Permit Application

Environmental Impact Assessment

White Pine North Project

Volume IIA

Appendix C-1 (1 of 6)

White Pine Copper LLC

White Pine, Michigan

September 2026

Project I.D.: 23W200

Solving our clients' toughest science and engineering challenges.

Appendix C

Hydrogeology Reports

C-1 Groundwater and Surface Water Hydrology Baseline Report
C-2 Deep Bedrock Hydrogeology Report
C-3 Groundwater Modeling Report Pre-Feasibility Study Report
C-4 GoldSim Model Construction Memorandum and
GoldSim Years 1-11 Legacy Outfall Model Construction Memorandum

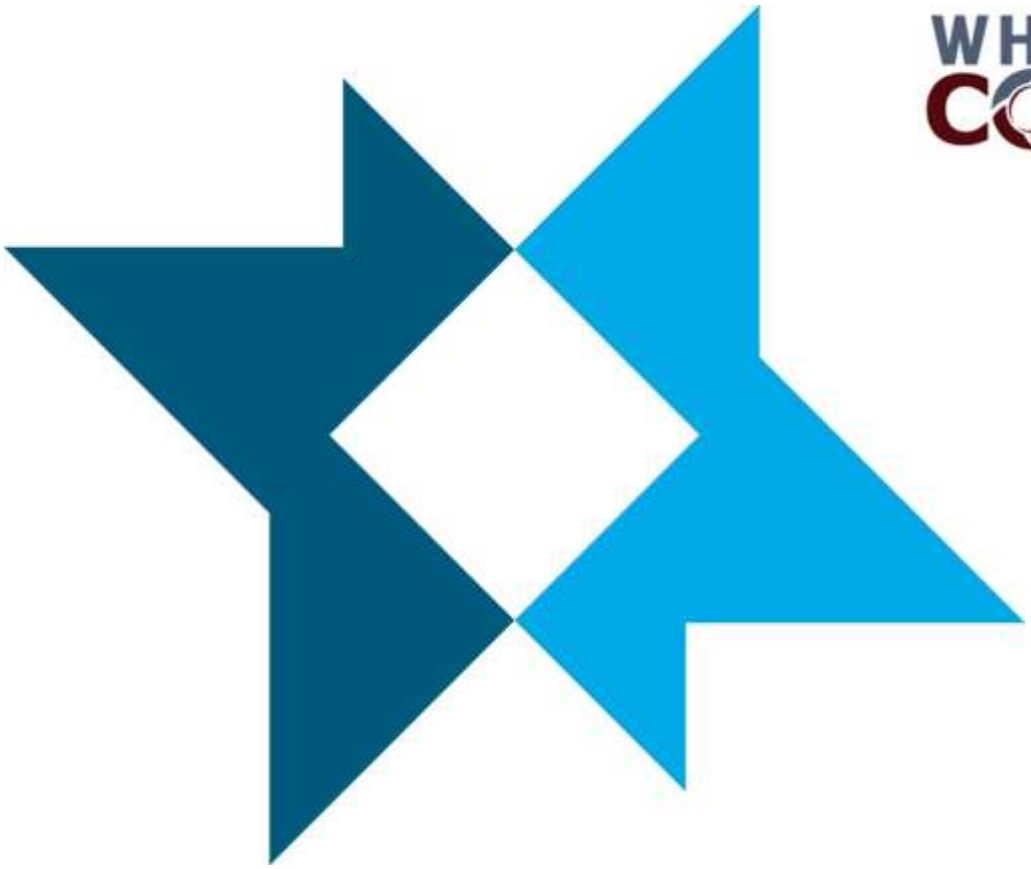
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Groundwater and Surface Water Hydrology Baseline Report

(1 of 6)

Groundwater and Surface Water Hydrology Baseline Report

White Pine North Project



White Pine Copper LLC

White Pine, Michigan

August 2026

Project ID: 23W200

Solving our clients' toughest science and engineering challenges.

Groundwater and Surface Water Hydrology Baseline Report
White Pine North Project

Project ID: 23W200

Prepared for
White Pine Copper LLC
White Pine, Michigan

Prepared by
Foth Infrastructure & Environment, LLC

August 2026

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White Pine North Project

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List of Abbreviations, Acronyms, and Symbols

ADVM	Acoustic Doppler Velocimeters
ASTM	ASTM International
Baseline Report	Groundwater and Surface Water Hydrology Baseline Report
BLM	Biotic Ligand Model
Cascade	Cascade Drilling L.P.
cfs	cubic feet per second
cm/s	centimeter per second
COLOG	COLOG, Inc.
CRC	Copper Range Company
CWA	Clean Air Act
DOC	dissolved organic carbon
EGLE	Michigan Department of Environment, Great Lakes, and Energy
EIA	Environmental Impact Assessment
ft bgs	feet below ground surface
ft/ft	feet per foot
ft/day	feet per day
Foth	Foth Infrastructure & Environment, LLC
Ga	billion years ago
GIS	Geographic Information Systems
gpm	gallon per minute
HpL	hydrophysical logging
memo	Memorandum
MFG	MFG Consulting Inc.
mg/L	milligram per liter
MGD	million gallons per day
MS/MSD	matrix spike/matrix spike duplicate
MSG	Mannik & Smith Group
NP1	North Pond 1
NP2	North Pond 2
NPDES	National Pollutant Discharge Elimination System
NREPA	Natural Resources Environmental Protection Act
PFS	Prefeasibility Study
PRISM	Parameter-elevation Regressions on Independent Slopes Model
Project	White Pine North Project
PVC	polyvinyl chloride
QA/QC	quality assurance/quality control
QAM	Quality Assurance Manual
QAPP	Quality Assurance Project Plan
RI	Remedial Investigation
SMI	Shephard Miller, Inc.
SOP	standard operating procedure
TDF	Tailings Disposal Facility
TDS	total dissolved solids
TOC	total organic carbon
TSS	total suspended solids

List of Abbreviations, Acronyms, and Symbols (continued)

µg/L	microgram per liter
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	volatile organic compound
VWP	Vibrating Wire Piezometer
WPC	White Pine Copper LLC
WPM	White Pine Mine

1. Introduction

White Pine Copper LLC (WPC) is a wholly owned subsidiary of Kinterra Copper USA, LLC. WPC is seeking to develop the brownfield site of the previous White Pine Mine located approximately 3 miles south of Lake Superior, east of M-64, in Carp Lake Township, Ontonagon County, Michigan (Figure 1-1). White Pine Mine (WPM) was part of the Upper Peninsula of Michigan's historical copper mining district. Underground mining on site began in the late 1800s. In 1952, the Copper Range Company began construction of a fully functioning underground mine and surface processing facilities, including a concentrator, smelter, and refinery. Tailings were placed in three tailings areas: North Pond 1 (NP1), North Pond 2 (NP2), and South Dam. Mining and processing ceased in 1997, and a State of Michigan Consent Decree was established.

The White Pine North Project (Project) encompasses infrastructure associated with the closed WPM. The underground mine workings will advance northeast of, and separate from, the historic underground mine workings of WPM. Copper ore will be extracted using conventional drill and blast room and pillar mining methods. A processing plant will be constructed on site to produce a copper concentrate, and processing will include crushing, grinding, flotation, concentrate thickening, and filtrations. Tailings will be managed through reuse of one or more of the existing tailings dams.

A Preliminary Economic Assessment of White Pine North was completed in 2023 (G Mining, 2023). To support both the Prefeasibility Study (PFS) and permitting requirements, a variety of environmental baseline studies documenting existing pre-Project biological resources, wetlands and streams, cultural resources, surface water hydrology, and groundwater hydrology were initiated in 2024. In addition, trade-off studies to assess various alternatives for certain aspects of the proposed plan such as mining method, backfilling the mine, tailings management strategy, metallurgy, and facility location were commenced in 2024. In 2025, WPC advanced the PFS and environmental studies necessary for permit applications to the Michigan Department of Environment, Great Lakes, and Energy (EGLE). This Groundwater and Surface Water Hydrogeology Baseline Report (Baseline Report) provides a baseline assessment of the groundwater and surface water resources present at the Project site.

1.1 Location

WPC is planning to develop a new mine decline into an undeveloped region of copper mineralization located north and east of the historic WPM (Figure 1-1). WPC plans to reuse the existing tailings dams for tailings management for the Project. The Project site lies on a flat glacial lake plain characterized by clay-rich soils with poor drainage, abundant wetlands, and low-gradient streams that cut shallow parallel channels towards Lake Superior.

1.2 Description of Property

WPM was part of the Upper Peninsula of Michigan's historical copper mining district. Underground mining on site began in the late 1800s. In 1952, the Copper Range Company (CRC) began construction of a fully functioning underground mine and surface processing facilities including a concentrator, smelter, and refinery. Tailings were placed in three tailings areas: NP1, NP2, and South Dam. Note that NP1 and NP2 were historically referred to as North Dam 1 and North Dam 2. Mining and processing ceased in 1995 and a judicial Consent Decree was signed between WPC's predecessor CRC, Michigan's Attorney General, and EGLE in October 1997. The

Consent Decree was put in place to address the identified environmental impacts at the WPM Property. The environmental liabilities related to the Consent Decree, and ongoing environmental obligations and responsibilities, were later assumed by WPC.

The surface components of the Project will be located on approximately 5,166 acres, including an existing tailing impoundment that will also be used for the Project generated tailings. The underground mine workings will extend under an area of approximately 9,000 acres and extend from the surface to working depths of 800 to 3,000 feet.

Ontonagon County has the second smallest population (5,802) in Michigan as of the 2020 U.S. Census (https://www.census.gov/data.html accessed 2025). The community of White Pine, which is the closest settlement to the Project has a population of 446. The county seat is Ontonagon, which has a population of 1,285 and is about 15 miles northeast of the Project. The Ontonagon Indian Reservation is located in the far northeast corner of Ontonagon Township (east of the Village of Ontonagon) and is part of the federally recognized Keweenaw Bay Indian Community.

1.3 Project Regulatory Requirements

This section discusses the applicable and appropriate regulatory requirements associated with the proposed Project, exclusive of the Consent Decree requirements associated with the historic WPM. Michigan's Natural Resources Environmental Protection Act (NREPA) requires permits for mining activities that impact water resources, wetlands, and critical dune areas, and include dredging, filling, or constructing structures in or near these areas. Specific permits are also needed for dams, certain air emissions, and hazardous waste handling. While specific NREPA requirements depend on the Project's location, scale, and environmental impact, the anticipated required state-issued permits include:

- A Part 632 Mining Permit and Environmental Impact Assessment
- A Part 303/301 Wetlands and Streams Permit
- A Part 315 Dam Safety Permit
- A Part 31 National Pollutant Discharge Elimination System (NPDES) Permit
- A Part 55 Permit to Install (air permit)

Permit applications are required to be comprehensive and demonstratively compliant with the underlying statutes and rules. All permit applications will be thoroughly reviewed by EGLE, the public, opposition groups, and Native American Tribes. In addition, U.S. Environmental Protection Agency (USEPA) retains the right to review permit applications for NPDES Permits, Air Permits, and Wetland Permits. Note that Wetland Permits are also reviewed by the U.S. Army Corps of Engineers (USACE) and the U.S. Fish and Wildlife Service (USFWS).

All permits are issued by EGLE, including the Wetlands Permit, which has been delegated under the Clean Water Act (CWA) to Michigan from USEPA. As such, Environmental Review requirements under the National Environmental Policy Act are not triggered.

1.4 Purpose

The environmental studies conducted for the Project's Environmental Impact Assessment (EIA) comply with the requirements of R425.202 of Part 632 (Michigan's Nonferrous Metallic Mining Regulations) of the NREPA (Act No. 451 of Public Acts of 1994, as amended). This Baseline

Report is intended to characterize the conditions and features at the site as they currently exist and address the Part 632 regulatory requirements. The topics included in this Baseline Report include:

- Topography.
- Soil series.
- Geology of the bedrock and unconsolidated material overlying the bedrock.
- Groundwater occurrences:
  - Hydrostratigraphic unit(s), thickness of unit(s), hydraulic conductivity, interconnections between hydrostratigraphic unit(s) and surface water, depth to groundwater, groundwater recharge areas, groundwater flow direction, hydraulic gradients, flow velocity, flow paths, and seasonal variations in the various characteristics.
- Surface water systems (lakes, ponds, impoundments, rivers, streams, creeks, drains, seeps, and springs).
- Water levels and/or discharge rates, seasonal and long-term variations.

1.5 Report Organization

The Baseline Report is organized into the following sections:

Section 2 provides background information on the surface water setting, climate, and geologic and hydrogeologic settings.

Section 3 provides a summary of field investigations that gathered datasets that were used in characterizing site hydrology (surface water and groundwater hydrogeology).

Section 4 provides the surface water characterization results.

Section 5 provides the hydrogeologic characterization results.

Section 6 provides interpretations and conclusions.

Section 7 provides references used in this baseline surface water and groundwater assessment.

2. Background Information

This section provides general discussions of the Project area's natural resources, including physiography, climate, pre-Project groundwater and surface hydrology, and underlying geology. The framework of surface water features, including rivers, streams, and their associated watersheds are provided. An overview of the occurrence and characteristics of groundwater, its quality, and the hydraulic properties of the geologic media in which groundwater exists is provided. Characterization of surface water and groundwater resources are expanded in Sections 4 and 5, respectively. Background on wetlands, and stream biological and ecological features will be presented in other reports that will be submitted as part of the EIA documentation accompanying the permit application (separate from this Baseline Report).

2.1 Surface Water Setting

The physiographic setting of the Project is on the Ontonagon High Clay Plain, which is a glacial lake-bed feature that is generally flat with incised small stream channels that have low sinuosity. The area is heavily forested with poorly drained soil, having created abundant wetlands.

2.1.1 Rivers and Streams

The Big Iron River and the Mineral River are the largest streams and watersheds located west of the proposed Project surface extent (and west of the historic mine). The Cranberry River and Potato River are the largest streams east of the Project area. Over a dozen small streams are located across the Project area flowing south to north and draining to Lake Superior (Figure 2-1). Additional details on stream characteristics are found in the 2024 and 2025 Stream Characterization Reports (Barr, 2025, 2026).

Regionally, three U.S. Geological Survey (USGS) flow meters have been identified (Figure 1-1):

- Mineral River downstream of Native Creek NR Silver City, MI – 040325155 (data available April 4, 2025 – present)
- West Branch Ontonagon River near Bergland, MI – 04036000 (data available October 1, 1988 – present)
- Ontonagon River near Rockland, MI – 04040000 (data available October 1, 1989 – present)

2.1.2 Watershed Delineations

The surficial drainage systems across the Project site are part of the Lake Superior watershed. Watersheds surrounding the Project site cover an area of approximately 90.7 square miles and are composed entirely of small streams flowing directly into Lake Superior. The locations of watersheds in the area are illustrated on Figure 2-1. Several river watersheds are located west of the Project area, including the Mineral River, Iron River, Little Iron River, and Union River Watersheds (moving westward). The Cranberry River watershed is located to the east of the Project area. In between, numerous streams flow north across the Project area from the higher ground to the south in roughly parallel channels across the Project area. At least 16 streams have been identified between Mineral River and Cranberry River watersheds and include (from

west to east): Portal Creek, Perch Creek, Native Creek, Patent Creek, Miles Creek, Stony Creek, Caribou Creek, Pine Creek, West Branch Duck Creek, East Branch Duck Creek, Duck Creek, Tolfrey Creek, Argentine Creek, Halfway Creek, Townline Creek, and the Little Cranberry River. While hydrologically distinct, these various sections of the Lake Superior watershed have similar characteristics. Flow within the streams is flashy and overwhelmingly controlled by precipitation and snowmelt runoff. Very little groundwater contribution has been observed in these streams, and many streams contain no or negligible flow during the drier portions of the year.

2.1.3 Topography

The prominent local topographic features include the Porcupine Mountains to the west, and the Trap Range located south of the site. Both ranges have numerous outcrops, which indicate bedrock strongly influences the local and regional topography. The Porcupine Mountains rise sharply from the shore to elevations of as much as 1,300 feet above the level of Lake Superior (±600 feet). However, the Project area between the Mineral and Cranberry Rivers is generally flat, sloping gently north towards Lake Superior, as illustrated on Figure 2-2. The parallel drainage pattern across the native areas north and east of the tailings basins is prominent. Numerous creeks flow parallel to each other toward Lake Superior. The parallel drainage pattern indicates uniform slope and strong subsurface materials. Incising of on-site creeks occurs, but is more pronounced along rivers, where, as observed along the Iron, Cranberry, and Potato Rivers, incising occurs within the unconsolidated deposits and bedrock.

2.1.4 Soils

A surficial soils map of the area is shown on Figure 2-3. The map was obtained from the Natural Resources Conservation Service (NRCS, 2025). The area largely contains silt loams and clay loams, with infrequent sandy loams mixed in.

2.1.5 Regional Runoff and Recharge Studies

Groundwater/surface water connection between the shallow hydrostratigraphic unit and streams and wetlands has been reported to be poorly developed due to the low permeability clays and the numerous small stream channels that are observed to go dry in summer and during drought periods. The Environmental Aspects of the Proposed Solution Mining Operation at the White Pine Mine indicated that surface water is in hydraulic connection with the shallow hydrostratigraphic unit (SMI, 1995). However, this conclusion is believed to be overstated, as outlined in Sections 4.1.1.4 and 6.3 of this Baseline Report. The Mineral River has been determined to have some groundwater baseflow during high flow periods but has also shown no flow during dry periods.

Regional hydrologic studies conducted by EGLE and the USGS provide context for understanding watershed behavior, including runoff, baseflow, and groundwater recharge conditions near the Project area. Together, these datasets outline how precipitation is partitioned within the local watershed system, with a summary provided below:

Baseflow: EGLE maintains an online, Geographic Information Systems (GIS)-based database of estimated baseflows for certain streams in Michigan (Base Flow of Michigan Streams | EGLE Maps & Data). For the Mineral River, the database shows an average annual baseflow of 11.3 cubic feet per second (cfs) for the upstream reach that crosses M-64, and an average

annual baseflow of 24.6 cfs downstream near Lake Superior (Figure 2-1). These values help characterize the sustained groundwater contribution to streamflow in the vicinity of the Project.

Runoff: A USGS report shows that on average, approximately 48% of the annual precipitation runs off the watershed (16.0 in runoff/33.0 in annual precipitation) (Rheaume, 1991). Another watershed-scale assessment report (Baker and Gunderman, 2008) shows runoff to range from 14 to 16 inches across the Ontonagon River watershed (the Ontonagon River is located east of the site, with the bulk of its watershed to the southeast). These estimates provide a regional benchmark for expected surface-water runoff.

Recharge: EGLE also maintains an online, GIS-based database of estimated recharge (weblink: Estimated Groundwater Recharge | State of Michigan indicates 11 to 12 inches per year of recharge within the township sections containing the Project area. The USGS estimates for the broader 8-digit Hydrologic Unit Code encompassing the Project area show average annual recharge ranging from 8.0 to 11.9 inches (Neff, et al., 2005). These values frame the expected range of groundwater replenishment by recharge from precipitation.

Taken together, these regional baseflow, runoff, and recharge estimates indicate a hydrologic system in which precipitation is partitioned between surface water runoff and groundwater replenishment (recharge), followed by baseflow from groundwater to the streams, providing a consistent framework for understanding watershed behavior in the vicinity of the Project area.

2.1.6 Other Surface Water Features

The area contains several ponded surface water features (both natural and constructed), many of which were sampled for water quality parameters as discussed in subsequent sections of this Baseline Report.

2.2 Climate

A Climate Data and Climate Change/Resiliency Memorandum (memo) has been prepared to both review historical climate data and to provide sources that could project adjustments for future climate change patterns, if needed (Foth, 2025) (Appendix A). As discussed in the memo, climate data are available from an on-site meteorological station, as well as from several regional meteorological stations. The Climate Data and Climate Change/Resiliency Memo (Appendix A) provides climate change tools that can be applied to modeling and analysis efforts that can be tailored to the details of the specific application.

The station in Ironwood, Michigan (USC00204104) was selected for historical climate application to the Project due to a combination of relative proximity (~ 35 miles to the southwest) and robustness of data (1902 – present day). Precipitation data from 1902 through 2024 show an average annual precipitation of 35.3 inches, with a maximum and minimum of 53.4 and 17.8 inches, respectively (Table 2-1). The average annual temperature is 40.3 degrees Fahrenheit, with the highest monthly average temperature in July (66.8) and the lowest in January (11.8).

2.3 Geologic Setting

The WPM area is on the southern flank of the 1,200 to 1,800-mile-long Midcontinent rift system of North America, as illustrated on Figure 2-4. Rocks associated with the rift system are only

exposed in the Lake Superior region and are notable for hosting economic deposits of copper, including the Keweenawan Copper Deposits. Keweenawan Copper Deposits are the economically important concentrations of copper found within certain formations of the Keweenawan Supergroup, formed by hydrothermal fluids moving through these rift rocks.

The WPM (along with Copperwood and several prospects in the Iron River Syncline) is located on the margin of the Porcupine Mountains hosted in shales and siltstones of the Nonesuch Formation. Due to their geographic proximity, these deposits have been grouped into the Porcupine Mountains sediment-hosted copper district (Bornhorst and Barron, 2013). The copper occurs as chalcocite (and lesser native copper) mineralized nearly stratiform within the fine-grained clastic sedimentary host rocks.

2.3.1 Regional Bedrock Geology

The Midcontinent rift in the region is filled with up to 18 miles of Keweenawan Supergroup volcanic and clastic sedimentary rocks that were deposited about 1.1 billion years ago (Ga) (Cannon et al., 1989). During the syn-rift (extensional) phase, tholeiitic flood basalts with minor interbedded red conglomerate and sandstone were deposited within the broad 100-mile-wide rift. The rift basin was filled with post-rift clastic sedimentary rocks of the Oronto and Bayfield Groups (which are within the Keweenawan Supergroup). The Oronto Group has a maximum exposed thickness of about 4 miles and is subdivided into three formations (in order of youngest to oldest):

1. Freda Formation (a reddish sandstone/siltstone)
2. Nonesuch Shale (the host of the historic copper orebody)
3. Copper Harbor Conglomerate (a basal sandstone/conglomerate unit)

All three formations of the Oronto Group are present at WPM but are typically found underlying unconsolidated glacial deposits. The bedrock geology and lithostratigraphy of the Western Upper Peninsula is illustrated on Figure 2-5.

2.3.2 Porcupine Mountains Sediment Hosted Copper District

The base of the Nonesuch Formation is enriched in copper along its entire exposed strike length. However, ore deposits and known prospects are restricted to the exposed margins of the Porcupine Mountains. This localized enrichment suggests both basin-scale mineralizing process coupled with local influence of the volcanic structure of the Porcupine Mountains. The chalcocite mineralization at White Pine formed at low temperatures (<130 degrees Celsius) during early diagenesis (Brown, 2009; Hitzman, et al., 2005; Swenson et al., 2004; Mauk, 1992).

The first, main-stage mineralization, formed a classic sediment-hosted stratiform copper deposit during early diagenesis. Clastic red-bed sedimentary rocks in the underlying Copper Harbor Formation provided the paleoaquifer for the copper-mineralizing ore fluids and were likely the source of the copper. Thinning of the Copper Harbor paleoaquifer rocks focused upward movement of mineralizing fluids which may have been further focused by faults (Brown, 2009; Swenson et al., 2004; Johnson et al., 1995; White, 1971) into the reducing environments of the silts and shales of the Nonesuch Formation. The reducing conditions resulted in the main-stage copper sulfides and native copper were precipitated.

The second stage of copper mineralization at White Pine occurred during compressional thrust faulting, which created fissures that allowed new mineralizing fluids to enter the ore body. This second stage introduced additional copper to the deposit, which is found as native copper in veins and fractures associated with these thrust faults, in contrast to the earlier, main-stage stratiform chalcocite mineralization (Mauk et al., 1992).

2.3.3 Local Bedrock Geology

In the immediate Project area, the bedrock stratigraphy (from shallow to deep) consists of the Freda Formation, underlain by the Nonesuch Shale, which in turn overlies the Copper Harbor Conglomerate. These units dip gently and may have local folding and faulting. The shallow bedrock of particular interest for groundwater transmission, which coincides predominantly with the upper portions of the Copper Harbor and Nonesuch units that have secondary permeability from moderate fracturing near the bedrock surface. Structurally, the area is on the flank of the Porcupine Mountains syncline; no major through-going faults are exposed at surface in the immediate site, though minor faults were encountered underground.

The local bedrock stratigraphy and structure is summarized below for reference. Detailed discussion on the structure, occurrence of the copper ore, ore stratigraphy, etc. is included in the Deep Bedrock Hydrogeology Report (Bedrock Report) (Foth, 2026). For the purposes of sorting data, this Baseline Report includes data and assessment of the upper 200 feet of bedrock regardless of lithologic unit.

- Freda Formation (also referred to as the Freda Sandstone) – consists of red-brown fine to very-fine sandstone, siltstone, and mudstone with a maximum exposed thickness of greater than 12,130 feet as the top is not exposed. The Freda Formation was deposited by shallow meandering rivers resulting in meter scale fining-upward sequences.

- Nonesuch Formation (also referred to as the Nonesuch Shale) – conformably overlies and has minor interfingers with the Copper Harbor Formation. The Nonesuch Formation consists of up to 720 feet of characteristically black-to-gray-to-green siltstones, shales, carbonate laminates, and minor sandstones. The variable vertical facies sequences in the Nonesuch Formation are interpreted to a combination of rates of sedimentation, subsidence, and fluctuations in lake level (Elmore et al., 1989). The interpretation of the Nonesuch Formation as lacustrine is supported by associated fluvial rocks. The Nonesuch Formation is gradational conformable upward into the Freda Formation.

- Copper Harbor Formation (also referred to as the Copper Harbor Conglomerate) – is composed of red-brown conglomerates and sandstones with lesser siltstone that range up to 1.1 miles in thickness. The Copper Harbor Formation sedimentary rocks were fluvial deposited in coalescing alluvial fans (Elmore et al., 1989) and are the oldest member of the Oronto Group.

Structurally, these bedrock units have been folded into an anticline with a northwest trending axis. The Tailings Basin overlies the northeast flank of the anticline. The White Pine Fault is the dominant structure on the southeast flank of the anticline, along with several other steeply dipping northerly-trending faults which are also present.

2.3.4 Unconsolidated Deposits

The bedrock strongly influences the topography of the overlying glacial materials, with the prominent topographic features with bedrock outcropping include the Porcupine Mountains to the west, and the Trap Range positioned northeast-southwest south of the site.

The Ontonagon lobe advanced out of the Lake Superior basin about 10,200 years ago (Peterson, 1982). As a result, the exposed glacial deposits in the area are of late Wisconsinan stage time-stratigraphic unit and younger. Surficial geologic mapping characterizes the glacial till in the White Pine area as “fluted till” deposits (Qcf) that are chiefly calcareous red till composed of fine sand, silt, and clay; have abundance of unmapped bedrock outcrops; and have a topography is essentially that of the bedrock surface. Thin veneers of sand, gravel, gray/brown till may be present in low-lying areas as found elsewhere on the Ontonagon Plain.

Flutes are straight narrow U-shaped grooves separated by straight round-topped, even-crested ridges. The distance between ridge crests average 380 feet, with ridge heights averaging 10 feet, and extending up to 3 miles between White Pine, Michigan, and the Cranberry River. According to Hack (1965), the flutes were formed by the slight differentiation of ice flow rates (by boulders) at the base of the Ontonagon lobe. The flutes indicate direction of the ice movement during the last glaciation.

Till within the area has variable color and grain size but is often found to have a distinct reddish color close to moderate reddish brown. Regionally, the grain-size distribution within red tills of the less than 2-millimeter fraction ranges from mostly medium-grained sand to mostly silt and clay. The red color is carried by the finer grained material, probably mostly the clay-sized grains. The red components of the tills deposited by the Ontonagon lobe are probably derived from the red sandstones and shales that underlie the glacial deposits. Tills that overlie the Freda Sandstone appear to have the same grain-size distribution as the Freda, which is a red fine- to very fine-grained sandstone.

As the ice sheet melted and receded, depositions of unconsolidated materials including gravels, sands, silts, and clays, that formed subglacial (base of glacier), glaciofluvial (meltwater), and glaciolacustrine (glacial lake) environments. Oscillations in the glacier led to the overriding and over-consolidation of some of these previously laid sediments. Concurrently, vast quantities of meltwater accumulated in the Lake Superior basin, transforming it into an immense glacial lake. Lacustrine sediments were deposits during this period. The gradual lowering of the massive lake's water levels to the present-day level of Lake Superior progressively exposed more of the land surface (Bornhorst and Lankton, 2009). The unconsolidated deposits primarily consist of clayey glacial till. As described by MFG Consulting Inc. (MFG) (1999), the base of these deposits contain bedrock boulders within a silt/sand matrix. Higher in the section, fewer boulders are observed, and the till matrix coarsens upwards to silt dominant. Overlying recent lacustrine sediments are predominantly clay.

2.4 Hydrogeology

Groundwater yields are low and water quality is typically poor throughout Ontonagon County (Doonan and Henrickson, 1969). Domestic groundwater supplies are typically obtained by increased well storage volumes through deeper wells or larger diameter dug wells (Doonan and Henrickson, 1969). Wells yielding high flow rates exceeding 100 gallons per minute (gpm) are

unknown. Water from most wells is hard to very hard, and many wells yield water that contains objectionable amounts of iron. Water from the deeper wells in bedrock, especially near Lake Superior, is generally too salty for domestic consumption.

2.4.1 Occurrence of Groundwater

The groundwater system in the vicinity of the Project can be divided into two flow system-based hydrostratigraphic units, which consist of: 1) the shallow hydrostratigraphic unit; and 2) the lower hydrostratigraphic unit. The shallow hydrostratigraphic unit is the most prominent occurrence of groundwater and consists of both unconsolidated deposits and bedrock. Specifically, the shallow hydrostratigraphic unit consists of groundwater within both:

- the unconsolidated overburden sediments (glacial and lacustrine)
- the underlying, upper portion of fractured Precambrian bedrock

The fracture frequency and density diminish with depth in the Precambrian bedrock. As a result, the quantities of groundwater are much higher in shallow bedrock as compared to deeper bedrock. The thickness of the fractured portion of upper bedrock (considered to be part of the shallow hydrostratigraphic unit) is not specifically defined but generalized based on hydraulic and water quality testing. Refining the base of the shallow hydrostratigraphic unit within bedrock is assessed in the Bedrock Report (Foth, 2026). However, for the purposes of sorting data for this Baseline Report, information from the upper 200 feet of bedrock is included in this Baseline Report (regardless of lithologic unit).

The lower hydrostratigraphic unit consists of confined, saline groundwater within infrequent secondary permeability features within the extremely low primary permeable Precambrian siltstone, sandstone, and shale units. The occurrence of groundwater within bedrock below the shallow hydrostratigraphic unit is assessed in the Bedrock Report (Foth, 2026).

2.4.2 Shallow Hydrostratigraphic Unit

Groundwater level data indicate that the lower portion of the unconsolidated sediments near the interface with fractured Precambrian rock is saturated with groundwater that occurs in partially confined to unconfined conditions.

Recharge to the shallow hydrostratigraphic unit occurs mostly by direct infiltration of precipitation (SMI, 1995; G Mining, 2023). Discharge from the shallow hydrostratigraphic unit occurs at the shoreline of Lake Superior, manifesting as baseflow to gaining rivers and streams, and through evapotranspiration.

2.4.3 Deep Hydrostratigraphic Unit

Groundwater in the deep hydrostratigraphic unit is essentially hydraulically disconnected from the shallow hydrostratigraphic unit because of the low hydraulic conductivity of the Precambrian bedrock (MFG, 1999). Furthermore, inter-mixing of shallow and deep groundwater is significantly slowed due to differences in pressure, temperature, and salinity (Freeze and Cherry, 1979). However, limited recharge is exhibited by upward gradients observed at upgradient monitoring well nests SMW-3SB to SMW-3, which is discussed further in Section 5.2.

Discharge from the lower hydrostratigraphic unit occurs slowly (flow paths on the order of millennia) beneath and approaching the Lake Superior shoreline. This limited area of connectivity is suggested by relatively high chloride levels in groundwater at bedrock depths greater than 75 feet near the Lake Superior shore (Doonan and Henrickson, 1969). Thus, background water quality in the shallow hydrostratigraphic unit approaching Lake Superior shoreline needs to reflect this potential influence.

2.5 Subsurface Data Collection

Subsurface data collection has included geologic and hydrogeologic characterization data collected as part of exploration and geotechnical drilling; as well as monitoring well installations that were used for hydraulic testing, groundwater level monitoring, and groundwater quality sampling.

Historical exploration drilling at the WPM delineated the gently north-dipping zone of disseminated copper mineralization approximately 10-feet-thick hosted in a base of Nonesuch Formation. Over 750 exploration boreholes were used to delineate the deposit before and during the active life of the mine from before 1927 through 1994. Additional boreholes have been advanced since 1994, including advancement of over 75 boreholes since 2014 to explore the White Pine North deposit. The subsurface data from the exploration programs have been utilized to construct the three-dimensional geological model for the Project. Transects from the three-dimensional model have been inspected and the data are considered accurate. Downhole survey measurements have allowed for reasonably accurate determination of lithologic contacts. A generalized summary of the historical exploratory drilling programs is provided in Table 2-2 and discussed further in Section 3.2.

3. Field Investigation Methods and Results

This section contains a summary of groundwater and surface water data collection methods and results. Relative to surface water, data includes stream flow and stage readings collected at up to 21 locations adjacent to the Project, to characterize area hydrology, precipitation-runoff relationships, and baseflow conditions. Surface water quality was also collected in the streams and select ponded areas in the Project area to establish baseline conditions. The monitoring program was implemented in accordance with the procedures established in the Surface Water Monitoring Work Plan (Foth, 2024a).

Historic exploration and testing programs were evaluated to establish hydrogeologic characterizations, but recent investigations conducted in 2024 and 2025 have expanded Project geologic and hydrogeologic datasets. The Project's hydrogeologic characterization conducted in accordance to the Groundwater Characterization and Monitoring Work Plan (Foth, 2024b) and includes evaluation of groundwater level monitoring, hydraulic conductivity testing, and groundwater quality monitoring within the unconsolidated materials and shallow bedrock. The recent datasets have enhanced the understanding of Project baseline surface water and groundwater conditions to assist in providing environmental controls and develop monitoring programs for Project activities.

3.1 Streams

3.1.1 Flow

Stream flow readings were collected at various locations on both a manual and continuous basis to better understand the stream dynamics and watershed runoff conditions.

3.1.1.1 Manual Flow

Manual stream flow readings were collected by Mannik & Smith Group (MSG) at 17 locations for nine quarterly events between July 2024 and March 2026. Results are found in Table 4-1 and locations shown on Figure 3-1.

3.1.1.2 Continuous Flow

Continuous stream flow data were collected at five locations to better evaluate the precipitation runoff-stream flow dynamic and overall flow variability on a sub-daily basis. The five total locations (on three streams) were selected due to proximity to the Project, the likelihood of minimal no-flow conditions, and to be able to evaluate the upstream/downstream dynamic on the same stream (on two out of the three streams).

Continuous flow monitoring stations were installed between May 5 through 7, 2025, at the following locations (Figure 3-2):

Cranberry River:	Mineral River:	Pine Creek:
CBR-01 and CBR-02	MLR-01 and MLR-03	PNC-04

The units are SonTek IQ-Standard Acoustic Doppler Velocimeters (ADVMs) continuous flow monitoring devices. The units were installed on the stream bed using a heavy metal plate and threaded rods. Wiring (secured to the stream bed) was run to shore and was connected to a

marine battery secured in a weather-proof battery box. The units were programmed to record water depth and flow every 15 minutes. The unit programming included conducting a cross-sectional survey (with survey rod and tape) at the location of the ADVM unit installations. The ADVM units then automatically calculate flow based on the depth and velocity readings they collect, along with the programmed cross-sectional information.

The units recorded flow through approximately mid-August (when they lost battery power), except for MLR-03 which stopped recording in early July due to a battery malfunction. Data from the five flow meters were downloaded on October 27, 2025, when the units were removed prior to winter freeze-up to prevent unit damage. Flow data area is shown on Figures 3-5 through 3-9.

Figures 3-5 through 3-9 also show daily precipitation values. Daily precipitation data were downloaded for this period from the PRISM Climate Group (PRISM, 2024). The Parameter-elevation Regressions on Independent Slopes Model (PRISM) gathers climate observations from a range of monitoring networks, applies sophisticated quality control measures, and develops spatial climate datasets to reveal climate patterns. PRISM uses regressions based on precipitation gages, climate data, and elevation to interpolate precipitation estimates onto a 4-kilometer (2.49 mile) grid.

The precipitation reporting location within the PRISM model was selected at a location central to the stream flow meters. Since the PRISM model automatically interpolates precipitation depth at the selected location from surrounding precipitation gages, this precipitation depth was taken to be representative of the stream flow meters.

3.1.2 Stage

Manual stream stage readings from 14 staff gages were periodically recorded since their installation in August 2024 (except at CBR-01, which was installed on May 7, 2025). The staff gage locations are found on Figure 3-2, and water depths are plotted on Figure 3-4.

3.1.3 Surface Water Quality

The baseline surface water monitoring program meets EGLE permitting requirement for collection of 2 years of baseline analytical data to serve as the basis for forecasting of potential impacts related to the Project. The surface water quality characterization was conducted at surface water monitoring locations depicted on Figure 3-1 to quantify natural variations in surface water chemistry over time, and to serve as a baseline for comparison to monitoring data during the Project operation period.

Surface water sampling was conducted by trained and experienced field representatives in accordance with the Project Quality Assurance Project Plan (QAPP) (Foth, 2024c) and the Surface Water Monitoring Work Plan (Foth, 2024a) using standard operating procedures (SOPs). The Project QAPP is provided in Appendix H. SOPs are included as an attachment to the QAPP and in Foth, 2024a.

Adherence to these sampling procedures and quality control measures minimized the potential for sample contamination and supported the collection of representative surface water samples. The surface water collection and analysis met the quality standards for regulatory compliance and for use in characterization.

Surface water quality monitoring was conducted to quantify baseline surface water quality for constituents of interest, and included: field and general chemistry parameters, major cations and anions, metals, oxidation-reduction (redox) sensitive parameters, and other constituents. The full suite of analytes from the 2024-2026 baseline monitoring program provides an assessment of natural constituents. The surface water analytes and methods are summarized in Table 3-6. The surface water analyte list matches the groundwater constituent list to enable a direct comparison between the surface water/groundwater systems to establish differences and potential correlation defining the interaction between groundwater and surface water.

3.1.3.1 Streams and Lake Superior

Quarterly surface water quality sampling was initiated by MSG on behalf of WPC in July 2024. The baseline surface water monitoring program sampling matrix is outlined in Table 3-1.

Water quality samples were collected from 18 stream locations and two Lake Superior locations, for eight events starting in July 2024 and continuing through March 2026 (Figure 3-1). Samples were analyzed for the parameters discussed above (field and general chemistry parameters, major cations and anions, metals, oxidation-reduction (redox) sensitive parameters, and other constituents) and as summarized in Table 3-6. The surface water quality results are summarized in Table 4-2. Field sampling sheets and laboratory analytical reports for the baseline data collection efforts are included in Appendix B.

3.1.3.2 Ponded Surface Water Data

Additional baseline water quality samples were collected from six ponded surface water locations for either eight or nine events between July 2024 and February 2026. The frequency of sampling is summarized in Table 3-1. These six ponded locations, which are illustrated on Figure 3-1, are summarized as follows:

- Two historical ponded locations upgradient of the tailings basins (SBW-01 and SBD-01);
- Two historical ponded locations downgradient of the tailings basins (BNW-01 and BNC-01); and
- Two new ponded locations inside the tailings basins (TBN-01 and TBS-01).

Samples were analyzed for the field and general chemistry parameters, major cations and anions, metals, oxidation-reduction (redox) sensitive parameters, and miscellaneous constituents and as summarized in Table 3-6. Water quality results are summarized in Table 4-3. Field sampling sheets and laboratory analytical reports for the baseline data collection efforts are included in Appendix B.

3.2 Geologic Exploration Program

Copper exploration and drilling began at White Pine in earnest in the early 20th century. Systematic drilling exploration began in 1907 when the Calumet and Hecla Mining Co. conducted a drilling campaign that discovered locally high grades of native copper (Bornhorst, and Lankton, 2009). The property was acquired by the CRC who initiated a continuous drilling program at the WPM from 1929 through the early 1970s, as summarized on Table 2-2. There

was a hiatus in exploration drilling until the commencement of the 1994-1995 drilling program associated with the potential mine expansion project.

Historical explorations conducted prior to 2014 were summarized by G Mining Service in the Preliminary Economic Assessment (G Mining, 2023):

> *All exploration work completed on the White Pine North Project prior to 2014 was performed by the previous owner, Copper Range Company ("CRC"), who is now a wholly-owned subsidiary of First Quantum Minerals Ltd. CRC conducted a regional exploration program in the 1960s and 1970s called the "Trace Drilling Program" designed to identify White Pine style and scale mineralization from White Pine northeastward towards Houghton. This program consisted of drilling vertical holes in approximately one-mile centers to depths of between 500 and 1,700 feet along the base of the Nonesuch Shale. No economic mineralization was intercepted during this drilling program, and it was believed that no White Pine scale deposits existed northeastward of the old White Pine mine.*

An exploration drilling program was conducted in 2014 and 2015 (i.e., 2014-2015 Drilling Program) to target the northern section of the historical mineral resource area and included 42 HQ-diameter core holes that provided 1,714 samples for copper and silver assaying. The 2014-2015 Drilling Program filled in the historical exploration grid, obtained new metallurgical samples, and allowed for additional geotechnical studies to refine the mining plan (G Mining, 2023). Three additional HQ-diameter drillholes were completed during the winter 2022-2023 Drilling Program to further upgrade the historical resource.

In 2024, an infill drilling program occurred in which 24 drill holes and 28 wedges were drilled that provided 71,745 feet of core. In addition, a 2026 infill drilling program consisting of an additional 13 drill holes. These drilling programs have expanded the Project's geologic and hydrogeologic datasets and have enhanced the understanding of Project baseline surface water and groundwater conditions. New datasets that have been collected recently are discussed in the following sections. A generalized summary of historical explorations is provided in Table 2-2. Additionally, Table 3-2 provides locations, ground surface elevations, and total depths of exploration boreholes investigated by Foth (2026), as well as a statistical summary of historical borehole exploration data. Legacy borehole data from historical exploration programs were used to develop the Project's geologic model and illustrations of the subsurface data. Unconsolidated deposit thicknesses, which are typically observed to be between 20 and 40 feet, are shown on Figure 3-10. The structural contours of the bedrock surface are illustrated on Figure 3-11.

3.2.1 Geologic/Hydrogeologic Characterization

3.2.1.1 Historic Geologic/Hydrogeologic Characterization

Numerous shallow monitoring wells were installed in the unconsolidated deposits and shallow bedrock starting in 1994 as part of the remedial investigation that has been reported by Shepard Miller, Inc. (SMI) (SMI, 1995) and MFG, 1999. The remedial investigation also included soil, sediment, and tailings sampling, among the environmental assessments. Fifteen monitoring wells were installed in 1998 through 2000, and then another eight wells installed in 2006 and 2009. A comprehensive summary of monitoring installation details, including well locations and

elevations or depths of ground surface, top of casing (measuring point elevation), and screened intervals are summarized in Table 3-3.

Available boring logs and well completion reports of existing and recently installed monitoring wells (forms are included in Appendix C and D, respectively). In addition, well abandonment forms for 19 historical monitoring wells that were abandoned in 2006 and 2007 are included in Appendix E. Well abandonment forms are available for former wells: MW-1A, MW-1B, MW-4, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-20, MW-21, MW-22, MW-24, MW-25, MW-26, and SMW-40.

3.2.1.2 Recent Geologic/Hydrogeologic Characterization (2024-2025)

To improve understanding of site hydrogeology in the new Project area, a comprehensive drilling program was executed by Foth, Cascade Drilling L.P. (Cascade), and Timberline Drilling, Inc. working on behalf of WPC in 2024 and 2025. The recent exploration and testing program, which is described in Foth (2026), included the following tasks:

- Advancement of multiple core holes across the site, reaching depths of several hundred to over 3,000 feet;
- Installation of six new monitoring wells within shallow bedrock (denoted MW-#SB series);
- Redevelopment of wells from the existing monitoring network, as needed;
- Conduct open borehole testing program that included geophysical logging (temperature, conductivity) and hydrophysical logging (HpL) in select deep holes that identified discrete water-bearing fractures, and
- Installation of vibrating wire piezometers (VWPs) within deep exploration holes.

Note that deep bedrock testing and monitoring were included as part of Foth's 2024-2025 field investigation. This information will be included in a separate comprehensive report detailing the geology and hydrogeology of the deep bedrock (Foth, 2026). However, since some of the hydraulic testing was conducted in the shallow bedrock at depths less than 200 feet below ground surface (ft bgs), the deep bedrock investigation is being introduced to provide context for the new data obtained to assist in the bedrock characterization.

Deep bedrock monitoring wells (i.e., wells installed greater than 200 ft bgs) were not installed in the recent (2024) exploration program. Rather, the geology and hydrogeology of the Project bedrock have been characterized by using field investigations that included hydrophysical logging, packer testing, one-time water quality sampling during packer testing, and deep piezometric head monitoring. The one-time water quality sampling during packer testing approach was preferred due to the difficulty of purging and sampling deep monitoring wells, as a component of routine quarterly groundwater monitoring, especially for bedrock intervals that are low yielding and very slow to recover from purging. Additionally, further water quality sampling and analyses of deep bedrock wells were not deemed necessary considering deep groundwater is not being affected by seasonal changes unlike the shallow groundwater.

3.2.1.2.1 Borehole Advancement

Six new shallow bedrock monitoring wells (MW-2SB, MW-5SB, MW-35SB, MW-43SB, SW-1SB, and SW-3SB) were installed to provide information on the hydraulics and connectivity between the unconsolidated deposits and shallow bedrock. The six new shallow bedrock wells, which are shown on Figure 5-1B, were drilled to various total depths ranging from 92 to 151 ft bgs. Their locations were targeted to fill spatial gaps around the Project area to support the understanding of the shallow bedrock in the footprint of the proposed Project. At four locations (MW-2SB, MW-5SB, SMW-1SB, and SMW-3SB) the shallow bedrock wells were positioned next to existing monitoring wells installed within the unconsolidated deposits such that vertical gradients could be assessed. In addition, two shallow bedrock well locations (MW-35SB and MW-43SB) were positioned near creeks where potential groundwater/surface water interactions could be assessed. Finally, well SMW-3SB was installed in an upgradient position to the former underground mine and tailings basins to provide water quality that is not influenced by any former mine or tailings features.

At each location, boreholes were advanced by Cascade under Foth's direction using sonic drilling techniques. The initial borehole was advanced through the unconsolidated material using 10.625-inch diameter drill casings. Once bedrock was confirmed, drilling advanced into competent bedrock so that a nominal 6-inch diameter steel surface casing could be installed and cemented into bedrock. The sealed casing prevented direct leakage from the unconsolidated deposits to the well. After the casing was installed and allowed to set, the borehole was advanced in bedrock using a 5.875-inch diameter drill bit and casings. Total depths and well screen intervals were determined through inspection of the cuttings by an on-site geologist. After the terminal depth was reached, the open borehole was pre-developed using pumping and airlifting methods to flush the drilling cuttings from the borehole prior to well construction.

The collection of subsurface materials for observation by geologists allowed for the characterization of the unconsolidated glacial material at each boring location. Samples were examined by on-site geologists and were described using the Unified Soil Classification System and a Munsell Soil Color Chart. The subsurface materials were also described to reflect glacial depositional environment, sediment structure, contact relationships, weathering zones, fracturing, pebble lithology, oxidation state and other pertinent information, following the method described by Kelleher (2008). Each boring was advanced into the underlying bedrock to determine bedrock type and the engineering properties of the rock at each location. The lithology logs are included in Appendix C.

3.2.1.2.2 New Monitoring Well Installations

The recently installed shallow bedrock monitoring wells were installed using Schedule 40 polyvinyl chloride (PVC) well screen and riser materials. Screen lengths were determined by the on-site geologist and varied between approximately 30 and 60 feet. Well construction information, including position and length of the screen interval, slot size, and filter pack/seal materials were recorded on the well completion reports, which are included in Appendix D.

Centralizers were installed at roughly 30-foot intervals to assist in positioning the PVC well in the middle of each borehole, so the annular space was relatively uniform around the PVC well casings. Centralizer locations depths are recorded on the well construction reports. Red Flint

#40 gradation silica filter pack sand was placed in the annual space around the screen via tremie pipe and extended 2 to 4 feet above the top of screen. The top of filter pack material was verified via a tagline. Coated bentonite chips were added on top of the filter pack to form the well seal. The depth of the top of bentonite was measured via tagline and recorded. The bentonite seal was allowed to fully hydrate prior to placement of the neat-cement grout. The cement grout backfill was placed via side-discharge tremie methods to seal the well to ground surface.

The new shallow bedrock monitoring wells were developed using surge and purge methods until particulate-free discharge was observed and field parameters, including pH, specific conductance, turbidity, and temperature stabilized. Well development records are included in Foth, 2025.

3.2.1.2.3 Deep Bedrock Testing and Piezometer Installations

The following scope of work associated with the recent Project hydrogeologic investigation was performed between June 2024 to February 2025. A summary of field investigation activities performed at each deep bedrock location is provided on Table 3-2.

- Geophysical Logging – DGI Geoscience Inc. was retained by WPC to conduct geophysical logging of nine selected open exploration boreholes to identify fracture zones and structures to better target zones of interest for subsequent HpL and packer testing.
- Hydrophysical Logging – COLOG, Inc. (COLOG) performed HpL on nine selected open exploration boreholes to identify the location of conductive zones within each borehole. Foth oversaw and provided support for COLOG's HpL field activities.
- Packer Testing – COLOG also performed packer testing on select intervals in the nine open exploration boreholes to determine the hydraulic properties of discrete intervals identified through geophysical logging and HpL. Foth oversaw and provided support for COLOG's packer testing field activities.
- One-Time Water Quality Sampling – Foth collected one-time water quality samples during packer testing. Samples were collected at eight of the nine packer testing locations with at least one interval being sampled from each hole. Two sets of samples were collected from each selected interval. Samples were not collected from WP-592.
- VWP Installations – Cascade installed nested, grouted-in VWPs in three of the exploration boreholes to monitor head levels within the deeper portions of bedrock. Foth procured the piezometer equipment and oversaw Cascade's field installation.

This information was included in a separate comprehensive report detailing the geology and hydrogeology of bedrock (Foth, 2026). The hydraulic testing conducted in shallow bedrock at depths less than 200 ft bgs are discussed in the following section to assist in the hydrogeologic characterization.

3.3 Hydrogeologic Characterization

Thirty years of hydrogeologic data have been collected for the historic WPM, primarily as the result of remedial investigations conducted near the processing facilities and downstream from the tailings on the west and north sides of the tailings basins, respectively. Most of the historical monitoring wells were installed in the shallow hydrostratigraphic unit either within the unconsolidated materials or shallow bedrock, as discussed in Section 2. Characterization of the Project's hydrogeology includes evaluation of two decades of groundwater level monitoring, numerous hydraulic conductivity tests, as well as recent and historical groundwater quality monitoring, as described below.

3.3.1 Groundwater Level Monitoring

Baseline groundwater level monitoring data were collected from manual and automated water level readings between July 2024 and June 2026 from the groundwater monitoring network shown on Figure 3-12. Manual water levels were recorded every 2 to 3 months primarily during water quality sampling events. Continuous groundwater levels were also collected during the baseline monitoring period at six monitoring wells that were paired at three locations, including wells: MW-5A/MW-5SB, MW-43/MW-43SB, and SMW-1/SMW-1SB. The automated groundwater levels were recorded on 6-hour intervals using a Rugged Troll 100 with on-site barometric correction.

The baseline groundwater level dataset is supplemented with an extensive historical dataset that includes groundwater level data from 1997-1998 and from 2006 through June 2024. Tabulation of groundwater levels, including depth to groundwater readings (from the top of casing measuring point), the top of casing/collar (measuring point) elevation, and the corresponding groundwater elevations are included in Appendix F-1. Hydrographs delineating groundwater levels across the Project area, including wells within each lithostratigraphic unit (unconsolidated deposits, shallow bedrock, and tailings) are provided in Appendix F-2. Hydrographs of the automated monitoring data are provided in Appendix F-3.

The available groundwater elevations from August through September 1997 and August 1998 from numerous remedial investigative monitoring wells, of which many have been abandoned. Monitoring frequency increased starting in June 2006. Since that time through 2023, historical manual groundwater monitoring occurred at least three times a year, typically in the spring, summer, and fall seasons. Characterization of groundwater levels are included in Section 5.2.

3.3.2 Hydraulic Testing

A comprehensive matrix of hydraulic testing at Project monitoring wells and within bedrock boreholes is summarized in Table 3-4. As part of the 2024-2025 field investigation program, Foth performed in-situ hydraulic conductivity (slug) tests at the newly installed shallow bedrock wells, as well as tested and re-tested numerous existing wells to measure the hydraulic response to an instantaneous applied stress. The slug tests were performed at single wells where the head change recovery was recorded versus elapsed time. This information is used to calculate the hydraulic conductivity of the saturated geologic media that transmits groundwater through the well screen interval.

Slug tests were performed using the methodologies described in ASTM International (ASTM) D4044/D4044M-15 (ASTM, 2015). For each slug test, the data was processed and analyzed

using AQTESOLV® software (Duffield, 2007) to estimate the hydraulic conductivity of the geologic materials within the screened interval. The recovery curves were analyzed using the following semi-log straight-line fit analytical solutions:

- Bouwer-Rice (Bouwer and Rice, 1976)
- Hvorslev (Hvorslev, 1951)

An effective casing radius was used if well construction information indicated that the free water surface rose or fell within both the screen and sand pack (typically used for some unconsolidated wells). In applying this correction, the filter pack specific yield will be assumed to be 30%. A similar correction was applied if the slug is only partially submerged in the well.

The water level estimated from pre-test monitoring was used to compute water level displacements that occurred during the test, where displacement is defined as the change in water level from the pre-test static. The entire transducer record of pressure change and water level displacement, including pre-test, during the slug test, and during recovery following the slug test are included in Foth (2025). Displacement versus time values were used to develop graphical plots in AQTESOLV®. For slug-out (rising head) tests, displacement was equivalent to hydraulic drawdown. For slug-in (falling head) tests, displacement was equivalent to hydraulic buildup. Slug tests were then analyzed with displacement data being fit to closed-form analytical solutions to estimate transmissivity and average hydraulic conductivity of the well completion interval. Appendix G provides the AQESOLV® slug test analysis results for each location.

3.3.2.1 Bedrock Hydraulic Testing Program

As discussed in Section 3.2.1.3, a bedrock testing program was conducted as part of the 2024-2025 exploration program to assist in the characterization of groundwater throughout the surface footprint and western extent of the proposed Project mine. The bedrock hydraulic testing program leveraged historical subsurface data and included both phases of White Pine North, including the western extent (Phase 1) that will be mined first and the eastern extent (Phase 2), which will be mined later. Testing was conducted to refine the limited hydraulic connectivity observed between the deep bedrock/lower hydrostratigraphic unit (where mining will occur) and the overlying shallow hydrostratigraphic unit system (that consists of unconsolidated sediment and fractured bedrock found at shallow depths).

The HpL was conducted throughout the entire length of nine deep bedrock boreholes, such that continuous data were able to be collected across the entire bedrock sequence. This enabled characterization of higher inflow/outflow zones (HpL conductive zones), as well as sequences where bulk hydraulic conductivities were low and have very limited capacity to transmit water (HpL non-conductive zones). This is an advantage over select-interval testing methods such as electromagnetic flow meters.

The purpose of packer testing was to obtain an estimate of hydraulic conductivity (and transmissivity) of discrete intervals targeting fault zones and intervals with indicators for potential localized zones of enhanced flow. If higher conductivity was encountered, a longer test occurred to evaluate the connectivity of larger fracture networks since a significant drop-in flow rate suggested limited fracture connectivity. The low storativity of the deep bedrock

groundwater system allowed for relatively rapid propagation of pressure gradients in zones of moderate to higher conductivity.

It is assumed that the packer tests were performed through isolated zones with the highest anomalies measured during pumping for HpL that is analogous to the most water conductive zones in the borehole. The hydraulic testing procedure of the packed-off intervals included slug testing, constant rate injection and subsequent pumping tests, as well as recovery monitoring. These tests followed an equilibration period after tools were lowered into position. Results from the bedrock slug and pumping testing that were conducted at depths less than 200 ft bgs are discussed in Section 5.3.2.

3.3.3 Groundwater Quality Monitoring

Quarterly groundwater quality sampling was initiated by MSG on behalf of WPC in July 2024. The groundwater quality characterization was conducted to satisfy two primary Project objectives: 1) quantify natural variations of groundwater geochemistry over time; and 2) provide additional lines of evidence for using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge. In addition, the objective of the baseline groundwater sampling program was to obtain representative samples to account for the variability in hydrologic conditions. As a result, sampling was attempted within 2 weeks of spring melt (high level) and low level (autumn) conditions.

The baseline groundwater monitoring network is illustrated on Figure 3-12 and the program sampling matrix is outlined in Table 3-5. Twenty-four groundwater monitoring locations (Figure 3-12) were selected to collect representative groundwater quality data on the hydrogeologic conditions on site both spatially and within the different portions of the shallow hydrostratigraphic unit geology/hydrostratigraphy. Of the 24 monitoring wells used for the baseline groundwater data collection efforts, 14 monitoring wells are completed in the unconsolidated deposits, while 10 monitoring wells are completed in shallow bedrock. Both monitored units are representative of the shallow hydrostratigraphic unit. In addition, four monitoring wells which were completed within the former mine tailings within the NP1 Tailings Disposal Facility (TDF) (i.e., NB1-1 and NB1-3) and the NP2 TDF (NB2-1 and NB2-3) were sampled. Monitoring was conducted on 2- to 3-month frequencies over the 2-year baseline monitoring period (from July 2024 through May 2026) to quantify background groundwater quality. Results from sampling conducted in April and May 2026 are being validated at the time of this publication. Consequently, these results will be submitted under separate cover.

The baseline groundwater monitoring program meets EGLE permitting requirements that specifically consists of the collection of 2 years of baseline analytical data so prediction of potential impacts during the Project operation can be assessed. In addition, Project operations time frame groundwater monitoring results may be compared to the baseline dataset.

3.3.3.1 Baseline Constituent List

Groundwater quality monitoring were conducted to quantify baseline groundwater quality for constituents of interest and included: field and general chemistry parameters, major cations and anions, metals, and oxidation-reduction (redox) sensitive parameters. The full suite of analytes from the 2024-2026 baseline monitoring program provides a complete assessment of natural constituents. The groundwater analytes and methods are summarized in Table 3-6. The

groundwater analyte list matches the surface water constituent list to enable a direct comparison between the surface water/groundwater systems to establish differences and potential correlation defining the groundwater and surface water connectivity.

3.3.3.2 Sampling Methodology

Groundwater sampling was conducted by trained and experienced field representatives in accordance with the Project QAPP using SOPs. The Project QAPP is provided in Appendix H. SOPs are included as an attachment to the QAPP. The QAPP outlines the sampling goals, data needs, responsibilities, and quality assurance/quality control (QA/QC) procedures to ensure reliable, usable data to assist in decision-making.

In addition, the QAPP provides a detailed plan for sample collection and analysis. For example, samplers wore disposable, powder-free nitrile gloves to reduce cross-contamination. Sample collection was preceded by low-flow purging using a peristaltic pump, a bladder pump, or downhole centrifugal pump (depending on depth to groundwater) that limited drawdown within the well. Field parameters were collected using a calibrated multi-parameter meter positioned within a flow-through cell. Field parameters included pH, temperature, specific conductance, dissolved oxygen, and oxidation reduction potential.

Unfiltered samples were collected directly into clean bottles provided by the analytical laboratory, with preservatives where required. Samples were placed on ice and continued to be stored in a cooler through shipment to the laboratory. Coolers were sealed with change of custody forms intact. Downhole tubing/measurement conduits, and pumping equipment were installed as dedicated equipment at each well. All non-dedicated and non-disposable equipment was decontaminated prior to use and between sampling locations. In accordance with the QAPP, MSG collected one complete field blank, duplicate samples (typically from MW-1BR), a matrix spike/matrix spike duplicate (MS/MSD) typically from MW-2B, and an equipment blank from the bladder pump. Copies of the groundwater field sheets are provided in Appendix B.

Adherence to the above sampling procedures and quality activities reduced the potential for contamination and allowed for the collection of representative groundwater samples. The groundwater collection and analysis met quality standards for regulatory compliance and characterization uses.

3.4 Review of Historical Information

Review of historical surface water and groundwater data collected by WPC and/or third-party consultants prior to July 2024, as well as additional data collected contemporaneously to the baseline data collection efforts, have been reviewed to provide supplemental framework for assessing the baseline monitoring results. The additional surface and groundwater information have been collected for a variety of purposes from several sources. Review of the supplemental surface water and groundwater hydrology information are provided in the following sections.

3.4.1 Review of Additional Surface Water Data

Manual stream flow readings were collected at 21 locations for one season (except for winter) on approximately a quarterly basis between October 2014 through October 2015. Results are shown in Table I.1-1 of Appendix I and locations are shown on Figure 3-1.

Water quality samples were collected from 18 stream locations and two Lake Superior locations, for three to five events from 2014 to 2015. Samples were analyzed for total metals, various anions/cations, and miscellaneous parameters. Data are found in Table I.1-2 in Appendix I, and locations are found on Figure 3-1.

3.4.1.1 Other Surface Water Data

MFG conducted surface water sampling as part of their remedial investigation (MFG, 1999). The constituents available from the additional data sources are similar to the baseline parameter list, including field and general chemistry parameters, as well as total and/or dissolved metals. Results from these events are summarized in Table I.1-3 in Appendix I, and the locations are shown on Figure 3-1.

Various ponded surface water sampling was performed by MSG in their Phase II Environmental Site Assessment, completed in December 2020 (Mannik & Smith Group, 2020). Results from these and miscellaneous more recent events (but pre-July 2024) are summarized in Table I.1-3 in Appendix I, and the locations are shown on Figure 3-1.

Surface water from Bedell Pond was sampled between October 2006 and April 2026. Samples were analyzed for total and dissolved copper, hardness, chloride, pH, low-level mercury, dissolved calcium, total magnesium, total dissolved solids (TDS), and total suspended solids (TSS). Results are found in Appendix Table I.1-4 (pre-July 2024) and Table I.1-4a (post-July 2024) of Appendix I, and the sampling location is found on Figure 3-1.

A Biotic Ligand Model (BLM) surface water sample was collected in Perch Creek, just downstream of the Perch Outfall (001A) (Note: the Perch Outfall 001A is found on Figure 3-1 and can be used to approximate the location of the BLM sample; the exact coordinates could not be found at the drafting of this Baseline Report). Samples were collected monthly between January 2021 and present day, and analyzed for dissolved organic carbon (DOC), dissolved calcium, dissolved sodium, chloride, pH, dissolved magnesium, dissolved potassium, temperature, alkalinity (as $CaCO_3$), and sulfate. Results are found in Table I.1-5 (pre-July 2024) and Table I.1-5a (post-July 2024) of Appendix I.

A culvert that crosses under the northern perimeter road and allows discharge from the NP2 spillway to flow into the stilling ponds was sampled approximately monthly from January 2006 through present day for TSS, chloride, and total and dissolved copper. Results are found in Table I.1-6 (pre-July 2024) and Table I.1-6a (post-July 2024) of Appendix I, and the sampling location is found on Figure 3-1.

Discharge sampling was conducted at the Perch Creek Outfall (001A) on at least a weekly basis from January 1998 through present day (this sampling location is regulated under NPDES Permit MI0006114). Samples were analyzed for TDS, TSS, total organic carbon (TOC), sulfate, chloride, temperature, conductivity, pH, hardness, and several dissolved and total metals. The sampling frequency for each parameter is in accordance with the NPDES permit. Results are found in Tables I.1-7 (pre-July 2024) and Table I.1-7a (post-July 2024) of Appendix I, and the sampling location is found on Figure 3-1.

The Perch Creek discharge is a regulated discharge under NPDES Permit Number MI0006114. Discharge through the weir and flume and into Perch Creek has been recorded from 1998

through present-day. In this Baseline Report, data are included on a 30-minute sampling basis from December 31, 2023, through April 6, 2025, (which is the endpoint of the data provided for this Baseline Report; discharges are ongoing). The flume is the default measuring point, but the weir should be used for flows under 2.2 million gallons per day (MGD) (4.08 cfs) due to better accuracy at the lower rates. Discharge locations are shown on Figure 3-1, and rates are plotted on Appendix Figure I.1-1 in Appendix I. Note that the flow spike on August 9, 2024, was due to drawdown of an upstream pond for maintenance. The flume and weir were not functional from mid-August to mid-November, during which water was pumped with a sump pump and discharged rates were estimated.

Portal Creek was sampled once in both 2011 and 2013, and then approximately monthly between 2014 and present day. Samples were analyzed for TDS, TSS, DOC, sulfate, hardness, chloride, dissolved calcium, dissolved magnesium, pH, and total and dissolved copper. Results are found in Table I.1-8 (pre-July 2024) and Table I.1-8a (post-July 2024) of Appendix I, and the sampling location is found on Figure 3-1.

A South Dam surface water sample was collected approximately monthly between January 2006 and present day and was analyzed for TSS, chloride, and total and dissolved copper. Results are found in Table I.1-9 (pre-July 2024) and Table I.1-9a (post-July 2024) of Appendix I, and the sampling location is found on Figure 3-1.

A Subterra Underground discharge sample was collected approximately weekly between October 2012 and March 2024 (when discharge is occurring), and analyzed for TDS, TSS, sulfate, chloride, pH, hardness, and several dissolved and total metals. Results are found in Table I.1-10 of Appendix I, and the sampling location is found on Figure 3-1.

A NP1 surface water sample (from the spillway culvert in the northeast corner of the north berm) was collected approximately monthly between January 2006 and present day and was analyzed for TSS, chloride, and total and dissolved copper. Results are found in Table I.1-11 (pre-July 2024) and Table I.1-11a (post-July 2024) of Appendix I, and the sampling location is found on Figure 3-3.

A NP2 surface water sample (from the spillway through the berm) was collected approximately monthly between January 2006 and present day and was analyzed for TSS, chloride, and total and dissolved copper. Results are found in Table I.1-12 (pre-July 2024) and Table I.1-12a (post-July 2024) of Appendix I, and the sampling location is found on Figure 3-3.

3.4.2 Review of Additional Groundwater Monitoring Data

Review of supplemental groundwater data was completed to complement the assessment of baseline groundwater data. For example, nearly three decades of groundwater levels were available for many of the monitoring wells. The historical and baseline groundwater level monitoring datasets are tabulated and plotted in Appendix F. In addition, groundwater quality data were available for sampling that has occurred on site over the past 10 to 20 years. While monitoring has been conducted for various reasons, these data are valuable for comparison purposes. Graphical box-and-whisker plots have been plotted to visually summarize the distribution of the composite baseline and supplemental groundwater quality monitoring dataset (Appendix I-2). These plots illustrate the range, spread, symmetry, and potential outliers of the composite dataset. The groundwater level and quality monitoring datasets provide

valuable insight for assessing typical and ranges of constituent concentrations, as well as seasonal and potential long-term temporal trends.

Data sources include historical sampling efforts from the 1990s as reported in the 1999 Remedial Investigation (RI) Report (MFG, 1999), semiannual groundwater sampling conducted between 2008 and 2023 as part of the Remedial Action Plan, as well as other miscellaneous data sources. The constituents available from the additional data sources were typically similar to the baseline parameter list, including general chemistry parameters and metals.

4. Surface Water Characterization – Data Analysis and Discussion

4.1 Streams

Surface water flow, stage, and water quality data were collected to evaluate seasonal variations and quantify local hydrology variations and contribution of groundwater to baseflow across the Project area. The surface water monitoring consisted of periodic manual measurements from 21 distinct locations that provided a broad spatial snapshot of flow conditions, which were complemented by continuous monitoring at five dedicated stations for high-resolution temporal analysis. This approach allowed for a robust assessment of hydrological patterns and facilitates the estimation of sustained flow contributions from subsurface sources to develop a baseline understanding local stream hydrology. The data analysis and discussions of the surface water hydrology are provided below.

4.1.1 Flow

4.1.1.1 Manual Flow Monitoring

Flow data from periodic manual monitoring is shown in Table I.1-1 of Appendix I for historical data, and in Table 4-1 for baseline data (July 2024 and after). Flows were recorded at one location in 2005, at 17 locations over four events between October 2014 and October 2015, and up to nine times (depending on the 17 locations) during the baseline monitoring events conducted between July 2024 and May 2026.

Flows range from 0 cfs at many locations to a high of 40.5 cfs at MLR-02. In general, flows are higher in spring and lower throughout the year, but several higher flows were recorded in late fall due to larger storm events. All locations showed a period (usually in the late summer) of either dry, negligible, or negative flow conditions. Negative flow values can occur due to wind, eddies, turbulence, interferences, or slight inaccuracies in equipment calibration. Field forms reviewed for the baseline monitoring (Appendix B-1) indicated wind as a likely reason for negative flows. However, some field reports including the historical data did not provide an explanation.

4.1.1.2 Continuous Flow Monitoring

Continuous stream flow data was collected from five locations in 2025 between early May and mid-August. Data were not collected in late summer and fall 2025 due to a mechanical issue (battery failure), and the units were removed before the winter freeze-up. It is anticipated that the units would be re-installed in 2026 (as soon as safe access is allowed) to provide a more robust dataset.

The continuous flow meter data from CBR-01, CBR-02, MLR-01, MLR-03, and PNC-04 are shown on Figures 3-5 through 3-9, respectively. The dark blue line represents streamflow in cfs, while the light gray line shows precipitation in inches. Flows were recorded from early May to mid-August 2025 (when they lost power due to low batteries), except for at MLR-03 which ran through early July. The graphs also show daily precipitation depths, as previously discussed.

At CBR-01 (upstream on the Cranberry River), flow generally ranges from 0 to 100 cfs, with multiple peaks between 40 to 90 cfs and a maximum of approximately 100 cfs (Figure 3-5). Several flow spikes align closely with precipitation events, suggesting a direct hydrologic response of the stream to rainfall, typical of surface runoff driven stream flow peaks. Generally,

the peak flows appear flashy and recede fairly quickly, but a number of peak flows in July take between 3 to 4 days to recede and return to background. This indicates a possible slow release of water from wetlands within the watershed. In general, it appears as though a precipitation depth of approximately one-quarter inch is needed to see a corresponding and noticeable increase in flow. While generally flows were higher in spring and receded somewhat throughout the year, a strong seasonal component to the flow system was not observed over the period of record. Flows were shown to be negligible for short periods throughout the summer.

At monitoring location CBR-02, situated downstream on the Cranberry River, the plotted flow values (Figure 3-6) likely under-represent true discharge conditions. Due to elevated water levels and associated safety constraints during the survey period, only approximately half of the channel cross-section could be directly measured. To complete the discharge estimate, hydraulic characteristics from the surveyed portion were extrapolated to the unmeasured half of the channel. This approach is consistent with standard field practice under constrained conditions, but it introduces uncertainty into the absolute magnitude of the calculated flows.

Given this limitation, the reported flows should be interpreted as conservative estimates, with actual discharges expected to be somewhat higher than shown. Even without adjustment, the maximum recorded flow at this site is approximately 92 cfs, while typical flows generally fall within the 0-10 cfs range. The hydrograph exhibits a characteristic “flashy” response, with sharp, short-duration peaks followed by rapid recession to baseline conditions—behavior that is hydrologically plausible for this watershed and remains evident despite the measurement constraints.

This interpretation remains technically defensible because the relative timing, pattern, and hydrologic response characteristics are unaffected by the partial-survey limitation; only the absolute magnitudes may be biased low. The dataset therefore provides reliable insight into watershed behavior while transparently acknowledging the uncertainty in peak flow quantification.

The unit showed both short (hours) and long (days) durations of zero flow. It is likely that the short durations (a few hours or less) are due to equipment issues; the longer durations (a few hours or more) may be due to equipment issues to some extent (especially if book-ended by higher flow values) but are more likely indicative of site conditions. These observations underscore the difficulty in quantifying low baseflows. CBR-02 does not exhibit a noticeable (semi-quantitative) correlation between precipitation and flow, with some higher precipitation depths showing relatively minor flow increases.

At MLR-01 (upstream on Mineral River), flow generally ranged between 1 to 10 cfs, with a few peaks of between 10 to 30 cfs and a maximum of 80 cfs. The unit showed both short (a few hours or less) and long (a few hours or more) durations of zero flow. It is likely that the short durations are due to equipment issues; the longer durations may be due to equipment issues to some extent (especially if book-ended by higher flow values) but are more likely indicative of site conditions. These observations again underscore the difficulty in quantifying low baseflows.

This location showed fewer peaks than the other locations and a more stable record overall. When a flow increase was observed, the recessions were slow, with some instance taking multiple days to return to background (this may be influenced by beaver dam activity in the

area). In general, it appears as though a precipitation depth of approximately three-quarters of an inch is needed to see a corresponding and noticeable increase in flow.

At MLR-03 (downstream on Mineral River), flows generally ranged between 2 to 30 cfs, with multiple peaks over 30 cfs and a maximum of approximately 190 cfs during snow melt. The peaks recede fairly quickly except for the snow melt-induced recession and one event each in June and July. This flow record appears to be quite noisy, with a near-constant minor increase and then decrease in flow. In general, it appears as though a precipitation depth of approximately one-quarter to one-half inch is needed to see a corresponding and noticeable increase in flow.

At PNC-04 (downstream on Pine Creek), flows generally ranged from between 0.5 to 6 cfs, with a maximum of 11.5 cfs. Except for a few peaks, the record is fairly stable, and peaks recede fairly quickly. The unit showed both short (a few hours or less) and long (a few hours or more) durations of zero flow. It is likely that the short durations are due to equipment issues; the longer durations may be due to equipment issues to some extent (especially if book-ended by higher flow values) but are more likely indicative of site conditions. These observations again underscore the difficulty quantifying low baseflows. In general, the location is responsive to precipitation, with a precipitation depth of approximately one-half inch needed to see a corresponding and noticeable increase in flow.

4.1.1.3 Seasonality

The continuous flow dataset collected to date is from approximately early May through mid-August of 2025. As such, an analysis for seasonal flow effects could not be fully assessed. Within the time period where data exists, only location MLR-03 shows a general trend of higher flows in early May followed by decreasing flows through early July (with the exception of a few brief increases due to larger precipitation events).

The manual flow dataset provides flows in all seasons (albeit with a much-reduced sampling frequency) and therefore allows for a limited analysis of seasonal effects. Of the 17 locations (PRC-03 was omitted due to only one monitoring event) with flow recorded across all seasons (but not all months), 13 showed the highest flow events to occur in spring (taken to be March through May). Three locations showed the highest events to occur in winter (taken to be December through February), and one showed the highest flow event to occur in summer (July). This analysis shows generally higher flows in the spring, as expected due to snowmelt.

4.1.1.4 Baseflow

Baseflows were estimated by evaluating flow conditions observed during extended periods of zero or negligible precipitation (when stream flow is likely to be comprised of mostly groundwater contributions). The baseflow estimates presented here are derived from continuous streamflow measurements collected between May and August. While this period does not encompass a full water year, the available data still provide meaningful insight into late-spring and summer hydrologic conditions. These months, especially the summer months, typically represent the portion of the year when evapotranspiration is highest, groundwater contributions are seasonally reduced, and baseflow conditions are often at or near their annual minimum. As such, the observed flows are expected to reflect the lower bound of seasonal baseflow behavior.

However, because the dataset does not include fall recharge, winter low-flow conditions, or early spring snowmelt or groundwater recovery, it should not be interpreted as representative of full annual or seasonal baseflow variability. The results should be viewed as preliminary and limited to the specific hydrologic window captured by the monitoring period. To fully characterize baseflow conditions and seasonal patterns, continued monitoring through at least one complete water year is recommended. Ongoing data collection will allow refinement of these preliminary estimates and support a more comprehensive assessment of long-term hydrologic behavior.

Along the Cranberry River at CBR-01, flows were shown to be at or near zero for short periods throughout the summer during periods of zero precipitation, and to oscillate between 0 to 1 cfs. Therefore, baseflow is estimated to be approximately 0.5 cfs. Approximately 7.5 river miles downstream at CBR-02, minimum flows were maintained at approximately 0 to 2 cfs during periods of no precipitation, and baseline flow is estimated to be approximately 1.0 cfs. Therefore, a groundwater contribution of less than 1.0 cfs is estimated to occur between CBR-01 and CBR-02. This equates to about 1 gpm per 100 feet of stream channel.

At MLR-01, minimum flows during periods of no precipitation appear to be between approximately 0 to 1.6 cfs. Therefore, baseflow is estimated to be approximately 0.8 cfs. Approximately eight river miles downstream at MLR-03, minimum flows during periods of no precipitation ranged from between 1.5 to 2.5 cfs (although it should be noted that the equipment failure in early July prevented analysis of flows during a long stretch of no precipitation in early to mid-August). Given the period of record available, baseline flow is estimated to be approximately 2 cfs. Therefore, a groundwater contribution of slightly more than 1.0 cfs is expected to occur between MLR-01 and MLR-03, which also equates to about 1 gpm per 100 feet of stream channel.

At PNC-04, minimum flows during periods of no precipitation ranged from between 0.25 to 0.75 cfs. Since suspected mechanical issues may have affected flow readings during periods of extended low precipitation in early to mid-August (when low flow readings would be expected), it is estimated that baseflow would be near the low end of the range above (i.e., baseflow is estimated to be approximately 0.25 to 0.5 cfs).

4.1.2 Stage

Manual staff gage readings taken from August 2024 through April 2026 are shown on Figure 3-4. Overall, water depths were a foot or less, but select locations and dates showed depths to be between 1 to 2 feet. The highest recorded depth of almost 4 feet occurred at CBR-02 in late October 2024 and again in March 2025.

In general, the 13 locations show water depths to be lowest in summer, increasing in the fall, and highest in the early spring. While the absence of year-round measurements prevents a complete seasonal assessment, the available data still capture the dominant hydrologic trends and support the interpretation of stream conditions.

4.1.3 Surface Water Quality – Streams and Lake Superior

Part 632 baseline water quality sampling from streams and Lake Superior was conducted on a roughly quarterly basis from July 2024 through March 2026 at 22 monitoring locations including

two Lake Superior sites, as summarized in Table 3-1. Stream water quality sampling was conducted to establish a baseline dataset and to evaluate natural variability and seasonal trends.

The primary constituents included in the baseline dataset included field parameters (e.g., pH, specific conductance, dissolved oxygen, redox potential, temperature, turbidity), total and dissolved metals (Ag, As, Ba, Be, Cd, Cr, Co, Cu, Fe, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, etc.), and general chemistry parameters, as well as primary cation and anions, including: alkalinity/ bicarbonate alkalinity, chloride, hardness, nitrate/nitrite, sulfate, TDS, TOC, etc. Baseline surface water sample results are summarized in Table 4-2 for the stream and Lake Superior monitoring locations illustrated on Figure 3-1. Historical sample results are summarized on Table I.1-2 of Appendix I. Locations of historical surface water monitoring locations that provide supplemental information are illustrated on Figure 3-3.

Table 4-2 includes baseline summary statistics for each stream (and Lake Superior) sampled. The following is a summary of overall observations as well as specific observations at a few select monitoring locations:

- At least eight sampling events were conducted at each location.
- The percentage of non-detect values varied widely between 0 to 100% at each location.
- Average and standard deviation values varied widely depending on parameter and location.
- No apparent temporal or seasonal trends were observed for individual analytical parameters when evaluated at a given monitoring location.
- Similarly, no systematic pattern was evident along the flow paths of individual streams; water quality did not vary in a consistent manner from upstream to downstream.
- Mineral River: Monitoring location MLR-02 on the Mineral River contained higher concentrations of several analytical parameters than at other monitoring locations (although not for every parameter). This may be tied to the higher levels of these analytical parameters documented at the upstream (background) location on the Mineral River (MLR-01).
- Perch Creek: Monitoring locations PRC-01 and PRC-02, on the Perch Creek and downstream of the tailings facility, showed higher levels of TDS than observed elsewhere across the site.

4.1.4 Surface Water Quality – Ponds and Non-Flowing Water Bodies

Additional baseline water quality sample results were collected from six ponded surface water locations (BNC-01, BNW-01, SBD-01, SBW-01, TBN-01, and TBS-01) between July 2024 and May 2026, as summarized in Table 4-3. Basic sampling results statistics are found in Table 4-3, and are summarized as follows:

- At least eight sampling events were conducted at each location.
- The percentage of non-detect values varied widely between 0 to 100% at each location.

- Average and standard deviation values varied widely depending on parameter and location.
- No obvious seasonal trends were observed.

4.1.5 Additional Surface Water Quality Data Used for Characterization

This section summarizes additional surface water quality datasets that supplement the Part 632 baseline monitoring program (Sections 4.1.3 and 4.1.4). These data include historical (pre-July 2024) and contemporaneous non-Part 632 monitoring results for both flowing (stream) and non-flowing (ponded and discharge) surface water systems. While these datasets were collected under varying objectives and methodologies, they provide additional temporal and spatial context for evaluating baseline conditions, including the range of variability, persistence of key parameters, and identification of consistent patterns in surface water quality across the Project area. These data are used to inform interpretation of baseline conditions but are not relied upon to establish regulatory baseline requirements.

Following are observations at select monitoring locations that show patterns and/or relationships: Pre-Baseline Stream Water Quality Sampling: Stream water quality samples collected prior to the establishment of baseline conditions provide supporting documentation and context to baseline conditions. Table I.1-2 of Appendix I shows results of various pre-baseline (pre-July 2024) stream surface water sampling. Sampling event dates vary widely by location and parameter, with dates ranging from July 1997 to May 2024. The dataset is extensive, and the magnitude of variability across dates, parameters, and locations is documented in Table I.1-2 of Appendix I, and on Figure 3-1. The results of analysis for petroleum compounds and pesticides at select locations were largely non-detect or observed at extremely low concentrations (and therefore not brought forward to Table I.1-2 of Appendix I).

Pre-Baseline Ponded Water Quality Sampling: Ponded water quality samples collected prior to the establishment of baseline conditions provide supporting documentation and context to baseline conditions. Table I.1-3 of Appendix I shows results of various pre-baseline (pre-July 2024) ponded surface water sampling. Sampling event dates vary widely by location and parameter, with dates ranging from July 1997 to May 2024. The dataset is comprehensive and the magnitude of variability across dates, parameters, and locations is documented in Table I.1-3 of Appendix I, and on Figure 3-1. While no discernible seasonal trends were observed, many metals concentrations were lower in 2024-2025 than during the 2014-2015 events.

Bedell Pond: Runoff water collected in the Bedell Pond was sampled prior to discharge to NP1. Surface water from Bedell Pond was sampled quarterly for select parameters between October 2006 and December 2010 and then monthly thereafter (Table 1.1-4 [pre-July 2024] and Table I.1-4a [post-July 2024] of Appendix I). Concentrations for TDS, TSS, and dissolved copper are stable over the sampling period.

BLM: Samples were collected to support a BLM model to predict the bioavailability of metals in surface water. A BLM surface water sample was collected monthly between January 2021 and April 2026. Concentrations of DOC remained relatively stable over the sampling period. Sulfate results appear to show a seasonal component, where concentrations are higher in the late

winter/early spring and then decrease the rest of the year (Table I.1-5 [pre-July 2024] and Table I.1-5a [post-July 2024] of Appendix I).

Culvert: A culvert that crosses under the northern perimeter road and allows discharge from the NP2 spillway to flow into the stilling ponds was sampled to assess discharge entering the stilling/settling ponds. Sampling occurred approximately on a monthly basis from January 2006 through present day (Table I.1-6 [pre-July 2024] and Table I.1-6a [post-July 2024] of Appendix I). Dissolved copper and TSS remained fairly steady overall but peaked during an extended period between 2013 to 2015.

Perch Creek Outfall (001): The Perch Creek Outfall (001) discharge was sampled under NPDES permit MI0006114. Continuous discharge measurements are collected every 30 minutes through the weir and flume at the Perch Creek Outfall (001) (Figure 3-1) as shown on Figure I.1-1 in Appendix I. Flows are shown for a 1.5-year period including the entire calendar year 2024 through early April 2025. Two data series are plotted on Figure I.1-1 in Appendix I, the Perch Outfall Flume (blue) and the Perch Creek Weir (orange). Note that the flume is the default measuring device, but the weir is the appropriate measuring device for flows under 2.2 MGD (4.08 cfs), since the plume measuring accuracy decreases below that threshold. The discharge values range from near zero to approximately 160 cfs, with multiple peaks throughout the monitoring period.

Flows measured through the weir/flume system generally ranged between 0 to 30 cfs, with sustained flows between 30 to 80 cfs in March and early April 2025, and a peak of over 160 cfs (which occurred at only one reading). The discharge generally showed a cyclical pattern from high to low, with a cycle lasting approximately 3 to 6 weeks.

Discharge-specific sampling required was conducted at the Perch Creek Outfall (001A) on at least a weekly basis for select parameters from January 1998 through April 2026 (Table I.1-7 [pre-July 2024] and Table I.1-7a [post-July 2024] of Appendix I). Results again show higher levels of TDS, with relatively stable readings of TDS and the other parameters throughout the record.

Portal Creek: Sampling at Portal Creek was conducted to assess water quality resulting from stormwater runoff as it is the closest stream in proximity to the historic industrial area. Portal Creek was sampled once in both 2011 and 2013, and then approximately monthly between 2014 and present day. Results are found in Table I.1-8 (pre-July 2024) and Table I.1-8a (post-July 2024) of Appendix I. Results show relatively stable trends overall for all parameters analyzed.

South Dam: South Dam surface water samples were collected to assess ponded water quality in the area. Samples were collected approximately on a monthly basis between January 2006 and present day (Table I.1-9 [pre-July 2024] and Table I.1-9a [post-July 2024] of Appendix I). Results show that TSS values remained fairly low throughout, except for a few brief spikes. Copper concentrations were higher between 2006 and 2011 and then lowered overall except for periodic brief spikes.

Subterra Underground Discharge: A Subterra Underground Discharge sample was collected to assess water quality at this discharge location. Samples were collected weekly when water was discharging between October 2012 and June 2025 (Table I.1-10 of Appendix I) (location labeled as ‘UGD_01’ on Figure 3-1). Results show consistently low TSS values, but higher and consistent

TDS values. Copper concentrations show a wide range, primarily between 1 to 100 micrograms per liter (µg/L), with numerous brief spikes reaching as high as 184 µg/L.

NP1: A surface water sample (from the spillway culvert in the northeast corner of the north berm) was collected approximately monthly between January 2006 and present day and was analyzed for TSS, chloride, and total and dissolved copper. Results are found in Table I.1-11 (pre-July 2024) and Table I.1-11a (post-July 2024) of Appendix I, and the sampling location is found on Figure 3-1.

Results show TSS fluctuate between non-detect and 160 milligrams per liter (mg/L), with most values above approximately 30 mg/L due to short-duration spikes, primarily occurring in the fall. Concentrations from early 2017 through present-day show values to be below approximately 20 mg/L. Dissolved copper concentrations ranged from approximately 10 to 120 ug/L, with most values between approximately 10 to 40 ug/L. Concentrations since early 2024 remained consistently below approximately 20 ug/L.

NP2: A surface water sample (from the spillway through the berm) was collected approximately monthly between January 2006 and present day and was analyzed for TSS, chloride, and total and dissolved copper. Results are found in Table I.1-12 (pre-July 2024) and Table I.1-12a (post-July 2024) of Appendix I, and the sampling location is found on Figure 3-1.

Results show TSS to primarily range between non-detect and approximately 30 mg/L, with a few short-duration spikes with a maximum value of 78 mg/L. Dissolved copper concentrations ranged from approximately 5 to 120 µg/L, with most values between approximately 5 to 50 µg/L.

Collectively, the supplemental datasets indicate that surface water quality within the Project area is generally stable over time, with observed variability primarily reflecting hydrologic conditions, localized influences, and sampling-specific factors rather than persistent or widespread changes in water quality. Long-term monitoring locations demonstrate consistent concentration ranges for key parameters such as TDS, TSS, and dissolved metals, with occasional short-duration fluctuations attributable to site-specific or operational conditions.

Where trends are observed, such as seasonal sulfate variability in the BLM dataset, these patterns are limited in scope and do not represent consistent site-wide behavior. Most metals concentrations at many ponded locations saw reductions in more recent events compared with historical data. Overall, the supplemental data supports the baseline monitoring results by confirming that:

- Background surface water quality conditions are generally stable across the Project area;
- Variability in water quality is location-specific and primarily influenced by hydrologic conditions rather than long-term trends; and
- No persistent or systematic temporal trends are evident across the broader dataset.

These findings provide additional context for interpreting the Part 632 baseline monitoring results and support the characterization of existing surface water conditions in the Project area.

5. Hydrogeologic Characterization - Results and Discussion

5.1 Lithologic Controls

The shallow hydrostratigraphic unit generally includes unconsolidated deposits (with thickness varying between approximately 25 to 75 feet) and the shallow fractured bedrock (typically upper portions of the bedrock). The shallow hydrostratigraphic unit is generally considered to have poor yields and poor water quality. Domestic groundwater supplies are typically obtained using increased well storage volumes through deeper wells and/or larger diameter dug wells to accommodate slow recharge (Doonan and Henrickson, 1969). Groundwater within the shallow hydrostratigraphic unit is partially confined to unconfined (SMI, 1995).

The upper unconsolidated deposits (sediments) occur throughout the Project area and typically consist of glacially or lacustrine derived red to brown, low to medium plasticity inorganic silty clay to clayey silt deposits. These materials have low permeability and have limited ability to transmit groundwater. The lower portions of the unconsolidated deposits in these areas have slightly coarser deposits consisting primarily of clayey and silty sands, with occasional silt and silty-sandy gravels.

Throughout the area of proposed underground mine workings, the unconsolidated deposit thicknesses are consistently between 20 and 40 feet (Figure 3-10). Thinner sequences of unconsolidated deposits (on the order of 10 to 20 feet) appear to occur in major stream channels, including the Big Iron and Mineral Rivers, as well as the Cranberry and Potato Rivers located west and east of the Project area, respectively. In areas where structural lows occur on the bedrock surface (Figure 3-11), the thicknesses of unconsolidated deposits (also referred to as overburden) are generally greater. This is primarily observed along the Big Iron River west of the Project area (west of the incorporated community of White Pine).

Groundwater in shallow bedrock is transmitted predominantly by secondary permeability associated with fractures and joints. Fracture occurrence and the associated secondary permeabilities and porosities decrease rapidly with depth in bedrock. The higher fracture occurrence frequency in shallow bedrock is the result of glacial loading and unloading. As a result, the occurrence and flow of groundwater is greater in shallow bedrock as compared to deeper bedrock where glacially induced fracturing did not occur. Differentiation of groundwater flow within the various shallow bedrock lithological units was not observed.

Recharge to the shallow hydrostratigraphic unit occurs mostly by direct infiltration of precipitation (SMI, 1995). Groundwater in the shallow hydrostratigraphic unit flows from the higher topographic areas in the south to the Project area. Recharge to deep bedrock underlying the shallow hydrostratigraphic unit is extremely limited due to extremely low transmissivity which is significantly slowed due to differences in pressure, temperature, and salinity (Freeze and Cherry, 1979). Limited recharge is exhibited by upward gradients observed at upgradient monitoring well nests SMW-3SB to SMW-3, as summarized in Table 5-1 and discussed further in Section 5.2. Limited vertical intermixing may occur locally from vertical conduits such as open shafts or boreholes, but groundwater in the deep hydrostratigraphic unit is essentially hydraulically disconnected from the shallow hydrostratigraphic unit (MFG, 1999). Horizontal hydraulic gradients generally match the gentle sloping topography and bedrock surface toward the lake (Table 5-2).

Groundwater discharge from the shallow hydrostratigraphic unit primarily occurs at the Lake Superior shoreline. Lesser volumes manifest as baseflow to gaining rivers and streams, to wetlands, or lost to the atmosphere through evapotranspiration from the upper portion of the unconsolidated deposits, albeit at limited quantities. Groundwater discharge from deep bedrock is suggested by relatively high chloride concentrations in bedrock at depths greater than 75 feet at various locations near the Lake Superior shoreline (Doonan and Henrickson, 1969).

5.2 Groundwater Levels

Baseline groundwater monitoring was conducted at 29 monitoring wells that were installed in either the unconsolidated deposits, shallow bedrock, tailings, or across the overburden/bedrock interface. Baseline groundwater monitoring locations are illustrated on Figure 3-12. Including historical and supplemental data, Project groundwater monitoring data includes groundwater levels from a total of 59 monitoring wells, as summarized in Appendix F-1 and illustrated on Figures 5-1A and 5-1B which show subregional and local areas, respectively.

Monitoring wells are installed at various depths, from 14 ft bgs (MW-3B) in shallow unconsolidated deposits to up to 140 ft bgs (SMW-3SB) bedrock wells. Depth to groundwater in shallow wells is typically very shallow, especially in lowland areas, where many wells completed within the unconsolidated deposits have water surface (water table) within 5 to 10 ft bgs. One shallow overburden well MW-36 is positioned in a lower-lying topographic area where artesian conditions are observed. In contrast, wells completed in upland areas (e.g., hilltops or thicker clay zones) indicate deeper depths to groundwater. In these occurrences, the first water encountered is typically at or near the top of bedrock, which can be more than 50 ft bgs. Overall, the water table (or the potentiometric surface, where confined conditions exist) of the shallow hydrostratigraphic unit mimics the gentle topography that slopes gradually northward toward Lake Superior. The area hydrogeologic conditions are illustrated in cross-sectional views displayed on Figures 5-2, 5-3, 5-4, and 5-5. The cross-section locations are depicted on Figures 5-1A and 5-1B.

Groundwater flow in the shallow system is predominantly to the north/northwest, eventually discharging to Lake Superior or to lower reaches of streams that reach the lake. Minor quantities of shallow groundwater also discharge locally to wetlands and springs on hillsides. A potentiometric surface map using the March 2025 groundwater level monitoring data is illustrated on Figure 5-6.

In cases where monitoring wells are screened across the shallow bedrock/overburden interface, their composite heads are generally continuous such that no large offsets in head are observed between overburden and shallow bedrock. Excluding a few exceptions, this indicates that they function as one hydrostratigraphic unit and therefore a continuous flow system across many locations. Local exceptions, for example, are caused by clay deposition within the unconsolidated deposits leading to the formation of locally perched groundwater causing much higher groundwater levels than bedrock wells positioned nearby. Phreatic levels are typically maintained at 10 to 15 feet above bedrock surface. Only a few exceptions were noted that either have phreatic levels within the same range as the bedrock elevation as the case of wells MW-36 and MW-41. Monitoring wells MW-36 and MW-41 are among the four monitoring wells along with shallow bedrock wells MW-5SB and MW-43SB that indicate artesian conditions, as summarized in Table 5-3. In addition, several core holes, including WPC-585, WPC-586, WPC-587, WPC-588, and WPC-598 were observed to be flowing after drilling was completed.

Depth to bedrock at monitoring wells MW-36 (2 feet) and MW-41 (10 feet) indicated thinner veneer of unconsolidated deposits. No shallow hydrostratigraphic monitoring wells appear to be within the influence of active dewatering of historical underground mine workings.

5.2.1 Hydraulic Gradients

5.2.1.1 Vertical Hydraulic Gradients

Eight monitoring well pairs were compared so groundwater heads could be assessed across different lithostratigraphic units. The monitoring well pairs represent the well clusters that were in closest proximity to one another as summarized in Table 5-1. The eight well pairs represent head differences across three lithostratigraphic units in five different areas of the Project area, as summarized on the following matrix:

Monitoring Well Pair	Representative Lithostratigraphic Units		Location
MW-1A-R and MW-1B-R	Unconsolidated Deposits	Shallow Bedrock	Northwest Corner of Tailings
MW-2B and MW-2A	Unconsolidated Deposits	Shallow Bedrock	North-Central Project Area
MW-2A and MW-2SB	Unconsolidated Deposits	Shallow Bedrock	North-Central Project Area
MW-3B and MW-3A	Unconsolidated Deposits	Shallow Bedrock	North-Central Project Area
MW-5A and MW-5SB	Unconsolidated Deposits	Shallow Bedrock	Northeast Corner of Tailings
SMW-1 and SMW-1SB	Unconsolidated Deposits	Shallow Bedrock	West-Central Project Area
SMW-1 and BMW-1	Unconsolidated Deposits	Deep Bedrock	West-Central Project Area
SMW-3 and SMW-3SB	Unconsolidated Deposits	Shallow Bedrock	Upgradient of Project Area

Groundwater monitoring results for each monitoring well pair, along with direction and magnitude of vertical gradients are summarized in Table 5-1. Note that matching groundwater level monitoring data was limited at some paired locations due to lack of overlapping monitoring data. This was most evident at new shallow bedrock (SB-suffix) monitoring wells that were installed in the fourth quarter of 2024. However, at two of the new shallow bedrock wells (MW-5SB and SMW-3SB), automated monitoring devices were installed at paired locations to evaluate continuous (6-hour interval) piezometric conditions which were used to calculate vertical gradients.

Six of the eight paired monitoring wells observed downward gradients for nearly all manual monitoring events. The two well pairs listed in Table 5-1 indicated upward gradients (MW-5A/MW-5SB and SMW-3/SMW-3SB). The piezometric levels and vertical gradients of these wells are depicted on the continuous monitoring hydrographs included in Appendix F-3. Upward gradients were not estimated between monitoring wells MW-43 and MW-43SB considering MW-43SB is located approximately 5,000 feet east of MW-43SB.

Little variation was observed in the vertical flow directions across the various monitoring events considering six of the eight well nests had all their gradient observations indicating the same direction of vertical flow. The consistent flow directions indicate the consistent groundwater conditions and lack of seasonal variability. Only two nests MW-2B/MW-2B and MW-3A/MW-3B had periodically observed changes in gradient direction (from downward to upward) between monitoring events, which were each observed in less than 10% of data.

The downward gradient between wells MW-2A and MW-2SB was an order of magnitude higher than other well nests–averaging 1.6 feet per foot (ft/ft). These higher downward gradients are the result of lower groundwater elevations observed in shallow bedrock well MW-2SB, which may have not stabilized since its December 2024 installation. Water levels have been slowly increasing in elevation and the total water column height is still low (approximately 7 feet). The groundwater heads at MW-2SB are about 80 feet lower than the similarly positioned shallow bedrock well MW-5SB located 800 feet laterally to the west. The slow water level recovery indicates that well MW-2SB may be screened across a section of bedrock that has low hydraulic conductivity (water column height insufficient to conduct slug testing and verify) and inferred to be hydraulically disconnected from the fracture network in the shallow bedrock hydrostratigraphic unit.

The hydraulic separation of the shallow bedrock from deeper portions of bedrock is demonstrated by the upward gradients observed in well nest SMW-3/SMW-3SB. Despite being screened nearly 70 feet lower, the shallow bedrock well SMW-3SB has groundwater heads that are about 3.5 feet higher than its paired overburden well SMW-3. This is counterintuitive considering this well nest has over 600 feet of vertical relief from Lake Superior and is positioned sufficiently upgradient from the Project area. Based on available information, the area would conceptually be characterized as an area of recharge and therefore should have downward gradients from the unconsolidated deposits to shallow bedrock. However, since the opposite is being observed, it is concluded that lower hydraulic conductivity of deeper bedrock is limiting downward flow.

5.2.1.2 Horizontal Hydraulic Gradients

Horizontal gradients were assessed at seven monitoring well pairs positioned along flow paths downgradient from NP2 evaluate the magnitude of horizontal gradients and temporal/seasonal changes within the available dataset (Table 5-2). Five of the well pairs have both wells screened in the unconsolidated deposits, while two of the pairs have wells screened in shallow bedrock, as summarized below:

Hydrogeologic Unit	Paired Monitoring Wells
Unconsolidated Deposits	MW-1A-R to MW-35
	MW-3A to MW-37
	MW-3B to MW-37
	MW-10 to MW-37
	MW-18 to SMW-1
Shallow Bedrock	MW-36 to MW-41
	MW-42 to MW-38

The evaluation period was primarily from 2006 through the end of 2024, with additional data included from single monitoring events in both 1997 and in 2025. Monitoring events typically aligned (i.e., water levels at the paired wells were measured within a few days period, as summarized in Appendix F). Assessment of well pairs were limited to this area based on narrowing down available data that had wells within the same hydrogeologic unit that were parallel to groundwater flow and had sufficient data to assess seasonal variations. Several other paired monitoring well locations were considered on west side of the tailings but were not deemed appropriate because of potential influence from stream channels. Monitoring well locations east of the existing tailings have limited data.

Overall, horizontal gradients averaged about 0.007 ft/ft in unconsolidated deposits and 0.012 ft/ft in shallow bedrock. Horizontal gradients were observed to range from 0.004 to 0.013 ft/ft in unconsolidated deposits and 0.005 to 0.016 ft/ft in shallow bedrock. While the horizontal gradients generally matched the gentle sloping topography toward the lake, season variations were evident as discussed in Section 5.2.2.

5.2.2 Seasonality

Seasonal variations are observed within the groundwater level monitoring data but are more clearly observed within horizontal gradient patterns. Groundwater elevations are typically observed to be highest during the spring (May and June) monitoring events and lowest in August. Elevations recorded in October were also observed to have low levels, but less frequently. However, it is important to note that evaluation of the seasonal groundwater fluctuations is limited to the available dataset. Nearly 80% of all available monitoring data were collected in June, August, and October. While these monitoring periods had similar collection frequency rates, winter season water levels are under-represented in the historical dataset due to difficulty accessing the wells (although recent baseline data have been collected year-round). Recent groundwater monitoring data are summarized in Appendix F.

Six out of the seven monitoring wells that had the greatest degree of fluctuations (or highest standard deviations) and had more than 10 observations (i.e., wells MW-41, MW-38, MW-37, MW-5, MW-19R, and MW-3A/3B) are located north of NP2. The lone exception is monitoring well MW-R4, which is located between two tributaries of the Mineral River west of the NP1.

Horizontal hydraulic gradients showed very consistent seasonal variations. Groundwater level measurements taken in October were consistently observed to have the highest gradients, whereas the groundwater level data from June showed the lowest horizontal gradients. Monitoring events conducted in July and August were observed to be within the range between the June and October events. Horizontal gradient fluctuations were consistently observed regardless if the wells were completed in overburden or within shallow bedrock. Horizontal gradients were consistently observed to be lower in spring and higher in fall. The seasonal variations were more pronounced in shallow bedrock versus in the unconsolidated deposits. This is suspected to be a function of the lower storage capacity of the fractured bedrock. Vertical gradients do not appear as strongly influenced by seasonal groundwater level fluctuations as horizontal gradients were observed to be.

5.3 Hydraulic Testing Results

The ability of the unconsolidated deposits and bedrock to transmit water has been quantified through hydraulic conductivity testing. Multiple testing techniques were used, while only slug tests were performed in unconsolidated wells, a combination of slug tests, discrete interval pumping tests, and packer tests were conducted in bedrock to quantify hydraulic conductivities and transmissivities. Historical slug test-based estimates of hydraulic conductivities are summarized in Table 5-4A. Recent slug testing was conducted at 21 well locations in 2024 and another five well locations in 2025 (Table 5-4B). A summary of hydraulic conductivities and transmissivities based on slug tests conducted by Foth in 2024 and 2025 are provided in Table 5-4B. These results are listed with their respective screen midpoints on Table 5-4C. For consistency (as noted in Table 5-4C), existing monitoring wells that were re-tested in 2024 and 2025 display the superseded results from recent testing. The slug test results summarized on Table 5-4C consistently indicate hydraulic conductivities lower than 5.0e-04 centimeters per second (cm/s). The mean value for all tests conducted in the unconsolidated deposits and shallow bedrock was 4.0e-05 cm/s.

Additionally, HpL and discrete interval packer testing was conducted at nine exploratory boreholes during the 2024 exploration and testing program. HpL tests completed in bedrock that are less than 200 lineal feet downhole are listed in Table 5-5. Shallow packer testing results are listed in Table 5-6 for T-4 Fault testing and Table 5-7 for 2024 testing, respectively. The mean value of shallow bedrock testing was 1.8e-04 cm/s for HpL tests and 2.4e-05 cm/s for recent packer tests. Comprehensive bedrock hydraulic conductivity testing results and analyses are provided in a separate report (Foth, 2026).

The hydraulic conductivity testing results from the various testing methods are summarized in Table 5-8. Testing results consistently showed that hydraulic conductivities are low overall. Specifically, the mean value of all tests conducted in the shallow hydrostratigraphic unit (inclusive of overburden wells and shallow bedrock wells installed less than 200 ft bgs) was 6.8e-05 cm/s or approximately 0.2 feet per day (ft/day). This result is consistent with hydraulic conductivities estimated by SMI (1995). SMI (1995) evaluated drawdown data across 40 domestic wells completed within the shallow hydrostratigraphic unit in the region of the historic WPM and indicated a mean hydraulic conductivity of 0.2 ft/day.

5.3.1 Unconsolidated Deposits

Slug tests were performed at 17 overburden well locations, which included 12 wells recently tested (including those that were retested) in 2024 and 2025. These tests yielded hydraulic conductivity values that ranged from 0.02 to 0.9 ft/day with a geometric mean of 0.1 ft/day. These correspond to $5.4e^{-6}$ to $3.3e^{-4}$ cm/s, with a geometric mean of $3.5e^{-5}$ cm/s. Overall, the hydraulic conductivity of the unconsolidated deposits represent the lower tail of glacial deposit conductivities considering glacial sand and gravel drift deposits (which are not present locally) yield much higher conductivity values on the order of 1 to 100+ ft/day. The presence of shallow lacustrine clay and silt deposits contributes to the low observed conductivity values. The low hydraulic conductivities of the unconsolidated deposits are highlighted by hydraulic test results for the shallow bedrock wells, which despite being completed within Precambrian bedrock, have slightly higher conductivities. For a typical glacial drift deposit with sand and gravels, the inverse would normally be the case since the bedrock is relatively impermeable.

Two monitoring wells (i.e., MW-30 and MW-43) are screened across the interface between the unconsolidated deposits and bedrock. Groundwater may be transmitted along this interface. However, since the conductivity testing results at these two wells are both less than mean overburden and shallow bedrock conductivity values, preferential flow along the overburden/ bedrock interface does not appear to be occurring at these locations. Note that the test results at wells MW-30 and MW-43 are included in the statistical summaries for the unconsolidated deposits because their screens extend less than 3 feet into shallow bedrock, versus wells that are screened exclusively in shallow bedrock.

5.3.2 Shallow Bedrock

Hydraulic testing of shallow bedrock (typically conducted at depths of less than 200 feet) included slug, HpL, and packer testing. Nine monitoring wells screened in shallow bedrock were slug tested in 2024-2025. These tests yielded hydraulic conductivity values that ranged from 0.01 to 4.3 ft/day, with a geometric mean of 0.19 ft/day. These correspond to conductivities of $5.1e^{-6}$ to $1.5e^{-3}$ cm/s, with a mean of $6.7e^{-5}$ cm/s. As a result, the shallow bedrock slug testing indicated that shallow bedrock had slightly higher hydraulic conductivities (in range and mean) than the unconsolidated deposits. Additionally, the shallow bedrock hydraulic conductivity results were significantly higher than conductivity testing conducted in deeper (>200 feet) bedrock.

HpL testing was conducted at 28 intervals in exploratory core holes that were less than 200 ft bgs (Table 5-5). The HpL results spanned a larger range than the slug tests (i.e., 0.001 to 451 ft/day) and yielded a slightly higher geometric mean of 0.51 ft/day. The HpL results correlate with a range of conductivities from $3.8e^{-7}$ to $1.6e^{-1}$ cm/s, with a mean of $1.8e^{-4}$ cm/s. Two historical packer tests were conducted in the vicinity of the T-4 Fault (SMI, 1995) at depths less than 200 ft bgs (Table 5-6). These tests indicated low hydraulic conductivities of less than 0.0024 ft/day (or $<8.3e^{-7}$ cm/s), indicating that the fault is not functioning as an enhanced permeability zone at those locations.

Finally, 11 packer tests were conducted in exposed portions of shallow bedrock boreholes during the 2024 exploration program. Nine inclined boreholes had intervals sealed that varied from 16 to 370 feet in length. Four of the intervals spanned deeper than 200 ft bgs to lineal depths between 233 feet and 370 feet. These tests were included since shallow portions of bedrock were represented. The water within the interval was then withdrawn and the groundwater level recovery within the sealed interval was measured. Five of these boreholes observed artesian conditions. The borehole packer test yielded lower conductivity results that varied from 0.001 to 0.9 ft/day with a geometric mean of 0.07 ft/day. These results correlate to a range of conductivities of $4.4e^{-7}$ to $3.2e^{-4}$ cm/s, with a mean of $2.4e^{-5}$ cm/s.

Deep bedrock testing (Foth, 2026) indicates that hydraulic conductivity values show consistent decreases in conductivity with increased depths. Open-hole HpL logging measured flow contributions at various depths in deep boreholes and found that nearly all significant inflows occurred within the upper few 100 feet. Below depths of about 500 ft bgs, many intervals had effectively no inflow. Packer tests conducted at multiple depths revealed conductivity values as low as $1e^{-9}$ to $1e^{-11}$ cm/s in the deepest tested zones. These results confirm the conceptual model of a more permeable shallow hydrostratigraphic unit underlain by an aquitard. Practically, this means groundwater in the overburden and shallow bedrock is transmitted towards discharge sinks (albeit slowly), but groundwater in deep bedrock is effectively stagnant.

5.4 Groundwater Quality Characterization

Quarterly groundwater quality sampling was initiated in July 2024 to quantify natural variations of groundwater chemistry over time and to infer groundwater flow paths such that areas of groundwater recharge and discharge can be deduced. The baseline groundwater monitoring network is illustrated on Figure 3-12. A summary of the groundwater quality results from the baseline monitoring conducted between July 2024 through June 2026 is provided in Table 5-9. Copies of the field sheets and laboratory reports are included in Appendix B-1 and B-2, respectively.

The primary constituents included in the baseline dataset include field parameters, total and dissolved metals, and general chemistry parameters, as well as primary cation and anions, as summarized in Table 3-6. Summary statistics of the groundwater monitoring data are also provided in Table 5-9. Graphical representations of the groundwater quality data are provided in Appendix H. Specifically, water quality graphs that include a Schoeller diagram and trend graphs are provided in Appendix H-1, while piper-trilinear diagrams are included in Appendix H-2. The QAPP is included in Appendix H-3 for reference. Supplemental data used to assist in the characterization of groundwater quality are summarized in Appendix I-2.

The pH of shallow groundwater is neutral to slightly alkaline, and bicarbonate alkalinity is the dominant anion. Since bicarbonate alkalinity is the dominant anion in shallow groundwater, it appears to have natural buffering capability to neutralize acids. This indicates that pH levels are stable and there is high resistance to significant changes in acidity or alkalinity when other substances are introduced. The bicarbonate is believed to be sourced from natural weathering and dissolution of carbonate minerals within the subsurface materials.

Shallow groundwater was found to be very hard (>180 mg/L, Freeze and Cherry, 1979), with measured hardness averaging 327 mg/L in overburden wells and 698 mg/L in shallow bedrock wells. The elevated hardness, which is the result of high concentrations of calcium and magnesium, is a natural process that also originates from chemical weathering and dissolution of carbonate minerals.

In general, shallow groundwater has much lower TDS than deep groundwater which is more mineralized. TDS in shallow groundwater averages about 150 mg/L with maximum concentrations less than 250 mg/L, whereas average TDS concentrations in deeper groundwater are more than two orders of magnitude higher (>15,000 mg/L) than shallow groundwater (Foth, 2026). Additionally, the median chloride concentration of the shallow hydrostratigraphic unit is about 41 mg/L, which is also a fraction of chloride concentrations in deep groundwater that vary from 500 mg/L to over 50,000 mg/L (Foth, 2026). Chloride concentrations vary significantly–most notably downward–since groundwater underlying the shallow hydrostratigraphic unit is brackish to saline.

5.4.1 Groundwater Quality Data from Additional Sources

Additional groundwater quality data have been gathered from several sources to provide supplemental framework for the baseline groundwater dataset. Supplemental data sources include historical sampling efforts from the 1990s as reported in the 1999 RI Report (MFG, 1999), semiannual groundwater sampling conducted between 2008 and 2023 as part of the Remedial Action Plan, as well as other miscellaneous data sources. The required baseline

constituents were also typically included in historical sampling events. As a result, the supplemental data sources have similar parameter lists that include field and general chemistry parameters, as well as total and dissolved metals.

A general summary of the supplemental groundwater monitoring data are statistically summarized in Appendix Table I.2-1 and sorted by percent of detection. The largest group of constituents, which include over 160 different parameters (most of which were organic compounds) had all their respective samples (100%) result in non-detections. An additional 47 parameters had more than half of their respective results below reporting limits, including 20 parameters that had more than 90% of their results below reporting limits. Field parameters, common metals along with major anions/cations, and general chemistry constituents were nearly always detected. The remaining parameters had concentrations that fluctuated above and below the reporting limit. Box plots of groundwater quality data are also provided in Appendix I-2. The box plot graphs were used to visualize the natural range and distribution of constituents and identify natural variability through evaluation of median, spread, and range of outliers based on the statistical summary of supplemental table provided in Appendix Table 1.2-2.

The 1999 RI Report (MFG, 1999) indicated that metals (such as arsenic, barium, boron, lead, lithium, manganese, mercury, and strontium, etc.) were not detected or detected only at trace levels slightly above reporting limits in the shallow hydrostratigraphic unit. No widespread contamination of any constituent or constituent group was observed (MFG, 1999). Groundwater geochemistry is influenced by natural interaction with the copper-bearing rocks since modestly elevated values of parameters like iron, manganese, chloride, and sulfate were noted (although their concentrations are within typical background ranges for Precambrian bedrock).

The Phase II Environmental Site Assessment (MSG, 2020) included analysis for petroleum compounds and volatile organic compounds (VOCs) for certain monitoring wells. These results were largely non-detect or observed at extremely low concentrations. A few wells near historical mine facilities had trace detections of hydrocarbons, but not above any actionable level. Similarly, no per- and polyfluoroalkyl substances/perfluorooctane sulfonate have been reported in site groundwater (not part of original scope, but recent checks did not find indications).

5.4.2 Groundwater Quality by Hydrostratigraphic Unit

Piper trilinear plots, which are graphical tools used to visualize the major ion chemistry of water samples, include triangular plots of cations and anions (as shown in Appendix H-2), along with a central diamond plot. The central plot is a transformation of the two triangular plots, which visualizes water chemistry in a single plot and is used to define the overall hydrochemical facies, also referred to as the “type” of water. The piper trilinear plots in Appendix H-2 have been prepared to show the relative abundance of major ions (cations and anions) in the Project area groundwater samples to identify water types and geochemical processes of various hydrogeologic units. Findings are discussed below.

5.4.2.1 Unconsolidated Deposits and Shallow Bedrock

Piper trilinear plots of groundwater monitoring data from five unconsolidated monitoring wells (MW-1A-R, MW-3A, MW-3B, SMW-1, and SMW-3) and seven shallow bedrock monitoring wells (MW-1B-R, MW-35SB, MW-36, MW-41, MW-42, SMW-1SB, and SMW-3SB) developed from

available baseline data collected within the past year are presented in Appendix H-2 to identify and compare hydrochemical facies. Individual trilinear plots for each of the monitoring wells are provided in Appendix H-2 to assist in visualization and comprehension of the groundwater quality data.

Samples from the five unconsolidated groundwater monitoring wells indicate facies that vary from Mg-HCO_3 type dominant to Na-HCO_3 type dominant (with a mixed-type in between). The Mg-HCO_3 type groundwater (as observed at wells MW-3A and MW-3B) is common and primarily indicates that the water's chemical composition is dominated by the natural dissolution of carbonate minerals within the glacial deposits (Ruhl, 1987). This water type is frequently observed in shallower, more recent recharge areas where the water has had less time to undergo complex, deeper-level geochemical evolution (e.g., ion exchange, mixing with older, more saline water) that can alter the major ion composition to other types, such as chloride type facies (Freeze and Cherry, 1979). However, other monitoring wells within the unconsolidated deposits indicate longer residence time.

The remaining overburden monitoring wells indicate Na-HCO_3 type dominant (SMW-1) or mixed Mg-HCO_3 -> Na-HCO_3 type (MW-1A-R and SMW-3) dominant. The Na-HCO_3 type groundwater from glacial till typically indicates that the water has a longer residence time and has undergone significant cation exchange processes and silicate weathering. Fresh groundwater is often a calcium or magnesium bicarbonate (Ca-HCO_3 or Mg-CO_3) type, but as flows deeper or along intermediate flow paths, it interacts with sodium-saturated clay materials within the glacial till. Calcium (Ca^{2+}) and magnesium (Mg^{2+}) ions in the water are exchanged for adsorbed sodium (Na^{+}) ions in the clay minerals, leading to an increase in Na^{+} concentration and a decrease in Ca^{2+} and Mg^{2+} (Deutsch, 1997).

The evolution from Mg-HCO_3 type water to Na-HCO_3 type requires sufficient time for these geochemical reactions to occur. Thus, Na-HCO_3 water is often found in intermediate flow zones, indicating a longer groundwater flow path and residence time compared to shallow flow systems more typical Mg-HCO_3 type groundwater (Freeze and Cherry, 1979). The process is often accompanied by the reduction of sulfate and decomposition of organic matter, which can add dissolved inorganic carbon to the water and promote the precipitation of calcite (calcium carbonate). The high bicarbonate alkalinity and higher pH characteristic of Na-HCO_3 water may also lead to calcite precipitation, further removing calcium from the solution (Fetter, 2001).

The shallow bedrock monitoring data indicates similar results, but with slightly higher relative Na and Cl concentrations. Water quality data from monitoring well MW-36 indicates a Mg-HCO_3 type facies combined with low TDS and limited sodium enrichment is consistent with minimal residence time and negligible cation exchange (Fetter, 2001). However, the remaining shallow bedrock well data indicate a mixed Mg-HCO_3 -> Na-HCO_3 type (at wells MW-1B-R, MW-41 and SMW-3SB) to Na-HCO_3 type (MW-35SB, MW-42, and SMW-1SB) dominant facies. These data provide evidence of transitional chemistry toward sodium-bicarbonate (Na-HCO3) composition in some locations and indicate hydraulic connectivity between the overburden and shallow bedrock and reflects the fracture-dominated flow in shallow bedrock where groundwater residence times are longer but still sufficiently short to preserve recharge signatures. The observed Mg-HCO3 -> Na-HCO3 transitionary trend is commonly associated with increasing groundwater residence time, intermediate flow paths, and early-stage cation exchange,

particularly in fracture-dominated bedrock aquifers where recharge-derived waters interact with mineral surfaces along fracture networks (Back, 1966; Freeze and Cherry, 1979).

5.4.2.2 Deep Bedrock

Deep groundwater sampling results are comprehensively reported and assessed in a separate report detailing the geology and hydrogeology of deep bedrock (Foth, 2026). However, to assist in the understanding of the baseline characterization, deep bedrock water quality is introduced here for further context. Deep bedrock groundwater samples were collected as part of Foth's 2024-2025 field investigation.

Samples collected from packer tested intervals between 500 and 1,000 ft bgs show high salinity. TDS results were observed to exceed 10,000 mg/L in the deepest zones, which were buoyed by high sodium and chloride concentrations that are likely residual brines from formation waters. The deep groundwater samples also have elevated concentrations of calcium and magnesium (that are believed to be from dissolution of dolomite and anhydrite in the basin) and relatively reduced conditions (sometimes detecting methane gas or showing ferrous iron). Groundwater from these deep boreholes is naturally occurring and confined. Based on the differences in water quality, it is evident that shallow potable groundwater and deep brackish groundwater have limited interaction. These differences are visualized in the Schoeller diagram provided in Appendix H-1. The Schoeller diagram offers a visual comparison of the relative concentrations of major ions (i.e., Ca, Mg, Na, Cl, SO4, HCO3) in multiple groundwater samples on logarithmic scales to display geochemical patterns of the overburden, shallow bedrock and deep bedrock sources.

The increase in solute concentrations of one to two orders of magnitude (or more) within the deep bedrock is apparent. The increases in sodium and chloride concentrations, along with the corresponding decrease in bicarbonate demonstrates the long residence time of the deep groundwater. Fresh groundwater is less dense than older, highly saline formation brine water due to the lower concentration of dissolved salts and minerals. This density difference is the primary reason the fresh groundwater sits on top of the brine. In addition, the density contrast is significant enough that potable shallow groundwater and brines do not readily mix (Barlow, 2003). This is coupled with the limited secondary porosity of the Precambrian bedrock which results in limited mixing.

5.5 Data Verification

Groundwater monitoring data are reviewed by the laboratory in a manner consistent with their internal Quality Assurance Manual (QAM). The QAM defines the QA/QC components and processes that meet regulatory expectations. Where applicable, the QA/QC checks include review of the following:

- Holding times
- Duplicate replication
- Field and/or trip blanks
- Matrix spike recovery
- Instrument calibration data

Laboratory reports, which include QA/QC evaluation results and discussion are provided in Appendix B-2.

Additionally, MSG conducted their Baseline 632 field sample collection events in accordance with the Project QAPP (Appendix H-3) to meet sampling goals and data needs to ensure reliable, usable data are collected to assist in decision-making and address Part 632 regulatory requirements. MSG confirmed that field blanks, duplicates, MS/MSD samples, and equipment blanks were all collected. Low level mercury and methylmercury samples were collected using specialized equipment and the "*clean hands, dirty hands*" procedures, which included a field blank for low level mercury analysis in each sample set.

Filtering for dissolved low level and dissolved methylmercury samples was conducted at a controlled location within WPC's office using FlipMateTM 50 and FlipMateTM 100 Filtration System 0.45 micrometer filters. A field blank for low level mercury was also collected at the filtering location. The filters were manufacturer certified for background metals to be less than 0.0005 µg/L mercury. Acid washing and low-level mercury confirmation analysis was provided by Trace Analytical Laboratories, Inc. for the Teflon, Teflon lined, and Masterflex tubing that was reused between sampling events for sample collection. Existing poly tubing encountered in many of the monitoring wells was temporarily removed, staged in plastic bags, and then reinstalled in the monitoring wells following sample collection.

The QAPP was prepared so that representative water chemistry data met permitting requirements of baseline analytical data for forecasting potential impacts and for characterizing and contextualizing any future changes on site operational monitoring. The QAPP describes the QA/QC procedures for environmental baseline data collection such that it provides representative, usable, and high-quality data to meet the data quality objectives of groundwater and surface water quality collection. In addition, data validation reviews of baseline groundwater data are in alignment with USEPA Regional Functional Guidelines which consist of review:

- Chain of custodies for sample integrity
- Holding times
- Blank analyses
- Equipment calibration
- Accuracy and precision through assessment of MS/MSD and Laboratory Control Samples

Supplemental groundwater data collected historically were assessed and are being provided as reported by CRC (and as provided in a database by WPC). Independent verification of the accuracy, completeness, or validity of supplemental information reviewed or received during this assessment was not attempted.

6. Interpretation and Conclusions

6.1 Surface Water

The Project is in a glacial lake-bed feature, the Ontonagon High Clay Plain, that is generally flat and sloping toward Lake Superior, with incised small stream channels that have low sinuosity. The surficial drainage systems across the Project site are part of the Lake Superior watershed. Several subwatersheds associated with individual streams, that are part of the regional Lake Superior Watershed, surround the Project site. These subwatersheds cover an area of approximately 90.7 square miles and are composed entirely of small streams flowing directly into Lake Superior.

Over a dozen small streams are located across the Project area flowing south to north and draining to Lake Superior. The parallel drainage pattern indicates uniform slope and fine-grained/low permeability subsurface materials. The area largely contains silt loams and clay loams, with infrequent sandy loams mixed in.

The average annual precipitation in the Project area is 33.0 inches, and the average annual runoff is approximately 16.0 inches. Continuous stream flow data plotted against precipitation data show that approximately 0.25 to 0.75 inches of precipitation is needed to show a noticeable stream flow response in most streams. Stream flow response to precipitation is flashy, with rapid hydrograph rise to peaks that are well above background, followed in most cases by rapid initial peak recession and then followed by a more gradual recession to background conditions. Flows recede to low-to-negligible conditions during periods with no precipitation, and baseflows of approximately 0.5 to 2 cfs were estimated at the five locations studied.

Surface water quality sampling has shown no apparent trends or seasonal/flow correlations to date.

In summary, the surface water baseline conditions can be characterized by the following:

- Many small, parallel streams flowing to Lake Superior.
- Low permeability of surficial soils encourage runoff over recharge.
- Rapid stream flow response to precipitation events (generally of 0.25-0.75 inches or more), due to narrow watersheds and tight soils.
- Rapid recession of the flow peak following a precipitation event (except when influenced by area beaver dam activity).
- Low baseflows with stagnant water present during long periods without precipitation.
- A robust water quality dataset from baseline data collected between July 2024 and March 2026 (as well as historical data) show minimal apparent trends or seasonality observed to date. The exceptions are a seasonal trend for sulfate at the BLM location on Perch Creek (higher concentrations in spring/early summer and lower the rest of the year), and generally lower concentrations of metals at most ponded locations in more recent years compared with historical data.

6.2 Groundwater

The groundwater system can be divided into two distinct flow systems: 1) the shallow hydrostratigraphic unit, which consists of saturated unconsolidated glacial and lacustrine deposits approximately 25 to 75 feet thick (also known as overburden) underlain by shallow fractured Precambrian bedrock that is hydraulically connected to the overburden; and 2) the lower/deep hydrostratigraphic unit. The shallow hydrostratigraphic unit is a low-yielding, low-permeability system with generally hard groundwater (i.e., elevated Ca and Mg), but lower TDS and salinity than underlying groundwater which indicates low to intermediate residence times. Locally, the shallow hydrostratigraphic unit may be suitable for individual residential use. The deep hydrostratigraphic unit contains brackish groundwater that is essentially stagnant due to the very low hydraulic conductivity of the Precambrian strata, density difference, as well as differences in pressure, temperature, and salinity (Freeze and Cherry, 1979). Discharge from the lower hydrostratigraphic unit occurs extremely slowly (sluggish flow paths, with groundwater travel times across the Project area on the order of millennia) beneath and approaching the Lake Superior shoreline. As a result, groundwater travel times are extraordinarily long, indicating that recharge entering the system today will not migrate appreciable distances for millennia. This slow transit underscores the highly inertial nature of the groundwater in the lower hydrostratigraphic unit (lack of connectivity to the shallow flow system) and the long-term stability of its flow regime. This exception of connectivity is suggested by relatively high chloride levels in groundwater at bedrock depths greater than 75 feet near the Lake Superior shore (Doonan and Henrickson, 1969).

Topographic highs on the bedrock surface strongly influence the topography of the unconsolidated deposits (Figures 3-11 and 3-12). Prominent bedrock outcropping occurs west (Porcupine Mountains) and south (Trap Range) of the Project. Structural lows of the bedrock surface occur on the west side of the tailings basins towards the Big Iron River (and beyond). The fracture frequency and density diminish with depth in the Precambrian bedrock. Deposition of unconsolidated gravels, sands, silts, and clays occurred as the ice sheet melted and receded, specifically in subglacial, glaciofluvial, and glaciolacustrine environments. The unconsolidated deposits primarily consist of clayey glacial till that have low permeability limiting the transmission of groundwater. Hydraulic conductivity tests ranged from 0.02 to 1.0 ft/day with a geometric mean of 0.1 ft/day (Table 5-4C).

Groundwater in shallow bedrock is transmitted nearly entirely through secondary fracture (joint) permeability. The higher fracture occurrence frequency in shallow bedrock is the result of glacial loading and unloading. Fracturing and secondary permeabilities and porosities decrease rapidly with depth in bedrock. Hydraulic testing in shallow bedrock indicates a geometric mean of about 0.3 ft/day, with a range of hydraulic conductivities from less than 0.001 ft/day to several feet per day in isolated fractures. The composite hydraulic conductivity of the shallow hydrostratigraphic unit (i.e., combined overburden and shallow bedrock) is approximately 0.1 ft/day (Table 5-8).

Recharge to the shallow hydrostratigraphic unit occurs mostly by direct infiltration of precipitation while lateral flux emanates from higher topographic areas from the south. Discharge from the shallow hydrostratigraphic unit primarily occurs at the Lake Superior shoreline. Lesser volumes manifest as baseflow to gaining rivers and streams or are lost to the atmosphere through evapotranspiration albeit at limited quantities.

The pH of shallow groundwater is neutral to slightly alkaline. Bicarbonate is the dominant anion (as illustrated in the trilinear diagrams in Appendix H-2), so groundwater has a natural buffering capability to neutralize acids. TDS averaged about 500 mg/L in the unconsolidated deposits and 825 mg/L in shallow bedrock wells (Table 5-9). Similarly, the average chloride concentration of the unconsolidated deposits was about 100 mg/L, with an increase to 365 mg/L observed in shallow bedrock wells. TDS and chloride concentrations vary significantly–most notably downward–with brackish to saline groundwater (with TDS concentrations exceeding 10,000 mg/L) underlying shallow groundwater. Water quality analysis indicates transitional geochemistry between Mg-HCO_3 to Na-HCO_3 type facies in overburden and shallow bedrock (Appendix H-2). These data indicate hydraulic connectivity between the overburden and shallow bedrock and reflect the fracture-dominated flow in shallow bedrock where groundwater residence times are longer but still sufficiently short to preserve recharge signatures. The observed Mg-HCO3 -> Na-HCO3 transitionary trend is commonly associated with increasing groundwater residence time, intermediate flow paths, and early-stage cation exchange, particularly in fracture-dominated bedrock aquifers where recharge-derived waters interact with mineral surfaces along fracture networks (Back, 1966; Freeze and Cherry, 1979). Deep groundwater geochemistry signatures indicate significantly higher salinity, TDS, and residence times.

In summary, the shallow groundwater system consists of low-permeability glacial deposits and fractured bedrock that transmit relatively fresh, hard water with short to intermediate residence times, discharging mainly to Lake Superior and local streams. In contrast, the deep system contains stagnant, highly saline groundwater with millennia-long residence times, minimal connection to the shallow unit, and flow controlled by the very low permeability of Precambrian bedrock.

6.3 Groundwater/Surface Water connectivity

Shallow groundwater monitoring data indicate water quality is similar to surface water when comparing several constituents, including low specific conductance (~200 to 500 microSiemens per centimeter), sulfate (typically <100 mg/L), nitrate (mostly non-detect), and very low dissolved metal concentrations. Historical streamflow studies (SMI, 1995; MFG, 1999) and recent monitoring results indicate that groundwater provides supplemental influent baseflow to local rivers and perennial streams at a rate of about 1.0 gpm per 100 feet of stream channel. However, measurable baseflows are low, not consistent, and difficult to quantify; therefore, the streams often go dry during extended periods without precipitation.

During the 1997 RI field investigation (MFG, 1999), the Mineral River was noted to be dry upstream of the Town of White Pine but observed to have some flow downstream of that location. This indicated that during certain years groundwater levels were either near the level of the Mineral River stream channel where small changes in stream gradient either allowed or prevented groundwater discharge from occurring; or the rate of groundwater discharge was low, close to or below the rate of evapotranspiration. Similar observations were made by the USGS (1985) who noted that the Mineral River was dry during late-summer measurements 3 out of the 6 years of their study period.

While historical investigations (SMI, 1995) indicated that surface water is in hydraulic connection with the shallow hydrostratigraphic unit, and that streamflow in the Iron River,

Mineral River, and other smaller perennial streams is generally increased by groundwater influent to the stream channel (although the Mineral River and smaller streams may dry up during drought periods), the hydraulic connection is poor. This is inferred from the small baseflows, low hydraulic conductivity of the unconsolidated deposits (both glacially and lacustrine derived), and limited hydraulic gradients directing flow toward incised stream channels. Rather, the dominant direction of groundwater flow is toward Lake Superior.

Based on review of the potentiometric surface maps and the topography of the incised river and stream valleys, only the Iron River appears to have an incised channel depth and sufficiently low topographic position to maintain consistent groundwater discharge conditions. Groundwater discharge for the remainder of the rivers and streams along an east-west profile across the Project area is seasonal and highly dependent on the surrounding groundwater head conditions. But regardless of groundwater levels, the low transmissivity of the unconsolidated deposits limits the flux of groundwater which results in a poor hydraulic connection between surface water and groundwater.

In summary, groundwater contributes only weakly to flow in most streams in the Project area because the shallow groundwater system which interacts with it has low transmissivity, limited hydraulic gradients directed towards streams, and often has heads near or below the level of local stream channels. As a result, many streams, especially the Mineral River, experience seasonal or drought-period drying, with only the more deeply incised Iron River maintaining consistent groundwater discharge.

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Tables

Table 2-1
Climate Summary - Ironwood, MI Station
White Pine Copper LLC

Mean Monthly Climate Data[1]		
Month	Precipitation (in)	Temperature (F)
January	1.90	11.8
February	1.56	14.3
March	2.13	25.3
April	2.62	39.5
May	3.39	52.4
June	4.11	61.9
July	3.99	66.8
August	3.70	64.5
September	3.66	56.5
October	3.16	45.2
November	2.92	30.3
December	2.24	17.4
Annual	35.3	40.3
Maximum	53.4	46.3
Minimum	17.8	21.7

Prepared By: MAN
Checked By: BDS1

Notes:

[1] Ironwood, MI - Station #USC00204104 (period 1902 - 2024)

F = Fahrenheit

in = inches

Table 2-2
Generalized Summary of Historical Exploration Programs
White Pine Copper LLC

Exploration Program	Dates	Subsurface Information
Continuous Drilling Program	1929 through early 1970s	Subsurface data used to develop 3-D Geologic Model
Feasibility Studies	1994-1995	Historical packer test and slug test hydraulic testing data
White Pine North Drilling Program	2014-2015	Subsurface data used to fill-in 3-D Geologic Model in northern section of deposit
	Winter 2022-2023	
Foth's Hydrogeologic Testing and Characterization Program	2024-2025	Hydrogeology Characterization
Geotechnical Drilling Programs	1998 and 2025	Geotechnical investigation of Tailings Embankments
Additional White Pine North Drilling Programs	Winter/Summer 2024	Subsurface data used to fill-in 3-D Geologic Model in northern section of deposit
	Winter 2026	

Prepared by: GMB
Checked by: VXT

Table 3-1
Summary of Baseline Surface Water Quality Monitoring Events
White Pine Copper LLC

Surface Water Monitoring Description	Surface Water Monitoring Station	Sampling Events	Start of Surface Water Data Range	End of Surface Water Data Range	Sample Dates									Metals (Total and Dissolved)[1]	Field and General Parameters[1]
Surface Water Stream and Lake Superior Monitoring Locations															
Argentine Creek	ARC-01	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Mar-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	ARC-02	9	July-24	May-26	Jul-24	Sep-24	Dec-24	Feb-25	May-25	Aug-25	Oct-25	Feb-26	May-26	Y	Y
	ARC-03	9	August-24	April-26	Aug-24	Sep-24	Dec-24	Mar-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Cranberry River	CBR-01	8	July-24	May-26	Jul-24	Sep-24	NS	Feb-25	May-25	Aug-25	Oct-25	Feb-26	May-26	Y	Y
	CBR-02	9	August-24	April-26	Aug-24	Oct-24	Dec-24	Mar-25	May-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Duck Creek	DKC-01	9	July-24	April-26	Jul-24	Oct-24	Dec-24	Mar-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	DKC-02	9	August-24	April-26	Jul-24	Oct-24	Dec-24	Mar-25	May-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	DKC-03	9	August-24	April-26	Jul-24	Oct-24	Dec-24	Mar-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Lake Superior	LKS-01	9	July-24	April-26	Jul-24	Oct-24	Dec-24	Mar-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	LKS-02	9	July-24	April-26	Jul-24	Oct-24	Dec-24	Mar-25	May-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Miles Creek	MLC-01	9	July-24	April-26	Jul-24	Oct-24	Dec-24	Mar-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Mineral River	MLR-01	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Mar-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	MLR-02	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Mar-25	May-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	MLR-03	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Feb-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Native Creek	NTC-01	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Feb-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Pine River	PNC-01	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Mar-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	PNC-02	8	July-24	April-26	Jul-24	Sep-24	NS	Mar-25	May-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	PNC-03	9	August-24	April-26	Aug-24	Sep-24	Dec-24	Mar-25	May-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	PNC-04	9	August-24	April-26	Aug-24	Sep-24	Dec-24	Mar-25	May-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Perch Creek	PRC-01	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Mar-25	May-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
	PRC-02	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Feb-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Patent Creek	PTC-01	9	August-24	April-26	Aug-24	Sep-24	Dec-24	Mar-25	Apr-25	Aug-25	Oct-25	Feb-26	Apr-26	Y	Y
Ponded Surface Water Monitoring Locations															
Historical ponded locations downgradient of tailings	BNC-01	9	August-24	April-26	Aug-24	Oct-24	Dec-24	Mar-25	May-25	Aug-25	Oct-25	Feb-26	April-26	Y	Y
	BNW-01	9	July-24	April-26	Jul-24	Oct-24	Dec-24	Feb-25	May-25	Aug-25	Oct-25	Feb-26	April-26	Y	Y
Historical ponded locations upgradient of tailings	SBD-01	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Feb-25	Apr-25	Aug-25	Oct-25	Feb-26	April-26	Y	Y
	SBW-01	9	July-24	April-26	Jul-24	Sep-24	Dec-24	Feb-25	Apr-25	Aug-25	Oct-25	Feb-26	April-26	Y	Y
Ponded location within tailings	TBN-01	9	July-24	April-26	Jul-24	Oct-24	Dec-24	Feb-25	May-25	Aug-25	Oct-25	Feb-26	April-26	Y	Y
	TBS-01	9	July-24	April-26	Jul-24	Oct-24	Dec-24	Feb-25	May-25	Aug-25	Oct-25	Feb-26	April-26	Y	Y

Notes:
[1] Refer to Table 3-6 for recent metal, general, and parameter constituent lists.
NS = not sampled due to being inaccessible

Prepared by: MAN
Checked by: KRM/GMB

Table 3-2
Exploration Borehole Suumary
White Pine Copper LLC

Borehole	Location[1] Northing (meters)	Location[1] Easting (meters)	Ground Surface Elevation (Ft NAVD88)	Depth (feet bgs)[2]	Notes (HpL = Hydrophysical Logging; GeoP = Downhole Geophysical Logging[3]; PT = Packer Testing; VWP = Vibrating Wire Piezometer (downhole depth in feet)
Exploration Boreholes used for Hydrophysical Testing, Packer Testing, and Vibrating Wire Piezometer Installations					
WP-583	5,182,650	308,660	853.9	2,308	HpL, GeoP, and PT (various intervals)
WP-584	5,182,538	307,706	853.5	1,683	HpL, GeoP, PT, and VWPs: VWP1 (613.5 ft), VWP2 (364 ft), VW3 (152.2 ft)
WP-585	5,184,339	307,786	808.9	2,318	HpL, GeoP, PT, and VWPs: VWP1 (720 ft), VWP2 (460 ft), VW3 (70 ft)
WP-586	5,184,319	308,318	807.4	2,506	HpL, GeoP, and PT (various intervals)
WP-587	5,183,123	313,065	809.5	2,858	HpL, GeoP, and PT (various intervals)
WP-588	5,184,178	313,698	786.3	3,305	HpL, GeoP, and PT (various intervals)
WP-592	5,184,573	311,707	767.0	3,239	HpL, GeoP, and PT (various intervals)
WP-594	5,183,303	311,804	809.1	3,009	HpL, GeoP, and PT (various intervals)
WP-598	5,184,771	309,875	777.7	3,049	HpL, GeoP, PT, and VWPs: VWP1 (650 ft), VWP2 (486.2 ft), VW3 (247.4 ft)

Prepared by: KRM2

Checked by: GMB

Statistical Summary of Available Historical Borehole Exploration Data (Total Depth; feet bgs)		
Includes WP001 through WP601C, plus DDH-5	Number:	**630**
	Minimum:	**33**
	Maximum:	**4,486**
	Average:	**1723**
	Median:	**1676**
	Standard Deviation:	**883**

Notes:

[1] Coordinate System = NAD83 UTM 16N, with exception of "BH-series" boreholes which reference estimated historic site grid coordinates.

[2] ft bgs = feet below ground surface

[3] Downhole Geophysical Logging included 3-Arm Caliper, Acoustic, and Optical logging.

Table 3-3
Monitoring Well Details
White Pine Copper LLC

Well	Monitored Unit	Date Installed	Location		Top of Casing (Collar) Elevation	Ground Surface Elevation	Depth to Bedrock (NE=not encountered)	Bedrock Elevation	Well Depth / Bottom of Borehole	Screened Interval		Screen Geology[1]	Screen Geology Comment	Casing Diameter	Area
			Northing	Easting						From	To				
			NAD83 16N	NAD83 16N	Ft NAVD88	Ft NAVD88	(ft bgs)	Ft NAVD88	(ft BGS)	(ft bgs)	(ft bgs)			(inches)	
Pat 632 Baseline Groundwater Monitoring Network															
MW-1AR (aka MW-1A-R)	Unconsolidated Deposits	8/26/2006	5,186,625.8	305,242.4	722.81	720.3	23.0	697.3	24.0	12.0	22.6	CL	clay with gravel. Brown, stiff, wet, no stain, no odor.	2	Tailings Basin Area
MW-1BR (aka MW-1B-R)	Shallow Bedrock	8/26/2006	5,186,627.4	305,240.6	721.23	719.2	23.0	696.2	30	25.5	30.0	BR	Weathered bedrock	2	Tailings Basin Area
MW-2A	Shallow Bedrock	3/17/1993	5,186,789.1	306,366.5	723.45	721.4	15.0	706.4	30	20.0	30.0	BR	Weathered bedrock (interbedded shale & sand)	3	Tailings Basin Area
MW-2B	Unconsolidated Deposits	3/17/1993	5,186,789.8	306,364.8	723.10	720.7	12.0	708.7	16	6.0	16.0	OB	Undifferentiated Glacial Till / Lakebed Sediment	3	Tailings Basin Area
MW-2SB	Shallow Bedrock	12/17/2024	5,186,787.0	306,365.6	726.08	723.7	12.0	711.7	91.7	58.9	88.9	BR	Freda Sandstone	2	Tailings Basin Area
MW-3A	Shallow Bedrock	3/17/1993	5,187,052.2	307,378.9	730.26	727.7	12.0	715.7	30	20.0	30.0	OB	Weathered bedrock (mostly shale with interbedded sand)	3	Tailings Basin Area
MW-3B	Unconsolidated Deposits	3/17/1993	5,187,052.2	307,377.5	729.13	727.3	NE	---	15	4.0	14.0	CL	silty clay	3	Tailings Basin Area
MW-5A	Unconsolidated Deposits	3/17/1993	5,186,656.9	309,855.6	717.47	715.0	10.0	705.0	30.0	20.0	30.0	OB	Undifferentiated Shallow Deposits	3	Tailings Basin Area
MW-5SB	Shallow Bedrock	9/30/2024	5,186,656.9	309,855.6	721.13	718.5	12.0	706.5	123.8	74.9	104.4	BR	Freda Sandstone	2	Northeast of Tailings
MW-10	Unconsolidated Deposits	6/26/1997	5,187,037.2	308,374.7	741.71	739.0	NE	---	20.0	10.0	20.0	SM	silty sand w/ 15-20% gravel	2	Tailings Basin Area
MW-31	Unconsolidated Deposits	7/31/1998	5,183,631.2	304,173.7	829.50	826.7	71.0	755.7	71.0	60.0	70.0	CL	silty clay w/ 20% sand and gravel	2	Bedell Pond
MW-35	Unconsolidated Deposits	8/3/1998	5,187,846.4	305,141.9	680.39	677.8	20.0	657.8	20.0	9.5	19.5	ML-CL	Glacial Till / Lakebed Sediment	2	North of Tailings
MW-35SB	Shallow Bedrock	12/17/2024	5,187,491.8	304,921.0	699.11	696.7	31.0	665.7	119.5	60.4	109.8	BR	Freda Sandstone	2	North of Tailings
MW-36	Shallow Bedrock	8/1/1998	5,187,293.8	307,077.0	719.73	717.2	2.0	715.2	18.0	5.0	15.0	SS	weathered bedrock	2	Tailings Basin Area
MW-37	Unconsolidated Deposits	8/11/1998	5,188,025.2	307,662.5	718.28	715.8	NE	---	20.0	9.0	19.0	CL-ML	clayey silt w/ 20-30% coarse sand and angular gravel	2	Tailings Basin Area
MW-38	Shallow Bedrock	7/31/1998	5,188,048.1	309,179.4	698.46	696.1	3.0	693.1	30.0	17.7	27.7	SS	weathered bedrock	2	Tailings Basin Area
MW-41	Shallow Bedrock	10/26/2006	5,187,711.3	307,310.2	704.79	702.8	10.0	692.8	30.0	17.5	26.5	BR	weathered siltstone bedrock	2	Tailings Basin Area
MW-42	Shallow Bedrock	8/26/2006	5,187,571.1	309,064.4	719.00	717.3	10.0	707.3	30.0	17.5	26.5	BR	weathered siltstone bedrock	2	Tailings Basin Area
MW-43	OB / BR Interface	9/28/2014	5,184,183.1	311,075.1	787.2	784.7*	22.0	762.7	42.0	15.0	25.0	OB/BR	Overburden / Bedrock Interface	2	East of tailings
MW-43SB	Shallow Bedrock	10/1/2024	5,184,457.1	309,559.3	790.29	787.5	20.0	767.5	145.4	109.0	139.7	BR	Freda Sandstone	2	East of tailings
MW-44	Unconsolidated Deposits	9/30/2014	5,181,948.5	311,129.6	850.2	847.7*	35.4	812.3	59.0	30.0	40.0	OB/BR	Glacial Till / Lakebed Sediment & Freda interface		East of tailings
SMW-1	Unconsolidated Deposits	2/18/1994	5,184,546.1	304,381.1	788.95	787.8	NE	---	35.7	25.5	35.7	GW-GM	sandy gravel with silt	3	West of Tailings
SMW-1SB	Shallow Bedrock	12/9/2024	5,184,551.1	304,376.6	787.89	785.4	37.5	747.9	130.8	70.0	129.6	BR	Freda Sandstone	2	West of Tailings
SMW-3	Unconsolidated Deposits	2/1/1994	5,175,982.5	306,684.8	1070.30	1068.7	50.0	1018.7	75.0	40.0	55.0	CL-ML	clay / siltstone with some sand and gravel	3	Upgradient of Mine site
SMW-3SB	Shallow Bedrock	12/4/2024	5,175,962.1	306,679.5	1069.62	1067.3	74.5	992.8	151.1	89.9	140.0	BR	Freda Sandstone	2	Upgradient of Mine site
NB1-1	Tailings	8/1/1997	5,183,704.0	306,303.4	852.10	850.0	NE	---	14.0	6.0	14.0	SM (tailings)	silty sand mine tailings	3	Tailings Basin
NB1-3	Tailings	8/1/1997	5,183,704.9	306,297.3	852.00	849.7	NE	---	32.6	22.6	32.6	ML (tailings)	Sandy silt mine tailings	3	Tailings Basin
NB2-1	Tailings	8/1/1997	5,185,068.6	305,689.4	800.34	797.8	NE	---	10.1	5.1	10.1	SM (tailings)	silty sand mine tailings	3	Tailings Basin
NB2-3	Tailings	8/1/1997	5,185,063.8	305,693.4	799.49	797.0	NE	---	28.1	18.1	28.1	SM (tailings)	silty sand mine tailings	3	Tailings Basin
Additional Groundwater Wells with Available Supplemental Monitoring Data															
MW-18	Unconsolidated Deposits	6/20/1997	5,183,299.0	304,273.8	837.70	834.7	NE	---	60.0	50.0	60.0	GM/ML	gravelly sandy silt	2	Bedell Pond
MW-19R	Unconsolidated Deposits	10/26/2006	5,182,113.2	304,325.4	870.10	867.2	NE	---	21.0	10.0	20.0	CL	Undifferentiated Glacial Till / Lakebed Sediment	2	Main Facilities Area
MW-23	Unconsolidated Deposits	6/30/1997	5,182,292.4	303,804.5	865.78	863.5	75.0	788.5	75.0	64.0	74.0	SM/GM	gravelly sandy silt (w/ SS fragments)	2	MFA, Historic Barrel Dump
MW-30	OB / BR Interface	7/28/1998	5,183,422.6	304,128.9	835.50	833.3	79.0	754.3	79.5	69.5	79.5	OB/BR	clayey-silt overlying weathered BR fragments	2	Bedell Pond
MW-32	Unconsolidated Deposits	8/12/1998	5,183,491.5	303,892.8	819.68	817.3	NE	---	63.0	52.5	62.5	CL-ML	silty very fine sand w/ interbedded silty clay	2	Bedell Pond
MW-PRB1	Shallow Bedrock	8/10/1998	5,182,879.2	303,797.5	854.96	852.2	75.5	776.7	82.0	72.0	82.0	SS	Freda Sandstone	2	On-Site Repository
MW-R2	Shallow Bedrock	7/27/1999	5,182,850.8	303,910.6	843.19	840.1	57.0	783.1	69.0	59.0	69.0	CL-SS	Freda Sandstone	2	On-Site Repository
MW-R3	Unconsolidated Deposits	5/9/2000	5,182,749.5	303,797.9	852.04	850.0	79.0	771.0	79.0	69.0	79.0	SC	silty clay w/ 10-20% sand and small gravel	2	On-Site Repository
MW-R4	Unconsolidated Deposits	5/9/2000	5,182,647.6	303,988.4	863.83	861.5	81.0	780.5	81.0	71.0	81.0	SM	sandy silt red-brown clay	2	On-Site Repository
NB1-2	Tailings	8/1/1997	5,183,699.2	306,299.1	852.25	850.2	NE	---	23.1	13.1	23.1	ML (tailings)	Sandy silt mine tailings	3	Tailings Basin
NB2-2	Tailings	7/15/1997	5,185,068.7	305,696.4	800.01	797.3	NE	---	19.0	9.0	19.0	ML (tailings)	Sandy silt mine tailings	3	Tailings Basin
BMW-1	Bedrock	2/21/1994	5,184,553.5	304,382.1	784.00	782.5	36.0	746.5	570.8	471.4	570.8	SS	sandstone & siltstone	4.8	Tailings Basin Area
MW-27	Unconsolidated Deposits	10/7/1997	5,177,679.9	305,815.4	1039.30	1035.6	NE	---	19.0	8.0	18.0	CL	silty clay	2	South Smelter Brick Loadout
MW-28	Unconsolidated Deposits	8/26/1997	5,179,855.0	306,124.1	957.21	953.4	NE	---	29.0	19.0	29.0	CL	Fine silty-sand with clayey silt overlying weathered bedrock	2	South East Tank Farm
BMW-3	Bedrock	5/6/1994	5,175,970.3	306,679.4	1068.50	1066.1	50.0	1016.1	1279.0	1192.0	1279.0	SS	sandstone & siltstone	4	South of Mine site
BMW-4A	Bedrock	2/21/1994	5,179,741.6	301,778.9	919.20	917.0	82	835.0	2650.30	2505.00	2650.30	SS	sandstone & siltstone	4	White Pine Townsite
BMW-4B	Bedrock	2/21/1994	5,179,741.6	301,778.9	919.20	917.0	82	835.0	2100.20	1997.50	2100.40	SS	sandstone & siltstone	4	White Pine Townsite

Table 3-3 (continued)

Well	Monitored Unit	Date Installed	Location		Top of Casing (Collar) Elevation	Ground Surface Elevation	Depth to Bedrock (NE=not encountered)	Bedrock Elevation	Well Depth / Bottom of Borehole	Screened Interval		Screen Geology[1]	Screen Geology Comment	Casing Diameter	Area
			Northing	Easting						From	To				
			NAD83 16N	NAD83 16N	Ft NAVD88	Ft NAVD88	(ft bgs)	Ft NAVD88	(ft BGS)	(ft bgs)	(ft bgs)			(inches)	
Abandoned Monitoring Wells															
MW-1A	Unconsolidated Deposits	3/17/1993	5,186,625.8	305,242.4	722.81	720.3	20.0	700.3	30.0	20.0	30.0	CL	clay with gravel. Red/brown weathered material	3	Tailings Basin Area
MW-1B	Unconsolidated Deposits	3/17/1993	5,186,627.4	305,240.6	721.23	719.2	20.0	699.2	30.0	14.0	24.0	CL	clay with gravel. Red/brown weathered material	3	Tailings Basin Area
MW-4	Unconsolidated Deposits	3/17/1993	5,186,906.5	308,906.5	737.90	?	NE	---	20.0	10.0	20.0	OB	Undifferentiated Shallow Deposits	3	Tailings Basin Area
MW-8	Unconsolidated Deposits	6/27/1997	5,181,853.5	308,613.1	868.42	865.4	NE	---	35.0	24.5	34.5	SM/ML	silty-sand w/ gravel	2	Tailings Basin Area
MW-9	Unconsolidated Deposits	6/27/1997	5,184,400.6	309,074.1	798.61	796.0	NE	---	23.0	13.0	23.0	GM/SM	Silty sand and Gravel	2	Tailings Basin Area
MW-11	Unconsolidated Deposits	6/23/1997	5,182,785.5	304,645.2	844.48	841.5	NE	---	54.0	44.0	54.0	SM	fine silty sand w/ gravel	2	Boneyard
MW-12	Unconsolidated Deposits	6/24/1997	5,182,880.9	304,562.0	849.55	846.9	NE	---	55.0	45.0	55.0	GM/GP	sandy gravel / gravelly sands	2	Boneyard
MW-13	Unconsolidated Deposits	6/25/1997	5,183,258.4	304,763.5	819.67	816.9	32.5	784.4	32.5	21.0	31.0	CL/SM/GM	Silty-Clay overlying silty sand w/ gravel (BR fragments)	2	Boneyard
MW-14	Unconsolidated Deposits	6/24/1997	5,183,283.4	304,636.4	830.09	827.1	NE	---	46.0	35.0	45.0	GM/SM	silty-sand w/ gravel	2	Boneyard
MW-15	Unconsolidated Deposits	6/26/1997	5,183,428.2	304,669.6	823.91	821.3	NE	---	40.0	28.5	38.5	MH	silty sand w/ some silt	2	Boneyard
MW-16	Unconsolidated Deposits	6/28/1997	5,183,548.5	304,627.9	818.79	815.8	39.3	776.5	39.3	28.5	38.5	GM	Gravelly sands w/ silt	2	Boneyard
MW-17	Unconsolidated Deposits	6/23/1997	5,183,358.6	304,486.9	834.17	831.5	51.0	780.5	51.0	40.0	50.0	GM	sandy gravel	2	Bedell Pond
MW-19	Fill / Overburden Interface	7/1/1997	5,182,091.5	304,302.8	870.10	867.2	NE	---	25.0	15.0	25.0	Fill/ML	Fill / Sandy silt	2	MFA, Historic Barrel Dump
MW-20	Unconsolidated Deposits	6/17/1997	5,181,895.0	303,997.2	874.24	871.6	NE	---	62.0	52.0	62.0	SM	gravelly silty sand	2	MFA, Historic Barrel Dump
MW-21	Unconsolidated Deposits	6/17/1997	5,182,211.0	304,119.7	868.34	865.3	NE	---	64.0	53.7	63.7	SM	sandy silt / silty-sand	2	MFA, Historic Barrel Dump
MW-22	Unconsolidated Deposits	6/19/1997	5,182,395.4	303,978.9	867.61	864.7	77.0	787.7	77.0	67.0	77.0	SM/GM	gravelly sandy silt	2	MFA, Historic Barrel Dump
MW-24	Unconsolidated Deposits	6/19/1997	5,182,211.0	303,670.1	860.42	857.3	69.5	787.8	69.5	59.0	69.0	SM	silty-sand w/ gravel	2	MFA, Historic Barrel Dump
MW-25	Unconsolidated Deposits	6/20/1997	5,181,987.9	303,735.0	876.81	874.2	NE	---	66.0	55.4	65.4	CL/ML/GM	sandy-silty clay with sandstone fragments	2	MFA, Historic Barrel Dump
MW-26	Unconsolidated Deposits	8/20/1997	5,182,150.4	303,841.0	871.60	868.6	NE	---	10.0	5.0	10.0	Fill	med. gravelly sand w/ slag	2	MFA, Historic Barrel Dump
SMW-4	Unconsolidated Deposits	2/1/1994	5,179,740.3	301,777.3	919.20	917.0	?	?	74.9	59.6	74.9	OB	Undifferentiated Shallow Deposits	3	White Pine Townsite

Notes:

[1] BR (bedrock), CL (clay), ML (silt), OB (overburden), SS (sandstone)

NE = not encountered

FT NAVD88 = Feet above North America Vertical Datum of 1988

ft bgs = feet below ground surface

aka = also known as

NAD83 16N = Universal Transverse Mercator (UTM) Zone 16 North; North America Datum of 1984

The top of casing (measurement point) elevation is inferred for wells MW-43 and MW-44 based ground surface in site geologic (Leapfrog) model plus 2.5-foot stick-up.

Prepared by: KRM2

Checked by: GMB

Table 3-4
Matrix of Hydraulic Testing - Locations and Method
White Pine Copper LLC

Well Identification	Date(s)	Hydrogeologic Unit(s)	Slug Testing	Packer Testing	Continuous Hydrophysical Logging Interval	
					Casing Depth	Total Depth
					(ft bgs)	(ft bgs)
BMW-1	8/21/1994	Copper Harbor Conglomerate	completed	---	---	---
BMW-3	9/1/1994	Copper Harbor Conglomerate	completed	---	---	---
DDH-508 Zone A	9/5 - 9/19 1994	Freda Sandstone	---	3 intervals	---	---
DDH-508 Zone B	9/5 - 9/19 1994	Freda Sandstone	---	2 intervals	---	---
DDH-508 Zone C	9/5 - 9/19 1994	Freda Sandstone	---	2 intervals	---	---
T4 Fault - 94-3	9/5 - 9/19 1994	Copper Harbor Conglomerate	---	1 interval	---	---
T4 Fault - 94-4	9/5 - 9/19 1994	Copper Harbor Conglomerate	---	1 interval	---	---
MW-1A-R	9/16/2024	Unconsolidated Deposits	completed		---	---
MW-1B-R	9/16/2024	Shallow Bedrock	completed		---	---
MW-1B	6/11/1998	Shallow Bedrock	completed		---	---
MW-2A	9/13/2024	Shallow Bedrock	completed		---	---
MW-2B	9/12/2024	Unconsolidated Deposits	completed		---	---
MW-3A	6/11/98 & 9/13/24	Shallow Bedrock	completed		---	---
MW-3B	10/3/2024	Unconsolidated Deposits	completed		---	---
MW-5	6/11/1998	Unconsolidated Deposits	completed		---	---
MW-5A	6/11/1998 & 9/12/2024	Unconsolidated Deposits	completed		---	---
MW-5SB	10/7/2024	Shallow Bedrock	completed		---	---
MW-10	9/13/2024	Unconsolidated Deposits	completed		---	---
MW-18	7/11/1998	Unconsolidated Deposits	completed		---	---
MW-30	7/11/1998	Unconsolidated Deposits	completed		---	---
MW-31	7/11/1998 & 6/9/2025	Unconsolidated Deposits	completed		---	---
MW-32	7/11/1998	Unconsolidated Deposits	completed		---	---
MW-35	6/11/1998 & 6/12/2025	Unconsolidated Deposits	completed		---	---
MW-35SB	6/12/2025	Shallow Bedrock	completed		---	---
MW-36	6/11/98 & 10/8/24	Shallow Bedrock	completed		---	---
MW-37	7/11/98 & 11/8/24	Unconsolidated Deposits	completed		---	---
MW-38	7/11/98 & 10/9/24	Bedrock	completed		---	---
MW-42	10/9/2024	Shallow Bedrock	completed		---	---
MW-43	10/9/2024	Unconsolidated Deposits	completed		---	---
MW-43SB	11/7/2024	Shallow Bedrock	completed		---	---
MW-44	9/17/2024	Unconsolidated Deposits	completed		---	---
NB1-3	6/9/2025	Tailings	completed		---	---
NB2-1	10/8/2024	Tailings	completed		---	---
NB2-3	10/8/2024	Tailings	completed		---	---
SMW-1	10/7/2024	Unconsolidated Deposits	completed		---	---
SMW-1SB	11/8/2024	Shallow Bedrock	completed		---	---
SMW-3	9/24/2024	Unconsolidated Deposits	completed		---	---
SMW-3SB	6/11/2025	Shallow Bedrock	completed		---	---
WP-583	7/22/2024	Freda Sandstone, Nonesuch Shale & Copper Harbor Conglomerate	---	6 intervals	52	2306
WP-584	7/28/2024	Freda Sandstone & Nonesuch Shale	---	7 intervals	70	1679
WP-585	8/22/2024	Freda Sandstone, Nonesuch Shale & Copper Harbor Conglomerate	---	6 intervals	36	2316
WP-586	8/25/2024	Freda Sandstone, Nonesuch Shale & Copper Harbor Conglomerate	---	7 intervals	25	2505
WP-587	7/14/2024	Freda Sandstone	---	4 intervals	33	2857
WP-588	7/16/2024	Freda Sandstone	---	5 intervals	116	3313
WP-592	8/1/2024	Freda Sandstone, Nonesuch Shale & Copper Harbor Conglomerate	---	7 intervals	68.5	3210
WP-594	8/16/2024	Freda Sandstone & Nonesuch Shale	---	6 intervals	70	3018
WP-598	9/5/2024	Freda Sandstone, Nonesuch Shale & Copper Harbor Conglomerate	---	6 intervals	37	3032

Notes:
--- = indicates no testing data available
ft bgs = feet below ground surface

Prepared by: KRM2
Checked by: GMB

Table 3-5
Summary of Baseline Groundwater Quality Monitoring Events
White Pine Copper LLC

Sampling Events:	Monitored	2024					Sampling Events Completed in 2024	2025						Sampling Events Completed in 2025	2026			Sampling Events Completed in 2026	Total Number of Samples Completed through May 2026
		1st		2nd		3rd		4th		5th		6th	7th		8th	9th			
Monitoring Well	Unit	Jul	Aug	Sep	Oct	Dec		Feb	Mar	Apr	May	Aug	Oct		Feb	Apr	May		
MW-1AR	OB	1		1		1	3	1			1	1	1	4	1	1		2	9
MW-1BR	SB	1		1		1	3	1			1	1	1	4	1	1		2	9
MW-2A	SB		1		1	1	3	1			1	1	1	4	1	1		2	9
MW-2B	OB		1		1	1	3	1			1	1	1	4	1	1		2	9
MW-3A	SB	1			1	1	3	1		1		1	1	4	1	1		2	9
MW-3B	OB	1			1	1	3	1			1	1	1	4	1	1		2	9
MW-5A	OB	1			1	1	3	1			1	1	1	4	1	1		2	9
MW-5SB	SB	NI	NI	1		1	2		1		1	1	1	4	NS	1		1	7
MW-10	OB		1	1		1	3	1			1	1	1	4	1	1		2	9
MW-31	OB	1			1	1	3		1	1		1	1	4	1	1		2	9
MW-35	OB	1		1		1	3		1	1		1	1	4	1	1		2	9
MW-35SB	SB	NI	NI	NI	NI	1	1		1		1	1	1	4	1	1		2	7
MW-36	SB	1		1		1	3		NS	1		1	1	3	NS	1		1	7
MW-37	OB	1			1	1	3		1		1	1	1	4	NS	1		1	8
MW-38	SB	1			1	1	3		1		1	1	1	4	1	1		2	9
MW-41	SB	1		1		1	3		1		1	1	1	4	1	1		2	9
MW-42	SB	1			1	1	3		1		1	1	1	4	1	1		2	9
MW-43	OB	1		1		1	3	1			1	1	1	4	1		1	2	9
MW-43SB	SB	NI	NI		1	NS	1	1			1	1	1	4	1		1	2	7
MW-44	OB	1		1		1	3	1			1	1	1	4	1		1	2	9
NB1-1	Tailings	1			1	NS	2		1		1	1	1	4	1	1		2	8
NB1-3	Tailings	1			1	1	3		1		1	1	1	4	1	1		2	9
NB2-1	Tailings	1		1		1	3		NS	1		1	1	3	NS	1		1	7
NB2-3	Tailings	1		1		1	3		1	1		1	1	4	NS	1		1	8
SMW-1	OB	1			1	1	3		1	1		1	1	4	1	1		2	9
SMW-1SB	SB	NI	NI	NI	NI	1	1		1	1		1	1	4	1	1		2	7
SMW-3	OB		1		1	1	3		1		1	1	1	4	1	1		2	9
SMW-3SB	SB	NI	NI	NI	NI	1	1		1		1	1	1	4	1	1		2	7
Sub-total:		19	4	11	14	26	74	11	15	8	20	28	28	110	23	25	3	51	235
No. of Samples per Event:		23		25				26		28									

Note:
Groundwater samples were analyzed for the constituent list provided in Table 3-6.
OB = overburden or unconsolidated deposits
SB = shallow bedrock
NI = Well not installed at time of monitoring
NS = Well not sampled due to inaccessibility
Water levels only collected at new monitoring well MW-2SB.

Prepared by: DCF1
Checked by: GMB

Table 3-6
Baseline Surface and Groundwater Quality Monitoring Parameters
White Pine Copper LLC

Groundwater Analyte	Method
Field Parameters	
Dissolved Oxygen	field
Oxidation Reduction Potential	field
pH	field
Specific Conductance	field
Temperature	field
Turbidity	field
General Parameters	
Ammonia (un-ionized as N)	350.1
Alkalinity, Total	2320B
Alkalinity, Bicarbonate as CaCO3	2320B
Alkalinity, Carbonate as CaCO3	2320B
Bromide	300.0
Chloride	300.0
Cyanide, total	335.4
Dissolved Organic Carbon	5310
Total Organic Carbon	5310C
Fluoride	300.0
Hardness (Ca+Mg)	2340B
Nitrate (as N)	300.0
Nitrite (as N)	300.0
Nitrate + Nitrite (as N)	300.0
Phosphorus, total	365.1
Sulfate	300.0
Sulfide	4500
Total Dissolved Solids (TDS)	2540C
Total Salinity	2520
Total Suspended Solids (TSS)	2540D
Metals (Total and Dissolved)	
Aluminum	6020B
Antimony	6020B
Arsenic	6020B
Barium	6020B
Beryllium	6020B
Boron	6020B
Cadmium	6020B
Calcium	6020B
Chromium (total)	200.8

Table 3-6 (continued)

Groundwater Analyte	Method
Cobalt	6020B
Copper	6020B
Iron	6020B
Lead	6020B
Lithium	6020B
Manganese	6020B
Magnesium	6020B
Mercury, Low Level	1631E
Methyl Mercury	1630
Molybdenum	6020B
Nickel	6020B
Potassium	6020B
Selenium	6020B
Silver	6020B
Sodium	6020B
Strontium	6020B
Thallium	6020B
Tin	6020B
Uranium	1638
Vanadium	6020B
Zinc	6020B

Prepared by: MAN
Checked by: DCF1

Table 4-1

Stream Flow Summary (Baseline)

White Pine Copper LLC

Location: / Date	ARC_01	ARC_02	ARC_03	DKC_01	DKC_02	MLC_01	MLR_01	MLR_02	MLR_03	NTC_01	PNC_01	PNC_02	PNC_03	PNC_04	PRC_01	PRC_02	PTC_01
	Stream Flow (cfs)																
7/22/24										0.07					1.01	0.81	
7/25/24						0.31		0.49	0.47								
7/29/24				Dry							0.01	0.07					
7/31/24	0.01	0.13															
8/1/24													0.02				
8/6/24			Dry			Dry											
8/7/24					Dry									0.01			Dry
9/23/24				Dry						0.02	0.02					0.05	
9/24/24								0.09				0.21	0.05		0.07		
9/25/24	0.02	0.23			0.08	Dry											Dry
9/26/24			0.03											0.08			
12/2/24						0.03				0.02						5.14	
12/4/24		0.43															
12/5/24	0.06			0.13							0.02						
12/9/24													3.44				
12/11/24			2.16												11.4		0.27
12/16/24								2.50									
12/17/24					11.6									11.0			
2/25/25										0.63						1.93	
2/26/25					7.04												
3/3/25						0.17											
3/4/25														3.33	5.50		
3/6/25			14.2														0.92
3/10/25												7.12	17.8				
3/11/25	4.11			9.99							5.73						
4/28/25	0.50		3.24	6.03							0.91						
4/29/25						0.77											0.58
4/30/25										0.58							
5/1/25														7.99			
5/5/25								15.8				1.77					
5/6/25																	
5/7/25					3.74								3.37		16.6		
8/4/25	-0.04			-0.004				0.08									
8/5/25		-0.04															
8/6/25										0.001			-0.03		0.30	0.15	
8/11/25														0.06			0.02
8/12/25																	
8/13/25			0.02		0.02		0.05				0.01						

Table 4-1 (continued)

Location: / Date	ARC_01	ARC_02	ARC_03	DKC_01	DKC_02	MLC_01	MLR_01	MLR_02	MLR_03	NTC_01	PNC_01	PNC_02	PNC_03	PNC_04	PRC_01	PRC_02	PTC_01
	Stream Flow (cfs)																
10/20/25	-0.12			-0.04				-0.07									
10/21/25										-0.03						0.27	
10/22/25		-0.27															
10/27/25			0.54		0.72									0.47			Dry
10/28/25						Dry											
10/29/25											-0.04		-0.80		1.18		
2/9/26	-0.06																
2/10/26											-0.01				2.91		
2/11/26																	
2/12/26				0.36									2.11				
2/16/26			2.87											3.07			0.11
2/17/26					6.87	0.07				0.12							
2/23/26		0.30															
2/24/26								15.64									
4/20/26	0.38										1.21						
4/21/26																	
4/22/26													7.39				
4/23/26				5.01				40.54									
4/27/26			3.32											9.68			0.64
4/28/26					29.58					0.85							
4/29/26						0.527											
4/30/26																	
5/4/26		-0.13															

Notes:

Prepared by: KRM2

Checked by: MAN

1. Data in this table were collected manually. The shading indicates sampling event groupings (sometimes spread over up to two weeks).

2. cfs = cubic feet per second.

3. Blank cells indicate that a flow reading was not attempted/conducted on that date. Flow values shown as '0.00' were measured as such.

4. Negative flow values were recorded at some locations on a few dates. Negative stream flow values can occur due to wind, eddies, or equipment error. While some field forms documented wind as a likely reason for negative flows, most field reports did not provide an explanation.

Table 4-2
Surface Water Stream Sampling Water Quality

		Field Parameters						*Metals (Total & Dissolved)*													
Stream Sampling Locations & Date	**Note**	**Conductivity (Field) (mS/cm)**	**Dissolved Oxygen (Field) (mg/L)**	**pH (Field) (SU)**	**Redox Potential (Field) (mV)**	**Temperature Field (°C)**	**Turbidity (NTU)**	**Aluminum, Dissolved (µg/L)**	**Aluminum, Total (µg/L)**	**Antimony, Dissolved (µg/L)**	**Antimony, Total (µg/L)**	**Arsenic, Dissolved (µg/L)**	**Arsenic, Total (µg/L)**	**Barium, Dissolved (µg/L)**	**Barium, Total (µg/L)**	**Beryllium, Dissolved (µg/L)**	**Beryllium, Total (µg/L)**	**Boron, Dissolved (µg/L)**	**Boron, Total (µg/L)**	**Cadmium, Dissolved (µg/L)**	**Cadmium, Total (µg/L)**
ARC-01																					
2024-07-31		0.129	2.8	6.89	122	20.68	8	74 J	130	<1.3	<1.3	0.64 J	0.67 J	34	35	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-09-25		0.223	2.61	6.79	194	11.67	2.4	<25	80 J	<1.3	<1.3	0.28 J	0.58 J	25	30	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-12-05		0.098	11.75	8.22	178	1.26	0	<25	600	<1.3	<1.3	<0.23	0.33 J	17	22	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-11		0.116	10.3	9.26	237	0.38	4.4	52	230	<1.3	<1.3	<0.23	<0.23	13	15	<0.53	<0.53	15	25	<0.17	<0.17
2025-04-28		0.07	10.28	7.09	227	10.57	5.6	140	470	<1.3	<1.3	0.26 J	0.31 J	12	15	<0.53	<0.53	29 J	47 J	<0.17	<0.17
2025-08-04		0.192	5.7	6.46	285	16.67	6.8	<25	87 J	<1.3	<1.3	0.41 J	0.43 J	28	30	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-10-20		0.225	2.2	6.37	46	7.75	51	29 J	1100	<1.3	<1.3	1.6	2.8	48	81	<0.53	<0.53	<13	14 J	<0.17	0.17 J
2026-02-09		0.095	12.07	6.36	211	0.47	252	41 J	190	<0.93	<0.93	<0.23	<0.23	12	14	<0.24	<0.24	<13	21 J	<0.17	<0.17
2026-04-20		0.051	10.6	6.53	233	3.43	15.9	140	680	<0.93	<0.93	<0.23	0.34 J	9.8	13	<0.24	<0.24	16 J	15 J	<0.17	<0.17
ARC-02																					
2024-07-31		0.153	1.93	7.72	120	19.32	25.8	51 J	470	<1.3	<1.3	0.94 J	1.1	32	36	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-09-25		0.129	5.05	7.4	159	14.76	12.6	34 J	130	<1.3	<1.3	0.49 J	0.52 J	27	30	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-12-04		0.158	6.56	8.52	158	0.32	733	49 J	29000	<1.3	<1.3	0.4 J	4.8	26	260	<0.53	1.1	<50	<50	<0.17	1.4
2025-02-27		0.064	7.56	8.77	280	1.19	40.8	97 J	910	<1.3	<1.3	0.24 J	0.35 J	15	19	<0.53	<0.53	15 J	14 J	<0.17	<0.17
2025-05-06		0.08	5.29	6.53	209	15	26.7	41 J	570	<1.3	<1.3	0.31 J	0.4 J	20	22	<0.53	<0.53	15 J	16 J	<0.17	<0.17
2025-08-05		0.138	1.65	6.48	137	18.06	37.1	420	1200 J	<1.3	<1.3	1.9	2.3	48	51	<0.53	<0.53	23 J	25 J	<0.17	<0.17
2025-10-22		0.117	3.11	6.56	70	9.99	42.5	270	660	<1.3	<1.3	0.74 J	1	35	36	<0.53	<0.53	38 J	44 J	<0.17	<0.17
2026-02-23		0.1	11.99	7.88	128	0.95	53.3	120	720	<0.93	<0.93	0.25 J	0.33 J	15	20	<0.24	<0.24	15 J	20 J	<0.17	<0.17
2026-05-04		0.08	6.4	6.4	96	14.16	184	110	370	<0.93	<0.93	0.24 J	0.29 J	24	26	<0.24	<0.24	28 J	33 J	<0.17	<0.17
ARC-03																					
2024-08-06	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-26		0.255	7.98	8.04	91	11.59	28.3	<25	65 J	<1.3	<1.3	0.25 J	0.32 J	74	72	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-12-11		0.093	16.25	8.15	199	0.07	32.6	59 J	310	<1.3	<1.3	0.26 J	0.31 J	35	38	<0.53	<0.53	33 J	20 J	<0.17	<0.17
2025-03-06		0.082	10.42	7.55	150	1.87	11.7	120	550	<1.3	<1.3	<0.23	0.28 J	21	26	<0.53	<0.53	<13	<13	<0.17	<0.17
2025-04-28		0.066	10.65	7.06	282	11.19	7.5	120	600	<1.3	<1.3	0.29 J	0.36 J	23	27	<0.53	<0.53	81	51	<0.17	<0.17
2025-08-13		0.202	5.71	7.57	149	18.34	2	<25	29 J	<1.3	<1.3	0.33 J	0.32 J	77	74	<0.53	<0.53	53	83	<0.17	<0.17
2025-10-27		0.132	12.58	7.51	167	8.54	0	44 J	150	<1.3	<1.3	0.36 J	0.39 J	44	47	<0.53	<0.53	21 J	17 J	<0.17	<0.17
2026-02-16		0.111	13.74	7.5	191	0.8	0.5	43 J	320	<0.93	<0.93	<0.23	0.28 J	30	33	<0.24	<0.24	20 J	20 J	<0.17	<0.17
2026-02-16	Duplicate Sample	--	--	--	--	--	--	50 J	300	<0.93	<0.93	0.23 J	0.24 J	31	33	<0.24	<0.24	16 J	16 J	<0.17	<0.17
2026-04-27		0.073	10.39	7.15	147	10.65	4.9	150	550	<0.93	<0.93	0.32 J	0.39 J	22	25	<0.24	<0.24	54	52	<0.17	<0.17
Argentine Creek Statistical Summary	**Number of Observations**	26	26	26	26	26	26	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	Number of Non-Detect	0	0	0	0	0	0	5	0	27	27	6	2	0	0	27	26	11	9	27	25
	% Non-Detect	0%	0%	0%	0%	0%	0%	19%	0%	100%	100%	22%	7%	0%	0%	100%	96%	41%	33%	100%	93%
	Maximum	0.255	16.25	9.26	285	20.68	733	420	29000	0.65	0.65	1.9	4.8	77	260	0.265	1.1	81	83	0.085	1.4
	Minimum	0.051	1.65	6.36	46	0.07	0	12.5	29	0.465	0.465	0.115	0.115	9.8	13	0.12	0.12	6.5	6.5	0.085	0.085
	Average	0.12	7.91	7.34	171.77	8.83	66.23	85.80	1498.93	--	--	0.42	0.73	29.55	41.85	--	0.26	25.61	27.39	--	0.14
	Standard Deviation	0.06	4.13	0.81	63.56	7.01	148.57	89.02	5504.94	--	--	0.43	1.02	16.87	47.12	--	0.18	15.98	15.84	--	0.25
	Skewness	0.86	0.04	0.59	0.07	0.09	3.85	2.30	4.88	--	--	2.34	2.91	1.44	3.88	--	3.88	1.80	1.88	--	4.87
CBR-01																					
2024-07-29		0.242	8.9	8.16	177	24.54	0	<25	160	<1.3	<1.3	0.42 J	0.46 J	71	75	<0.53	<0.53	88	90	<0.17	<0.17
2024-09-25		0.295	6.96	7.77	175	12.08	1.2	<25	60 J	<1.3	<1.3	0.33 J	0.37 J	86	87	<0.53	<0.53	130	140	<0.17	<0.17
2024-12-10	Sample location not acessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-02-27		0.092	11.27	8.74	348	0.07	32.8	73 J	1600	<1.3	<1.3	<0.23	0.36 J	22	35	<0.53	<0.53	27 J	25 J	<0.17	<0.17
2025-05-06		0.068	8.75	6.86	200	16.47	13.6	110	520	<1.3	<1.3	0.26 J	0.29 J	22	24	<0.53	<0.53	<50	51	<0.17	<0.17
2025-08-05		0.201	6.53	8.53	185	23.39	9.8	28 J	460	<1.3	<1.3	0.42 J	0.54 J	54	61	<0.53	<0.53	87	88	<0.17	<0.17
2025-10-22		0.091	10.16	7.48	154	8.81	102	120	1900	<1.3	<1.3	0.39 J	0.69 J	27	47	<0.53	<0.53	33 J	34 J	<0.17	<0.17
2026-02-17		0.107	13.48	7.5	187	0.23	11.4	61 J	510	<0.93	<0.93	<0.23	<0.23	25	29	<0.24	<0.24	21 J	<50	<0.17	<0.17
2026-05-04		0.074	9.81	7.36	155	14.08	18.6	95 J	730	<0.93	<0.93	0.4 J	0.51 J	19	24	<0.24	<0.24	17 J	18 J	<0.17	<0.17

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Calcium, Dissolved (µg/L)	Calcium, Total (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total (µg/L)	Cobalt, Dissolved (µg/L)	Cobalt, Total (µg/L)	Copper, Dissolved (µg/L)	Copper, Total (µg/L)	Iron, Dissolved (µg/L)	Iron, Total (µg/L)	Lead, Dissolved (µg/L)	Lead, Total (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total (ng/L)	Molybdenum, Dissolved (µg/L)
ARC-01																							
2024-07-31	25000	25000	<1.1	<1.1	0.45 J	0.67 J	2.6	2.3	880	1600	<0.19	<0.19	<2.5	<2.5	6300	6200	300	450	1.6	2.5	<0.022	0.036 J	<2.5
2024-09-25	31000	32000	<1.1	<1.1	<0.40	0.62 J	1.7 J	2.3	240	2500	<0.19	<0.19	<2.5	<2.5	7500	7700	76	430	0.5	0.77	0.027 J	0.05	<2.5
2024-12-05	16000	16000	<1.1	<1.1	<0.40	<0.40	3.3	5.2	83 J	990	<0.19	0.57	<2.5	<2.5	4100	4100	7	110	1	1.1	<0.022	<0.022	<2.5
2025-03-11	11000	12000	<1.1	<1.1	<0.40	<0.40	3.7	4.5	180	490	<0.19	<0.19	<2.5	<2.5	2800	2900	5	7.2	2.3	2.9	0.19	0.3	<2.5
2025-04-28	8600	8800	<1.1	<1.1	<0.40	<0.40	6.2	7.4	180	450	<0.19	0.21 J	<2.5	<2.5	2100	2200	7.2	16	3.5	4.4	<0.022	<0.022	<2.5
2025-08-04	27000	25000	<1.1	<1.1	<0.40	<0.40	2.6	2.6	450	580	<0.19	<0.19	<2.5	<2.5	6500	6200	200	260	1.4	2	<0.022	<0.022	<2.5
2025-10-20	33000	34000	<1.1	< 5	2.1	3.7	0.76 J	5.7	3200	9700	<0.19	0.46 J	<2.5	<2.5	8800	9100	1600	2400	1.2	3	0.028 J	<0.022	<2.5
2026-02-09	12000	12000	<1.1	<1.1	<0.40	<0.40	2.7	3.3	160	350	<0.19	<0.19	<2.5	<2.5	3200	3300	13	18	1.4	2	0.058	0.086	<2.5
2026-04-20	7600	7900	<1.1	<1.1	<0.40	<0.40	5.4	6.7	170	540	<0.19	0.28 J	<2.0	<2.0	1900	2000	8.2	13	5.2	6.2	0.098	0.08	<2.5
ARC-02																							
2024-07-31	22000	21000	<1.1	<1.1	0.4 J	0.63 J	4.7	5.7	950	2500	<0.19	0.27 J	<2.5	<2.5	4600	4700	240	310	1.2	1.8	0.037 J	0.077	<2.5
2024-09-25	17000	18000	<1.1	<1.1	<0.40	<0.40	6.1	6.9	420	760	<0.19	<0.19	<2.5	<2.5	3700	3800	18	44	1.2	1.4	0.089	0.15	<2.5
2024-12-04	16000	24000	<1.1	34	0.6 J	18	8.4	140	580	30000	<0.19	16	<2.5	30	3700	11000	360	1900	3.8	55	0.15	0.88	<2.5
2025-02-27	12000	9900	<1.1	1.2 J	<0.40	<0.40	9	14	210	1000	<0.19	0.47 J	<2.5	<2.5	2500	2300	13	48	4.6	6.9	0.051	0.069	<2.5
2025-05-06	12000	11000	<1.1	<1.1	<0.40	<0.40	11	13	130	640	<0.19	<0.50	<2.5	<2.5	2600	2500	23	24	4.1	5.7	<0.080	<0.080	<2.5
2025-08-05	20000	19000 J	1.2 J	1.9 J	1.8	2.2	3.1	6.5	6800	9200	0.25 J	0.64	<2.5	<2.5	4300	4200	910	890	0.53 J	0.53 J	0.14	0.14	<2.5
2025-10-22	16000	14000	<1.1	1.1 J	0.58 J	0.79 J	6.7	14	1100	3100	0.28 J	0.68	<2.5	<2.5	3600	3300	300	290	2.6 J	4.6 J	0.041 J	0.068	<2.5
2026-02-23	15000	15000	<1.1	<1.1	<0.40	<0.40	6.8	9.1	390	1100	<0.19	0.38 J	<2.5	<2.5	3300	3500	17	34	3	5.3	0.027 J	0.058	<2.5
2026-05-04	11000	11000	<1.1	<1.1	<0.40	<0.40	3.4	3.7	200	400	<0.19	<0.19	<2.0	<2.0	2800	2800	6.8	10	4.3	5.3	0.13	0.17	<2.5
ARC-03																							
2024-08-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-26	27000	26000	<1.1	<1.1	<0.40	<0.40	3.5	3.8	80 J	150	<0.19	<0.19	<2.5	<2.5	5900	5700	29	26	0.84	0.92	<0.022	0.035 J	<2.5
2024-12-11	14000	14000	<1.1	<1.1	<0.40	<0.40	5.8	6.8	230	480	<0.19	<0.19	<2.5	<2.5	3600	3600	5	8.8	3.3	3.5	0.072	<0.050	<2.5
2025-03-06	8900	9200	<1.1	<1.1	<0.40	<0.40	7.6	9.5	160	490	<0.19	0.31 J	<2.5	<2.5	2000	2100	5.2	10	4.4	5.9	0.042 J	0.04 J	<2.5
2025-04-28	9100	9300	<1.1	<1.1	<0.40	<0.40	7.6	9	200	600	<0.19	0.27 J	<2.5	<2.5	2100	2200	6.3	14	4.2	5	<0.022	<0.022	<2.5
2025-08-13	27000	26000	<1.1	<1.1	<0.40	<0.40	3.7	3.8	100	200	<0.19	<0.19	3.6 J	3.2 J	5800	5500	23	25	1.4	1.4	0.065	0.082	<2.5
2025-10-27	17000	17000	<1.1	<1.1	<0.40	<0.40	5.3	5.7	360	580	<0.19	<0.19	<2.5	<2.5	4000	4100	6.7	8.4	2.7	2.8	0.051	0.055	<2.5
2026-02-16	14000	14000	<1.1	<1.1	<0.40	<0.40	3.9	4.9	190	660	<0.19	<0.19	<2.5	<2.5	3400	3500	5.4	9.2	2.1	2.5	0.029 J	<0.05	<2.5
2026-02-16	14000	14000	<1.1	<1.1	<0.40	<0.40	4.2	5.3	290	650	<0.19	<0.19	<2.5	<2.5	3500	3500	6.1	9	2.2	2.7	0.022 J	<0.05	<2.5
2026-04-27	9500	9700	<1.1	<1.1	<0.40	<0.40	9.3	11	280	690	<0.19	0.28 J	<2.0	<2.0	2200	2400	8.5	15	6.4	7.3 J	0.063	0.1	<2.5
Argentine Creek Statistical Summary	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	0	0	26	23	21	20	0	0	0	0	25	14	26	25	0	0	0	0	0	0	7	9	27
	0%	0%	96%	85%	78%	74%	0%	0%	0%	0%	93%	52%	96%	93%	0%	0%	0%	0%	0%	0%	26%	33%	100%
	33000	34000	1.2	34	2.1	18	11	140	6800	30000	0.28	16	3.6	30	8800	11000	1600	2400	6.4	55	0.19	0.88	1.25
	7600	7900	0.55	0.55	0.2	0.2	0.76	2.3	80	150	0.095	0.095	1	1	1900	2000	5	7.2	0.5	0.53	0.011	0.011	1.25
	16766.67	16844.44	0.57	1.96	0.38	1.13	5.15	11.58	674.56	2607.41	0.11	0.83	1.31	2.36	3955.56	4237.04	155.53	273.32	2.63	5.31	0.06	0.10	--
	7266.15	7364.75	0.13	6.42	0.47	3.46	2.53	25.88	1368.55	5974.09	0.05	3.04	0.46	5.54	1779.01	2226.79	348.14	581.82	1.58	10.13	0.05	0.17	--
	0.79	0.79	4.90	4.86	2.99	4.56	0.47	4.77	3.73	3.87	3.30	4.87	4.66	4.87	1.10	1.49	3.16	2.76	0.53	4.60	1.28	3.94	--
CBR-01																							
2024-07-29	29000	29000	<1.1	<1.1	<0.40	<0.40	2.1	2.3	99 J	320	<0.19	<0.19	2.6 J	3 J	7400	7600	5.9	31	0.93	0.99	0.071	0.078	<2.5
2024-09-25	35000	35000	<1.1	<1.1	<0.40	<0.40	1.5 J	1.8 J	120	220	<0.19	<0.19	3.1 J	3 J	8900	9000	8.2	15	0.58	0.76	0.046 J	0.056	<2.5
2024-12-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-02-27	11000	11000	<1.1	1.8 J	<0.40	0.42 J	2.8	4.5	210	1300	<0.19	0.53	<2.5	<2.5	3000	3200	6.9	24	4.7	6.5	0.085	0.1	<2.5
2025-05-06	9600	9500	<1.1	<1.1	<0.40	<0.40	4.2	4.6	180	470	<0.19	<0.50	<2.5	<2.5	2400	2500	6.3	10	4.6	5.1	<0.080	<0.080	<2.5
2025-08-05	25000	26000	<1.1	<1.1	<0.40	<0.40	2.1	3	160	680	<0.19	<0.19	2.7 J	3.1 J	6300	6600	9.2	65	0.52 J	0.52 J	0.095	0.3	<2.5
2025-10-22	11000	12000	<1.1	2.4 J	<0.40	0.89 J	3.7	6.2	330	2000	<0.19	0.7	<2.5	<2.5	3100	3600	29	140	6.1	9	0.059	0.12	<2.5
2026-02-17	14000	14000	<1.1	<1.1	<0.40	<0.40	2.2	2.8	220	650	<0.19	0.22 J	<2.5	<2.5	3700	3800	4.8	9.6	2.4	2.8	0.033 J	0.031 J	<2.5
2026-05-04	12000	12000	<1.1	1.1 J	<0.40	0.43 J	8.9	11	640	1400	<0.19	0.45 J	<2.0	<2.0	2700	2800	53	86	3.3	3.8	0.08	0.12	<2.5

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Molybdenum, Total (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total (µg/L)	Potassium, Dissolved (µg/L)	Potassium, Total (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total (µg/L)	Silver, Dissolved (µg/L)	Silver, Total (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total (µg/L)	Tin, Dissolved (µg/L)	Tin, Total (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total (µg/L)
ARC-01																							
2024-07-31	<2.5	<0.63	<0.63	1300	1200	<0.98	<0.98	<0.12	<0.12	2000	2000	66	63	<0.57	<0.57	<1.3	<1.3	0.072	0.068	<2.2	<2.2	<6.9	<6.9
2024-09-25	<2.5	<0.63	<0.63	2100	2200	<0.98	<0.98	<0.12	<0.12	2700	2800	70	73	<0.57	<0.57	<1.3	<1.3	<0.050	<0.050	<2.2	<2.2	<6.9	<6.9
2024-12-05	<2.5	<0.63	<0.63	1300	1300	<0.98	<0.98	<0.12	<0.12	1200	1200	38	38	<0.57	<0.57	<1.3	<1.3	0.022 J	0.059	<2.2	<2.2	<6.9	8.4 J
2025-03-11	<2.5	<0.63	<0.63	1000	1100	1	<0.98	<0.12	<0.12	1100	1100	28	28	<0.57	<0.57	<1.3	<1.3	0.027	0.039	<2.2	<2.2	<6.9	<6.9
2025-04-28	<2.5	<0.63	<0.63	890	1100	<0.98	<0.98	<0.12	<0.12	920	940	21	22	<0.57	<0.57	<1.3	<1.3	0.027 J	0.044 J	<2.2	<2.2	<6.9	<6.9
2025-08-04	<2.5	<0.63	<0.63	1100	1100	<0.98	<0.98	<0.12	<0.12	1800	1800	63	62	<0.57	<0.57	<1.3	<1.3	0.047 J	0.056	<2.2	<2.2	<6.9	<6.9
2025-10-20	<2.5	<0.63	< 2	4000	2500	<0.98	<0.98	<0.12	<0.12	2400	2500	88	93	<0.57	<0.57	<1.3	<1.3	0.038 J	0.093	<2.2	2.6 J	<6.9	16 J
2026-02-09	<2.5	<0.63	<0.63	750	790	<0.98	<0.98	<0.12	<0.12	1200	1300	30	30	<0.25	<0.25	<1.3	<1.3	0.022 J	0.028 J	0.18 J	0.42	<6.9	<6.9
2026-04-20	<2.5	<0.63	<0.63	830	930	<0.98	<0.98	<0.12	<0.12	780	800	18	19	<0.25	<0.25	<1.3	<1.3	0.034 J	0.052	0.55	1.4	<6.9	<20
ARC-02																							
2024-07-31	<2.5	<0.63	0.99 J	1100	1200	<0.98	<0.98	<0.12	<0.12	2000	2000	79	80	<0.57	<0.57	<1.3	<1.3	0.1	0.15	<2.2	2.2 J	<6.9	<6.9
2024-09-25	<2.5	<0.63	<0.63	1300	1400	<0.98	<0.98	<0.12	<0.12	2000	2000	66	68	<0.57	<0.57	<1.3	<1.3	0.067	0.074	<2.2	<2.2	<6.9	<6.9
2024-12-04	<2.5	<0.63	31	1600	6300	<0.98	1.7 J	<0.12	0.34 J	2200	3200	63	110	<0.57	<0.57	<1.3	1.8 J	0.1	3.8	<2.2	66	7.4 J	150
2025-02-27	<2.5	<0.63	0.82 J	940	1100	<0.98	<0.98	<0.12	<0.12	1800	4000	35	32	<0.57	<0.57	<1.3	<1.3	0.096	0.13	<2.2	<2.2	<6.9	7 J
2025-05-06	<2.5	<0.63	<0.63	1100	1100	<0.98	<0.98	<0.12	<0.12	1300	1200	37	36	<0.57	<0.57	<1.3	<1.3	0.095	0.15	<2.2	<2.2	<6.9	<6.9
2025-08-05	<2.5	1.3 J	1.8 J	1500	1600	<0.98	<0.98	<0.12	<0.12	1800	1700	68	64	<0.57	<0.57	<1.3	<1.3	0.1	0.16	2.9 J	4.9 J	<6.9	<6.9
2025-10-22	<2.5	0.87 J	1.2 J	2700	2200	<0.98	1.6 J	<0.12	<0.12	1900	1700	62	53	<0.57	<0.57	<1.3	<1.3	0.078	0.11	<2.2	3.2 J	<6.9	<6.9
2026-02-23	<2.5	<0.63	0.73 J	830	920	<0.98	<0.98	<0.12	<0.12	1800	1900	43	45	<0.25	<0.25	<1.3	<1.3	0.1	0.14	0.55	1.7	<6.9	<6.9
2026-05-04	<2.5	0.63 J	<0.63	760	830	<0.98	<0.98	<0.12	<0.12	2200	2200	41	42	<0.25	<0.25	<1.3	<1.3	0.11	0.12	0.84	1.3	<6.9	<6.9
ARC-03																							
2024-08-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-26	<2.5	<0.63	<0.63	1700	1700	<0.98	<0.98	<0.12	<0.12	14000	14000	150	150	<0.57	<0.57	<1.3	<1.3	0.36	0.39	<2.2	<2.2	<6.9	<6.9
2024-12-11	<2.5	<0.63	<0.63	1000	1000	<0.98	<0.98	<0.12	<0.12	3500	3400	62	62	<0.57	<0.57	<1.3	<1.3	0.14	0.17	<2.2	<2.2	<6.9	<6.9
2025-03-06	<2.5	<0.63	<0.63	750	810	<0.98	<0.98	<0.12	<0.12	1700	1800	34	36	<0.57	<0.57	<1.3	<1.3	0.11	0.14	<2.2	<2.2	<6.9	<6.9
2025-04-28	<2.5	<0.63	0.85 J	820	910	<0.98	<0.98	<0.12	<0.12	2100	2100	36	37	<0.57	<0.57	<1.3	<1.3	0.17	0.22	<2.2	2.2 J	<6.9	<6.9
2025-08-13	<2.5	<0.63	<0.63	1600	1500	<0.98	<0.98	<0.12	<0.12	14000	14000	170	160	<0.57	<0.57	<1.3	<1.3	0.37	0.38	<2.2	<2.2	<6.9	<6.9
2025-10-27	<2.5	<0.63	<0.63	2000	2000	<0.98	<0.98	<0.12	<0.12	4200	4200	83	84	<0.57	<0.57	<1.3	<1.3	0.19	0.2	<2.2	<2.2	<6.9	<6.9
2026-02-16	<2.5	<0.63	<0.63	760	800	<0.98	<0.98	<0.12	<0.12	3000	3000	57	57	<0.25	<0.25	<1.3	<1.3	0.15	0.17	0.31	0.93	<6.9	<6.9
2026-02-16	<2.5	<0.63	0.79 J	770	810	<0.98	<0.98	<0.12	<0.12	3000	3000	58	59	<0.25	<0.25	<1.3	<1.3	0.15	0.17	0.42	0.9	<6.9	<6.9
2026-04-27	<2.5	<0.63	0.76 J	990	1100	<0.98	<0.98	<0.12	<0.12	1800	1800	37	37	<0.25	<0.25	<1.3	<1.3	0.15	0.19	1	1.9	<6.9	<6.9
Argentine Creek Statistical Summary	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	27	24	18	0	0	26	25	27	26	0	0	0	0	27	27	27	26	1	1	19	14	26	23
	100%	89%	67%	0%	0%	96%	93%	100%	96%	0%	0%	0%	0%	100%	100%	100%	96%	4%	4%	70%	52%	96%	85%
	1.25	1.3	31	4000	6300	1	1.7	0.06	0.34	14000	14000	170	160	0.285	0.285	0.65	1.8	0.37	3.8	2.9	66	7.4	150
	1.25	0.315	0.315	750	790	0.49	0.49	0.06	0.06	780	800	18	19	0.125	0.125	0.65	0.65	0.022	0.025	0.18	0.42	3.45	3.45
	--	0.38	1.68	1314.44	1462.96	0.51	0.58	--	0.07	2903.70	3023.70	59.37	60.74	--	--	--	0.69	0.11	0.27	1.02	3.89	3.60	9.90
	--	0.22	5.87	722.96	1076.45	0.10	0.31	--	0.05	3289.34	3283.63	34.76	35.11	--	--	--	0.22	0.09	0.71	0.47	12.45	0.76	28.14
	--	3.31	4.87	2.23	3.55	4.90	3.26	--	4.90	2.96	2.86	1.75	1.42	--	--	--	4.90	1.73	4.78	1.99	4.86	4.90	4.83
CBR-01																							
2024-07-29	<2.5	<0.63	<0.63	1300	1400	<0.98	<0.98	<0.12	<0.12	9200	9200	130	140	<0.57	<0.57	<1.3	<1.3	0.3	0.31	<2.2	<2.2	<6.9	<6.9
2024-09-25	<2.5	<0.63	<0.63	1500	1500	<0.98	<0.98	<0.12	<0.12	11000	11000	170	170	<0.57	<0.57	<1.3	<1.3	0.36	0.36	<2.2	<2.2	<6.9	<6.9
2024-12-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-02-27	<2.5	<0.63	1.2 J	720	960	<0.98	<0.98	<0.12	<0.12	2600	2500	40	41	<0.57	<0.57	<1.3	<1.3	0.095	0.13	<2.2	2.7 J	<6.9	<6.9
2025-05-06	<2.5	<0.63	0.67 J	660	720	<0.98	<0.98	<0.12	<0.12	2100	2000	35	33	<0.57	<0.57	<1.3	<1.3	0.11	0.12	<2.2	<2.2	<6.9	<6.9
2025-08-05	<2.5	<0.63	0.73 J	1100	1200	<0.98	<0.98	<0.12	<0.12	7500	7600	110	120	<0.57	<0.57	<1.3	<1.3	0.3	0.31	<2.2	<2.2	<6.9	<6.9
2025-10-22	<2.5	<0.63	2.5	2100	2600	<0.98	1.3 J	<0.12	<0.12	1800	1900	42	45	<0.57	<0.57	<1.3	<1.3	0.069	0.16	<2.2	4.1 J	<6.9	7.7 J
2026-02-17	<2.5	<0.63	0.66 J	640	730	<0.98	<0.98	<0.12	<0.12	2700	2800	49	49	<0.25	<0.25	<1.3	<1.3	0.098	0.11	0.35	1	<6.9	<6.9
2026-05-04	<2.5	0.71 J	1.2 J	1200	1300	<0.98	<0.98	<0.12	<0.12	1500	1500	42	42	<0.25	<0.25	<1.3	<1.3	0.089	0.13	1	2.4	<6.9	<6.9

Table 4-2 (continued)

General Parameters

Stream Sampling Locations & Date	Alkalinity (mg/L)	Ammonia (mg/L)	Bicarbonate Alkalinity (as CaCO3) (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Carbonate Alkalinity (as CaCO3) (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Salinity (PSU)
ARC-01																				
2024-07-31	90	0.48	90	<0.18	7.8	<3.7	0.53 J	<0.0036	0.19 J	87	<0.043 J	<0.070	<0.070	0.064 J	<0.21	<0.23	100	7.9	6.4	<0.33
2024-09-25	110	<0.10	110	<0.18	7.6	<3.7	2.1	0.004 J	<0.19	110	<0.043	<0.070	<0.070	0.041 J	0.35 J	<0.23	130	8.6	7.6	0.33
2024-12-05	63	<0.10	63	<0.45	5.9	<3.7	0.7 J	<0.0036	<0.43	57	<0.37	<0.37	<0.25	<0.024	0.62 J	<0.23	66	6.1	12	<0.33
2025-03-11	39	<0.10	39	<0.45	6.1	<3.7	0.6	<0.0036	<0.43	41	<0.37	<0.37	<0.25	<0.024	1.9	0.4	36	6.4	<1.9	<0.33
2025-04-28	30	<0.10	30	<0.45	6.9	<3.7	0.5 J	<0.0036	<0.43	31	<0.37	<0.37	<0.25	0.048 J	0.87 J	0.65 J	<4.3	7.3	4.2 J	<0.33
2025-08-04	97	<0.10	97	<0.45	8.3	<3.7	1.3	<0.0036	<0.43	89	<0.37	<0.37	<0.25	0.068	<0.47	0.68 J	100	8.1	13	<0.33
2025-10-20	120	<0.10	120	<0.45	11	<3.7	0.99 J	<0.0036	<0.43	120	<0.37	<0.37	<0.25	0.25	<0.47	14	120	13	42	<0.33
2026-02-09	64	<0.10	64	<0.45	6.4	<3.7	0.59 J	<0.0036	<0.43	45	<0.37	<0.37	<0.25	0.034 J	0.53 J	0.51 J	42	6.4	--	--
2026-04-20	31	0.06 J	31	<0.45	7.1	<3.7	<0.42	<0.0036	<0.43	28	<1	<1	<1	0.06	0.52 J	<0.23	40	7	3.4 J	<0.33
ARC-02																				
2024-07-31	74	<0.10	74	<0.18	15	<3.7	<1.0	<0.0036	0.19 J	72	<0.043	<0.070	<0.070	0.073 J	<0.21	<0.23	98	15	13	<0.33
2024-09-25	57	<0.10	57	<0.18	12	<3.7	1.7	<0.0036	<0.19	60	<0.043	<0.070	<0.070	<0.024	2.4	<0.23	64	13	3.8 J	0.48
2024-12-04	52	0.15 J	52	<0.45	11	<3.7	3.5	<0.0036	<0.43	110	0.49 J	0.49 J	<0.25	0.27	1.4	<2.5	86	16	2300	<0.33
2025-02-27	30	<0.10	30	<0.45	8.3	<3.7	2.3	<0.0036	<0.43	34	<0.37	<0.37	<0.25	0.039 J	1.9	<0.58	100	7.8	10	<0.33
2025-05-06	37	<0.10	37	<0.45	9.3	<3.7	0.82 J	<0.0036	<0.43	39	<0.37	<0.37	<0.25	0.028 J	0.65 J	<0.23	72	8.8	5	<0.33
2025-08-05	78	1.1	78	<0.45	15	<3.7	1.1	<0.0036	<0.43	64	<0.37	<0.37	<0.25	0.15	<0.47	<0.23	82	16	51	<0.33
2025-10-22	16	0.17 J	16	<0.45	16	<3.7	2.2	<0.0036	<0.43	48	<0.37	<0.37	<0.25	0.087 J	1.4	<0.58	84	18	17	<0.33
2026-02-23	63	<0.10	63	<0.45	8.1	<3.7	1.6	<0.0036	<0.43	51	<0.37	<0.37	<0.25	0.054	0.82 J	2.7	100	7.6	14	<0.33
2026-05-04	46	<0.049	46	<0.45	9.6	<3.7	1.4	<0.0036	<0.43	39	<0.37	<0.37	<0.25	0.034 J	<0.47	<1.0	66	9.4	20	<0.33
ARC-03																				
2024-08-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-26	84	<0.10	84	0.33 J	7.4	<3.7	23	<0.0036	<0.19	87	0.45 J	0.45 J	<0.070	0.038 J	1.4	<0.23	120	6.8	11	<0.33
2024-12-11	46	<0.10	46	<0.45	8.7	<3.7	5.2	<0.0036	<0.43	50	<0.37	<0.37	<0.25	<0.024	3.1	1.2	66	8.5	<1.9	<0.33
2025-03-06	28	<0.10	28	<0.45	8.4	<3.7	1.7	<0.0036	<0.43	32	1.2	1.2	<0.25	0.033 J	1.8	0.32 J	60	7.9	<1.9	<0.33
2025-04-28	29	<0.10	29	<0.45	7.6	<3.7	1.8	<0.0036	<0.43	32	<0.37	<0.37	<0.25	0.029 J	1.1	1.7	98	8.2	6.8	<0.33
2025-08-13	86	<0.10	86	<0.45	7.5	<3.7	31	<0.0036	<0.43	88	<0.37	<0.37	<0.25	<0.024	0.79 J	<1.0	14 J	7.1	<1.9	<0.33
2025-10-27	71	<0.10	71	<0.45	12	<3.7	5.5	<0.0036	<0.43	59	<0.37	<0.37	<0.25	0.036 J	2.3	1.3	74	12	<1.9	<0.33
2026-02-16	72	<0.10	72	<0.45	7	<3.7	3.6	<0.0036	<0.43	50	<0.37	<0.37	<0.25	0.04 J	0.75 J	<0.23	100	6.9	3 J	<0.33
2026-02-16	58	<0.10	58	<0.45	7	<3.7	3.5	<0.0036	<0.43	50	<0.37	<0.37	<0.25	0.043 J	0.9 J	3.5	96	7.1	3.8 J	<0.33
2026-04-27	47	<0.049	47	<0.45	9.7	<3.7	1.8	<0.0036	<0.43	34	<1	<1	<1	0.052	0.53 J	<0.23	72	9.6	8.2	<0.33
Argentine Creek Statistical Summary	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	25	25
	0	22	0	26	0	27	2	26	25	0	24	24	27	5	6	16	1	0	5	24
	0%	81%	0%	96%	0%	100%	7%	96%	93%	0%	89%	89%	100%	19%	22%	59%	4%	0%	20%	96%
	120	1.1	120	0.33	16	1.85	31	0.004	0.215	120	1.2	1.2	0.5	0.27	3.1	14	130	18	2300	0.48
	16	0.0245	16	0.09	5.9	1.85	0.21	0.0018	0.095	28	0.0215	0.035	0.035	0.012	0.105	0.115	2.15	6.1	0.95	0.165
	59.93	0.11	59.93	0.21	9.14	--	3.69	0.00	0.20	59.52	0.24	0.24	--	0.06	1.01	1.15	77.34	9.50	102.26	0.18
	26.75	0.22	26.75	0.05	2.78	--	6.95	0.00	0.04	26.76	0.23	0.23	--	0.06	0.79	2.70	31.18	3.41	458.02	0.07
	0.43	3.94	0.43	-1.18	1.18	--	3.18	4.90	-2.35	0.84	2.76	2.83	--	2.36	0.96	4.22	-0.61	1.20	4.69	3.59
CBR-01																				
2024-07-29	93	0.25	93	0.22 J	8.4	<3.7	19	<0.0036	0.26 J	100	<0.043	<0.070	<0.070	<0.024 J	1.4	0.5 J	140	7.4	<1.9	<0.33
2024-09-25	110	<0.10	110	0.26 J	6.4	<3.7	23	<0.0036	<0.19	120	<0.043	<0.070	<0.070	<0.024	1.7	<0.23	180	6.8	<1.9	<0.33
2024-12-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-02-27	34	<0.10	34	<0.45	7.9	<3.7	3.3	0.015	<0.43	41	<0.37	<0.37	<0.25	0.029 J	2.2	<0.58	74	8.2	7.8	<0.33
2025-05-06	31	<0.10	31	<0.45	9.4	<3.7	2.7	<0.0036	<0.43	34	<0.37	<0.37	<0.25	<0.024	1	<0.23	42	9	2.6 J	<0.33
2025-08-05	91	<0.10	91	<0.45	9.3	<3.7	14	<0.0036	<0.43	91	<0.37	<0.37	<0.25	<0.05	1	0.68 J	68	9.3	11	<0.33
2025-10-22	50	<0.10	50	<0.45	16	<3.7	2.5	<0.0036	<0.43	45	<0.37	<0.37	<0.25	0.12 J	1.2	1.4 J	52	17	49	<0.33
2026-02-17	64	<0.10	64	<0.45	7.2	<3.7	3.7	<0.0036	<0.43	50	<0.37	<0.37	<0.25	<0.024	1	1.5	58	7.2	4.6 J	<0.33
2026-05-04	42	0.065 J	42	<0.45	8.3	<3.7	3.1	<0.0036	<0.43	42	<0.37	<0.37	<0.25	0.051	0.7 J	5.3 J	42 J	8.1	2.4	<0.33

Table 4-2 (continued)

Stream Sampling Locations & Date	Note	Conductivity (Field) (mS/cm)	Dissolved Oxygen (Field) (mg/L)	pH (Field) (SU)	Redox Potential (Field) (mV)	Temperature Field (°C)	Turbidity (NTU)	Aluminum, Dissolved (µg/L)	Aluminum, Total (µg/L)	Antimony, Dissolved (µg/L)	Antimony, Total (µg/L)	Arsenic, Dissolved (µg/L)	Arsenic, Total (µg/L)	Barium, Dissolved (µg/L)	Barium, Total (µg/L)	Beryllium, Dissolved (µg/L)	Beryllium, Total (µg/L)	Boron, Dissolved (µg/L)	Boron, Total (µg/L)	Cadmium, Dissolved (µg/L)	Cadmium, Total (µg/L)
		Field Parameters						*Metals (Total & Dissolved)*													
CBR-02																					
2024-08-06		0.246	6.7	7.97	92	26.38	0	<25	180	<1.3	<1.3	0.57 J	0.66 J	80	83	<0.53	<0.53	64	74	<0.17	<0.17
2024-10-03		0.261	7.32	8.1	106	13.84	12.2	<25	42 J	<1.3	<1.3	<1.0	0.49 J	73	73	<0.53	<0.53	70	69	<0.17	<0.17
2024-12-17		0.118	10.09	8.3	229	0.75	39.2	110	1300	<1.3	<1.3	0.24 J	0.37 J	33	44	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-04		0.119	11.02	7.42	130	1.04	43.9	100	640	<1.3	<1.3	0.26 J	0.43 J	31	48	<0.53	<0.53	31 J	34 J	<0.17	<0.17
2025-05-06		0.074	11.6	7.38	68	12.26	4.2	89 J	500	<1.3	<1.3	0.28 J	0.33 J	28	31	<0.53	<0.53	<50	53	<0.17	<0.17
2025-08-11		0.163	3.82	7.41	114	23.42	0	<25	100	<1.3	<1.3	0.38 J	0.44 J	60	62	<0.53	<0.53	49 J	46 J	<0.17	<0.17
2025-10-27		0.097	11.28	7.76	151	7.18	0	91 J	750	<1.3	<1.3	0.37 J	0.45 J	33	40	<0.53	<0.53	34 J	28 J	<0.17	<0.17
2026-02-16		0.126	10.75	7.8	127	1.44	0	50 J	370	<0.93	<0.93	<0.23	0.27 J	34	38	<0.24	<0.24	24 J	37 J	<0.17	<0.17
2026-04-27		0.069	10.85	7.17	219	9.15	14.5	120	530	<0.93	<0.93	0.26 J	0.31 J	22	27	<0.24	<0.24	27 J	31 J	<0.17	<0.17
Cranberry River Statistical Summary	**Number of Observations**	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	Number of Non-Detect	0	0	0	0	0	0	5	0	17	17	4	1	0	0	17	17	3	2	17	17
	% Non-Detect	0%	0%	0%	0%	0%	0%	29%	0%	100%	100%	24%	6%	0%	0%	100%	100%	18%	12%	100%	100%
	Maximum	0.295	13.48	8.74	348	26.38	102	120	1900	0.65	0.65	0.57	0.69	86	87	0.265	0.265	130	140	0.085	0.085
	Minimum	0.068	3.82	6.86	68	0.07	0	12.5	42	0.465	0.465	0.115	0.115	19	24	0.12	0.12	17	18	0.085	0.085
	Average	0.14	9.37	7.75	165.71	11.48	25.28	65.26	608.94	--	--	0.32	0.42	42.35	48.71	--	--	45.71	51.06	--	--
	Standard Deviation	0.08	2.42	0.50	64.59	9.11	25.82	42.52	532.95	--	--	0.13	0.14	22.96	20.99	--	--	31.56	32.13	--	--
	Skewness	0.78	-0.59	0.33	1.13	0.23	2.21	-0.15	1.19	--	--	-0.05	0.07	0.76	0.52	--	--	1.37	1.38	--	--
DKC-01																					
2024-07-29	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-23	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-05		0.159	14.81	7.83	250	0.59	0	110	95 J	<1.3	<1.3	<0.23	0.24 J	48	46	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-11		0.16	12.12	7.99	325	-0.02	0.9	27	190	<1.3	<1.3	<0.23	<0.23	35	38	<0.53	<0.53	28	51	<0.17	<0.17
2025-04-28		0.16	12.12	7.99	325	-0.02	0.9	89 J	--	--	--	0.23 J	0.46 J	--	--	--	--	26 J	27 J	--	--
2025-04-28		0.06	12.06	7.25	208	8.22	37.5	89 J	1700	<1.3	<1.3	0.23 J	0.46 J	15	30	<0.53	<0.53	26 J	27 J	<0.17	<0.17
2025-08-04		0.167	7.44	7.57	331	16.2	0.6	<25	34 J	<1.3	<1.3	0.38 J	0.4 J	43	44	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-10-20		0.193	5.19	7.1	123	7.78	26.5	<25	760	<1.3	<1.3	0.38 J	0.58 J	50	61	<0.53	<0.53	28 J	28 J	<0.17	<0.17
2026-02-19		0.102	13.5	7.2	188	0.33	11.8	69 J	620	<0.93	<0.93	<0.23	0.26 J	25	29	<0.24	<0.24	13 J	<50	<0.17	<0.17
2026-04-23		0.036	11.24	6.77	154	8.26	40	110	870	<0.93	<0.93	<0.23	0.29 J	15	26	<0.24	<0.24	27 J	<50	<0.17	<0.17
DKC-02																					
2024-08-07	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25		0.152	9.39	7.65	168	18.34	2.5	32 J	30 J	<1.3	<1.3	0.37 J	0.36 J	42	43	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-12-17		0.081	16.12	7.3	189	0.06	24.7	290	650	<1.3	<1.3	0.27 J	0.32 J	25	27	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-02-26		0.075	11.02	8.26	298	0.03	16.5	91 J	700	<1.3	<1.3	0.27 J	0.36 J	21	27	<0.53	<0.53	<13	17 J	<0.17	<0.17
2025-05-07		0.065	10.88	6.63	191	11.43	10.2	100	380	<1.3	<1.3	0.33 J	0.4 J	21	23	<0.53	<0.53	19 J	20 J	<0.17	<0.17
2025-08-13		0.126	6.18	7.67	154	19.46	2.3	<25	51 J	<1.3	<1.3	0.5 J	0.52 J	52	51	<0.53	<0.53	53	53	<0.17	<0.17
2025-10-27		0.135	12.13	7.74	146	5.45	0	<25	63 J	<1.3	<1.3	0.42 J	0.41 J	37	37	<0.53	<0.53	26 J	22 J	<0.17	<0.17
2026-02-17		0.092	13.56	7.31	145	0.2	10	110	470	<0.93	<0.93	0.24 J	0.28 J	22	25	<0.24	<0.24	13 J	<13	<0.17	<0.17
2026-04-28		0.047	11.61	7.04	170	9.63	31.1	170	320	<0.93	<0.93	0.28 J	0.3 J	15	19	<0.24	<0.24	25 J	28 J	<0.17	<0.17
DKC-03																					
2024-08-06		0.213	5.21	7.52	151	25.28	0	<25	37 J	<1.3	<1.3	0.44 J	0.55 J	49	51	<0.53	<0.53	34 J	41 J	<0.17	<0.17
2024-09-26		0.163	6.67	7.83	151	14.36	8.7	<25	33 J	<1.3	<1.3	0.33 J	0.29 J	39	40	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-12-16		0.087	13.76	7.5	237	1.63	47.7	43 J	870	<1.3	<1.3	0.23 J	0.41 J	25	34	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-03		0.077	12.06	7.46	136	1.31	6.5	450	1100 J	<1.3	<1.3	0.24 J	0.38 J	22	27	<0.53	<0.53	26 J	21 J	<0.17	<0.17
2025-04-29		0.05	11.11	7.31	271	8.4	34.5	100	2500 J	<1.3	<1.3	0.26 J	0.61 J	16 J	38	<0.53	<0.53	22 J	18 J	<0.17	<0.17
2025-08-12		0.108	5.02	7.43	110	24.53	1.2	<25	48 J	<1.3	<1.3	0.36 J	0.4 J	30	31	<0.53	<0.53	<50 J	<50 J	<0.17	<0.17
2025-10-27		0.139	9.94	7.7	154	9.28	0	<25	42 J	<1.3	<1.3	0.32 J	0.39 J	40	42	<0.53	<0.53	38 J	46 J	<0.17	<0.17
2026-02-09		0.109	12.46	---	223	1.3	14.7	53 J	310	<0.93	<0.93	<0.23	0.28 J	24	26	<0.24	<0.24	35 J	26 J	<0.17	<0.17
2026-04-29		0.052	12.18	7.34	155	8.32	6.8	220	750	<0.93	<0.93	0.33 J	0.37 J	16	21	<0.24	<0.24	46 J	25 J	<0.17	<0.17

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Calcium, Dissolved (µg/L)	Calcium, Total (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total (µg/L)	Cobalt, Dissolved (µg/L)	Cobalt, Total (µg/L)	Copper, Dissolved (µg/L)	Copper, Total (µg/L)	Iron, Dissolved (µg/L)	Iron, Total (µg/L)	Lead, Dissolved (µg/L)	Lead, Total (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total (ng/L)	Molybdenum, Dissolved (µg/L)
CBR-02																							
2024-08-06	30000	30000	<1.1	<1.1	<0.40	<0.40	1.9 J	2.3	120	480	<0.19	<0.19	<2.5	<2.5	6800	7000	30	42	0.71	0.84	0.058	0.096	<2.5
2024-10-03	28000	30000	<1.1	<1.1	<0.40	<0.40	1.2 J	3.2	110	330	<0.19	<0.19	<2.5	<2.5	6200	6400	8.9	12	0.68	0.65	0.05	0.06	<2.5
2024-12-17	13000	13000	<1.1	1.8 J	<0.40	0.44 J	3.6	5.2	290	1300	<0.19	0.5	<2.5	<2.5	3500	3800	25	37	4.5	5.8	0.026 J	0.045 J	<2.5
2025-03-04	12000	13000	<1.1	<1.1	<0.40	<0.40	3.1	5.3	290	1000	<0.19	0.52	<2.5	<2.5	3000	3400	29	42	4.1	7.8	0.041 J	0.15	<2.5
2025-05-06	11000	10000	<1.1	<1.1	<0.40	<0.40	4.5	4.6	170	460	<0.19	<0.50	<2.5	<2.5	2500	2700	7.5	12	4.2	4.8	<0.080	<0.080	<2.5
2025-08-11	24000	24000	<1.1	<1.1	<0.40	<0.40	1.8 J	2	60 J	270	<0.19	<0.19	<2.5	<2.5	5500	5400	10	40	1.1	1.4	0.091	0.16	<2.5
2025-10-27	13000	13000	<1.1	1.2 J	<0.40	<0.40	4.6	5.2	340	1000	<0.19	0.32 J	<2.5	<2.5	3300	3500	26	41	5.1 J	6 J	0.058	0.071	<2.5
2026-02-16	16000	16000	<1.1	<1.1	<0.40	<0.40	2.1	2.7	280	620	<0.19	<0.19	<2.5	<2.5	4200	4400	7.5	13	1.8	2.3	<0.022	0.039	<2.5
2026-04-27	9000	9200	<1.1	<1.1	<0.40	<0.40	3.9	4.5	220	560	<0.19	0.2 J	<2.0	<2.0	2200	2300	8.5	14	5.2	5.2 J	0.078	0.095	<2.5
	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	0	0	17	12	17	13	0	0	0	0	17	9	14	14	0	0	0	0	0	0	3	2	17
	0%	0%	100%	71%	100%	76%	0%	0%	0%	0%	100%	53%	82%	82%	0%	0%	0%	0%	0%	0%	18%	12%	100%
Cranberry River Statistical Summary	35000	35000	0.55	2.4	0.2	0.89	8.9	11	640	2000	0.095	0.7	3.1	3.1	8900	9000	53	140	6.1	9	0.095	0.3	1.25
	9000	9200	0.55	0.55	0.2	0.2	1.2	1.8	60	220	0.095	0.095	1	1	2200	2300	4.8	9.6	0.52	0.52	0.011	0.031	1.25
	17800.00	18041.18	--	0.88	--	0.28	3.19	4.19	225.82	768.24	--	0.27	1.49	1.54	4394.12	4588.24	16.22	37.27	2.97	3.78	0.06	0.09	--
	8583.71	8759.50	--	0.58	--	0.18	1.83	2.21	135.98	492.78	--	0.20	0.64	0.72	2039.75	2022.96	13.42	33.90	1.96	2.73	0.02	0.07	--
	0.73	0.69	--	1.53	--	2.49	1.80	1.67	1.62	1.02	--	0.76	1.72	1.65	0.81	0.78	1.35	1.83	-0.01	0.30	-0.02	1.84	--
DKC-01																							
2024-07-29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-05	30000	29000	<1.1	4.1 J	<0.40	<0.40	2.6	2.1	180	180	<0.19	<0.19	<2.5	<2.5	8000	7800	35	30	0.96	0.8	<0.022	<0.022	<2.5
2025-03-11	21000	22000	<1.1	<1.1	<0.40	<0.40	2.6	3.2	130	300	<0.19	<0.19	<2.5	<2.5	5900	6000	4.4	5.5	1.6	1.8	<0.022	<0.050	<2.5
2025-04-28	--	--	1.3 J	3.5 J	--	0.76 J	--	--	86 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-04-28	7500	8000	1.3 J	3.5 J	<0.40	0.76 J	4.7	6.7	86 J	1300	<0.19	0.58	<2.5	<2.5	1900	2400	3.4	29	3.5	5.3	<0.050	0.074	<2.5
2025-08-04	25000	24000	<1.1	<1.1	<0.40	<0.40	3.5	2.7	130	170	<0.19	<0.19	<2.5	<2.5	6300	6400	19	8.2	1.2	1.4	0.05	0.056	<2.5
2025-10-20	27000	28000	<1.1	<5	<0.40	0.57 J	1.8 J	3.9	130	1000	<0.19	0.29 J	<2.5	<2.5	8000	8200	7.6	130	1.3	1.4	0.049 J	0.057	<2.5
2026-02-19	14000	14000	<1.1	<1.1	<0.40	<0.40	3.5	4.5	160	570	<0.19	0.24 J	<2.5	<2.5	3900	4100	5.4	9.3	2.5	3.4	<0.022	<0.022	<2.5
2026-04-23	5800	5900	<1.1	<1.1	<0.40	<0.40	3.3	4.5	79 J	570	<0.19	0.29 J	<2.0	<2.0	1400	1600	4.8	11	4	4.6	<0.033	0.055	<2.5
DKC-02																							
2024-08-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	18000	18000	<1.1	<1.1	<0.40	<0.40	2.8	2.8	390	430	<0.19	<0.19	<2.5	<2.5	5000	5000	12	14	0.91	0.87	0.045 J	0.049 J	<2.5
2024-12-17	11000	11000	<1.1	1.1 J	<0.40	<0.40	7.7	8.9	570	940	<0.19	0.32 J	<2.5	<2.5	3200	3300	8	12	3.9	4.8	<0.022	<0.022	<2.5
2025-02-26	9600	9800	<1.1	<1.1	<0.40	<0.40	6.9	9.4	660	1600	<0.19	0.26 J	<2.5	<2.5	2600	2700	18	27	3.3	4.8	0.034 J	0.044 J	<2.5
2025-05-07	9400	9600	<1.1	<1.1	<0.40	<0.40	9.8	11	290	560	<0.19	<0.50	<2.5	<2.5	2400	2500	12	18	3.7	4.3	<0.080	<0.080	<2.5
2025-08-13	21000	20000	<1.1	<1.1	<0.40	<0.40	3.1	3.4	370	590	<0.19	<0.19	<2.5	<2.5	5700	5400	59	76	1.5	1.3	0.12	0.12	<2.5
2025-10-27	18000	18000	<1.1	<1.1	<0.40	<0.40	4	4.1	500	630	<0.19	<0.19	<2.5	<2.5	5300	5300	6.8	8.3	1.5 J	1.3 J	0.026 J	<0.022	<2.5
2026-02-17	12000	12000	<1.1	<1.1	<0.40	<0.40	5.1	6.5	490	1100	<0.19	0.2 J	<2.5	<2.5	3300	3400	7.4	12	2.3	3.3	<0.022	0.025 J	<2.5
2026-04-28	7400	7400	<1.1	<1.1	<0.40	<0.40	11	13	290	510	<0.19	0.19 J	<2.0	<2.0	1900	2000	12	21	5.6	7.4	0.052	0.095	<2.5
DKC-03																							
2024-08-06	19000	19000	<1.1	<1.1	<0.40	<0.40	2.1	2.5	300	850	<0.19	<0.19	<2.5	<2.5	4300	4300	56	100	0.78	0.96	0.091	0.18	<2.5
2024-09-26	16000	16000	<1.1	<1.1	<0.40	<0.40	2.8	2.9	250	440	<0.19	<0.19	<2.5	<2.5	3900	3900	16	30	0.67	0.83	<0.022	0.056	<2.5
2024-12-16	11000	12000	<1.1	1.3 J	<0.40	0.46 J	6.2	10	300	1400 J	<0.19	2.3	<2.5	<2.5	3200	3400	7	45	2.9	3.9	0.035 J	0.03 J	<2.5
2025-03-03	8500 J	8300	<1.1	1.3 J	<0.40	<0.40	8.5	11	740	1600	<0.19	0.46 J	<2.5	<2.5	2300	2300	11	22	4.5	6.6	<0.050	<0.050	<2.5
2025-04-29	6900	7800	<1.1	3 J	<0.40	1.2	9.4	15	190	2300 J	<0.19	1	<2.5	<2.5	1800	2400	17	83	4.6	8	0.049 J	0.067	<2.5
2025-08-12	15000	15000	<1.1	<1.1	<0.40	<0.40	2.7 J	2.3	220	410	1.2	<0.19	<2.5	<2.5	3500	3400	37	71	0.7	0.85	0.07	0.11	<2.5
2025-10-27	17000	18000	2.1 J	2.4 J	<0.40	<0.40	3.6	3.9	390	510	<0.19	<0.19	<2.5	<2.5	4900	5100	13	14	1.4	1.3	<0.022	0.034 J	<2.5
2026-02-09	12000	12000	<1.1	<1.1	<0.40	<0.40	5.1	5.2	590	1200	<0.19	<0.19	<2.5	<2.5	3300	3300	12	19	1.9	2.5	0.038 J	0.035 J	<2.5
2026-04-29	7500	7500	<1.1	1.1 J	<0.40	<0.40	11	13	360	770	<0.19	0.3 J	<2.0	<2.0	2000	2000	13	19	5.8	7.7	0.052	0.052	<2.5

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Molybdenum, Total (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total (µg/L)	Potassium, Dissolved (µg/L)	Potassium, Total (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total (µg/L)	Silver, Dissolved (µg/L)	Silver, Total (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total (µg/L)	Tin, Dissolved (µg/L)	Tin, Total (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total (µg/L)
CBR-02																							
2024-08-06	<2.5	<0.63	<0.63	1400	1500	<0.98	<0.98	<0.12	<0.12	11000	11000	170	170	<0.57	<0.57	<1.3	<1.3	0.26	0.29	<2.2	<2.2	<6.9	<6.9
2024-10-03	<2.5	<0.63	<0.63	1500	1500	<0.98	<0.98	<0.12	<0.12	9600	9900	170	170	<0.57	<0.57	<1.3	<1.3	0.29	0.28	<5.0	<2.2	<6.9	<6.9
2024-12-17	<2.5	<0.63	1.1 J	890	1100	<0.98	<0.98	<0.12	<0.12	3400	3500	60	61	<0.57	<0.57	<1.3	<1.3	0.12	0.18	<2.2	2.5 J	<6.9	<6.9
2025-03-04	<2.5	<0.63	0.75 J	790	880	<0.98	1 J	<0.12	<0.12	3400	3600	56	60	<0.57	<0.57	<1.3	<1.3	0.13	0.27	<2.2	<2.2	<6.9	<6.9
2025-05-06	<2.5	<0.63	0.64 J	750	810	<0.98	<0.98	<0.12	<0.12	2900	2900	47	46	<0.57	<0.57	<1.3	<1.3	0.14	0.16	<2.2	<2.2	<6.9	<6.9
2025-08-11	<2.5	<0.63	<0.63	1200	1300	<0.98	<0.98	<0.12	<0.12	7800	7700	130	130	<0.57	<0.57	<1.3	<1.3	0.23	0.23	<2.2	<2.2	<6.9	<6.9
2025-10-27	<2.5	<0.63	1.3 J	1200	1300	<0.98	<0.98	<0.12	<0.12	3200	3200	60	61	<0.57	<0.57	<1.3	<1.3	0.12	0.16	<2.2	2.2 J	<6.9	<6.9
2026-02-16	<2.5	<0.63	0.67 J	750	820	<0.98	<0.98	<0.12	<0.12	4100	4200	70	71	<0.25	<0.25	<1.3	1.3 J	0.17	0.2	0.45	1.1	<6.9	<6.9
2026-04-27	<2.5	<0.63	0.64 J	720	810	<0.98	<0.98	<0.12	<0.12	1900	1900	36	37	<0.25	<0.25	<1.3	<1.3	0.12	0.13	0.94	1.6	<6.9	<6.9
	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	17	16	5	0	0	17	15	17	17	0	0	0	0	17	17	17	16	0	0	13	9	17	16
	100%	94%	29%	0%	0%	100%	88%	100%	100%	0%	0%	0%	0%	100%	100%	100%	94%	0%	0%	76%	53%	100%	94%
Cranberry River Statistical Summary	1.25	0.71	2.5	2100	2600	0.49	1.3	0.06	0.06	11000	11000	170	170	0.285	0.285	0.65	1.3	0.36	0.36	2.5	4.1	3.45	7.7
	1.25	0.315	0.315	640	720	0.49	0.49	0.06	0.06	1500	1500	35	33	0.125	0.125	0.65	0.65	0.069	0.11	0.35	1	3.45	3.45
	--	0.34	0.80	1083.53	1201.76	--	0.57	--	--	5041.18	5082.35	83.35	85.06	--	--	--	0.69	0.18	0.21	1.08	1.62	--	3.70
	--	0.10	0.55	399.58	458.93	--	0.23	--	--	3446.02	3460.89	51.22	51.92	--	--	--	0.16	0.09	0.08	0.43	0.87	--	1.03
	--	3.75	1.77	0.88	1.59	--	2.62	--	--	0.69	0.68	0.76	0.69	--	--	--	3.75	0.67	0.44	1.75	1.59	--	3.75
DKC-01																							
2024-07-29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-05	<2.5	<0.63	<0.63	1300	1300	<0.98	<0.98	<0.12	<0.12	2900	2800	69	67	<0.57	<0.57	<1.3	<1.3	0.72	0.69	<2.2	<2.2	<6.9	<6.9
2025-03-11	<2.5	<0.63	<0.63	830	810	1.2	<0.98	<0.12	<0.12	2100	2100	51	51	<0.57	<0.57	<1.3	<1.3	0.4	0.41	<2.2	<2.2	<6.9	<6.9
2025-04-28	--	1.9 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.4 J	--	--
2025-04-28	<2.5	1.9 J	6.8	540	940	<0.98	<0.98	<0.12	<0.12	740	820	17	19	<0.57	<0.57	<1.3	<1.3	0.11	0.16	<2.2	4.4 J	<6.9	<6.9
2025-08-04	<2.5	<0.63	<0.63	1200	1200	<0.98	<0.98	<0.12	<0.12	2000	2000	58	58	<0.57	<0.57	<1.3	<1.3	0.28	0.29	<2.2	<2.2	<6.9	<6.9
2025-10-20	<2.5	<0.63	<2	2300	2400	<0.98	<0.98	<0.12	<0.12	2700	2700	73	76	<0.57	<0.57	<1.3	<1.3	0.19	0.27	<2.2	2.2 J	<6.9	<6.9
2026-02-19	<2.5	<0.63	<0.63	570	670	<0.98	1.1 J	<0.12	<0.12	1300	1300	35	35	<0.25	<0.25	<1.3	<1.3	0.13	0.16	0.47	1.3	<6.9	<6.9
2026-04-23	<2.5	<0.63	0.93 J	490 J	700	<0.98	<0.98	<0.12	<0.12	600	660 J	14	15	<0.25	<0.25	<1.3	<1.3	0.081	0.11	0.79	2	<6.9	<6.9
DKC-02																							
2024-08-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	<2.5	<0.63	<0.63	1300	1300	<0.98	<0.98	<0.12	<0.12	4700	4700	78	78	<0.57	<0.57	<1.3	<1.3	0.29	0.3	<2.2	<2.2	<6.9	<6.9
2024-12-17	<2.5	<0.63	<0.63	960	990	<0.98	<0.98	<0.12	<0.12	1900	1900	41	40	<0.57	<0.57	<1.3	<1.3	0.16	0.21	<2.2	<2.2	<6.9	<6.9
2025-02-26	<2.5	<0.63	0.68 J	870	980	<0.98	<0.98	<0.12	<0.12	1700	1700	34	36	<0.57	<0.57	<1.3	<1.3	0.17	0.22	<2.2	<2.2	<6.9	<6.9
2025-05-07	<2.5	<0.63	<0.63	860	910	<0.98	<0.98	<0.12	<0.12	1400	1400	32	32	<0.57	<0.57	<1.3	<1.3	0.23	0.26	<2.2	<2.2	<6.9	<6.9
2025-08-13	<2.5	<0.63	<0.63	1400	1400	<0.98	<0.98	<0.12	<0.12	490 J	490 J	92	88	<0.57	<0.57	<1.3	<1.3	0.26	0.25	<2.2	<2.2	<6.9	<6.9
2025-10-27	<2.5	<0.63	0.64 J	1900	1900	<0.98	<0.98	<0.12	<0.12	3300	3300	71	72	<0.57	<0.57	<1.3	<1.3	0.28	0.31	<2.2	<2.2	<6.9	<6.9
2026-02-17	<2.5	<0.63	<0.63	790	850	<0.98	<0.98	<0.12	<0.12	1800	1800	43	44	<0.25	<0.25	<1.3	<1.3	0.18	0.2	0.49	1.2	<6.9	<6.9
2026-04-28	<2.5	<0.63	<0.63	800	820	<0.98	<0.98	<0.12	<0.12	1100	1100	23	23	<0.25	<0.25	<1.3	<1.3	0.18	0.23	1	1.4	<6.9	<6.9
DKC-03																							
2024-08-06	<2.5	<0.63	<0.63	1300	1400	<0.98	<0.98	<0.12	<0.12	19000	19000	74	74	<0.57	<0.57	<1.3	<1.3	0.068	0.064	<2.2	<2.2	<6.9	<6.9
2024-09-26	<2.5	<0.63	<0.63	1400	1400	<0.98	<0.98	<0.12	<0.12	10000	10000	64	65	<0.57	<0.57	<1.3	<1.3	0.085	0.083	<2.2	<2.2	<6.9	<6.9
2024-12-16	<2.5	<0.63	1.1 J	1000	1200	<0.98	<0.98	<0.12	<0.12	3300	3400	44	46	<0.57	<0.57	<1.3	<1.3	0.12	0.14	<2.2	2.5 J	<6.9	11 J
2025-03-03	<2.5	<0.63	0.92 J	850	920	<0.98	<0.98	<0.12	<0.12	1400	1300	29	30	<0.57	<0.57	<1.3	<1.3	0.16	0.2	<2.2	2.3 J	<6.9	<6.9
2025-04-29	<2.5	<0.63	2.7	720	1300	<0.98	<0.98	<0.12	<0.12	1000	1100	24 J	27	<0.57	<0.57	<1.3	<1.3	0.17	0.4	<2.2	6.6	<6.9	8 J
2025-08-12	<2.5	<0.63	<0.63	980	970	<0.98	<0.98	<0.12	<0.12	6800	6500	50	49	<0.57	<0.57	<1.3	<1.3	0.091	0.097	<2.2	<2.2	<6.9	<6.9
2025-10-27	<2.5	0.78 J	0.9 J	1900	1900	<0.98	<0.98	<0.12	<0.12	4500	4500	71	75	<0.57	<0.57	<1.3	<1.3	0.19	0.21	<2.2	<2.2	<6.9	<6.9
2026-02-09	<2.5	<0.63	<0.63	840	880	<0.98	<0.98	<0.12	<0.12	2300	2300	47	47	<0.25	<0.25	<1.3	<1.3	0.15	0.2	0.46	1	<6.9	<6.9
2026-04-29	<2.5	<0.63	0.86 J	810	890	<0.98	<0.98	<0.12	<0.12	1000	1000	25	26	<0.25	<0.25	1.8 J	1.5 J	0.16	0.2	1.1	1.9	<6.9	<6.9

Table 4-2 (continued)

General Parameters

Stream Sampling Locations & Date	Alkalinity (mg/L)	Ammonia (mg/L)	Bicarbonate Alkalinity (as CaCO3) (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Carbonate Alkalinity (as CaCO3) (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Salinity (PSU)
CBR-02																				
2024-08-06	80	<0.10	80	<0.18	7.6	<3.7	23	<0.0036	<0.19	100	<0.043	<0.070	<0.070	0.044 J	0.67 J	<0.23	130	7.8	4 J	<0.33
2024-10-03	90	<0.10	90	<0.18	6.2	<3.7	23	<0.0036	<0.19	100	<0.043	<0.070	<0.070	<0.024	1.3	<0.23	140	6.2	<1.9	<0.33
2024-12-17	45	<0.10	45	<0.45	10	<3.7	5.3	<0.0036	<0.43	49	<0.37	<0.37	<0.25	<0.024	2.7	1.7	88	11	17	<0.33
2025-03-04	46	<0.10	46	<0.45	8.4	<3.7	5.9	<0.0036	<0.43	45	0.48 J	0.48 J	<0.25	0.1	2.8	<0.23	78	8.7	160	<0.33
2025-05-06	32	<0.10	32	<0.45	8.1	<3.7	4.2	<0.0036	<0.43	37	<0.37	<0.37	<0.25	0.027 J	1.1	0.72 J	60	8.6	2.2 J	<0.33
2025-08-11	82	<0.10	82	<0.45	7.5	<3.7	18	<0.0036	<0.43	83	<0.37	<0.37	<0.25	0.031 J	1.1	1.2	130	7.5	4.6 J	<0.33
2025-10-27	55	<0.10	55	<0.45	14	<3.7	4.5	<0.0036	<0.43	47	<0.37	<0.37	<0.25	0.057	1.1	1.2	48	14	19	<0.33
2026-02-16	74	<0.10	74	<0.45	6.8	<3.7	6.2	<0.0036	<0.43	59	<0.37	<0.37	<0.25	0.041 J	1.2	1.2	92	6.7	3.6 J	<0.33
2026-04-27	48	<0.049	48	<0.45	9.3	<3.7	3	0.005	<0.43	32	<1	<1	<1	0.048 J	0.67 J	<0.23	30	9.1	5.6	<0.33
Cranberry River Statistical Summary	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	0	15	0	15	0	17	0	15	16	0	16	16	17	7	0	7	0	0	3	17
	0%	88%	0%	88%	0%	100%	0%	88%	94%	0%	94%	94%	100%	41%	0%	41%	0%	0%	18%	100%
	110	0.25	110	0.26	16	1.85	23	0.015	0.26	120	0.5	0.5	0.5	0.12	2.8	5.3	180	17	160	0.165
	31	0.0245	31	0.09	6.2	1.85	2.5	0.0018	0.095	32	0.0215	0.035	0.035	0.012	0.67	0.115	30	6.2	0.95	0.165
	62.76	0.06	62.76	0.21	8.87	--	9.67	0.00	0.20	63.24	0.18	0.19	--	0.04	1.34	0.96	85.41	8.98	17.43	--
	24.66	0.05	24.66	0.05	2.56	--	8.19	0.00	0.05	28.75	0.14	0.13	--	0.03	0.65	1.25	43.43	2.76	38.56	--
	0.34	3.60	0.34	-2.19	1.70	--	0.74	3.44	-1.47	0.66	1.08	1.22	--	1.45	1.23	2.56	0.69	1.81	3.25	--
DKC-01																				
2024-07-29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-05	110	<0.10	110	<0.45	6.2	<3.7	0.6 J	<0.0036	<0.43	110	<0.37	<0.37	<0.25	<0.024	3.5	0.59 J	100	6	3.8 J	<0.33
2025-03-11	75	<0.10	75	<0.45	5.1	<3.7	0.53	<0.0036	<0.43	79	<0.37	<0.37	<0.25	<0.024	3.5	<1.2	70	5.3	<1.9	<0.33
2025-04-28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32 J	--	--	--	--
2025-04-28	25	<0.10	25	<0.45	6.6	<3.7	<0.42	<0.0036	<0.43	30	<0.37	<0.37	<0.25	3.9	1.1	0.32 J	24	6.7	31	<0.33
2025-08-04	90	<0.10	90	<0.45	7.7	<3.7	<0.42	<0.0036	<0.43	88	<0.37	<0.37	<0.25	<0.05	0.62 J	0.95 J	46	7.4	3.6 J	<0.33
2025-10-20	110	<0.10	110	<0.45	12	<3.7	0.77 J	<0.0036	<0.43	100	<0.37	<0.37	<0.25	0.08	<0.47	8.1	80	11	10	<0.33
2026-02-19	71	<0.10	71	<0.45	6.1	<3.7	<0.42	<0.0036	<0.43	53	<0.37	<0.37	<0.25	0.028 J	1.4	1.3	110	6.3	3.6 J	<0.33
2026-04-23	24.7 J	<0.049	24.7 J	<0.45	6.5	<3.7	<0.42	<0.0036	<0.43	21	<0.37	<0.37	<0.25	<0.024	0.87 J	<0.23	30	6.2	11	<0.33
DKC-02																				
2024-08-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	74	<0.10	74	<0.18	8.4	<3.7	2.6	<0.0036	0.48 J	67	<0.043	<0.070	<0.070	<0.024	0.89 J	<0.23	78	8.3	2.2 J	<0.33
2024-12-17	47	<0.10	47	<0.45	8.7	<3.7	1.3	<0.0036	<0.43	41	<0.37	<0.37	<0.25	<0.024	1.7	0.62 J	76	8.8	<1.9	<0.33
2025-02-26	35	<0.10	35	<0.45	7.2	<3.7	0.95 J	0.005	<0.43	36	<0.37	<0.37	<0.25	0.039 J	1.4	2	52	7.7	4.4 J	<0.33
2025-05-07	33	<0.10	33	<0.45	8.9	<3.7	0.53 J	<0.0036	<0.43	34	<0.37	<0.37	<0.25	<0.024	0.82 J	<0.23	90	8.6	<1.9	<0.33
2025-08-13	85	<0.10	85	<0.45	8.7	<3.7	3.4	<0.0036	<0.43	73	<0.37	<0.37	<0.25	<0.024	0.7 J	<1.0	14 J	8.9	2.8 J	<0.33
2025-10-27	79	<0.10	79	<0.45	11	<3.7	1.5	<0.0036	<0.43	68	<0.37	<0.37	<0.25	<0.024	0.62 J	6.3	80	12	<1.9	<0.33
2026-02-17	61	<0.10	61	<0.45	7.9	<3.7	1.2	<0.0036	<0.43	45	<0.37	<0.37	<0.25	<0.024	0.97 J	1.6	60	7.5	3.8 J	<0.33
2026-04-28	31	<0.049	31	<0.45	9.8	<3.7	<0.42	<0.0036	<0.43	27	<1	<1	<1	0.053	0.5 J	11	<4.3	9.8	9.6	<0.33
DKC-03																				
2024-08-06	63	<0.10	63	<0.18	8	<3.7	25	<0.0036	<0.19	66	<0.043	<0.070	<0.070	0.051	0.94 J	<0.23	130	8.5	5.4	<0.33
2024-09-26	61	<0.10	61	<0.18	7.7	<3.7	11	<0.0036	<0.19	55	<0.043	<0.070	<0.070	<0.024	0.88 J	<0.23	82	7.6	<1.9	<0.33
2024-12-16	44	<0.10	44	<0.45	8.5	<3.7	3.3	<0.0036	<0.43	43	<0.37	<0.37	<0.25	<0.024	4.5 J	0.89 J	66	8.8	7.8	<0.33
2025-03-03	29	<0.10	29	<0.45	8	<3.7	0.9 J	<0.0036	<0.43	30	<0.37	<0.37	<0.25	0.038 J	1.7	<2.5	32	8.1	2.4 J	<0.33
2025-04-29	24	<0.10 J	24	<0.45	9	<3.7	0.51 J	<0.0036	<0.43	29	<0.37	<0.37	<0.25	0.049 J	1	2.1	38	9	23	<0.33
2025-08-12	61	<0.10 J	61	<0.45	4.9	<3.7	8.9	<0.0036	<0.43	52	<0.37	<0.37	<0.25	<0.024	2	0.29 J	56	4.7	2.2 J	<0.33
2025-10-27	69	<0.10	69	<0.45	11	<3.7	3.4	<0.0036	<0.43	66	<0.37	<0.37	<0.25	0.025 J	0.54 J	4.9	70	11	<1.9	<0.33
2026-02-09	58	<0.10	58	<0.45	7.8	<3.7	3.7	<0.0036	<0.43	44	<0.37	<0.37	<0.25	0.041 J	1.2	2.7 J	44	8	3.4 J	<0.33
2026-04-29	39	<0.049	39	<0.45	9.7	<3.7	<0.42	0.005	<0.43	27	<1	<1	<1	0.074 J	0.47 J	<0.23	32	10	6.2	<0.33

Table 4-2 (continued)

Stream Sampling Locations & Date	Note	Conductivity (Field) (mS/cm)	Dissolved Oxygen (Field) (mg/L)	pH (Field) (SU)	Redox Potential (Field) (mV)	Temperature Field (°C)	Turbidity (NTU)	Aluminum, Dissolved (µg/L)	Aluminum, Total (µg/L)	Antimony, Dissolved (µg/L)	Antimony, Total (µg/L)	Arsenic, Dissolved (µg/L)	Arsenic, Total (µg/L)	Barium, Dissolved (µg/L)	Barium, Total (µg/L)	Beryllium, Dissolved (µg/L)	Beryllium, Total (µg/L)	Boron, Dissolved (µg/L)	Boron, Total (µg/L)	Cadmium, Dissolved (µg/L)	Cadmium, Total (µg/L)
		Field Parameters						*Metals (Total & Dissolved)*													
	Number of Observations	25	25	24	25	25	25	25	24	24	24	25	25	24	24	24	24	25	25	24	24
	Number of Non-Detect	0	0	0	0	0	0	8	0	24	24	5	1	0	0	24	24	8	10	24	24
	% Non-Detect	0%	0%	0%	0%	0%	0%	32%	0%	100%	100%	20%	4%	0%	0%	100%	100%	32%	40%	100%	100%
Duck Creek Statistical Summary	**Maximum**	0.213	16.12	8.26	331	25.28	47.7	450	2500	0.65	0.65	0.5	0.61	52	61	0.265	0.265	53	53	0.085	0.085
	Minimum	0.047	5.02	6.63	110	-0.02	0	12.5	30	0.465	0.465	0.115	0.115	15	19	0.12	0.12	6.5	6.5	0.085	0.085
	Average	0.11	10.75	7.50	198.12	8.02	14.40	90.12	525.96	--	--	0.28	0.38	30.29	34.83	--	--	26.66	27.26	--	--
	Standard Deviation	0.05	3.11	0.35	66.75	7.91	13.77	102.82	600.21	--	--	0.11	0.11	12.52	10.79	--	--	9.59	10.33	--	--
	Skewness	0.29	-0.59	-0.10	0.83	0.76	1.13	2.07	1.76	--	--	-0.04	0.12	0.35	0.61	--	--	0.68	1.08	--	--
LKS-01																					
2024-07-28		0.116	11.12	8.34	191	20.87	0.1	<25	180	<1.3	<1.3	0.36 J	0.39 J	12	13	<0.53	<0.53	<13	<13	<0.17	<0.17
2024-10-07		0.111	9.56	8.91	112	13.68	12.4	<25	560	<1.3	<1.3	0.32 J	0.49 J	12	16	<0.53	<0.53	<13	15 J	<0.17	<0.17
2024-12-16		0.212	13.74	7.56	236	0.3	37.8	<25	500	<1.3	<1.3	0.36 J	0.51 J	49	65	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-04		0.389	54.3	7.17	193	1.22	10.6	66 J	3800	<1.3	<1.3	0.38 J	0.88 J	94	120	<0.53	<0.53	61	65	<0.17	<0.17
2025-04-30		0.085	11.3	6.88	167	10.95	13.2	50 J	640	<1.3	<1.3	0.32 J	0.49 J	15 J	20 J	<0.53	<0.53	18 J	20 J	<0.17	<0.17
2025-08-12		0.082	10.98	8.3	85	21.78	10.9	<25	480	<1.3	<1.3	0.35 J	0.49 J	11	14	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-10-28		0.1	12.26	8.18	121	9.04	9.6	<25	330	<1.3	<1.3	0.39 J	0.47 J	12 J	14 J	<0.53	<0.53	<50	<50	<0.17	<0.17
2026-02-23		0.333	13.95	7.57	159	0.35	38.1	48 J	2900	<0.93	<0.93	0.26 J	0.65 J	96	120	<0.24	<0.24	58 J	64 J	<0.17	<0.17
2026-04-29		0.101	15.27	7.45	237	8.11	52.4	70 J	1000	<0.93	<0.93	0.33 J	0.58 J	17	26	<0.24	<0.24	33 J	91	<0.17	<0.17
LKS-02																					
2024-07-28		0.112	11.11	7.69	172	21.91	0	<25	71 J	<1.3	<1.3	0.38 J	0.38 J	10	11	<0.53	<0.53	<13	<13	<0.17	<0.17
2024-10-07		0.108	10.06	9.23	42	13.49	1.2	<25	120	<1.3	<1.3	0.35 J	0.39 J	11	12	<0.53	<0.53	<13	14 J	<0.17	<0.17
2024-12-16		0.115	10.79	8.11	62	0.7	17.6	26 J	78 J	<1.3	<1.3	0.35 J	0.39 J	14	14	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-03		0.171	11.58	7.5	91	0.93	3.1	110	410	<1.3	<1.3	0.35 J	0.44 J	23	29	<0.53	<0.53	61	37 J	<0.17	<0.17
2025-05-01		0.054	11.53	6.64	170	6.67	13.5	37 J	590	<1.3	<1.3	0.31 J	0.4 J	14	18	<0.53	<0.53	23 J	26 J	<0.17	<0.17
2025-08-12		0.08	9.37	8.13	104	20.94	0	<25	210	<1.3	<1.3	0.32 J	0.47 J	9.8	13	<0.53	<0.53	25 J	24 J	<0.17	<0.17
2025-10-28		0.099	11.3	8.03	29	9.42	40	<25	<25	<1.3	<1.3	0.34 J	0.37 J	10 J	10 J	<0.53	<0.53	<13	<50	<0.17	<0.17
2026-02-24		0.111	14.15	7.2	202	1.57	0	88 J	200	<0.93	<0.93	0.38 J	0.39 J	16	18	<0.24	<0.24	22 J	22 J	<0.17	<0.17
2026-04-30		0.087	13.28	7.37	135	5.53	26.7	55 J	530	<0.93	<0.93	0.36 J	0.47 J	14	18	<0.24	<0.24	17 J	24 J	<0.17	<0.17
	Number of Observations	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	Number of Non-Detect	0	0	0	0	0	0	9	1	18	18	0	0	0	0	18	18	9	7	18	18
	% Non-Detect	0%	0%	0%	0%	0%	0%	50%	6%	100%	100%	0%	0%	0%	0%	100%	100%	50%	39%	100%	100%
Lake Superior Statistical Summary	**Maximum**	0.389	54.3	9.23	237	21.91	40	110	3800	0.65	0.65	0.39	0.88	96	120	0.265	0.265	61	91	0.085	0.085
	Minimum	0.054	9.37	6.64	29	0.3	0	12.5	12.5	0.465	0.465	0.26	0.37	9.8	10	0.12	0.12	6.5	6.5	0.085	0.085
	Average	0.15	14.13	7.80	139.33	8.87	18.19	36.81	700.64	--	--	0.35	0.48	24.43	30.61	--	--	25.03	30.00	--	--
	Standard Deviation	0.10	10.14	0.67	62.68	8.23	14.68	30.68	1007.78	--	--	0.03	0.12	27.19	34.81	--	--	18.12	21.85	--	--
	Skewness	1.44	3.74	0.36	-0.15	0.46	0.65	0.98	2.30	--	--	-0.91	2.00	2.09	2.03	--	--	0.98	1.59	--	--
MLC-01																					
2024-08-06	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-02		0.275	14.59	12.12	-43	3.76	16.3	<25	39 J	<1.3	<1.3	<0.23	<0.23	69	71	<0.53	<0.53	<50	59	<0.17	<0.17
2025-03-03		0.218	12.23	7.27	173	0.49	9.8	110	3500	<1.3	<1.3	<0.23	0.45 J	48	80	<0.53	<0.53	44 J	36 J	<0.17	<0.17
2025-04-29		0.133	10.87	7.23	261	8.04	19.5	330	1400	<1.3	<1.3	0.25 J	0.38 J	56	67	<0.53	<0.53	35 J	40 J	<0.17	<0.17
2025-08-06	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-10-28	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2026-02-17		0.207	10.85	7.15	216	0.46	38.6	130	5400	<0.93	<0.93	<0.23	0.52	58	100	<0.24	<0.24	33	<50	<0.17	<0.17
2024-07-25		0.148	7.52	7.72	150	15.35	0.1	40	250	<1.3	<1.3	0.58	0.61	29	32	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-09-23		0.177	9.5	7.95	141	16.42	7.7	28	130	<1.3	<1.3	0.44	0.46	33	38	<0.53	<0.53	<50	51	<0.17	<0.17
2024-12-16		0.088	15.08	7.58	199	0.36	32.2	150	1500	<1.3	<1.3	0.3	0.41	16	24	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-10		0.071	11.51	8.64	361	0.32	43.4	570	1,700	<1.3	<1.3	0.29	0.43	14	22	<0.53	<0.53	26	20	<0.17	<0.17
2025-04-28		0.05	12.17	6.81	223	8.35	22.4	120	930	<1.3	<1.3	0.24	0.37	10	17	<0.53	<0.53	31	32	<0.17	<0.17
2025-08-13		0.112	7.03	7.81	130	21.31	0	<25	160	<1.3	<1.3	0.6	0.61	28	30	<0.53	<0.53	59	59	<0.17	<0.17
2025-10-28		0.085	11.25	7.15	165	6.49	0	200	540	<1.3	<1.3	0.42	0.46	18	21	<0.53	<0.53	<50	<50	<0.17	<0.17
2026-02-10		0.097	12.57	6.08	236	0.68	7.2	110	370	<0.93	<0.93	<0.23	0.25	15	18	<0.24	<0.24	23	28	<0.17	<0.17
2026-04-29		0.151	12.71	7.02	163	9.61	2.3	110	890	<0.93	<0.93	0.26 J	0.27 J	52	60	<0.24	<0.24	67	92	<0.17	<0.17
	Number of Observations	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	Number of Non-Detect	0	0	0	0	0	0	2	0	13	13	4	1	0	0	13	13	5	4	13	13
	% Non-Detect	0%	0%	0%	0%	0%	0%	15%	0%	100%	100%	31%	8%	0%	0%	100%	100%	38%	31%	100%	100%
Miles Creek Statistical Summary	**Maximum**	0.275	15.08	12.12	361	21.31	43.4	570	5400	0.65	0.65	0.6	0.61	69	100	0.265	0.265	67	92	0.085	0.085
	Minimum	0.05	7.03	6.08	-43	0.32	0	12.5	39	0.465	0.465	0.115	0.115	10	17	0.12	0.12	23	20	0.085	0.085
	Average	0.14	11.38	7.73	182.69	7.05	18.14	147.92	1293.00	--	--	0.30	0.41	34.31	44.62	--	--	34.08	39.77	--	--
	Standard Deviation	0.07	2.35	1.45	91.78	7.06	15.02	153.34	1553.70	--	--	0.17	0.14	19.96	27.59	--	--	14.19	20.56	--	--
	Skewness	0.59	-0.38	2.22	-0.60	0.70	0.66	1.76	1.68	--	--	0.57	-0.49	0.35	0.70	--	--	1.41	1.35	--	--

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Calcium, Dissolved (µg/L)	Calcium, Total (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total (µg/L)	Cobalt, Dissolved (µg/L)	Cobalt, Total (µg/L)	Copper, Dissolved (µg/L)	Copper, Total (µg/L)	Iron, Dissolved (µg/L)	Iron, Total (µg/L)	Lead, Dissolved (µg/L)	Lead, Total (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total (ng/L)	Molybdenum, Dissolved (µg/L)
	24	24	25	25	24	25	24	24	25	24	24	24	24	24	24	24	24	24	24	24	24	24	24
	0	0	22	16	24	20	0	0	0	0	23	12	24	24	0	0	0	0	0	0	11	7	24
	0%	0%	88%	64%	100%	80%	0%	0%	0%	0%	96%	50%	100%	100%	0%	0%	0%	0%	0%	0%	46%	29%	100%
Duck Creek Statistical Summary	30000	29000	2.1	4.1	0.2	1.2	11	15	740	2300	1.2	2.3	1.25	1.25	8000	8200	59	130	5.8	8	0.12	0.18	1.25
	5800	5900	0.55	0.55	0.2	0.2	1.8	2.1	79	170	0.095	0.095	1	1	1400	1600	3.4	5.5	0.67	0.8	0.011	0.011	1.25
	14566.67	14679.17	0.67	1.28	--	0.31	5.16	6.35	315.24	830.42	0.14	0.32	--	--	3916.67	4008.33	16.53	33.93	2.54	3.31	0.04	0.05	--
	6755.91	6607.90	0.36	1.15	--	0.25	2.93	3.99	189.02	522.76	0.23	0.47	--	--	1883.26	1812.74	15.14	33.23	1.59	2.40	0.03	0.04	--
	0.67	0.64	3.00	1.31	--	2.33	0.82	0.75	0.64	1.06	4.59	3.40	--	--	0.72	0.79	1.81	1.55	0.57	0.62	1.33	1.52	--
LKS-01																							
2024-07-28	14000	14000	<1.1	<1.1	<0.40	<0.40	2.3	1.1 J	<47	250	<0.19	<0.19	<2.5	<2.5	3100	3100	<0.79	6.1	<0.20	<0.20	<0.022	<0.022	<2.5
2024-10-07	14000	14000	<1.1	<1.1	<0.40	<0.40	1 J	2.1	<47	560	<0.19	0.2 J	<2.5	<2.5	3000	3200	<0.79	16	0.2 J	0.32 J	<0.022	<0.022	<2.5
2024-12-16	22000	23000	<1.1	<1.1	<0.40	<0.40	3	4.4	<47	550	<0.19	0.23 J	<2.5	<2.5	4700	5100	<0.79	14	1.7	1.7	<0.022	<0.022	<2.5
2025-03-04	27000	28000	<1.1	4.1 J	<0.40	2.3	11	15	73 J	2600	<0.19	1.3	<2.5	4.8 J	5700	7000	4	56	4.8	7.2	<0.022	<0.022	<2.5
2025-04-30	12000	13000	<1.1	1.1 J	<0.40	<0.40	4.1	6.7	49 J	530	<0.19	0.25 J	<2.5	<2.5	2600	3000	2.7	15	1.7	2.5	<0.022	<0.022	<2.5
2025-08-12	14000	14000	<1.1	<1.1	<0.40	<0.40	0.75 J	1.9 J	<47	460	<0.19	0.19 J	<2.5	<2.5	3000	3200	0.84 J	16	0.3 J	0.76	<0.022	<0.022	<2.5
2025-10-28	14000	14000	<1.1	<1.1	<0.40	<0.40	<2	<2	<47	290	<0.19	<0.19	<2.5	<2.5	3100	3200	<2.5	14 J	0.41 J	0.75	<0.022	<0.022	<2.5
2026-02-23	32000	31000	<1.1	3.4 J	<0.40	1	10	14	80 J	1800	<0.19	1.2	<2.5	4.9 J	7000	7300	3.5	35	3.8	7.2	<0.022	0.032 J	<2.5
2026-04-29	14000	14000	<1.1	1.3 J	<0.40	0.45 J	7.5	12	100	860	<0.19	0.36 J	<2.0	2.4 J	2600	3000	3.7	23	2.7	4.3	<0.033	0.051	<2.5
LKS-02																							
2024-07-28	14000	14000	<1.1	<1.1	<0.40	<0.40	0.91 J	1.1 J	<47	71 J	<0.19	<0.19	<2.5	<2.5	3100	3200	1.1 J	3.2	<0.20	0.23 J	<0.022	0.028 J	<2.5
2024-10-07	14000	14000	<1.1	<1.1	<0.40	<0.40	0.73 J	1.3 J	<47	120	<0.19	<0.19	<2.5	<2.5	2900	2900	0.81 J	5.1	<0.20	0.43 J	<0.022	0.022 J	<2.5
2024-12-16	14000	14000	<1.1	<1.1	<0.40	<0.40	1.6 J	1.9 J	330	460	<0.19	<0.19	<2.5	<2.5	3300	3400	50	50	1.1	0.8	<0.022	<0.022	<2.5
2025-03-03	15000	16000	<1.1	<1.1	<0.40	<0.40	15	13	350	770	<0.19	0.27 J	<2.5	<2.5	3200	3600	18	24	4	5	0.024 J	<0.050	<2.5
2025-05-01	13000	13000	<1.1	<1.1	<0.40	<0.40	3.3	4.7	<47	530	<0.19	0.24 J	<2.5	<2.5	2700	2900	2 J	13	1.4	2.3	<0.022	0.038 J	<2.5
2025-08-12	14000	14000	<1.1	<1.1	<0.40	<0.40	1 J	1.3 J	<47	230	<0.19	<0.19	<2.5	<2.5	3000	3100	1.7 J	12	0.38 J	1.1	<0.022	0.087	<2.5
2025-10-28	14000	14000	<1.1	<1.1	<0.40	<0.40	<2	<2	<47	<47	<0.19	<0.19	<2.5	<2.5	3000	3100	3.7 J	3.6 J	0.44 J	0.32 J	<0.022	<0.022	<2.5
2026-02-24	14000	14000	<1.1	<1.1	<0.40	<0.40	8.8	9.9	340	580	<0.19	0.21 J	<2.5	<2.5	3100	3200	4.1	5.2	2.4	2.8	0.04 J	0.047 J	<2.5
2026-04-30	13000	13000	<1.1	<1.1	<0.40	<0.40	5.3	7.1	85 J	430	<0.19	<0.19	<2.0	<2.0	2700	2800	2.9	12	1.9	2.5	<0.033	0.048 J	<2.5
	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	0	0	18	14	18	15	2	2	10	1	18	8	18	15	0	0	4	0	3	1	16	10	18
	0%	0%	100%	78%	100%	83%	11%	11%	56%	6%	100%	44%	100%	83%	0%	0%	22%	0%	17%	6%	89%	56%	100%
Lake Superior Statistical Summary	32000	31000	0.55	4.1	0.2	2.3	15	15	350	2600	0.095	1.3	1.25	4.9	7000	7300	50	56	4.8	7.2	0.04	0.087	1.25
	12000	13000	0.55	0.55	0.2	0.2	0.73	1	23.5	23.5	0.095	0.095	1	1	2600	2800	0.395	3.2	0.1	0.1	0.011	0.011	1.25
	16000.00	16166.67	--	0.98	--	0.38	4.35	5.53	91.22	617.47	--	0.29	--	1.70	3433.33	3683.33	5.64	17.96	1.53	2.24	0.01	0.03	--
	5379.70	5360.53	--	1.04	--	0.52	4.32	5.08	117.35	632.99	--	0.36	--	1.18	1175.23	1357.01	11.76	15.07	1.49	2.29	0.01	0.02	--
	2.11	1.98	--	2.36	--	3.18	1.11	0.73	1.62	2.10	--	2.26	--	2.26	2.11	2.01	3.28	1.42	0.86	1.14	2.82	1.46	--
MLC-01																							
2024-08-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-02	26000	26000	<1.1	<1.1	<0.40	<0.40	5.8	6.3	48 J	96 J	<0.19	<0.19	<2.5 J	<2.5 J	6000	6100	6.2	6.9	0.7	0.88	<0.022	<0.022	<2.5
2025-03-03	18000	20000	<1.1	3.4 J	<0.40	0.8 J	8	17	82 J	2100	<0.19	1.3	<2.5	4.2 J	4300	5200	7.3	31	4.6	9.8	<0.022	<0.022	<2.5
2025-04-29	18000	18000	<1.1	1.6 J	<0.40	0.44 J	14	18	230	890	<0.19	0.6	<2.5	<2.5	4000	4200	16	28	5.2	8.2	<0.022	<0.050	<2.5
2025-08-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-10-28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2026-02-17	23000	23000	<1.1	5.3	<0.40	1.3	7.1	21	120	3000	<0.19	2.1	<2.5	6.9	5800	6600	16	56	6.5	16	<0.022	0.035	<2.5
2024-07-25	19000	19000	<1.1	<1.1	<0.40	<0.40	3.9	4.2	370	770	<0.19	<0.19	<2.5	<2.5	5400	5300	28	33	1.3	1.6	0.11	0.14	<2.5
2024-09-23	23000	23000	<1.1	<1.1	<0.40	<0.40	2.7	2.7	220	390	<0.19	<0.19	<2.5	<2.5	6200	6500	22	35	0.96	0.96	0.078	0.089	<2.5
2024-12-16	10000	10000	<1.1	1.8	<0.40	0.42	7.1	10	620	1800	<0.19	0.59	<2.5	<2.5	2900	3100	11	21	4.6	6.4	0.054	0.034	<2.5
2025-03-10	7600	7700	<1.1	1.8	<0.40	0.46	11	14	670	1500	0.25	0.66	<2.5	<2.5	2000	2300	15	27	4.6	6.5	0.041	0.051	<2.5
2025-04-28	6000	6000	<1.1	1.2	<0.40	<0.40	6.7	8.3	190	860	<0.19	0.36	<2.5	<2.5	1600	1700	16	27	3.9	5.8	0.11	0.064	<2.5
2025-08-13	19000	20000	<1.1	<1.1	<0.40	<0.40	3.8	4	410	640	1.9	<0.19	<2.5	<2.5	5200	5400	33	40	1.4	1.5	0.093	0.1	<2.5
2025-10-28	12000	12000	<1.1	<1.1	<0.40	<0.40	5.9	6.7	640	1000	<0.19	0.25	<2.5	<2.5	3200	3400	12	17	3.2	3.5	0.026	0.035	<2.5
2026-02-10	13000	13000	<1.1	<1.1	<0.40	<0.40	4.8	5.8	840	1300	<0.19	0.19	<2.5	<2.5	3600	3600	8.6	16	2.1	2.7	0.03	0.068	<2.5
2026-04-29	19000	19000	<1.1	1.1 J	<0.40	<0.40	13	17	140	590	<0.19	0.37 J	<2.0	<2.0	4100	4100	9.8	17	5.2	7.4	0.047 J	0.053	<2.5
	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	0	0	13	6	13	8	0	0	0	0	11	4	13	11	0	0	0	0	0	0	4	3	13
	0%	0%	100%	46%	100%	62%	0%	0%	0%	0%	85%	31%	100%	85%	0%	0%	0%	0%	0%	0%	31%	23%	100%
Miles Creek Statistical Summary	26000	26000	0.55	5.3	0.2	1.3	14	21	840	3000	1.9	2.1	1.25	6.9	6200	6600	33	56	6.5	16	0.11	0.14	1.25
	6000	6000	0.55	0.55	0.2	0.2	2.7	2.7	48	96	0.095	0.095	1	1	1600	1700	6.2	6.9	0.7	0.88	0.011	0.011	1.25
	16430.77	16669.23	--	1.50	--	0.39	7.22	10.38	352.31	1148.92	0.25	0.52	--	1.89	4176.92	4423.08	15.45	27.30	3.40	5.48	0.05	0.06	--
	6205.83	6298.60	--	1.41	--	0.33	3.50	6.23	261.46	789.16	0.50	0.58	--	1.72	1498.42	1574.35	8.02	12.54	1.92	4.34	0.04	0.04	--
	-0.26	-0.33	--	1.74	--	1.92	0.75	0.39	0.55	0.97	3.14	1.75	--	2.31	-0.24	-0.17	0.96	0.62	-0.09	0.99	0.55	0.87	--

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Molybdenum, Total (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total (µg/L)	Potassium, Dissolved (µg/L)	Potassium, Total (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total (µg/L)	Silver, Dissolved (µg/L)	Silver, Total (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total (µg/L)	Tin, Dissolved (µg/L)	Tin, Total (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total (µg/L)
	24	25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	25	24	24
	24	22	15	0	0	23	23	24	24	0	0	0	0	24	24	23	23	0	0	18	13	24	22
	100%	88%	63%	0%	0%	96%	96%	100%	100%	0%	0%	0%	0%	100%	100%	96%	96%	0%	0%	75%	52%	100%	92%
Duck Creek Statistical Summary	1.25	1.9	6.8	2300	2400	1.2	1.1	0.06	0.06	19000	19000	92	88	0.285	0.285	1.8	1.5	0.72	0.69	1.1	6.6	3.45	11
	1.25	0.315	0.315	490	670	0.49	0.49	0.06	0.06	490	490	14	15	0.125	0.125	0.65	0.65	0.068	0.064	0.46	1	3.45	3.45
	--	0.46	0.87	1079.58	1167.92	0.52	0.52	--	--	3251.25	3244.58	48.29	48.88	--	--	0.70	0.69	0.20	0.24	1.00	1.82	--	3.95
	--	0.44	1.37	454.86	420.62	0.14	0.12	--	--	3993.32	3978.54	21.79	21.33	--	--	0.23	0.17	0.14	0.13	0.22	1.37	--	1.76
	--	2.90	3.68	1.11	1.34	4.59	4.59	--	--	2.89	2.92	0.20	0.18	--	--	4.59	4.59	2.48	1.76	-1.98	2.27	--	3.34
LKS-01																							
2024-07-28	<2.5	<0.63	<0.63	550	660	<0.98	<0.98	<0.12	<0.12	1900	1800	23	22	<0.57	<0.57	<1.3	<1.3	0.052	0.06	<2.2	<2.2	<6.9	<6.9
2024-10-07	<2.5	<0.63	0.83 J	550	700	<0.98	<0.98	<0.12	<0.12	2000	2000	24	24	<0.57	<0.57	<1.3	<1.3	0.058	0.074	<2.2	<2.2	<6.9	<6.9
2024-12-16	<2.5	<0.63	0.89 J	850	1000	<0.98	<0.98	<0.12	<0.12	14000	17000	51	56	<0.57	<0.57	2.2 J	<1.3	0.19	0.22	<2.2	<2.2	<6.9	<6.9
2025-03-04	<2.5	<0.63	4.6	1200	1800	1.2 J	1.1 J	<0.12	<0.12	32000	32000	96	99	<0.57	<0.57	<1.3	<1.3	0.27	0.42	<2.2	8	<6.9	12 J
2025-04-30	<2.5	<0.63	<0.63	530	720	<0.98	<0.98	<0.12	<0.12	2500	2700	29 J	31 J	<0.57	<0.57	<1.3	<1.3	0.071	0.088	<2.2	<2.2	<6.9	<6.9
2025-08-12	<2.5	<0.63	0.64 J	510	640	<0.98	<0.98	<0.12	<0.12	1800	1900	23	24	<0.57	<0.57	<1.3	<1.3	0.047 J	0.065	<2.2	<2.2	<6.9	<6.9
2025-10-28	<2.5	<0.63	0.7 J	530	600	<0.98	<0.98	<0.12	<0.12	1800	1800	24	24	<0.57	<0.57	<1.3	<1.3	0.047 J	0.062	<2.2	<2.2	<6.9	<6.9
2026-02-23	<2.5	<0.63	2.5	1400	1700	<0.98	<0.98	<0.12	<0.12	28000	27000	110	110	<0.25	<0.25	<1.3	<1.3	0.34	0.47	0.89	6.1	<6.9	10 J
2026-04-29	3.2 J	<0.63	1.3 J	700	940	<0.98	<0.98	<0.12	<0.12	3400	3500	44	46	<0.25	<0.25	<1.3	2.1 J	0.11	0.14	0.63	2.4	<6.9	<6.9
LKS-02																							
2024-07-28	<2.5	<0.63	<0.63	550	590	<0.98	<0.98	<0.12	<0.12	1700	1800	22	22	<0.57	<0.57	<1.3	<1.3	0.06	0.05	<2.2	<2.2	<6.9	<6.9
2024-10-07	<2.5	<0.63	<0.63	530	560	<0.98	<0.98	<0.12	<0.12	1700	1700	22	22	<0.57	<0.57	<1.3	<1.3	0.056	0.06	<2.2	<2.2	<6.9	<6.9
2024-12-16	<2.5	<0.63	<0.63	580	600	<0.98	<0.98	<0.12	<0.12	2100	2200	28	28	<0.57	<0.57	<1.3	<1.3	0.056	0.054	<2.2	<2.2	<6.9	<6.9
2025-03-03	<2.5	<0.63	0.68 J	740	860	<0.98	<0.98	<0.12	<0.12	8100	8700	60	61	<0.57	<0.57	<1.3	<1.3	0.048 J	0.063	<2.2	<2.2	<6.9	<6.9
2025-05-01	<2.5	<0.63	0.78 J	580	710	<0.98	<0.98	<0.12	<0.12	1900	1900	26	26	<0.57	<0.57	<1.3	<1.3	0.091	0.11	<2.2	<2.2	<6.9	<6.9
2025-08-12	<2.5	<0.63	<0.63	520	580	<0.98	<0.98	<0.12	<0.12	1600	1700	21	22	<0.57	<0.57	<1.3	<1.3	0.047 J	0.1	<2.2	<2.2	<6.9	<6.9
2025-10-28	<2.5	<0.63	<0.63	520	520	<0.98	<0.98	<0.12	<0.12	1700	1700	24	23	<0.57	<0.57	<1.3	<1.3	0.046 J	0.051	<2.2	<2.2	<6.9	<6.9
2026-02-24	<2.5	<0.63	0.7 J	530	590	<0.98	<0.98	<0.12	<0.12	3800	3900	30	31	<0.25	<0.25	<1.3	<1.3	0.049 J	0.057	0.78	1.2	<6.9	<6.9
2026-04-30	<2.5	<0.63	0.66 J	560	690	<0.98	<0.98	<0.12	<0.12	2200	2300	33	34	<0.25	<0.25	<1.3	<1.3	0.083	0.095	0.51	1.3	<6.9	<6.9
	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	17	18	7	0	0	17	17	18	18	0	0	0	0	18	18	17	17	0	0	14	13	18	16
	94%	100%	39%	0%	0%	94%	94%	100%	100%	0%	0%	0%	0%	100%	100%	94%	94%	0%	0%	78%	72%	100%	89%
Lake Superior Statistical Summary	3.2	0.315	4.6	1400	1800	1.2	1.1	0.06	0.06	32000	32000	110	110	0.285	0.285	2.2	2.1	0.34	0.47	1.1	8	3.45	12
	1.25	0.315	0.315	510	520	0.49	0.49	0.06	0.06	1600	1700	21	22	0.125	0.125	0.65	0.65	0.046	0.05	0.51	1.1	3.45	3.45
	1.36	--	0.92	662.78	803.33	0.53	0.52	--	--	6233.33	6422.22	38.33	39.17	--	--	0.74	0.73	0.10	0.12	1.01	1.85	--	4.29
	0.46	--	1.06	251.06	368.41	0.17	0.14	--	--	9205.69	9234.75	26.00	26.56	--	--	0.37	0.34	0.08	0.12	0.18	1.94	--	2.47
	3.88	--	2.67	2.06	1.97	3.88	3.88	--	--	2.09	1.96	1.85	1.76	--	--	3.88	3.88	1.97	2.06	-1.81	2.50	--	2.57
MLC-01																							
2024-08-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-02	<2.5	<0.63	<0.63	1600	1600	<0.98	<0.98	<0.12	<0.12	7800	7900	150	150	<0.57	<0.57	<1.3	<1.3	0.19	0.2	<2.2	<2.2	<6.9	<6.9
2025-03-03	<2.5	<0.63	2	950	1500	<0.98	<0.98	<0.12	<0.12	5700	6300	110	110	<0.57	<0.57	<1.3	<1.3	0.19	0.36	<2.2	5.9	<6.9	8.7 J
2025-04-29	<2.5	<0.63	1.1 J	1300	1500	<0.98	<0.98	<0.12	<0.12	4900	4800	110	110	<0.57	<0.57	<1.3	<1.3	0.17	0.23	<2.2	2.6 J	<6.9	<6.9
2025-08-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-10-28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2026-02-17	<2.5	<0.63	3.2	1100	1800	<0.98	<0.98	<0.12	<0.12	7000	6800	130	140	<0.25	<0.25	<1.3	<1.3	0.36	0.66	0.54	8.3	<6.9	14
2024-07-25	<2.5	<0.63	<0.63	1200	1300	<0.98	<0.98	<0.12	<0.12	3400	3200	66	66	<0.57	<0.57	<1.3	<1.3	0.48	0.54	<2.2	<2.2	<6.9	<6.9
2024-09-23	<2.5	<0.63	0.68	1600	1600	<0.98	<0.98	<0.12	<0.12	4000	4500	79	86	<0.57	<0.57	<1.3	<1.3	0.56	0.57	<2.2	<2.2	<6.9	80
2024-12-16	<2.5	<0.63	1.2	930	1100	<0.98	<0.98	<0.12	<0.12	4700	4500	29	30	<0.57	<0.57	<1.3	<1.3	0.18	0.22	<2.2	2.7	<6.9	<6.9
2025-03-10	<2.5	<0.63	1.1	740	930	<0.98	<0.98	<0.12	<0.12	3900	4200	22	23	<0.57	<0.57	1.4	<1.3	0.12	0.17	<2.2	3	<6.9	<6.9
2025-04-28	<2.5	<0.63	1	530	690	<0.98	<0.98	<0.12	<0.12	1100	1100	17	17	<0.57	<0.57	<1.3	<1.3	0.13	0.16	<2.2	2.4	<6.9	<6.9
2025-08-13	<2.5	<0.63	<0.63	1300	1400	<0.98	<0.98	<0.12	<0.12	490	490	68	69	<0.57	<0.57	<1.3	<1.3	0.47	0.49	<2.2	<2.2	<6.9	<6.9
2025-10-28	<2.5	<0.63	0.87	1400	1500	1.8	2.2	<0.12	<0.12	1900	1900	34	35	<0.57	<0.57	<1.3	<1.3	0.24	0.26	<2.2	<2.2	<6.9	<6.9
2026-02-10	<2.5	<0.63	0.63	710	760	<0.98	<0.98	<0.12	<0.12	2600	2600	37	37	<0.25	<0.25	<1.3	<1.3	0.22	0.24	0.56	1.1	<6.9	<6.9
2026-04-29	<2.5	<0.63	0.73 J	1300	1400	<0.98	<0.98	<0.12	<0.12	4900	4900	110	110	<0.25	<0.25	<1.3	<1.3	0.13	0.17	0.6	1.8	<6.9	<6.9
	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	13	13	3	0	0	12	12	13	13	0	0	0	0	13	13	12	13	0	0	10	5	13	10
	100%	100%	23%	0%	0%	92%	92%	100%	100%	0%	0%	0%	0%	100%	100%	92%	100%	0%	0%	77%	38%	100%	77%
Miles Creek Statistical Summary	1.25	0.315	3.2	1600	1800	1.8	2.2	0.06	0.06	7800	7900	150	150	0.285	0.285	1.4	0.65	0.56	0.66	1.1	8.3	3.45	80
	1.25	0.315	0.315	530	690	0.49	0.49	0.06	0.06	490	490	17	17	0.125	0.125	0.65	0.65	0.12	0.16	0.54	1.1	3.45	3.45
	--	--	1.04	1127.69	1313.85	0.59	0.62	--	--	4030.00	4091.54	74.00	75.62	--	--	0.71	--	0.26	0.33	0.98	2.56	--	10.55
	--	--	0.80	337.64	342.55	0.36	0.47	--	--	2158.29	2197.75	44.60	45.55	--	--	0.21	--	0.15	0.18	0.23	2.19	--	21.10
	--	--	1.68	-0.25	-0.64	3.18	3.18	--	--	0.03	-0.01	0.22	0.21	--	--	3.18	--	0.89	0.74	-1.29	1.70	--	3.06

Table 4-2 (continued)

General Parameters

Stream Sampling Locations & Date	Alkalinity (mg/L)	Ammonia (mg/L)	Bicarbonate Alkalinity (as CaCO3) (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Carbonate Alkalinity (as CaCO3) (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Salinity (PSU)
	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	25	24	24	24	24
	0	24	0	24	0	24	6	22	23	0	24	24	24	13	1	9	1	0	6	24
	0%	100%	0%	100%	0%	100%	25%	92%	96%	0%	100%	100%	100%	54%	4%	36%	4%	0%	25%	100%
Duck Creek Statistical Summary	110	0.05	110	0.225	12	1.85	25	0.005	0.48	110	0.5	0.5	0.5	3.9	4.5	11	130	12	31	0.165
	24	0.0245	24	0.09	4.9	1.85	0.21	0.0018	0.095	21	0.0215	0.035	0.035	0.012	0.235	0.115	2.15	4.7	0.95	0.165
	58.28	--	58.28	--	8.14	--	2.97	0.00	0.22	53.50	--	--	--	0.19	1.34	1.88	60.92	8.18	5.91	--
	25.74	--	25.74	--	1.78	--	5.42	0.00	0.07	24.29	--	--	--	0.79	1.07	2.79	31.08	1.81	7.24	--
	0.39	--	0.39	--	0.21	--	3.11	3.02	2.33	0.70	--	--	--	4.58	1.74	2.07	0.16	0.14	2.34	--
LKS-01																				
2024-07-28	50	<0.10	50	<0.18	2.2	<3.7	1.7	<0.0036	0.21 J	47	0.64 J	0.64 J	<0.070	<0.024 J	3.7	<0.23	46	1.6	7.2	<0.33
2024-10-07	47	<0.10	47	<0.18	1.8	<3.7	2	<0.0036	0.45 J	48	0.66 J	0.66 J	<0.070	<0.024	3.5	<0.23	56	1.7	18	<0.33
2024-12-16	61	<0.10	61	<0.45	3.7	<3.7	41	<0.0036	<0.43	78	0.48 J	0.48 J	<0.25	<0.024	4.4	<0.23	150	3.9	15	<0.33
2025-03-04	54	<0.10	54	<0.45	9.4	<3.7	73	<0.0036	<0.43	98	1.7 J	1.7 J	<0.25	0.048 J	5.4	<0.23	200	8.9	67	<0.33
2025-04-30	46	<0.10	46	<0.45	4.3	<3.7	3.5	<0.0036	<0.43	45	0.44 J	0.44 J	<0.25	<0.024	3.1	0.89 J	44	4.1	12	<0.33
2025-08-12	46	<0.10	46	<0.45	1.7	<3.7	2.3	<0.0036	<0.43	49	0.82 J	0.82 J	<0.25	<0.024	3.9	0.71 J	110	1.2	31	<0.33
2025-10-28	58	--	58	<0.45	1.4	<3.7	2 J	<0.0036	<0.43	49	<0.37	<0.37	<0.25	0.034 J	3.4	<0.23	18	1.3	31	<0.33
2026-02-23	74	<0.10	74	<0.45	8.7	<3.7	67	<0.0036	<0.43	110	<0.37	<0.37	<0.25	0.076	4.8	2.7	260	7.3	23	<0.33
2026-04-29	45	<0.049	45	<0.45	6.3	<3.7	5	<0.0036	<0.43	48	<1	<1	<1	0.068 J	2.3	<0.23	60	6.4	24	<0.33
LKS-02																				
2024-07-28	46	<0.10	46	<0.18	1.6	<3.7	1.6	<0.0036	<0.19	49	0.96 J	0.96 J	<0.070	<0.024 J	3.6	<0.23	44	1.8	9.4	<0.33
2024-10-07	52	1.5	52	<0.18	1.7	<3.7	1.6	<0.0036	0.45 J	47	0.67 J	0.67 J	<0.070	<0.024	3.5	<0.23	58	1.7	6	<0.33
2024-12-16	50	<0.10	50	<0.45	3.9	<3.7	2.7	<0.0036	<0.43	50	0.5 J	0.5 J	<0.25	<0.024	3.5	<0.23	60	3.8	<1.9	<0.33
2025-03-03	26	<0.10	26	<0.45	13	<3.7	28	0.006	<0.43	55	<0.37	<0.37	<0.25	0.027 J	3.1	<2.5	96	13	2.2 J	<0.33
2025-05-01	45	<0.10	45	<0.45	4.1	<3.7	2.3	<0.0036	<0.43	45	0.46 J	0.46 J	<0.25	<0.024	3.2	0.64 J	46	3.9	9.6	<0.33
2025-08-12	52	<0.10	52	<0.45	1.5	<3.7	1.8	<0.0036	<0.43	48	0.9 J	0.9 J	<0.25	0.035 J	4	0.38 J	92	1.4	14	<0.33
2025-10-28	60	--	60	<0.45	1.5	<3.7	1.7 J	<0.0036	<0.43	48	<0.37	<0.37	<0.25	<0.024	3.4	0.29 J	28	1.5	2.8 J	<0.33
2026-02-24	50	<0.10	50	<0.45	11	<3.7	11	<0.0036	<0.43	49	<0.37	<0.37	<0.25	0.039 J	2.2	3.7	92	11	<1.9	<0.33
2026-04-30	46	<0.049	46	<0.45	4.9 J	<3.7	2.8	<0.0036	<0.43	44	0.99 J	0.99 J	<0.25	0.051 J	2.9	<0.23	84	4.7	10	<0.33
	18	16	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	0	15	0	18	0	18	0	17	15	0	6	6	18	10	0	11	0	0	2	18
	0%	94%	0%	100%	0%	100%	0%	94%	83%	0%	33%	33%	100%	56%	0%	61%	0%	0%	11%	100%
Lake Superior Statistical Summary	74	1.5	74	0.225	13	1.85	73	0.006	0.45	110	1.7	1.7	0.5	0.076	5.4	3.7	260	13	67	0.165
	26	0.0245	26	0.09	1.4	1.85	1.6	0.0018	0.095	44	0.185	0.185	0.035	0.012	2.2	0.115	18	1.2	0.95	0.165
	50.44	0.14	50.44	--	4.59	--	13.94	0.00	0.23	55.94	0.59	0.59	--	0.03	3.55	0.65	85.78	4.40	15.78	--
	9.64	0.36	9.64	--	3.64	--	22.99	0.00	0.08	19.10	0.39	0.39	--	0.02	0.78	1.00	62.25	3.58	15.91	--
	0.02	3.61	0.02	--	1.05	--	1.78	3.88	1.80	2.03	1.20	1.20	--	1.05	0.52	2.16	1.56	1.13	1.94	--
MLC-01																				
2024-08-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-02	57	<0.10	57	<0.45	5.1	<3.7	38	<0.0036	<0.43	89	<0.37	<0.37	<0.25	<0.024	7.7	<0.23	150	5.1	<1.9	<0.33
2025-03-03	36	<0.10	36	<0.45	7.3	<3.7	29	<0.0036	<0.43	72	<0.37	<0.37	<0.25	0.086	2.9	<2.5	130	7.4	3.8 J	<0.33
2025-04-29	41	<0.10	41	<0.45	8.5	<3.7	22	<0.0036	<0.43	62	<0.37	<0.37	<0.25	0.055	1.4	2.5	120	8.6	4.6 J	<0.33
2025-08-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-10-28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2026-02-17	61	<0.10	61	<0.45	6.3	<3.7	32	<0.0036	<0.43	86	<0.37	<0.37	<0.25	0.16	2.2	1.3	210	7.1	18	<0.33
2024-07-25	72	<0.10	72	<0.18	11	<3.7	1.2	0.0048	0.23	69	0.44	0.44	<0.070	0.034	1	<0.23	36	11	3	<0.33
2024-09-23	87	<0.10	87	<0.18	13	<3.7	1.6	<0.0036	<0.19	85	0.45	0.45	<0.070	<0.024	0.94	<0.23	92	11	2	<0.33
2024-12-16	42	<0.10	42	<0.45	10	<3.7	5.2	<0.0036	<0.43	38	<0.37	<0.37	<0.25	<0.024	2	0.94	96	11	2.2	<0.33
2025-03-10	24	<0.10	24	<0.45	7.6	<3.7	4.9	<0.0036	<0.43	29	<0.37	<0.37	<0.25	0.048	1.5	0.3	40	7.6	7.4	<0.33
2025-04-28	20	<0.10	20	<0.45	7.7	<3.7	<0.42	<0.0036	<0.43	22	<0.37	<0.37	<0.25	0.055	0.92	1	16	7.9	10	<0.33
2025-08-13	82	<0.10	82	<0.45	12	<3.7	1.7	<0.0036	<0.43	72	<0.37	<0.37	<0.25	<0.05	1.2	<1.0	14	11	2.2	<0.33
2025-10-28	55	--	55	<0.45	12	<3.7	1.1	<0.0036	<0.43	44	<0.37	<0.37	<0.25	0.052	1.2	1.7	58	12	3.4	<0.33
2026-02-10	63	<0.10	63	<0.45	8	<3.7	1.3	<0.0036	<0.43	47	<0.37	<0.37	<0.25	0.056	1.2	1.6	100	7.9	5.8	
2026-04-29	45	<0.049	45	<0.45	9.7 J	<3.7	23	<0.0036	<0.43	63	0.82 J	0.82 J	<0.25	0.068 J	0.72 J	<0.23	92	9.8	3.6 J	<0.33
	13	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	12
	0	12	0	13	0	13	1	12	12	0	10	10	13	4	0	6	0	0	1	12
	0%	100%	0%	100%	0%	100%	8%	92%	92%	0%	77%	77%	100%	31%	0%	46%	0%	0%	8%	100%
Miles Creek Statistical Summary	87	0.05	87	0.225	13	1.85	38	0.0048	0.23	89	0.82	0.82	0.125	0.16	7.7	2.5	210	12	18	0.165
	20	0.0245	20	0.09	5.1	1.85	0.21	0.0018	0.095	22	0.185	0.185	0.035	0.012	0.72	0.115	14	5.1	0.95	0.165
	52.69	--	52.69	--	9.09	--	12.40	0.00	0.21	59.85	0.27	0.27	--	0.05	1.91	0.89	88.77	9.03	5.15	--
	20.59	--	20.59	--	2.41	--	14.09	0.00	0.03	22.06	0.19	0.19	--	0.04	1.84	0.76	56.51	2.07	4.58	--
	0.08	--	0.08	--	0.11	--	0.67	3.18	-3.09	-0.30	2.08	2.08	--	1.50	2.62	0.60	0.49	-0.20	1.87	--

Table 4-2 (continued)

		Field Parameters						*Metals (Total & Dissolved)*													
Stream Sampling Locations & Date	**Note**	**Conductivity (Field) (mS/cm)**	**Dissolved Oxygen (Field) (mg/L)**	**pH (Field) (SU)**	**Redox Potential (Field) (mV)**	**Temperature Field (°C)**	**Turbidity (NTU)**	**Aluminum, Dissolved (µg/L)**	**Aluminum, Total (µg/L)**	**Antimony, Dissolved (µg/L)**	**Antimony, Total (µg/L)**	**Arsenic, Dissolved (µg/L)**	**Arsenic, Total (µg/L)**	**Barium, Dissolved (µg/L)**	**Barium, Total (µg/L)**	**Beryllium, Dissolved (µg/L)**	**Beryllium, Total (µg/L)**	**Boron, Dissolved (µg/L)**	**Boron, Total (µg/L)**	**Cadmium, Dissolved (µg/L)**	**Cadmium, Total (µg/L)**
MLR-01																					
2024-07-25		0.15	7.52	7.72	150	15.35	0.10	40 J	250.00	<1.3	<1.3	0.58 J	0.61 J	29.00	32.00	<0.53	32.00	<50	<50	<0.17	<0.17
2024-09-23		0.18	9.50	7.95	141	16.42	7.70	28 J	130.00	<1.3	<1.3	0.44 J	0.46 J	33.00	38.00	<0.53	38.00	<50	51.00	<0.17	<0.17
2024-12-16		0.09	15.08	7.58	199	0.36	32.20	150.00	1500.00	<1.3	<1.3	0.3 J	0.41 J	16.00	24.00	<0.53	24.00	<50	<50	<0.17	<0.17
2025-03-10		0.07	11.51	8.64	361	0.32	43.40	570.00	1700 J	<1.3	<1.3	0.29 J	0.43 J	14.00	22.00	<0.53	22.00	26 J	20 J	<0.17	<0.17
2025-04-28		0.05	12.17	6.81	223	8.35	22.40	120.00	930.00	<1.3	<1.3	0.24 J	0.37 J	10.00	17.00	<0.53	17.00	31 J	32 J	<0.17	<0.17
2025-08-13		0.11	7.03	7.81	130	21.31	0.00	<25	160.00	<1.3	<1.3	0.6 J	0.61 J	28.00	30.00	<0.53	30.00	59.00	59.00	<0.17	<0.17
2025-10-28		0.09	11.25	7.15	165	6.49	0.00	200.00	540.00	<1.3	<1.3	0.42 J	0.46 J	18 J	21 J	<0.53	21.00	<50	<50	<0.17	<0.17
2026-02-10		0.10	12.57	6.08	236	0.68	7.20	110.00	370.00	<0.93	<0.93	<0.23	0.25 J	15.00	18.00	<0.24	18.00	23 J	28 J	<0.17	<0.17
2026-04-30		0.053	12.32	7.22	227	6.74	18.5	120	980	<0.93	<0.93	0.3 J	0.37 J	11	18	<0.24	<0.24	<13	16 J	<0.17	<0.17
MLR-02																					
2024-07-25		0.247	7.46	7.41	114	19.59	7.4	<25	460	<1.3	<1.3	0.68 J	0.77 J	44	50	<0.53	<0.53	<50	51	<0.17	<0.17
2024-09-24		0.265	13.09	8.15	116	15.97	1.5	40 J	70 J	<1.3	<1.3	0.49 J	0.49 J	42	42	<0.53	<0.53	<50	54	<0.17	<0.17
2024-12-16		0.14	14.4	7.82	234	0.31	57.1	110	1000	<1.3	<1.3	0.39 J	0.49 J	21	29	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-11		0.18	13.67	7.73	145	0	18	88 J	1200	<1.3	<1.3	0.36 J	0.53 J	19	28	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-05-05		0.092	10.38	7.11	202	10.5	33.6	87 J	920	<1.3	<1.3	0.46 J	0.6 J	17	23	<0.53	<0.53	25 J	24 J	<0.17	<0.17
2025-08-04		0.19	6.22	7.72	292	20.85	19.6	44 J	870	<1.3	<1.3	0.79 J	0.95 J	30	37	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-10-20		0.204	7.36	7.7	171	10.53	48.2	<25	1600	<1.3	<1.3	0.4 J	0.82 J	32	49	<0.53	<0.53	28 J	32 J	<0.17	<0.17
2026-02-24		0.153	13.29	7.74	154	0.19	13.4	110	570	<0.93	<0.93	0.35 J	0.4 J	20	22	<0.24	<0.24	<13	<13	<0.17	<0.17
2026-04-23		0.056	10.92	6.77	175	9.4	82.1	170	1600	<0.93	<0.93	0.41 J	0.58 J	19	47	<0.24	<0.24	37 J	<50	<0.17	<0.17
MLR-03																					
2024-07-25		0.245	9.27	7.79	186	15.87	0	<25	42 J	<1.3	<1.3	0.56 J	0.63 J	44	46	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-09-23		0.283	10.02	8.64	31	14.3	1.6	<25	46 J	<1.3	<1.3	0.47 J	0.49 J	43	45	<0.53	<0.53	50	51	<0.17	<0.17
2024-12-02		0.168	21.09	9.17	192	0.05	17.5	41 J	220	<1.3	<1.3	0.42 J	0.49 J	22	24	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-02-25		0.241	2.29	7.88	299	-0.1	23.6	27 J	360	<1.3	<1.3	0.34 J	0.44 J	33	37	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-04-30		0.067	11.09	7.13	164	9.2	15.8	650	1000	<1.3	<1.3	0.44 J	0.5 J	19	22	<0.53	<0.53	25 J	29 J	<0.17	<0.17
2025-08-06		0.195	7.68	8.01	223	18.55	1.9	25 J	110	<1.3	<1.3	0.62 J	0.68 J	36	38	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-10-21		0.204	7.15	7.55	145	9.48	30.3	<25	100	<1.3	<1.3	0.44 J	0.41 J	38	40	<0.53	<0.53	40 J	46 J	<0.17	<0.17
2026-02-17		0.176	14.58	7.37	183	0.31	17.7	78 J	470	<0.93	<0.93	0.36 J	0.38 J	25	26	<0.24	<0.24	21 J	28	<0.17	<0.17
2026-04-28		0.107	11.92	7.47	160	9.38	96.4	110	400	<0.93	<0.93	0.5 J	0.57 J	18	24	<0.24	<0.24	42 J	41 J	<0.17	<0.17
Mineral River Statistical Summary	**Number of Observations**	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	Number of Non-Detect	0	0	0	0	0	0	6	0	27	27	1	0	0	0	27	19	15	12	27	27
	% Non-Detect	0%	0%	0%	0%	0%	0%	22%	0%	100%	100%	4%	0%	0%	0%	100%	70%	56%	44%	100%	100%
	Maximum	0.28	21.09	9.17	361.00	21.31	96.40	650.00	1700.00	0.65	0.65	0.79	0.95	44.00	50.00	0.27	38.00	59.00	59.00	0.09	0.09
	Minimum	0.05	2.29	6.08	31.00	-0.10	0.00	12.50	42.00	0.47	0.47	0.12	0.25	10.00	17.00	0.12	0.12	6.50	6.50	0.09	0.09
	Average	0.15	10.77	7.63	185.85	9.25	25.72	110.85	651.78	--	--	0.44	0.53	25.78	31.44	--	7.64	27.59	31.24	--	--
	Standard Deviation	0.07	3.67	0.62	65.40	7.40	24.66	153.86	530.54	--	--	0.14	0.15	10.52	10.48	--	12.26	10.76	12.79	--	--
	Skewness	0.17	0.32	0.08	0.49	0.13	1.53	2.64	0.62	--	--	0.33	0.93	0.39	0.35	--	1.22	0.90	0.70	--	--
NTC-01																					
2024-07-22		0.208	9.55	7.85	39	17.79	34.7	28 J	620	<1.3	<1.3	0.67 J	1.2	49	73	<0.53	<0.53	69	71	<0.17	<0.17
2024-09-23		0.225	2.17	7.56	-19	15.34	171	<25	100	<1.3	<1.3	0.57 J	0.73 J	80	82	<0.53	<0.53	100	100	<0.17	<0.17
2024-09-23	Duplicate Sample	--	--	--	--	--	--	<25	160	<1.3	<1.3	0.62 J	0.72 J	80	84	<0.53	<0.53	100	100	<0.17	<0.17
2024-12-02		0.252	14.1	9.87	56	1.76	12.7	<25	36 J	<1.3	<1.3	0.36 J	0.37 J	30	32	<0.53	<0.53	60	71	<0.17	<0.17
2024-12-02	Duplicate Sample	--	--	--	--	--	--	<25	25 J	<1.3	<1.3	0.35 J	0.38 J	30	32	<0.53	<0.53	73	77	<0.17	<0.17
2025-02-25		0.233	8.92	7.93	254	0.53	15.6	<25	180	<1.3	<1.3	0.29 J	0.39 J	54	59	<0.53	<0.53	52	61	<0.17	<0.17
2025-02-25	Duplicate Sample	--	--	--	--	--	--	<25	350	<1.3	<1.3	0.29 J	0.51 J	54	68	<0.53	<0.53	55	60	<0.17	<0.17
2025-04-30		0.105	2.2	6.65	175	14.11	2.2	47 J	110	<1.3	<1.3	0.3 J	0.31 J	30	30	<0.53	<0.53	61	74	<0.17	<0.17
2025-04-30	Duplicate Sample	--	--	--	--	--	--	48 J	120	<1.3	<1.3	0.33 J	0.35 J	29	30	<0.53	<0.53	48 J	56	<0.17	<0.17
2025-08-06		0.143	4.94	7.4	234	19.93	2.9	<25	67 J	<1.3	<1.3	0.62 J	0.74 J	41	42	<0.53	<0.53	65	63	<0.17	<0.17
2025-08-06	Duplicate Sample	--	--	--	--	--	--	<25	61 J	<1.3	<1.3	0.56 J	0.77 J	42	41	<0.53	<0.53	61	61	<0.17	<0.17
2025-10-21		0.229	1.55	6.82	-70	10.79	167	32 J	1900	<1.3	<1.3	2.6	2.2	170	160	<0.53	<0.53	93	99	<0.17	0.19 J
2026-02-17		0.219	10.72	7.44	167	0.33	19.4	<25	50 J	<0.93	<0.93	0.23 J	0.29 J	50	53	<0.24	<0.24	47 J	<50	<0.17	<0.17
2026-04-28		0.075	9.4	7.08	139	10.5	4.8	70 J	190	<0.93	<0.93	0.29 J	0.35 J	25	28	<0.24	<0.24	44 J	48 J	<0.17	<0.17
Native Creek Statistical Summary	**Number of Observations**	9	9	9	9	9	9	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	Number of Non-Detect	0	0	0	0	0	0	9	0	14	14	0	0	0	0	14	14	0	1	14	13
	% Non-Detect	0%	0%	0%	0%	0%	0%	64%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	7%	100%	93%
	Maximum	0.25	14.10	9.87	254.00	19.93	171.00	70.00	1900.00	0.65	0.65	2.60	2.20	170.00	160.00	0.27	0.27	100.00	100.00	0.09	0.19
	Minimum	0.08	1.55	6.65	-70.00	0.33	2.20	12.50	25.00	0.47	0.47	0.23	0.29	25.00	28.00	0.12	0.12	44.00	25.00	0.09	0.09
	Average	0.19	7.06	7.62	108.33	10.12	47.81	24.11	283.50	--	--	0.58	0.67	54.57	58.14	--	--	66.29	69.00	--	0.09
	Standard Deviation	0.06	4.48	0.95	112.58	7.55	69.44	18.59	491.07	--	--	0.60	0.51	37.57	35.49	--	--	18.96	20.96	--	0.03
	Skewness	-0.81	0.03	1.53	-0.24	-0.25	1.27	1.35	2.82	--	--	2.97	2.11	2.23	1.74	--	--	0.78	-0.10	--	3.33

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Calcium, Dissolved (µg/L)	Calcium, Total (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total (µg/L)	Cobalt, Dissolved (µg/L)	Cobalt, Total (µg/L)	Copper, Dissolved (µg/L)	Copper, Total (µg/L)	Iron, Dissolved (µg/L)	Iron, Total (µg/L)	Lead, Dissolved (µg/L)	Lead, Total (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total (ng/L)	Molybdenum, Dissolved (µg/L)
MLR-01																							
2024-07-25	19000.00	19000.00	<1.1	<1.1	<0.40	<0.40	3.90	4.20	370.00	770.00	<0.19	<0.19	<2.5	<2.5	5400.00	5300.00	28.00	33.00	1.30	1.60	0.11	0.14	<2.5
2024-09-23	23000.00	23000.00	<1.1	<1.1	<0.40	<0.40	2.70	2.70	220.00	390.00	<0.19	<0.19	<2.5	<2.5	6200.00	6500.00	22.00	35.00	0.96	0.96	0.08	0.09	<2.5
2024-12-16	10000.00	10000.00	<1.1	1.8 J	<0.40	0.42 J	7.10	10.00	620.00	1800.00	<0.19	0.59	<2.5	<2.5	2900.00	3100.00	11.00	21.00	4.60	6.40	0.05	0.034 J	<2.5
2025-03-10	7600.00	7700.00	<1.1	1.8 J	<0.40	0.46 J	11.00	14.00	670.00	1500.00	0.25 J	0.66	<2.5	<2.5	2000.00	2300.00	15.00	27.00	4.60	6.50	0.041 J	0.05	<2.5
2025-04-28	6000.00	6000.00	<1.1	1.2 J	<0.40	<0.40	6.70	8.30	190.00	860.00	<0.19	0.36 J	<2.5	<2.5	1600.00	1700.00	16.00	27.00	3.90	5.80	0.11	0.06	<2.5
2025-08-13	19000.00	20000.00	<1.1	<1.1	<0.40	<0.40	3.80	4.00	410.00	640.00	1.90	<0.19	<2.5	<2.5	5200.00	5400.00	33.00	40.00	1.40	1.50	0.09	0.10	<2.5
2025-10-28	12000.00	12000.00	<1.1	<1.1	<0.40	<0.40	5.9 J	6.7 J	640.00	1000.00	<0.19	0.25 J	<2.5	<2.5	3200.00	3400.00	12 J	17 J	3.20	3.50	0.026 J	0.035 J	<2.5
2026-02-10	13000.00	13000.00	<1.1	<1.1	<0.40	<0.40	4.80	5.80	840.00	1300.00	<0.19	0.19 J	<2.5	<2.5	3600.00	3600.00	8.60	16.00	2.10	2.70	0.03 J	0.07	<2.5
2026-04-30	6900	7100	<1.1	1.5 J	<0.40	0.4 J	8	11	330	1200	<0.19	0.34 J	<2.0	<2.0	1900	2100	16	30	4.7	6.3	0.055	0.097	<2.5
MLR-02																							
2024-07-25	30000	30000	<1.1	<1.1	<0.40	<0.40	43	51	350	1100	<0.19	0.22 J	<2.5	<2.5	6400	6600	61	170	0.97	1.2	<0.022	<0.022	<2.5
2024-09-24	34000	34000	<1.1	<1.1	<0.40	<0.40	29	30	110	160	<0.19	<0.19	<2.5	<2.5	6700	6800	14	16	0.59	0.61	<0.022	<0.022	<2.5
2024-12-16	17000	18000	<1.1	1.3 J	<0.40	<0.40	30	37	410	1100	<0.19	0.43 J	<2.5	<2.5	4300	4600	7.7	18	3	4.3	0.036 J	<0.022	<2.5
2025-03-11	16000	17000	<1.1	1.5 J	<0.40	0.4 J	36	48	280	1200	<0.19	0.51	<2.5	<2.5	3800	4100	22	40	3.4	4.8	<0.022	0.052	<2.5
2025-05-05	12000	12000	<1.1	1.4 J	<0.40	<0.40	41	49	210	950	<0.19	0.39 J	<2.5	<2.5	2700	2900	34	26	4.2	5.1	0.038 J	0.044 J	<2.5
2025-08-04	23000	24000	<1.1	1.5 J	<0.40	0.52 J	38	56	450	1400	<0.19	0.44 J	<2.5	<2.5	5200	5600	46	110	2	2.7	<0.022	<0.022	<2.5
2025-10-20	24000	26000	<1.1	2.1 J	<0.40	1	17	52	69 J	1600	<0.19	0.69	<2.5	2.6 J	5400	6500	19	210	0.92	1.5	<0.022	<0.022	<2.5
2026-02-24	18000	16000	<1.1	<1.1	<0.40	<0.40	24	27	560	1000	<0.19	0.27 J	<2.5	<2.5	4300	4100	11	16	2.6	3.3	0.032 J	0.027 J	<2.5
2026-04-23	8400	8900	<1.1	1.8 J	<0.40	0.6 J	33	40	260	1300	<0.19	0.5	<2.0	<2.0	1900	2400	11	31	5.1	5.4	0.058	0.064	<2.5
MLR-03																							
2024-07-25	30000	31000	<1.1	<1.1	<0.40	<0.40	34	38	85 J	140	<0.19	<0.19	<2.5	<2.5	6800	7000	4.9	8.3	0.79	0.91	<0.022	<0.022	<2.5
2024-09-23	33000	34000	<1.1	<1.1	<0.40	<0.40	26	29	<47	62 J	<0.19	<0.19	<2.5	<2.5	6700	6900	2.6	5.3	0.65	0.54	<0.022	<0.022	<2.5
2024-12-02	20000	20000	<1.1	<1.1	<0.40	<0.40	25	29	320	580	<0.19	<0.19	<2.5 J	<2.5 J	4600	4600	3.4	7.3	2	2.3	<0.050	<0.022	<2.5
2025-02-25	27000	28000	<1.1	<1.1	<0.40	<0.40	23	30	510	1100	<0.19	<0.19	<2.5	<2.5	6100	6200	24	31	1.5	2	<0.050	<0.050	<2.5
2025-04-30	9900	9800	<1.1	1.4 J	<0.40	<0.40	41	43	660	960	0.3 J	0.43 J	<2.5	<2.5	2300	2400	19	24	4.6	6.1	0.036 J	0.045 J	<2.5
2025-08-06	24000	24000	<1.1	1.2 J	<0.40	<0.40	35	39	250	400	<0.19	<0.19	<2.5	<10	5400	5400	8.1	20	1.3	1.6	0.023 J	<0.022	<2.5
2025-10-21	24000	25000	<1.1	<1.1	<0.40	<0.40	19	25	<47	150	<0.19	<0.19	<2.5	<2.5	5800	6100	9.2	19	1.2	1.3	<0.022	0.13	<2.5
2026-02-17	19000	19000	<1.1	<1.1	<0.40	<0.40	23	27	520	1000	0.24 J	0.25 J	<2.5	<2.5	4600	4600	7.9	12	1.8	2.2	<0.022	<0.022	<2.5
2026-04-28	14000	15000	<1.1	<1.1	<0.40	<0.40	46	56	260	620	<0.19	0.3 J	<2.0	<2.0	3400	3700	14	38	4.6	6.1	<0.033	<0.033	<2.5
Mineral River Statistical Summary	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	0	0	27	15	27	20	0	0	2	0	23	10	27	26	0	0	0	0	0	0	12	12	27
	0%	0%	100%	56%	100%	74%	0%	0%	7%	0%	85%	37%	100%	96%	0%	0%	0%	0%	0%	0%	44%	44%	100%
	34000.00	34000.00	0.55	2.10	0.20	1.00	46.00	56.00	840.00	1800.00	1.90	0.69	1.25	5.00	6800.00	7000.00	61.00	210.00	5.10	6.50	0.11	0.14	1.25
	6000.00	6000.00	0.55	0.55	0.20	0.20	2.70	2.70	23.50	62.00	0.10	0.10	1.00	1.00	1600.00	1700.00	2.60	5.30	0.59	0.54	0.01	0.01	1.25
	18511.11	18870.37	--	0.99	--	0.29	22.85	28.62	357.07	899.33	0.18	0.29	--	1.41	4385.19	4588.89	17.79	38.81	2.52	3.23	0.04	0.04	--
	8140.80	8363.14	--	0.53	--	0.18	14.06	17.67	217.06	469.58	0.35	0.19	--	0.77	1662.88	1677.99	13.31	47.96	1.53	2.08	0.03	0.04	--
	0.23	0.22	--	0.58	--	2.48	-0.04	-0.04	0.31	-0.21	4.72	0.57	--	4.10	-0.18	-0.12	1.63	2.64	0.36	0.35	1.28	1.07	--
NTC-01																							
2024-07-22	23000	23000	<1.1	1.1 J	<0.40	0.86 J	4.1	8.5	500	2400	<0.19	0.4 J	3.8 J	4.8 J	4700	4900	250	1300	0.98	1.1	0.059	0.048 J	3.5 J
2024-09-23	26000	27000	<1.1	<1.1	<0.40	<0.40	2.2	3.5	620	1100	<0.19	<0.19	4.9 J	5 J	4600	4700	860	910	0.68	0.73	<0.050	<0.022	2.6 J
2024-09-23	26000	26000	<1.1	<1.1	<0.40	0.42 J	1.6 J	4.5	710	1100	<0.19	<0.19	5.2 J	5.2 J	4500	4600	890	910	0.93	0.78	0.056	0.038 J	2.7 J
2024-12-02	20000	21000	<1.1	<1.1	<0.40	<0.40	3.5	3.8	150	260	<0.19	<0.19	<2.5 J	<2.5 J	4200	4300	32	34	0.69	0.7	<0.022	<0.022	<2.5
2024-12-02	20000	20000	<1.1	<1.1	<0.40	<0.40	3.4	4.8	140	260	<0.19	<0.19	<2.5 J	<2.5 J	4200	4300	31	34	0.81	0.68	<0.022	<0.022	<2.5
2025-02-25	28000	28000	<1.1	<1.1	<0.40	<0.40	2.5	5.6	490	1900	<0.19	<0.19	2.7 J	2.5 J	5700	5700	410	530 J	0.93	1.4	0.18	0.22	<2.5
2025-02-25	28000	28000	<1.1	<1.1	<0.40	0.49 J	3.3	7.8	850	2400	<0.19	0.23 J	2.6 J	3 J	5500	5700	400	780 J	1	1.3	0.18	0.22	<2.5
2025-04-30	15000	15000	<1.1	<1.1	<0.40	<0.40	11	12	300	430	<0.19	<0.19	<2.5	<2.5	3300	3200	34	43	2.6	3.2	0.035 J	0.049 J	<2.5
2025-04-30	15000	15000	<1.1	<1.1	<0.40	<0.40	11	12	270	420	<0.19	<0.19	<2.5	<2.5	3200	3200	33	44	2.5	3.1	0.047 J	0.066	<2.5
2025-08-06	18000	19000	<1.1	<1.1	<0.40	<0.40	3.9	4.9	550	1000	<0.19	<0.19	3.8 J	<10	3600	3700	190	200	0.81	1.1	0.024 J	0.034 J	<2.5
2025-08-06	19000	19000	<1.1	<1.1	<0.40	<0.40	4.1	4.8	640	1000	<0.19	<0.19	3.5 J	<10	3700	3700	190	190	0.77	1.5	<0.022	0.038 J	<2.5
2025-10-21	29000	29000	<1.1	2.5 J	1.9	2.4	1.6 J	33	9300	6100	<0.19	1.1	6.4 J	6.8 J	5200	5700	2500	3900	0.89 J	1.2 J	0.024 J	0.033 J	4.1 J
2026-02-17	29000	29000	<1.1	<1.1	<0.40	<0.40	2.5	3.4	810	1400	<0.19	<0.19	2.7 J	2.9 J	6200	6300	230	250	0.55	0.58	0.094	0.11	<2.5
2026-04-28	12000	12000	<1.1	<1.1	<0.40	<0.40	11	13	340	570	<0.19	<0.19	<2.0	<2.0	2600	2700	35	56	4	4.7	0.057	0.073	<2.5
Native Creek Statistical Summary	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	0	0	14	12	13	10	0	0	0	0	14	11	5	7	0	0	0	0	0	0	4	3	10
	0%	0%	100%	86%	93%	71%	0%	0%	0%	0%	100%	79%	36%	50%	0%	0%	0%	0%	0%	0%	29%	21%	71%
	29000.00	29000.00	0.55	2.50	1.90	2.40	11.00	33.00	9300.00	6100.00	0.10	1.10	6.40	6.80	6200.00	6300.00	2500.00	3900.00	4.00	4.70	0.18	0.22	4.10
	12000.00	12000.00	0.55	0.55	0.20	0.20	1.60	3.40	140.00	260.00	0.10	0.10	1.00	1.00	2600.00	2700.00	31.00	34.00	0.55	0.58	0.01	0.01	1.25
	22000.00	22214.29	--	0.73	0.32	0.44	4.69	8.69	1119.29	1452.86	--	0.20	2.97	3.30	4371.43	4478.57	434.64	655.79	1.30	1.58	0.06	0.07	1.81
	5777.94	5767.00	--	0.53	0.45	0.59	3.52	7.76	2365.47	1518.86	--	0.27	1.71	1.96	1038.07	1100.47	659.72	1021.78	1.01	1.22	0.06	0.07	0.99
	-0.23	-0.30	--	2.96	3.33	2.83	1.19	2.37	3.27	2.18	--	2.85	0.50	0.22	0.10	0.05	2.39	2.47	1.75	1.52	1.41	1.49	1.34

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Molybdenum, Total (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total (µg/L)	Potassium, Dissolved (µg/L)	Potassium, Total (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total (µg/L)	Silver, Dissolved (µg/L)	Silver, Total (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total (µg/L)	Tin, Dissolved (µg/L)	Tin, Total (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total (µg/L)
MLR-01																							
2024-07-25	<2.5	<0.63	<0.63	1200.00	1300.00	<0.98	<0.98	<0.12	<0.12	3400.00	3200.00	66.00	66.00	<0.57	<0.57	<1.3	<1.3	0.48	0.54	<2.2	<2.2	<6.9	<6.9
2024-09-23	<2.5	<0.63	0.68 J	1600.00	1600.00	<0.98	<0.98	<0.12	<0.12	4000.00	4500.00	79.00	86.00	<0.57	<0.57	<1.3	<1.3	0.56	0.57	<2.2	<2.2	<6.9	80.00
2024-12-16	<2.5	<0.63	1.2 J	930.00	1100.00	<0.98	<0.98	<0.12	<0.12	4700.00	4500.00	29.00	30.00	<0.57	<0.57	<1.3	<1.3	0.18	0.22	<2.2	2.7 J	<6.9	<6.9
2025-03-10	<2.5	<0.63	1.1 J	740.00	930.00	<0.98	<0.98	<0.12	<0.12	3900.00	4200.00	22.00	23.00	<0.57	<0.57	1.4 J	<1.3	0.12	0.17	<2.2	3 J	<6.9	<6.9
2025-04-28	<2.5	<0.63	1 J	530.00	690.00	<0.98	<0.98	<0.12	<0.12	1100.00	1100.00	17.00	17.00	<0.57	<0.57	<1.3	<1.3	0.13	0.16	<2.2	2.4 J	<6.9	<6.9
2025-08-13	<2.5	<0.63	<0.63	1300.00	1400.00	<0.98	<0.98	<0.12	<0.12	490 J	490 J	68.00	69.00	<0.57	<0.57	<1.3	<1.3	0.47	0.49	<2.2	<2.2	<6.9	<6.9
2025-10-28	<2.5	<0.63	0.87 J	1400.00	1500.00	1.8 J	2.2 J	<0.12	<0.12	1900.00	1900.00	34.00	35.00	<0.57	<0.57	<1.3	<1.3	0.24	0.26	<2.2	<2.2	<6.9	<6.9
2026-02-10	<2.5	<0.63	0.63 J	710.00	760.00	<0.98	<0.98	<0.12	<0.12	2600.00	2600.00	37.00	37.00	<0.25	<0.25	<1.3	<1.3	0.22	0.24	0.56	1.10	<6.9	<6.9
2026-04-30	<2.5	<0.63	0.98 J	660	860	<0.98	<0.98	<0.12	<0.12	1100	1100	21	23	<0.25	<0.25	<1.3	<1.3	0.13	0.16	0.83	2.3	<6.9	<6.9
MLR-02																							
2024-07-25	<2.5	<0.63	0.87 J	1300	1400	<0.98	<0.98	<0.12	<0.12	11000	11000	77	78	<0.57	<0.57	<1.3	<1.3	0.3	0.31	<2.2	<2.2	<6.9	<6.9
2024-09-24	<2.5	<0.63	<0.63	1600	1700	<0.98	<0.98	<0.12	<0.12	12000	12000	81	80	<0.57	<0.57	<1.3	<1.3	0.27	0.27	<2.2	<2.2	<6.9	<6.9
2024-12-16	<2.5	<0.63	0.9 J	960	1200	<0.98	<0.98	<0.12	<0.12	11000	11000	42	45	<0.57	<0.57	<1.3	<1.3	0.18	0.21	<2.2	<2.2	<6.9	<6.9
2025-03-11	<2.5	<0.63	0.95 J	920	1200	<0.98	<0.98	<0.12	<0.12	9500	9500	37	38	<0.57	<0.57	<1.3	<1.3	0.14	0.16	<2.2	2.3 J	<6.9	<6.9
2025-05-05	<2.5	<0.63	1 J	730	950	<0.98	<0.98	<0.12	<0.12	4500	4600	31	31	<0.57	<0.57	<1.3	<1.3	0.15	0.17	<2.2	2.2 J	<6.9	<6.9
2025-08-04	<2.5	<0.63	1.3 J	1100	1300	<0.98	<0.98	<0.12	<0.12	9500	9700	59	61	<0.57	<0.57	<1.3	<1.3	0.22	0.25	<2.2	2.7 J	<6.9	<6.9
2025-10-20	<2.5	<0.63	2.1	1400	1900	<0.98	<0.98	<0.12	<0.12	7800	8300	58	64	<0.57	<0.57	<1.3	<1.3	0.17	0.3	<2.2	3.7 J	<6.9	7 J
2026-02-24	<2.5	<0.63	0.67 J	840	860	<0.98	<0.98	<0.12	<0.12	9900	9200	45	43	<0.25	<0.25	<1.3	<1.3	0.17	0.2	0.56	1.2	<6.9	<6.9
2026-04-23	<2.5	<0.63	1.5 J	630	1000	<0.98	<0.98	<0.12	<0.12	2400	2500	22	25	<0.25	<0.25	<1.3	1.6 J	0.099	0.13	0.97	3.1	<6.9	<6.9
MLR-03																							
2024-07-25	<2.5	<0.63	<0.63	1300	1400	<0.98	<0.98	<0.12	<0.12	12000	12000	87	90	<0.57	<0.57	<1.3	<1.3	0.35	0.36	<2.2	<2.2	<6.9	<6.9
2024-09-23	<2.5	<0.63	<0.63	1600	1700	<0.98	<0.98	<0.12	<0.12	11000	11000	84	86	<0.57	<0.57	<1.3	<1.3	0.27	0.26	<2.2	<2.2	<6.9	<6.9
2024-12-02	<2.5	<0.63	<0.63	1000	1100	<0.98	<0.98	<0.12	<0.12	9000	8900	51	52	<0.57	<0.57	<1.3	<1.3	0.24	0.25	<2.2	<2.2	<6.9	<6.9
2025-02-25	<2.5	<0.63	<0.63	1100	1200	<0.98	<0.98	<0.12	<0.12	10000	11000	68	70	<0.57	<0.57	<1.3	<1.3	0.32	0.34	<2.2	<2.2	<6.9	<6.9
2025-04-30	<2.5	0.83 J	1.1 J	770	850	<0.98	<0.98	<0.12	<0.12	3200	3200	25	25	<0.57	<0.57	<1.3	<1.3	0.14	0.16	<2.2	2.3 J	<6.9	<6.9
2025-08-06	<2.5	<0.63	0.84 J	1100	1100	<0.98	<0.98	<0.12	<0.12	9700	9700	68	67	<0.57	<0.57	<1.3	<5.0	0.22	0.23	<2.2	<2.2	<6.9	<6.9
2025-10-21	<2.5	<0.63	<0.63	2000	2100	<0.98	<0.98	<0.12	<0.12	8400	8700	65	67	<0.57	<0.57	<1.3	<1.3	0.14	0.16	<2.2	<2.2	<6.9	<6.9
2026-02-17	<2.5	1 J	<0.63	860	930	<0.98	<0.98	<0.12	<0.12	11000	12000	52	51	<0.25	<0.25	<1.3	<1.3	0.24	0.22	0.47	1.1	<6.9	<6.9
2026-04-28	<2.5	<0.63	0.68 J	980	1100	<0.98	<0.98	<0.12	<0.12	6100	6300	34	37	<0.25	<0.25	<1.3	<1.3	0.2	0.23	0.78	1.5	<6.9	<6.9
Mineral River Statistical Summary	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	27	25	9	0	0	26	26	27	27	0	0	0	0	27	27	26	26	0	0	21	13	27	25
	100%	93%	33%	0%	0%	96%	96%	100%	100%	0%	0%	0%	0%	100%	100%	96%	96%	0%	0%	78%	48%	100%	93%
	1.25	1.00	2.10	2000.00	2100.00	1.80	2.20	0.06	0.06	12000.00	12000.00	87.00	90.00	0.29	0.29	1.40	2.50	0.56	0.57	1.10	3.70	3.45	80.00
	1.25	0.32	0.32	530.00	690.00	0.49	0.49	0.06	0.06	490.00	490.00	17.00	17.00	0.13	0.13	0.65	0.65	0.10	0.13	0.47	1.10	3.45	3.45
	--	0.36	0.79	1083.70	1227.04	0.54	0.55	--	--	6710.74	6821.85	50.33	51.70	--	--	0.68	0.75	0.24	0.26	1.01	1.70	--	6.42
	--	0.16	0.44	359.50	354.42	0.25	0.33	--	--	3885.04	3947.22	21.94	22.41	--	--	0.14	0.39	0.12	0.11	0.19	0.81	--	14.72
	--	3.37	0.90	0.62	0.68	4.90	4.90	--	--	-0.15	-0.16	0.11	0.14	--	--	4.90	3.79	1.34	1.46	-1.91	0.93	--	4.89
NTC-01																							
2024-07-22	3.9 J	<0.63	1 J	1300	1400	<0.98	<0.98	<0.12	<0.12	8200	8100	180	180	<0.57	<0.57	<1.3	<1.3	0.052	0.18	<2.2	3.4 J	<6.9	<6.9
2024-09-23	2.8 J	0.64 J	0.77 J	2100	2200	<0.98	<0.98	<0.12	<0.12	8800	9000	200	200	<0.57	<0.57	<1.3	<1.3	0.075	0.12	<2.2	<2.2	<6.9	<6.9
2024-09-23	2.8 J	0.63 J	0.77 J	2100	2200	<0.98	<0.98	<0.12	<0.12	8600	8800	190	200	<0.57	<0.57	<1.3	<1.3	0.094	0.095	<2.2	<2.2	<6.9	<6.9
2024-12-02	<2.5	<0.63	<0.63	2300	2400	<0.98	<0.98	<0.12	<0.12	7600	7800	140	150	<0.57	<0.57	<1.3	<1.3	<0.05	0.051	<2.2	<2.2	<6.9	<6.9
2024-12-02	<2.5	<0.63	<0.63	2300	2300	<0.98	<0.98	<0.12	<0.12	7600	7700	140	140	<0.57	<0.57	<1.3	<1.3	0.047 J	0.048 J	<2.2	<2.2	<6.9	<6.9
2025-02-25	<2.5	<0.63	<0.63	1900	1900	<0.98	<0.98	<0.12	<0.12	8100	8000	190	190	<0.57	<0.57	<1.3	<1.3	0.081	0.1	<2.2	<2.2	<6.9	<6.9
2025-02-25	<2.5	<0.63	<0.63	1800	1900	<0.98	<0.98	<0.12	<0.12	8000	8000	180	190	<0.57	<0.57	<1.3	<1.3	0.08	0.084	<2.2	2.2 J	<6.9	<6.9
2025-04-30	<2.5	<0.63	<0.63	1300	1300	<0.98	<0.98	<0.12	<0.12	3500	3500	91	89	<0.57	<0.57	<1.3	1.3 J	0.058	0.057	<2.2	<2.2	<6.9	<6.9
2025-04-30	<2.5	<0.63	<0.63	1300	1300	<0.98	<0.98	<0.12	<0.12	3500	3500	89	89	<0.57	<0.57	<1.3	<1.3	0.053	0.053	<2.2	<2.2	<6.9	<6.9
2025-08-06	<2.5	<0.63	<0.63	830	870	<0.98	<0.98	<0.12	<0.12	4400	4500	140	130	<0.57	<0.57	<1.3	<1.3	0.05	0.052	<2.2	<2.2	<6.9	<6.9
2025-08-06	<2.5	<0.63	<0.63	840	850	<0.98	<0.98	<0.12	<0.12	4500	4500	140	130	<0.57	<0.57	<1.3	<1.3	0.05	0.055	<2.2	<2.2	<6.9	<6.9
2025-10-21	5.1	<0.63	3.1	3200	3200	<0.98	<0.98	<0.12	<0.12	7000	7200	180	210	<0.57	<0.57	1.7 J	2 J	0.22	0.23	<2.2	9.7	<6.9	14 J
2026-02-17	<2.5	<0.63	<0.63	1900	1900	<0.98	<0.98	<0.12	<0.12	6500	6600	200	200	<0.25	<0.25	<1.3	<1.3	0.087	0.089	0.29	0.53	<6.9	<6.9
2026-04-28	<2.5	<0.63	<0.63	1100	1200	<0.98	<0.98	<0.12	<0.12	2600	2700	67	72	<0.25	<0.25	<1.3	<1.3	0.054	0.062	0.64	1	<6.9	<6.9
Native Creek Statistical Summary	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	10	12	10	0	0	14	14	14	14	0	0	0	0	14	14	13	12	1	0	12	9	14	13
	71%	86%	71%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	100%	100%	93%	86%	7%	0%	86%	64%	100%	93%
	5.10	0.64	3.10	3200.00	3200.00	0.49	0.49	0.06	0.06	8800.00	9000.00	200.00	210.00	0.29	0.29	1.70	2.00	0.22	0.23	1.10	9.70	3.45	14.00
	1.25	0.32	0.32	830.00	850.00	0.49	0.49	0.06	0.06	2600.00	2700.00	67.00	72.00	0.13	0.13	0.65	0.65	0.03	0.05	0.29	0.53	3.45	3.45
	1.94	0.36	0.63	1733.57	1780.00	--	--	--	--	6350.00	6421.43	151.93	155.00	--	--	0.73	0.79	0.07	0.09	1.01	1.91	--	4.20
	1.24	0.12	0.75	662.21	662.27	--	--	--	--	2172.82	2194.11	44.15	47.46	--	--	0.28	0.39	0.05	0.05	0.24	2.35	--	2.82
	1.55	2.04	2.84	0.46	0.38	--	--	--	--	-0.52	-0.51	-0.65	-0.48	--	--	3.33	2.53	2.41	1.53	-2.37	2.89	--	3.33

Table 4-2 (continued)

General Parameters

Stream Sampling Locations & Date	Alkalinity (mg/L)	Ammonia (mg/L)	Bicarbonate Alkalinity (as CaCO3) (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Carbonate Alkalinity (as CaCO3) (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Salinity (PSU)
MLR-01																				
2024-07-25	72.00	<0.10	72.00	<0.18	12.00	<3.7	1.20	0.0048 J	0.23 J	69.00	0.44 J	0.44 J	<0.070	0.034 J	1.00	<0.23	3.00	11.00	3 J	<0.33
2024-09-23	87.00	<0.10	87.00	<0.18	11.00	<3.7	1.60	<0.0036	<0.19	85.00	0.45 J	0.45 J	<0.070	<0.024	0.94 J	<0.23	2.00	11.00	2 J	<0.33
2024-12-16	42.00	<0.10	42.00	<0.45	13.00	<3.7	5.20	<0.0036	<0.43	38.00	<0.25	<0.37	<0.25	<0.024	2.00	0.94 J	2.20	11.00	2.2 J	<0.33
2025-03-10	24.00	<0.10	24.00	<0.45	10.00	<3.7	4.90	<0.0036	<0.43	29.00	<0.25	<0.37	<0.25	0.048 J	1.50	0.3 J	7.40	7.60	7.40	<0.33
2025-04-28	20.00	<0.10	20.00	<0.45	7.60	<3.7	<0.42	<0.0036	<0.43	22.00	<0.25	<0.37	<0.25	0.06	0.92 J	1.00	10.00	7.90	10.00	<0.33
2025-08-13	82.00	<0.10	82.00	<0.45	7.70	<3.7	1.70	<0.0036 J	<0.43	72.00	<0.25	<0.37	<0.25	<0.05	1.20	<1.0	14 J	11.00	2.2 J	<0.33
2025-10-28	55.00	--	55.00	<0.45	12.00	<3.7	1.1 J	<0.0036	<0.43	44.00	<0.25	<0.37	<0.25	0.05	1.20	1.70	3.40	12.00	3.4 J	<0.33
2026-02-10	63.00	<0.10	63.00	<0.45	8.00	<3.7	1.30	<0.0036	<0.43	47.00	<0.25	<0.37	<0.25	0.06	1.20	1.60	5.80	7.90	5.80	<0.33
2026-04-30	31	<0.049	31	<0.45	9.9 J	<3.7	<0.42	<0.0036	<0.43	26	0.55 J	0.55 J	<0.25	0.068 J	<0.47	<0.23	46	9.7	10	<0.33
MLR-02																				
2024-07-25	99	<0.10	99	<0.18	13	<3.7	15	<0.0036	0.22 J	100	<0.043	<0.070	<0.070	<0.024 J	1.2	<0.23	100	13	15	<0.33
2024-09-24	110	<0.10	110	<0.18	9.4	<3.7	15	<0.0036	0.47 J	110	<0.043	<0.070	<0.070	<0.024	2.6	<0.23	160	8.6	<1.9	<0.33
2024-12-16	61	<0.10	61	<0.45	11	<3.7	17	<0.0036	<0.43	63	<0.37	<0.37	<0.25	<0.024	4.3	1.4	120	11	4.4 J	<0.33
2025-03-11	50	<0.10	50	<0.45	8.2 J	<3.7	16	<0.0050 J	<0.43	59	1.6 J	1.6 J	<0.25	0.059	3.6	<0.23	94	8.2 J	7	<0.33
2025-05-05	38	<0.10	38	<0.45	12	<3.7	5.5	<0.0036	<0.43	43	<0.37	<0.37	<0.25	<0.024	1.5	<0.23	72	12	5.4	<0.33
2025-08-04	80	<0.10	80	<0.45	14	<3.7	12	<0.0036	<0.43	83	<0.37	<0.37	<0.25	0.056	1.3	1.6	98	13	130	<0.33
2025-10-20	100	<0.10	100	<0.45	8.9	<3.7	11	<0.0036	<0.43	91	<0.37	<0.37	<0.25	0.15	2	0.92 J	78	9.1	34	<0.33
2026-02-24	66	<0.10	66	<0.45	9.8	<3.7	14	<0.0036	<0.43	58	<0.37	<0.37	<0.25	0.041 J	2.2	3.4	130	9.7	3.8 J	<0.33
2026-04-23	33	<0.049	33	<0.45	10	<3.7	2.5	<0.0036	<0.43	32	<0.37	<0.37	<0.25	<0.024	1.2 J	0.57 J	22	9.5	22	<0.33
MLR-03																				
2024-07-25	97	<0.10	97	<0.18	12	<3.7	17	0.0055	0.22 J	110	<0.043	<0.070	<0.070	<0.024 J	1.3	0.53 J	150	12	<1.9	<0.33
2024-09-23	110	<0.10	110	<0.18	10	<3.7	13	<0.0036	<0.19	110	<0.043	<0.070	<0.070	<0.024	3	<0.23	150	9.9	2.6 J	<0.33
2024-12-02	71	<0.10	71	<0.45	10	<3.7	13	<0.0036	<0.43	69	<0.37	<0.37	<0.25	<0.024	4.2	1.7	92	10	<1.9	<0.33
2025-02-25	83	<0.10	83	<0.45	7.1	<3.7	17	<0.0036	<0.43	95	<0.37	<0.37	<0.25	<0.024	3.5	1.3	140	7	3 J	<0.33
2025-04-30	31	<0.10	31	<0.45	12	<3.7	3.7	<0.0036	<0.43	34	<0.37	<0.37	<0.25	0.03 J	1.4	2.1	66	11	10	<0.33
2025-08-06	90	<0.20	90	<0.45	12	<3.7	13	<0.0036	<0.43	83	<0.37	<0.37	<0.25	<0.05	1.3	0.76 J	180	12	6.2	<0.33
2025-10-21	95	<0.10	95	<0.45	11	<3.7	12	<0.0036	<0.43	88	<0.37	<0.37	<0.25	0.061 J	2.1	3.2	92	11	7.6	<0.33
2026-02-17	81	<0.10	81	<0.45	9.8	<3.7	17	<0.0036	<0.43	66	<0.37	<0.37	<0.25	0.15	2.5	1.7	110	9.7	5.6	<0.33
2026-04-28	53	0.1 J	53	<0.45	3.7	<3.7	6.7	<0.0036	<0.43	54	<1	<1	<1	0.12	1.4	1.3	60	5.9	34	<0.33
Mineral River Statistical Summary	27	26	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	0	25	0	27	0	27	2	25	23	0	23	23	27	13	1	9	0	0	3	27
	0%	96%	0%	100%	0%	100%	7%	93%	85%	0%	85%	85%	100%	48%	4%	33%	0%	0%	11%	100%
	110.00	0.10	110.00	0.23	14.00	1.85	17.00	0.01	0.47	110.00	1.60	1.60	0.50	0.15	4.30	3.40	180.00	13.00	130.00	0.17
	20.00	0.02	20.00	0.09	3.70	1.85	0.21	0.00	0.10	22.00	0.02	0.04	0.04	0.01	0.24	0.12	2.00	5.90	0.95	0.17
	67.56	0.05	67.56	--	10.19	--	8.81	0.00	0.22	65.93	0.24	0.26	--	0.04	1.88	1.02	74.36	10.06	12.57	--
	27.21	0.02	27.21	--	2.22	--	6.31	0.00	0.06	27.33	0.30	0.30	--	0.04	1.05	0.92	56.94	1.84	25.06	--
	-0.17	1.89	-0.17	--	-0.79	--	-0.06	3.21	2.29	0.08	3.48	3.56	--	1.56	0.98	1.03	0.12	-0.39	4.05	--
NTC-01																				
2024-07-22	72	<0.10	72	0.27 J	12	<3.7	37	<0.0036	0.26 J	78	0.45 J	0.45 J	<0.070	0.027 J	0.86 J	<0.23	240	12	26	<0.33
2024-09-23	85	<0.10	85	0.25 J	11	<3.7	11	<0.0036	<0.19	87	<0.043	<0.070	<0.070	0.033 J	0.75 J	<0.23	110	11	6	<0.33
2024-09-23	87	<0.10	87	0.28 J	11	<3.7	11	<0.0036	<0.19	85	<0.043	<0.070	<0.070	0.03 J	0.75 J	<0.23	140	11	6.8	<0.33
2024-12-02	64	<0.10	64	<0.45	8.8	<3.7	15	<0.0036	<0.43	70	<0.37	<0.37	<0.25	<0.024	2.5	<0.23	90	8.9	<1.9	<0.33
2024-12-02	66	<0.10	66	<0.45	8.7	<3.7	15	<0.0036	<0.43	68	<0.37	<0.37	<0.25	<0.024	2.5	<0.23	92	9	<1.9	<0.33
2025-02-25	79	<0.10	79	<0.45	6.5	<3.7	18	<0.0036	<0.43	93	<0.37	<0.37	0.29 J	<0.024	3.1	<0.23	110	6.8	5.4	<0.33
2025-02-25	80	<0.10	80	<0.45	6.4	<3.7	17	<0.0036	<0.43	93	<0.37 J	<0.37 J	<0.25 J	<0.024	2.7	<0.23	140	6.7	9.6	<0.33
2025-04-30	55	<0.10	55	<0.45	9.8	<3.7	5.7	<0.0036	<0.43	50	<0.37	<0.37	<0.25	<0.024	1.7	1.5	86 J	10	<1.9	<0.33
2025-04-30	52	<0.10	52	<0.45	10	<3.7	5.5	<0.0036	<0.43	50	<0.37	<0.37	<0.25	<0.024	1.7	0.91 J	54 J	10	<1.9	<0.33
2025-08-06	75	<0.10	75	<0.45	11	<3.7	4.7	<0.0036	<0.43	63	<0.37	<0.37	<0.25	<0.05	0.49 J	0.66 J	210 J	12	4.4 J	<0.33
2025-08-06	75	<0.20	75	<0.45	12	<3.7	4.6	<0.0036	<0.43	62	<0.37	<0.37	<0.25	0.032 J	0.5 J	0.47 J	66 J	12	7.2	<0.33
2025-10-21	100	<0.10	100	<0.45	15	<3.7	6.9	<0.0036	<0.43	97	<0.37	<0.37	<0.25	0.12 J	0.68 J	2.2	100	14	34	<0.33
2026-02-17	490	0.12 J	490	<0.45	6.9	<3.7	13	<0.0036	<0.43	97	<0.37	<0.37	< 0.25	<0.024	1.6	1.9	92	7.1	6.2	<0.33
2026-04-28	54	<0.049	54	<0.45	11	<3.7	3.6	<0.0036	<0.43	42	0.96 J	0.96 J	<0.25	0.033 J	1.1	<0.23	12	11	2.8 J	<0.33
Native Creek Statistical Summary	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	0	13	0	11	0	14	0	14	13	0	12	12	13	8	0	8	0	0	4	14
	0%	93%	0%	79%	0%	100%	0%	100%	93%	0%	86%	86%	93%	57%	0%	57%	0%	0%	29%	100%
	490.00	0.12	490.00	0.28	15.00	1.85	37.00	0.00	0.26	97.00	0.96	0.96	0.29	0.12	3.10	2.20	240.00	14.00	34.00	0.17
	52.00	0.02	52.00	0.23	6.40	1.85	3.60	0.00	0.10	42.00	0.02	0.04	0.04	0.01	0.49	0.12	12.00	6.70	0.95	0.17
	102.43	0.06	102.43	0.23	10.01	--	12.00	--	0.20	73.93	0.24	0.24	0.12	0.03	1.50	0.61	110.14	10.11	8.01	--
	112.38	0.02	112.38	0.02	2.40	--	8.74	--	0.05	18.77	0.23	0.23	0.06	0.03	0.90	0.74	58.90	2.19	9.83	--
	3.24	1.74	3.24	1.71	0.12	--	1.67	--	-1.71	-0.26	2.42	2.47	1.13	2.74	0.47	1.18	0.78	-0.19	1.82	--

Table 4-2 (continued)

		Field Parameters						*Metals (Total & Dissolved)*													
Stream Sampling Locations & Date	**Note**	**Conductivity (Field) (mS/cm)**	**Dissolved Oxygen (Field) (mg/L)**	**pH (Field) (SU)**	**Redox Potential (Field) (mV)**	**Temperature Field (°C)**	**Turbidity (NTU)**	**Aluminum, Dissolved (µg/L)**	**Aluminum, Total (µg/L)**	**Antimony, Dissolved (µg/L)**	**Antimony, Total (µg/L)**	**Arsenic, Dissolved (µg/L)**	**Arsenic, Total (µg/L)**	**Barium, Dissolved (µg/L)**	**Barium, Total (µg/L)**	**Beryllium, Dissolved (µg/L)**	**Beryllium, Total (µg/L)**	**Boron, Dissolved (µg/L)**	**Boron, Total (µg/L)**	**Cadmium, Dissolved (µg/L)**	**Cadmium, Total (µg/L)**
PNC-01																					
2024-07-29		0.119	2.13	6.53	171	21.62	1.2	37 J	64 J	<1.3	<1.3	0.8 J	1	21	21	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-09-23		0.285	1.51	7.33	175	16.7	21.6	<25	49 J	<1.3	<1.3	0.36 J	0.78 J	49	66	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-12-05		0.085	10.99	7.22	131	0.93	55.1	45 J	220	<1.3	<1.3	0.3 J	0.36 J	14	16	<0.53	<0.53	<13	<50	<0.17	<0.17
2025-03-11		0.041	12.69	8.91	293	0.02	51.7	190	1200	<1.3	<1.3	0.25 J	0.47 J	8.3	15	<0.53	<0.53	<50	<13	<0.17	<0.17
2025-04-28		0.047	10.13	6.83	198	9.87	9.2	110	490	<1.3	<1.3	0.26 J	0.34 J	7.6	12	<0.53	<0.53	47 J	58	<0.17	<0.17
2025-08-13		0.095	0.085	6.84	147	20.81	6.6	28 J	120	<1.3	<1.3	0.71 J	0.87 J	24	26	<0.53	<0.53	61	<50	<0.17	<0.17
2025-10-29		0.108	5.73	6.76	95	9.22	2	29 J	140	<1.3	<1.3	0.41 J	0.52 J	17	18	<0.53	<0.53	22 J	18 J	<0.17	<0.17
2026-02-10		0.056	11.4	6.56	182	0.94	3.1	120	330	<0.93	<0.93	0.25 J	0.27 J	8.8	10	<0.24	<0.24	<13	<13	<0.17	<0.17
2026-04-20		0.026	11.7	5.95	218	4.67	14.4	260	570	<0.93	<0.93	0.35 J	0.38 J	7.2	9.1	<0.24	<0.24	24 J	13 J	<0.17	<0.17
PNC-02																					
2024-07-29		0.293	4.63	7.29	72	27.19	41	170	140	<1.3	<1.3	0.97 J	0.86 J	93	85	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-09-24		0.343	12.59	7.73	136	17.27	7.9	<25	42 J	<1.3	<1.3	0.51 J	0.54 J	89	91	<0.53	<0.53	56	57	<0.17	<0.17
2024-12-10	Sample location not accessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-03-10		0.129	9.63	9.29	289	-0.05	230	140	630	<1.3	<1.3	0.32 J	0.36 J	26	30	<0.53	<0.53	13 J	<13	<0.17	<0.17
2025-05-05		135	7.76	6.95	0.1	17.87	670	47 J	1100	<1.3	<1.3	0.35 J	0.51 J	24	32	<0.53	<0.53	14 J	14 J	<0.17	<0.17
2025-08-04		0.281	5.16	7.52	308	22.14	19.9	<25	170	<1.3	<1.3	0.61 J	0.66 J	63	71	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-10-20		0.334	5.06	7.36	119	10.98	277	<25	92 J	<1.3	<1.3	0.4 J	0.42 J	89	87	<0.53	<0.53	30 J	34 J	<0.17	<0.17
2026-02-09	`	0.209	9.64	7.37	158	0.7	16.1	28 J	210	<0.93	<0.93	0.29 J	0.33 J	40	43	<0.24	<0.24	26 J	29 J	<0.17	<0.17
2026-04-20		0.067	11.05	7	188	7.26	35.6	92 J	650	<0.93	<0.93	0.25 J	0.35 J	16	21	<0.24	<0.24	<13	<13	<0.17	<0.17
PNC-03																					
2024-08-01		0.453	4.62	7.79	105	20.11	0	<25	33 J	<1.3	<1.3	0.61 J	0.58 J	120	110	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-09-24		0.395	10.22	7.84	138	15.97	6.4	<25	36 J	<1.3	<1.3	0.47 J	0.47 J	91	96	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-12-09		0.274	10.26	8.92	168	1.72	10	<25	81 J	<1.3	<1.3	0.27 J	0.36 J	56	63	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-10		0.173	12.94	7.6	143	0.42	8	45 J	290	<1.3	<1.3	0.28 J	0.31 J	30	34	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-05-07		0.124	9.16	7.86	170	12.94	26.4	36 J	310	<1.3	<1.3	0.33 J	0.42 J	37	36	<0.53	<0.53	57	<13	<0.17	<0.17
2025-08-06		0.315	6.67	7.88	247	20.16	1.5	<25	38 J	<1.3	<1.3	0.55 J	0.65 J	87	66	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-10-29		0.346	6.97	7.52	136	6.71	0	<25	<25	<1.3	<1.3	0.41 J	0.36 J	69	67	<0.53	<0.53	27 J	26 J	<0.17	<0.17
2026-02-12		0.217	13.68	7.53	159	0.26	19.4	<25	78 J	<0.93	<0.93	0.24 J	0.27 J	45	46	<0.24	<0.24	<13	<13	<0.17	<0.17
2026-04-22		0.086	10.08	6.77	133	7.54	28.3	54 J	580	<0.93	<0.93	0.31 J	0.38 J	34	41	<0.24	<0.24	37 J	<50	<0.17	<0.17
PNC-04																					
2024-08-07		0.481	9.73	7.35	157	17.08	0	<25	26 J	<1.3	<1.3	0.55 J	0.69 J	170	170	<0.53	<0.53	190	200	<0.17	<0.17
2024-09-26		0.412	7.89	7.82	138	13.69	2.6	<25	27 J	<1.3	<1.3	0.3 J	0.3 J	78	80	<0.53	<0.53	<50	<50	<0.17	<0.17
2024-12-17		0.241	15.12	8.27	276	0.06	19.9	<25	210	<1.3	<1.3	0.26 J	0.32 J	46	47	<0.53	<0.53	<50	<50	<0.17	<0.17
2025-03-04		0.179	13.72	7.47	136	0	11.6	45 J	190	<1.3	<1.3	0.27 J	0.3 J	37	39	<0.53	<0.53	<13	<13	<0.17	<0.17
2025-05-01		0.099	11.09	6.85	204	9.79	5.6	43 J	330	<1.3	<1.3	0.32 J	0.33 J	25	29	<0.53	<0.53	19 J	22 J	<0.17	<0.17
2025-08-11		0.267	8.62	7.9	75	20.01	0	<25	34 J	<1.3	<1.3	0.43 J	0.42 J	67	68	<0.53	<0.53	46 J	45 J	<0.17	<0.17
2025-10-27		0.349	11.79	7.7	132	5.86	0	<25	<25	<1.3	<1.3	0.36 J	0.32 J	63	63	<0.53	<0.53	35 J	31 J	<0.17	<0.17
2026-02-16		0.227	14.16	7.65	138	0.48	0	26 J	330	<0.93	<0.93	0.26 J	0.32 J	42	46	<0.24	<0.24	<13	21 J	<0.17	<0.17
2026-04-27		0.102	13.24	7.03	224	9.2	10.4	71 J	570	<0.93	<0.93	0.32 J	0.36 J	23	29	<0.24	<0.24	21 J	38 J	<0.17	<0.17

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Calcium, Dissolved (µg/L)	Calcium, Total (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total (µg/L)	Cobalt, Dissolved (µg/L)	Cobalt, Total (µg/L)	Copper, Dissolved (µg/L)	Copper, Total (µg/L)	Iron, Dissolved (µg/L)	Iron, Total (µg/L)	Lead, Dissolved (µg/L)	Lead, Total (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total (ng/L)	Molybdenum, Dissolved (µg/L)
PNC-01																							
2024-07-29	18000	17000	<1.1	<1.1	0.44 J	0.49 J	7	7.8	1300	2400	<0.19	<0.19	<2.5	<2.5	4000	3900	1100	1200	1.2	1.5	<0.022	0.032 J	<2.5
2024-09-23	41000	45000	<1.1	<1.1	0.75 J	1	1.4 J	2.6	570	8400	<0.19	<0.19	<2.5	<2.5	7900	8400	1400	1700	2.2 J	0.88	0.086	0.14	<2.5
2024-12-05	12000	12000	<1.1	<1.1	<0.40	<0.40	6.8	7.1	770	1300	<0.19	<0.19	<2.5	<2.5	3000	3100	85	94	1.3	1.6	<0.022	<0.022	<2.5
2025-03-11	5100	5200	<1.1	1.4 J	<0.40	<0.40	11	16	540	1700	<0.19	0.45 J	<2.5	<2.5	1300	1500	46	78	5.4	7.6	<0.022	0.048 J	<2.5
2025-04-28	5700	7300	<1.1	<1.1	<0.40	<0.40	13	15	160	550	<0.19	0.23 J	<2.5	<2.5	1400	1800	29	35	4.2	5.4	<0.022	<0.022	<2.5
2025-08-13	18000	18000	<1.1	<1.1	0.56 J	0.67 J	3.5	4.5	1400	2800	<0.19	<0.19	<2.5	<2.5	3800	4000	1000	1300	1.2	1.2	<0.022	0.028 J	<2.5
2025-10-29	16000	16000	<1.1	<1.1	<0.40	<0.40	5	5.9	1100	2000	<0.19	<0.19	<2.5	<2.5	3500	3800	120	140	0.96	0.9	0.041 J	0.051	<2.5
2026-02-10	7400	7400	<1.1	<1.1	<0.40	<0.40	7.3	8.4	1000	1500	<0.19	<0.19	<2.5	<2.5	2000	2100	49	52	2.4	3	0.066	0.092	<2.5
2026-04-20	4200	4200	<1.1	<1.1	<0.40	<0.40	14	16	320	590	<0.19	0.25 J	<2.0	<2.0	1000	1100	19	24	5.7	7	0.04 J	0.094	<2.5
PNC-02																							
2024-07-29	44000	42000	<1.1	<1.1	<0.40	<0.40	5.4	5.3	1200	1200	<0.19	<0.19	3.6 J	3.2 J	10000	10000	640	500	<0.50	<0.50	<0.022	<0.022	<2.5
2024-09-24	46000	47000	<1.1	<1.1	<0.40	<0.40	4.4	4.5	260	590	<0.19	<0.19	3.7 J	4.1 J	11000	11000	190	260	0.37 J	0.36 J	<0.022	<0.022	<2.5
2024-12-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-03-10	19000	19000	<1.1	<1.1	<0.40	<0.40	13	17	490	1100	<0.19	0.26 J	<2.5	<2.5	4400	4500	45	58	2.1	3.2	0.031 J	0.035 J	<2.5
2025-05-05	16000	16000	<1.1	1.7 J	<0.40	0.54 J	16	23	200	1200	<0.19	0.4 J	<2.5	<2.5	3600	4000	50	79	2.6	2.9	<0.022	0.04 J	<2.5
2025-08-04	41000	41000	<1.1	<1.1	<0.40	<0.40	4.8	5.6	170	860	<0.19	<0.19	2.9 J	2.9 J	9100	9100	100	170	0.75	0.88	<0.022	<0.022	<2.5
2025-10-20	43000	41000	<1.1	<1.1	<0.40	<0.40	2.5	2.8	480	880	<0.19	<0.19	3.9 J	3.7 J	9900	9500	210	210	0.95	0.55	<0.022	<0.022	<2.5
2026-02-09	27000	27000	<1.1	<1.1	<0.40	<0.40	7.6	9.2	590	1100	<0.19	<0.19	<2.5	<2.5	6600	6700	87	97	1.2	1.6	0.035 J	0.08	<2.5
2026-04-20	11000	11000	<1.1	<1.1	<0.40	<0.40	18	21	200	710	<0.19	0.24 J	<2.0	<2.0	2400	2600	15	27	4.6	5.5	0.048 J	0.039 J	<2.5
PNC-03																							
2024-08-01	62000	59000	<1.1	<1.1	<0.40	<0.40	6.2	5.9	140	260	<0.19	<0.19	5 J	4.6 J	12000	12000	100	120	0.7	0.79	<0.022	<0.022	<2.5
2024-09-24	51000	52000	<1.1	<1.1	<0.40	<0.40	6.6	7.2	140	340	<0.19	<0.19	3.7 J	3.7 J	11000	11000	40	45	1.1 J	0.57 J	<0.022	<0.022	<2.5
2024-12-09	33000	33000	<1.1	<1.1	<0.40	<0.40	6.9	8.4	320	600	<0.19	<0.19	<2.5	<2.5	8300	7400	84	130	0.82	1.2	<0.022	<0.022	<2.5
2025-03-10	18000	18000	<1.1	<1.1	<0.40	<0.40	11	13	440	920	<0.19	<0.19	<2.5	<2.5	4400	4300	66	110	1.8	3.1	0.036 J	0.04 J	<2.5
2025-05-07	20000	18000	<1.1	<1.1	<0.40	<0.40	14	16	360	690	<0.19	<0.19	<2.5	<2.5	4300	4100	100	62	1.8	2.2	<0.022	0.022 J	<2.5
2025-08-06	44000	42000	<1.1	<1.1	<0.40	<0.40	5.1	6.8	370	530	<0.19	<0.19	3.6 J	<10	9400	9000	890	82	0.62	0.68	<0.022	<0.022	<2.5
2025-10-29	46000	44000	<1.1	<1.1	<0.40	<0.40	4.9	4.9	100	180	<0.19	<0.19	3.4 J	3.3 J	10000	9800	17	18	0.33 J	0.48 J	<0.022	<0.022	<2.5
2026-02-12	30000	31000	<1.1	<1.1	<0.40	<0.40	6.2	7.2	510	820	<0.19	<0.19	<2.5	<2.5	6700	6800	87	92	0.73	0.94	<0.022	<0.05	<2.5
2026-04-22	13000	13000	<1.1	<1.1	<0.40	<0.40	14	17	220	760	<0.19	<0.19	<2.0	<2.0	3100	3200	46	57	3.4	4	0.036 J	0.039 J	<2.5
PNC-04																							
2024-08-07	55000	56000	<1.1	<1.1	0.43 J	0.48 J	1.6 J	2	470	1500	<0.19	<0.19	17	17	10000	10000	640	640	0.45 J	0.66	0.16	0.27	<2.5
2024-09-26	48000	48000	<1.1	<1.1	<0.40	<0.40	3.9	4	94 J	180	<0.19	<0.19	6.1 J	5.7 J	8400	8500	9.9	14	0.41 J	0.42 J	<0.022	<0.022	<2.5
2024-12-17	29000	28000	<1.1	<1.1	<0.40	<0.40	7.9	8.9	270	520	<0.19	<0.19	<2.5	<2.5	6800	6800	14	19	1.4	1.6	<0.022	<0.022	<2.5
2025-03-04	22000	21000	<1.1	<1.1	<0.40	<0.40	10	12	490	770	0.19 J	<0.19	<2.5	<2.5	5000	4800	32	40	2	2.8	0.024 J	0.04 J	<2.5
2025-05-01	15000	16000	<1.1	<1.1	<0.40	<0.40	14	16	180	520	<0.19	<0.19	<2.5	<2.5	3400	3600	14	24	2.9	3.4	0.039 J	0.029 J	<2.5
2025-08-11	43000	44000	<1.1	<1.1	<0.40	<0.40	4.6	4.7	77 J	170	<0.19	<0.19	5.6 J	5.6 J	8200	8300	48	59	0.78	0.87	0.096	0.038 J	<2.5
2025-10-27	47000	47000	<1.1	<1.1	<0.40	<0.40	3.9	4.3	89 J	130	<0.19	<0.19	4.1 J	3.1 J	9900	9900	10	12	0.7	0.72	<0.022	0.023 J	<2.5
2026-02-16	30000	30000	<1.1	<1.1	<0.40	<0.40	6	7.2	420	850	<0.19	<0.19	<2.5	<2.5	6900	7000	13	18	1.2	1.7	<0.022	<0.05	<2.5
2026-04-27	14000	15000	<1.1	<1.1	<0.40	<0.40	16	19	280	810	<0.19	0.22 J	<2.0	<2.0	3100	3300	22	37	4.3	5 J	0.068	0.063	<2.5

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Molybdenum, Total (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total (µg/L)	Potassium, Dissolved (µg/L)	Potassium, Total (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total (µg/L)	Silver, Dissolved (µg/L)	Silver, Total (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total (µg/L)	Tin, Dissolved (µg/L)	Tin, Total (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total (µg/L)
PNC-01																							
2024-07-29	<2.5	0.63 J	0.66 J	1400	1300	<0.98	<0.98	<0.12	<0.12	1000	1200	50	47	<0.57	<0.57	<1.3	<1.3	0.032	0.037	<2.2	<2.2	<6.9	<6.9
2024-09-23	<2.5	<0.63	<0.63	1900	2000	<0.98	<0.98	<0.12	<0.12	3200	3400	77	85	<0.57	<0.57	1.8 J	1.8 J	0.081	0.083	<2.2	<2.2	<6.9	<6.9
2024-12-05	<2.5	<0.63	<0.63	1500	1600	<0.98	<0.98	<0.12	<0.12	1300	1300	30	30	<0.57	<0.57	<1.3	<1.3	0.042 J	0.031 J	<2.2	<2.2	<6.9	<6.9
2025-03-11	<2.5	<0.63	<0.63	750	850	<0.98	<0.98	<0.12	<0.12	680	670	13	14	<0.57	<0.57	<1.3	<1.3	0.052	0.078	<2.2	<2.2	<6.9	<6.9
2025-04-28	<2.5	<0.63	<0.63	680	770	<0.98	<0.98	<0.12	<0.12	710	730	14	17	<0.57	<0.57	<1.3	<1.3	0.065	0.071	<2.2	<2.2	<6.9	<6.9
2025-08-13	<2.5	<0.63	0.65 J	1100	1200	<0.98	<0.98	<0.12	<0.12	490 J	490 J	45	46	<0.57	<0.57	<1.3	<1.3	0.033 J	0.045 J	<2.2	<2.2	<6.9	<6.9
2025-10-29	<2.5	0.83 J	<0.63	1500	1600	<0.98	<0.98	<0.12	<0.12	1300	1300	38	40	<0.57	<0.57	2.4 J	2 J	0.044 J	0.052	<2.2	<2.2	<6.9	<6.9
2026-02-10	<2.5	<0.63	<0.63	690	710	<0.98	<0.98	<0.12	<0.12	830	820	20	20	<0.25	<0.25	<1.3	<1.3	0.03 J	0.037 J	0.47	0.83	<6.9	<6.9
2026-04-20	<2.5	<0.63	<0.63	590	630	<0.98	<0.98	<0.12	<0.12	530	530	11	11	<0.25	<0.25	<1.3	<1.3	0.039 J	0.057	0.72	1.1	<6.9	<6.9
PNC-02																							
2024-07-29	<2.5	0.67 J	<0.63	980	900	<0.98	<0.98	<0.12	<0.12	6100	6000	220	210	<0.57	<0.57	<1.3	<1.3	0.38	0.4	<2.2	<2.2	<6.9	<6.9
2024-09-24	<2.5	<0.63	<0.63	1500	1500	<0.98	<0.98	<0.12	<0.12	8900	8900	290	280	<0.57	<0.57	2.1 J	2.3 J	0.24	0.24	<2.2	<2.2	<6.9	<6.9
2024-12-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-03-10	<2.5	<0.63	<0.63	990	1100	<0.98	<0.98	<0.12	<0.12	1800	1800	62	62	<0.57	<0.57	<1.3	<1.3	0.15	0.17	<2.2	<2.2	<6.9	<6.9
2025-05-05	<2.5	<0.63	1.4 J	910	1200	<0.98	<0.98	<0.12	<0.12	1300	1400	50	51	<0.57	<0.57	<1.3	<1.3	0.15	0.17	<2.2	2.6 J	<6.9	<6.9
2025-08-04	<2.5	<0.63	<0.63	630	640	<0.98	<0.98	<0.12	<0.12	5200	5200	220	230	<0.57	<0.57	<1.3	<1.3	0.26	0.27	<2.2	<2.2	<6.9	<6.9
2025-10-20	<2.5	<0.63	<0.63	1500	1400	<0.98	<0.98	<0.12	<0.12	8700	8400	250	250	<0.57	<0.57	<1.3	<1.3	0.49	0.48	<2.2	<2.2	<6.9	<6.9
2026-02-09	<2.5	<0.63	<0.63	1200	1200	<0.98	<0.98	<0.12	<0.12	3600	3700	120	120	<0.25	<0.25	<1.3	<1.3	0.25	0.26	0.28	0.62	<6.9	<6.9
2026-04-20	<2.5	<0.63	<0.63	720	830	<0.98	<0.98	<0.12	<0.12	910	920	34	34	<0.25	<0.25	<1.3	<1.3	0.086	0.14	0.49	1.5	<6.9	<20
PNC-03																							
2024-08-01	<2.5	<0.63	<0.63	1900	1700	<0.98	<0.98	<0.12	<0.12	11000	10000	370	350	<0.57	<0.57	<1.3	<1.3	0.56	0.51	<2.2	<2.2	<6.9	<6.9
2024-09-24	<2.5	<0.63	<0.63	1900	2000	<0.98	<0.98	<0.12	<0.12	9100	9400	290	300	<0.57	<0.57	<1.3	<1.3	0.32	0.31	<2.2	<2.2	<6.9	<6.9
2024-12-09	<2.5	<0.63	<0.63	1400	1400	<0.98	<0.98	<0.12	<0.12	7900	7000	160	170	<0.57	<0.57	<1.3	<1.3	0.32	0.33	<2.2	<2.2	<6.9	<6.9
2025-03-10	<2.5	<0.63	<0.63	880	900	<0.98	<0.98	<0.12	<0.12	2600	2500	79	78	<0.57	<0.57	<1.3	<1.3	0.15	0.21	<2.2	<2.2	<6.9	<6.9
2025-05-07	<2.5	<0.63	0.67 J	1100	1100	<0.98	<0.98	<0.12	<0.12	2500	2300	88	79	<0.57	<0.57	<1.3	<1.3	0.18	0.17	<2.2	<2.2	<6.9	<6.9
2025-08-06	<2.5	<0.63	0.67 J	1300	1200	<0.98	<0.98	<0.12	<0.12	7100	6800	240	220	<0.57	<0.57	<1.3	<1.3	0.34	0.3	<2.2	<2.2	<6.9	<6.9
2025-10-29	<2.5	<0.63	<0.63	2000	1900	<0.98	<0.98	<0.12	<0.12	8800	8400	260	250	<0.57	<0.57	<1.3	<1.3	0.24	0.29	<2.2	<2.2	<6.9	<6.9
2026-02-12	<2.5	<0.63	<0.63	1100	1100	<0.98	<0.98	<0.12	<0.12	4800	4900	150	160	<0.25	<0.25	<1.3	<1.3	0.23	0.24	0.25 J	0.43	<6.9	<6.9
2026-04-22	<2.5	<0.63	0.72 J	860	980	<0.98	<0.98	<0.12	<0.12	1700	1800	55	56	<0.25	<0.25	<1.3	<1.3	0.12	0.15	0.55	1.5	<6.9	<6.9
PNC-04																							
2024-08-07	<2.5	<0.63	<0.63	1700	1700	<0.98	<0.98	<0.12	<0.12	23000	23000	610	610	<0.57	<0.57	<1.3	<1.3	1.2	1.2	<2.2	<2.2	<6.9	<6.9
2024-09-26	<2.5	<0.63	<0.63	1600	1600	<0.98	<0.98	<0.12	<0.12	14000	14000	420	410	<0.57	<0.57	<1.3	<1.3	<0.05	<0.05	<2.2	<2.2	<6.9	<6.9
2024-12-17	<2.5	<0.63	<0.63	1300	1300	<0.98	<0.98	<0.12	<0.12	6200	6000	140	140	<0.57	<0.57	<1.3	<1.3	0.23	0.24	<2.2	<2.2	<6.9	<6.9
2025-03-04	<2.5	<0.63	<0.63	1000	990	<0.98	<0.98	<0.12	<0.12	3800	3700	100	99	<0.57	<0.57	<1.3	<1.3	0.16	0.17	<2.2	<2.2	<6.9	<6.9
2025-05-01	<2.5	<0.63	<0.63	860	940	<0.98	<0.98	<0.12	<0.12	2100	2100	67	67	<0.57	<0.57	<1.3	<1.3	0.16	0.18	<2.2	<2.2	<6.9	<6.9
2025-08-11	<2.5	<0.63	<0.63	1500	1500	<0.98	<0.98	<0.12	<0.12	11000	11000	350	360	<0.57	<0.57	<1.3	<1.3	0.38	0.4	<2.2	<2.2	<6.9	<6.9
2025-10-27	<2.5	<0.63	<0.63	2000	2000	<0.98	<0.98	<0.12	<0.12	9900	9700	300	310	<0.57	<0.57	<1.3	<1.3	0.32	0.34	<2.2	<2.2	<6.9	<6.9
2026-02-16	<2.5	<0.63	<0.63	1100	1100	<0.98	<0.98	<0.12	<0.12	5700	5700	150	160	<0.25	<0.25	<1.3	<1.3	0.21	0.24	0.3	0.83	<6.9	<6.9
2026-04-27	<2.5	<0.63	0.7 J	940	1100	<0.98	<0.98	<0.12	<0.12	2100	2100	62	64	<0.25	<0.25	<1.3	3.5 J	0.14	0.17	0.67	1.6	<6.9	<6.9

Table 4-2 (continued)

General Parameters

Stream Sampling Locations & Date	Alkalinity (mg/L)	Ammonia (mg/L)	Bicarbonate Alkalinity (as CaCO3) (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Carbonate Alkalinity (as CaCO3) (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Salinity (PSU)
PNC-01																				
2024-07-29	60	<0.10	60	<0.18	14	<3.7	<1.0	<0.0036	<0.19	59	0.43 J	0.43 J	<0.070	<0.024 J	<0.21	<0.23	84	14	6.6	<0.33
2024-09-23	130	0.12 J	130	<0.18	10	<3.7	7.8	<0.0036	<0.19	150	<0.043	<0.070	<0.070	0.049 J	0.53 J	<0.23	240	12	19	<0.33
2024-12-05	47	<0.10	47	<0.45	9.2	<3.7	1	<0.0036	<0.43	43	<0.37	<0.37	<0.25	<0.024	0.57 J	0.26 J	60	9	39	<0.33
2025-03-11	16	<0.10	16	<0.45	8.1	<3.7	<0.42	<0.0036	<0.43	19	0.8 J	0.8 J	<0.25	0.05	1.5	<0.23	50	8.3	13	<0.33
2025-04-28	23	<0.10	23	<0.45	9.4	<3.7	<0.42	<0.0036	<0.43	26	<0.37	<0.37	<0.25	0.029 J	0.81 J	2.8	18	9	4.4 J	<0.33
2025-08-13	67	<0.10	67	<0.45	12	<3.7	<0.42	<0.0036 J	<0.43	61	<0.37	<0.37	<0.25	0.05	<0.47	2.1 J	14 J	12	9	<0.33
2025-10-29	66	0.17 J	66	<0.45	10	<3.7	1	<0.0036	<0.43	56	<0.37	<0.37	<0.25	0.036 J	<0.47	<0.23	42	11	4.6 J	<0.33
2026-02-10	34 J	<0.10	34 J	<0.45	8.5	<3.7	0.51 J	<0.0036	<0.43	27	<0.37	<0.37	<0.25	0.037 J	0.96 J	13	50	8.4	3 J	<0.33
2026-04-20	15 J	0.062 J	15 J	<0.45	8	<3.7	<0.42	<0.0036	<0.43	15	<1	<1	<1	0.053	0.61 J	0.6 J	44	8.1	3.8 J	<0.33
PNC-02																				
2024-07-29	130	<0.10	130	0.23 J	14	<3.7	9.2	<0.0036	0.25 J	150	<0.043	<0.070	<0.070	<0.024 J	0.22 J	<0.23	180	24	9.5	<0.33
2024-09-24	130	<0.10	130	0.38 J	14	<3.7	26	0.005	0.48 J	160	<0.043	<0.070	<0.070	0.031 J	0.32 J	<0.23	210	13	3.8 J	<0.33
2024-12-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2025-03-10	60	<0.10	60	<0.45	7.6	<3.7	3.4	<0.0036	<0.43	66	<0.37	<0.37	<0.25	<0.024	1.9	<0.23	82	7.6	3.4 J	<0.33
2025-05-05	49	<0.10	49	<0.45	9	<3.7	1.6	<0.0036	<0.43	56	<0.37	<0.37	<0.25	0.03 J	0.79 J	0.51 J	32	8.9	23	<0.33
2025-08-04	130	<0.10	130	<0.45	11	<3.7	14	<0.0036	<0.43	140	<0.37	<0.37	<0.25	0.044 J	<0.47	2.8	130	11	11	<0.33
2025-10-20	140	<0.10	140	<0.45	10	<3.7	18	<0.0036	<0.43	140	<0.37	<0.37	<0.25	0.03 J	<0.47	8.1	170	10	4.8 J	<0.33
2026-02-09	100	<0.10	100	<0.45	8.8	<3.7	8.4	<0.0036	<0.43	96	<0.37	<0.37	<0.25	0.032 J	1.3	1.3	98	9.1	<1.9	<0.33
2026-04-20	43	0.054 J	43	<0.45	8.3	<3.7	1.6	0.006	<0.43	39	<1	<1	<1	0.063	0.76 J	0.5 J	44	8.1	24	<0.33
PNC-03																				
2024-08-01	130	<0.10	130	0.51 J	11	<3.7	47	<0.0036	0.21 J	200	0.45 J	0.45 J	<0.070	<0.050	0.35 J	<0.23	280	11	<1.9	<0.33
2024-09-24	120	<0.10	120	0.58 J	14	<3.7	44	0.005	0.48 J	180	0.46 J	0.46 J	<0.070	<0.024	0.32 J	<0.23	250	12	<1.9	<0.33
2024-12-09	88	<0.10	88	<0.45	8.8	<3.7	27	<0.0036	<0.43	110	<0.37	<0.37	<0.25	<0.024	0.79 J	<0.23	230	9.4	3 J	<0.33
2025-03-10	61	<0.10	61	<0.45	8.7	<3.7	8	<0.0036	<0.43	62	<0.37	<0.37	<0.25	0.032 J	1.4	1.5	110	7.7	19	<0.33
2025-05-07	62	<0.10	62	<0.45	10	<3.7	7.1	<0.0036	<0.43	63	<0.37	<0.37	<0.25	<0.024	0.79 J	1.5	160	9.9	2.6 J	<0.33
2025-08-06	120	<0.10	120	0.57 J	12	<3.7	29	<0.0036	<0.43	140	<0.37	<0.37	<0.25	<0.05	<0.47	1	230	12	2.4 J	<0.33
2025-10-29	120	<0.10	120	<0.45	11	<3.7	36	<0.0036	<0.43	150	<0.37	<0.37	<0.25	<0.024	<0.47	0.71 J	250	11	<1.9	<0.33
2026-02-12	88	<0.10	88	<0.45	8.2	<3.7	19	<0.0036	<0.43	100	<0.37	<0.37	<0.25	0.026 J	<0.47	1.2	130	8.6	<1.9	<0.33
2026-04-22	51	0.059 J	51	<0.45	9.3	<3.7	5.5	<0.0036	<0.43	47	<1	<1	<1	<0.024	0.83 J	13	76	8.5	11	<0.33
PNC-04																				
2024-08-07	120	<0.10	120	0.61 J	6.3	<3.7	72	<0.0036	0.22 J	180	<0.043	<0.070	<0.070	<0.024	1.7	<0.23	330	6.7	5.6	<0.33
2024-09-26	100	<0.10	100	0.63 J	7.4	<3.7	53	<0.0050	<0.19	160	0.44 J	0.44 J	<0.070	<0.024	0.87 J	<0.23	250	7.5	<1.9	0.48
2024-12-17	87	0.26	87	<0.45	8.8	<3.7	23	<0.0036	<0.43	98	<0.37	<0.37	<0.25	<0.024	1.1	1.6	130	9	<1.9	<0.33
2025-03-04	63	<0.10	63	<0.45	8.4	<3.7	13	<0.0036	<0.43	72	2 J	2 J	<0.25	<0.024	1.8	<0.23	98	8	3.8 J	<0.33
2025-05-01	50	<0.10	50	<0.45	8	<3.7	5.4	<0.0036	<0.43	54	<0.37	<0.37	<0.25	<0.024	0.92 J	1.1	78	9.3	2.6 J	<0.33
2025-08-11	120	<0.10	120	<0.45	9.3	<3.7	40	<0.0036	<0.43	140	<0.37	<0.37	<0.25	0.036 J	0.67 J	0.66 J	280	9.5	<1.9	<0.33
2025-10-27	130	<0.10	130	0.45 J	11	<3.7	47	<0.0036	<0.43	160	<0.37	<0.37	<0.25	<0.024	<0.47	0.94 J	210	11	<1.9	<0.33
2026-02-16	100	<0.10	100	<0.45	7.9	<3.7	21	<0.0036	<0.43	100	<0.37	<0.37	<0.25	0.044 J	1.1	1.3	170	7.8	<1.9	<0.33
2026-04-27	47	<0.049	47	<0.45	10	<3.7	6.4	<0.0036	<0.43	50	<1	<1	<1	0.051	0.63 J	<0.23	120	10	15	<0.33

Table 4-2 (continued)

		Field Parameters						*Metals (Total & Dissolved)*													
Stream Sampling Locations & Date	**Note**	**Conductivity (Field) (mS/cm)**	**Dissolved Oxygen (Field) (mg/L)**	**pH (Field) (SU)**	**Redox Potential (Field) (mV)**	**Temperature Field (°C)**	**Turbidity (NTU)**	**Aluminum, Dissolved (µg/L)**	**Aluminum, Total (µg/L)**	**Antimony, Dissolved (µg/L)**	**Antimony, Total (µg/L)**	**Arsenic, Dissolved (µg/L)**	**Arsenic, Total (µg/L)**	**Barium, Dissolved (µg/L)**	**Barium, Total (µg/L)**	**Beryllium, Dissolved (µg/L)**	**Beryllium, Total (µg/L)**	**Boron, Dissolved (µg/L)**	**Boron, Total (µg/L)**	**Cadmium, Dissolved (µg/L)**	**Cadmium, Total (µg/L)**
	Number of Observations	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
	Number of Non-Detect	0	0	0	0	0	0	15	2	35	35	0	0	0	0	35	35	18	21	35	35
	% Non-Detect	0%	0%	0%	0%	0%	0%	43%	6%	100%	100%	0%	0%	0%	0%	100%	100%	51%	60%	100%	100%
Pine Creek Statistical Summary	**Maximum**	135.00	15.12	9.29	308.00	27.19	670.00	260.00	1200.00	0.65	0.65	0.97	1.00	170.00	170.00	0.27	0.27	190.00	200.00	0.09	0.09
	Minimum	0.03	0.09	5.95	0.10	-0.05	0.00	12.50	12.50	0.47	0.47	0.24	0.27	7.20	9.10	0.12	0.12	6.50	6.50	0.09	0.09
	Average	4.06	9.20	7.46	164.55	10.30	55.60	51.53	268.71	--	--	0.40	0.46	49.05	50.95	--	--	30.40	28.61	--	--
	Standard Deviation	22.78	3.76	0.69	65.22	8.29	123.33	59.51	295.39	--	--	0.17	0.19	36.36	34.25	--	--	31.18	32.41	--	--
	Skewness	5.66	-0.66	0.58	0.28	0.25	4.13	1.94	1.63	--	--	1.63	1.32	1.25	1.29	--	--	3.98	4.38	--	--
PRC-01																					
2024-07-22		0.972	9.33	8.22	110	24.4	47.9	<25	45 J	<1.3	<1.3	0.64 J	0.63 J	130	130	<0.53	<0.53	400	420	<0.17	<0.17
2024-07-22	Duplicate Sample	--	--	--	--	--	--	<25	45	<1.3	<1.3	0.64	0.63	130	130	<0.53	<0.53	390	400	<0.17	<0.17
2024-09-24		0.481	7.68	7.37	114	18.86	3.3	<25	61 J	<1.3	<1.3	0.68 J	0.81 J	160	160	<0.53	<0.53	410	410	<0.17	<0.17
2024-12-11		0.938	13.84	8.11	192	0.56	21.1	<25	120	<1.3	<1.3	0.55 J	0.64 J	140	140	<0.53	<0.53	340	340	<0.17	<0.17
2025-03-04		0.914	13.14	7.54	195	0.28	6.8	<25	25 J	<1.3	<1.3	0.53 J	0.56 J	180	180	<0.53	<0.53	170	170	<0.17	<0.17
2025-05-07		0.429	9.34	8	112	16.32	20.5	<25	320	<1.3	<1.3	0.57 J	0.6 J	69	72	<0.53	<0.53	120	130	<0.17	<0.17
2025-08-06		0.689	7.86	7.94	191	24.25	16.7	<25	670	<1.3	<1.3	0.56 J	0.87 J	130	140	<0.53	<0.53	230	240	<0.17	<0.17
2025-10-29		0.982	10.82	7.93	1	8.42	10.1	<25	200	<1.3	<1.3	0.59 J	0.71 J	220	230	<0.53	<0.53	270	290	<0.17	<0.17
2026-02-10		1.2	12.34	7.5	111	1.05	0	<25	<25	<0.93	<0.93	0.62 J	0.67 J	200	210	<0.24	<0.24	360	350	<0.17	<0.17
2026-04-30		0.368	13.14	7.74	255	9.69	148	<25	1900	<0.93	<0.93	0.48 J	0.73 J	51	62	<0.24	<0.24	100	110	<0.17	<0.17
PRC-02																					
2024-07-22		0.984	11.13	8.05	132	19.87	10.6	<25	51 J	<1.3	<1.3	0.59 J	0.6 J	130	130	<0.53	<0.53	390	390	<0.17	<0.17
2024-09-23		1.03	7.33	7.91	112	13.89	0.3	<25	120	<1.3	<1.3	0.44 J	0.46 J	140	150	<0.53	<0.53	370	390	<0.17	<0.17
2024-12-02		0.821	19.4	8.95	-109	0.13	25.6	110	55 J	<1.3	<1.3	0.52 J	0.49 J	120	130	<0.53	<0.53	300	320	<0.17	<0.17
2025-02-25		0.745	12.63	7.99	420	0.13	7.6	<25	210	<1.3	<1.3	0.45 J	0.51 J	150	150	<0.53	<0.53	160	160	<0.17	<0.17
2025-04-30		0.381	10.72	6.83	162	11.35	14	<25	460	<1.3	<1.3	0.45 J	0.59 J	57	62	<0.53	<0.53	120	120	<0.17	<0.17
2025-08-06		0.701	6	7.92	240	19.81	2.4	<25	58 J	<1.3	<1.3	0.48 J	0.63 J	120	130	<0.53	<0.53	220	230	<0.17	<0.17
2025-10-21		0.941	7.65	7.71	174	9.64	12	<25	<25	<1.3	<1.3	0.47 J	0.49 J	190	190	<0.53	<0.53	260	270	<0.17	<0.17
2026-02-17		0.001	15.78	7.5	196	0.23	21.4	<25	46 J	<0.93	<0.93	0.52 J	0.61 J	210	210	<0.24	<0.24	340	330	<0.17	<0.17
2026-04-28		0.313	11.21	7.59	170	11.1	66.1	<25	290	<0.93	<0.93	0.49 J	0.57 J	51	54	<0.24	<0.24	110	110 J	<0.17	<0.17
	Number of Observations	18	18	18	18	18	18	19	19	19	19	19	19	19	19	19	19	19	19	19	19
	Number of Non-Detect	0	0	0	0	0	0	18	2	19	19	0	0	0	0	19	19	0	0	19	19
	% Non-Detect	0%	0%	0%	0%	0%	0%	95%	11%	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	100%	100%
Perch Creek Statistical Summary	**Maximum**	1.20	19.40	8.95	420	24.40	148	110.00	1900.00	0.65	0.65	0.68	0.87	220.00	230.00	0.27	0.27	410.00	420.00	0.09	0.09
	Minimum	0.00	6.00	6.83	-109	0.13	0.0	12.50	12.50	0.47	0.47	0.44	0.46	51.00	54.00	0.12	0.12	100.00	110.00	0.09	0.09
	Average	0.72	11.07	7.82	154.3	10.55	25.55	17.63	247.42	--	--	0.54	0.62	135.68	140.00	--	--	266.32	272.63	--	--
	Standard Deviation	0.32	3.35	0.44	107.7	8.72	35.16	22.37	436.31	--	--	0.07	0.11	51.70	51.26	--	--	110.46	111.40	--	--
	Skewness	-0.59	0.67	0.28	-0.08	0.12	2.68	4.01	3.10	--	--	0.30	0.67	-0.19	-0.12	--	--	-0.21	-0.23	--	--
PTC-01																					
2024-08-07	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-11		0.215	14.47	8.03	231	-0.07	2.7	<25	<25	<1.3	<1.3	<0.23	<0.23	86	88	<0.53	<0.53	66	61	<0.17	<0.17
2025-03-06		0.224	12.02	7.45	114	0.83	7.3	26 J	87 J	<1.3	<1.3	0.23 J	0.24 J	64	62	<0.53	<0.53	29 J	27 J	<0.17	<0.17
2025-04-29		0.12	4.88	7.44	258	7.86	4.7	46 J	76 J	<1.3	<1.3	0.27 J	0.29 J	48	50	<0.53	<0.53	42 J	41 J	<0.17	<0.17
2025-08-11		0.196	6.07	7.73	126	19.29	0	<25	<25	<1.3	<1.3	0.29 J	0.33 J	120	120	<0.53	<0.53	130	140	<0.17	<0.17
2025-10-27	Sample location dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2026-02-16		0.224	12.75	7.8	190	3.57	0	<25	41 J	<0.93	<0.93	<0.23	<0.23	92	94	<0.24	<0.24	54	55	<0.17	<0.17
2026-04-27		0.113	11.86	7.28	183	11.74	0	54 J	110	<0.93	<0.93	0.28 J	0.32 J	46	45	<0.24	<0.24	55 J	44 J	<0.17	<0.17
	Number of Observations	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	Number of Non-Detect	0	0	0	0	0	0	3	2	6	6	2	2	0	0	6	6	0	0	6	6
	% Non-Detect	0%	0%	0%	0%	0%	0%	50%	33%	100%	100%	33%	33%	0%	0%	100%	100%	0%	0%	100%	100%
Patent Creek Statistical Summary	**Maximum**	0.22	14.47	8.03	258.00	19.29	7.30	54.00	110.00	0.65	0.65	0.29	0.33	120.0	120.0	0.27	0.27	130.0	140.0	0.09	0.09
	Minimum	0.11	4.88	7.28	114.00	-0.07	0.00	12.50	12.50	0.47	0.47	0.12	0.12	46.0	45.0	0.12	0.12	29.0	27.0	0.09	0.09
	Average	0.18	10.34	7.62	183.67	7.20	4.90	27.25	56.50	--	--	0.22	0.24	76.0	76.5	--	--	62.7	61.3	--	--
	Standard Deviation	0.05	3.90	0.28	56.54	7.40	3.05	18.55	40.71	--	--	0.08	0.10	28.7	29.1	--	--	35.3	40.3	--	--
	Skewness	-0.60	-0.55	0.24	-0.02	0.63	0.63	0.55	0.05	--	--	-0.53	-0.42	0.37	0.32	--	--	1.28	1.45	--	--
	Number of Observations	194	194	193	194	194	194	201	200	200	200	201	201	200	200	200	200	201	201	200	200
	Number of Non-Detect	0	0	0	0	0	0	80	7	200	200	22	7	0	0	200	191	69	66	200	197
Stream Sample Locations Statistical Summary	**% Non-Detect**	0%	0%	0%	0%	0%	0%	40%	4%	100%	100%	11%	3%	0%	0%	100%	96%	34%	33%	100%	99%
	Maximum	135	54.30	12.12	420	27.19	733	650	29000	0.65	0.65	2.60	4.80	220	260	0.27	38.0	410	420	0.09	1.40
	Minimum	0.001	0.09	5.95	-109.0	-0.10	0	12.5	12.5	0.47	0.47	0.12	0.12	7.20	9.10	0.12	0.12	6.50	6.50	0.09	0.09
	Average	0.60	10.2	7.63	165.4	9.17	30.2	65.7	613.5	100% ND	100% ND	0.38	0.49	50.20	55.77	100% ND	3.95	61.0	63.8	100% ND	0.11
	Standard Deviation	9.69	4.5	0.71	73.4	7.85	78.8	88.8	2110.2	--	--	0.25	0.42	28.28	32.73	--	4.49	39.2	40.3	--	0.09

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Calcium, Dissolved (µg/L)	Calcium, Total (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total (µg/L)	Cobalt, Dissolved (µg/L)	Cobalt, Total (µg/L)	Copper, Dissolved (µg/L)	Copper, Total (µg/L)	Iron, Dissolved (µg/L)	Iron, Total (µg/L)	Lead, Dissolved (µg/L)	Lead, Total (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total (ng/L)	Molybdenum, Dissolved (µg/L)
	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
	0	0	35	33	31	30	0	0	0	0	34	28	23	24	0	0	0	0	1	1	21	15	35
	0%	0%	100%	94%	89%	86%	0%	0%	0%	0%	97%	80%	66%	69%	0%	0%	0%	0%	3%	3%	60%	43%	100%
Pine Creek Statistical Summary	62000.00	59000.00	0.55	1.70	0.75	1.00	18.00	23.00	1400.00	8400.00	0.19	0.45	17.00	17.00	12000.00	12000.00	1400.00	1700.00	5.70	7.60	0.16	0.27	1.25
	4200.00	4200.00	0.55	0.55	0.20	0.20	1.40	2.00	77.00	130.00	0.10	0.10	1.00	1.00	1000.00	1100.00	9.90	12.00	0.25	0.25	0.01	0.01	1.25
	28411.43	28317.14	--	0.61	0.24	0.26	8.10	9.61	449.14	1126.57	0.10	0.13	2.58	2.56	6165.71	6197.14	211.94	217.23	1.79	2.16	0.03	0.04	--
	16331.65	16152.41	--	0.24	0.12	0.17	4.53	5.76	357.11	1405.41	0.02	0.09	2.91	2.90	3281.31	3183.55	359.19	394.95	1.49	1.95	0.03	0.05	--
	0.24	0.24	--	3.96	3.11	2.98	0.58	0.71	1.31	4.15	5.66	2.29	3.67	3.71	0.10	0.13	2.06	2.64	1.25	1.31	2.36	3.19	--
PRC-01																							
2024-07-22	75000	76000	<1.1	<1.1	<0.40	<0.40	10	13	50 J	240	<0.19	<0.19	37	39	11000	11000	19	52	<0.20	<0.20	<0.022	<0.022	36
2024-07-22	75000	75000	<1.1	<1.1	<0.40	<0.40	11	12	50	240	<0.19	<0.19	38	38	11000	11000	19	53	<0.20	<0.20	<0.022	<0.022	37
2024-09-24	89000	88000	<1.1	<1.1	<0.40	<0.40	2.7	4.4	230	980	<0.19	<0.19	40	39	13000	13000	260	280	0.28 J	0.27 J	<0.022	<0.022	24
2024-12-11	79000	81000	<1.1	<1.1	<0.40	<0.40	21	34	<47	300	<0.19	<0.19	39	40	12000	12000	71	81	<0.50	<0.50	<0.022	<0.022	48
2025-03-04	90000	89000	<1.1	<1.1	<0.40	<0.40	30	36	<47	110	<0.19	<0.19	28	29	14000	13000	260	250	<0.50	<0.50	<0.022	<0.022	41
2025-05-07	49000	49000	<1.1	<1.1	<0.40	<0.40	20	40	<47	530	<0.19	<0.19	18	19	5600	6000	55	88	0.35 J	0.58	<0.022	<0.022	25
2025-08-06	59000	60000	<1.1	1.6 J	<0.40	0.43 J	5.8	11	<47	980	<0.19	0.28 J	32	32	11000	11000	31	93	0.22 J	0.64	<0.022	<0.022	24
2025-10-29	96000	100000	<1.1	<1.1	<0.40	<0.40	3.4	7.7	54 J	330	<0.19	<0.19	39	42	16000	17000	37	110	<0.5	<0.20	<0.022	<0.022	28
2026-02-10	110000	110000	<1.1	<1.1	<0.40	<0.40	22	31	<47	130	<0.19	<0.19	42	42	16000	17000	680	720	0.21 J	0.24 J	<0.022	<0.022	44
2026-04-30	41000	42000	<1.1	4.8 J	<0.40	1.3	23	100	<47	2900	<0.19	0.36 J	16	19	4800	6100	24	96	0.49 J	1.1	<0.033	<0.033	20
PRC-02																							
2024-07-22	76000	77000	<1.1	<1.1	<0.40	<0.40	8.7	11	<47	100	<0.19	<0.19	36	36	11000	11000	21	29	0.2 J	0.24 J	<0.022	<0.022	35
2024-09-23	90000	92000	<1.1	<1.1	<0.40	<0.40	5.8	9	<47	170	<0.19	<0.19	35	36	13000	13000	43	100	0.34 J	0.27 J	<0.022	0.04 J	19
2024-12-02	76000	78000	<1.1	<1.1	<0.40	<0.40	25	21	260	140	<0.19	<0.19	31 J	34 J	11000	11000	38	32	0.22 J	0.33 J	<0.022	<0.022	41
2025-02-25	81000	83000	<1.1	<1.1	<0.40	<0.40	23	29	60 J	280	<0.19	<0.19	25	26	12000	12000	280	280	1	1.6	<0.050	<0.050	28
2025-04-30	44000	45000	<1.1	1.2 J	<0.40	<0.40	19	52	<47	740	<0.19	0.21 J	17	17	5400	5700	23	49	<0.50	0.85 J	<0.022	0.033 J	22
2025-08-06	60000	60000	<1.1	1.3 J	<0.40	<0.40	6.8	8.7	<47	110	<0.19	<0.19	32	31	11000	11000	33	44	<0.50	<0.50	<0.022	<0.022	22
2025-10-21	92000	93000	<1.1	<1.1	<0.40	<0.40	4.6	5.2	<47	52 J	<0.19	<0.19	35	37	16000	16000	18	21	0.58	0.38 J	0.1	<0.022	22
2026-02-17	110000	110000	<1.1	<1.1	<0.40	<0.40	23	27	<47	130	<0.19	<0.19	45	44	18000	18000	260	280	0.26 J	0.31 J	<0.022	<0.022	42
2026-04-28	39000	40000	<1.1	<1.1	<0.40	<0.40	19	56	<47	520	<0.19	<0.19	17	16	4800	5100	20	51	0.73	1.3	0.04 J	0.089	22
	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
	0	0	19	15	19	17	0	0	13	0	19	16	0	0	0	0	0	0	7	6	17	16	0
	0%	0%	100%	79%	100%	89%	0%	0%	68%	0%	100%	84%	0%	0%	0%	0%	0%	0%	37%	32%	89%	84%	0%
Perch Creek Statistical Summary	110000.00	110000.00	0.55	4.80	0.20	1.30	30.00	100.00	260.00	2900.00	0.10	0.36	45.00	44.00	18000.00	18000.00	680.00	720.00	1.00	1.60	0.10	0.09	48.00
	39000.00	40000.00	0.55	0.55	0.20	0.20	2.70	4.40	23.50	52.00	0.10	0.10	16.00	16.00	4800.00	5100.00	18.00	21.00	0.10	0.10	0.01	0.01	19.00
	75315.79	76210.53	--	0.90	--	0.27	14.94	26.74	53.13	472.74	--	0.12	31.68	32.42	11400.00	11573.68	115.37	142.58	0.33	0.48	0.02	0.02	30.53
	21664.24	21704.02	--	0.99	--	0.25	8.72	23.69	68.94	653.85	--	0.07	9.10	9.02	3925.42	3841.71	168.07	166.48	0.22	0.43	0.02	0.02	9.41
	-0.22	-0.24	--	3.43	--	3.76	-0.01	1.65	2.45	2.89	--	2.31	-0.58	-0.67	-0.36	-0.13	2.22	2.38	1.75	1.41	3.36	2.94	0.42
PTC-01																							
2024-08-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-11	25000	25000	<1.1	<1.1	<0.40	<0.40	2.6	2.8	69 J	110	<0.19	0.33 J	2.9 J	2.5 J	5800	5800	3.6	4.5	1	1.1	0.028 J	0.024 J	<2.5
2025-03-06	25000	23000	<1.1	<1.1	<0.40	<0.40	5.4	5.9	200	370	0.32 J	0.94	<2.5	<2.5	5500	5200	5.4	12	1.5	2	0.028 J	0.024 J	<2.5
2025-04-29	15000	16000	<1.1	<1.1	<0.40	<0.40	7.3	7.9	100	150	4.2	5.8	<2.5	<2.5	3200	3300	9	12	2.9	3	<0.022	<0.022	<2.5
2025-08-11	31000	32000	<1.1	<1.1	<0.40	<0.40	2	2.2	<47	61 J	<0.19	0.54	7.1 J	6.9 J	6800	6900	6	8.8	0.74	0.85	0.04 J	<0.022	<2.5
2025-10-27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2026-02-16	28000	28000	<1.1	<1.1	<0.40	<0.40	2	2.3	<47	69 J	<0.19	0.93	3.1 J	2.5 J	6500	6500	2 J	13	0.52	0.91	<0.022	<0.022	<2.5
2026-04-27	15000	15000	<1.1	<1.1	<0.40	<0.40	8.9	9.4	170	250	3.9	5.1	<2.0	<2.0	3200	3100	8.2	11	3.5	3.7 J	0.049 J	0.045 J	<2.5
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	0	0	6	6	6	6	0	0	2	0	3	0	3	3	0	0	0	0	0	0	2	3	6
	0%	0%	100%	100%	100%	100%	0%	0%	33%	0%	50%	0%	50%	50%	0%	0%	0%	0%	0%	0%	33%	50%	100%
Patent Creek Statistical Summary	31000	32000	0.55	0.55	0.20	0.20	8.90	9.40	200.00	370.00	4.20	5.80	7.10	6.90	6800.00	6900.00	9.00	13.00	3.50	3.70	0.05	0.05	1.25
	15000	15000	0.55	0.55	0.20	0.20	2.00	2.20	23.50	61.00	0.10	0.33	1.00	1.00	3200.00	3100.00	2.00	4.50	0.52	0.85	0.01	0.01	1.25
	23167	23167	--	--	--	--	4.70	5.08	97.67	168.33	1.45	2.27	2.77	2.57	5166.67	5133.33	5.70	10.22	1.69	1.93	0.03	0.02	--
	6706	6676	--	--	--	--	2.96	3.11	74.21	120.39	2.02	2.48	2.31	2.22	1593.32	1608.31	2.66	3.14	1.23	1.20	0.02	0.01	--
	-0.35	-0.08	--	--	--	--	0.37	0.33	0.33	0.79	0.71	0.70	1.23	1.46	-0.44	-0.33	-0.10	-1.10	0.57	0.50	0.11	1.00	--
	200	200	201	201	200	201	200	200	201	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Stream Sample Locations Statistical Summary	0.00	0.00	197	152	189	159	2	2	27	1	187	112	153	149	0	0	4	0	11	8	97	80	177
	0%	0%	98%	76%	95%	79%	1%	1%	13%	1%	94%	56%	77%	75%	0%	0%	2%	0%	6%	4%	49%	40%	89%
	110000	110000	2.10	34.0	2.10	18.0	46.0	140.0	9300	30000	4.20	16.00	45.00	44.00	18000	18000	2500	3900	6.50	55.00	0.19	0.88	48.00
	4200	4200	0.55	0.55	0.20	0.20	0.73	1.00	23.50	23.50	0.10	0.10	1.00	1.00	1000	1100	0.40	3.20	0.10	0.10	0.01	0.01	1.25
	24897	25118	0.62	1.09	0.31	0.42	8.03	11.68	373.5	1009.2	0.37	0.53	7.13	5.53	5137	5291	99.5	145.4	2.07	2.95	0.04	0.05	16.17
	11227	11222	0.14	2.46	0.21	1.29	6.54	14.17	814.4	2340.8	0.38	1.21	3.09	3.73	2296	2319	265.9	381.8	1.48	4.25	0.03	0.07	2.88

Table 4-2 (continued)

Metals (Total & Dissolved)

Stream Sampling Locations & Date	Molybdenum, Total (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total (µg/L)	Potassium, Dissolved (µg/L)	Potassium, Total (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total (µg/L)	Silver, Dissolved (µg/L)	Silver, Total (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total (µg/L)	Tin, Dissolved (µg/L)	Tin, Total (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total (µg/L)
	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
	35	32	28	0	0	35	35	35	35	0	0	0	0	35	35	32	31	1	1	27	26	35	35
	100%	91%	80%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	100%	100%	91%	89%	3%	3%	77%	74%	100%	100%
Pine Creek Statistical Summary	1.25	0.83	1.40	2000.00	2000.00	0.49	0.49	0.06	0.06	23000.00	23000.00	610.00	610.00	0.29	0.29	2.40	3.50	1.20	1.20	1.10	2.60	3.45	10.00
	1.25	0.32	0.32	590.00	630.00	0.49	0.49	0.06	0.06	490.00	490.00	11.00	11.00	0.13	0.13	0.65	0.65	0.03	0.03	0.25	0.43	3.45	3.45
	--	0.35	0.41	1228.00	1255.43	--	--	--	--	5138.57	5061.71	155.29	155.14	--	--	0.77	0.85	0.22	0.23	0.96	1.13	--	--
	--	0.12	0.22	420.11	393.90	--	--	--	--	4855.87	4784.81	140.14	138.84	--	--	0.42	0.61	0.22	0.21	0.28	0.33	--	--
	--	3.24	2.95	0.33	0.37	--	--	--	--	1.61	1.71	1.26	1.26	--	--	3.12	3.15	2.73	2.78	-1.57	2.44	--	--
PRC-01																							
2024-07-22	37	<0.63	<0.63	3800	3900	<0.98	<0.98	<0.12	<0.12	86000	88000	930	950	<0.57	<0.57	<1.3	<1.3	0.3	0.28	<2.2	<2.2	<6.9	7.8 J
2024-07-22	37	<0.63	<0.63	3900	3800	<0.98	<0.98	<0.12	<0.12	87000	86000	940	940	<0.57	<0.57	<1.3	<1.3	0.29	0.29	<2.2	<2.2	<6.9	7.8
2024-09-24	24	<0.63	<0.63	5300	5300	<0.98	<0.98	<0.12	<0.12	89000	88000	1000	1000	<0.57	<0.57	<1.3	<1.3	0.28	0.28	<2.2	<2.2	<6.9	<6.9
2024-12-11	48	<0.63	<0.63	5500	5600	<0.98	<0.98	<0.12	<0.12	75000	76000	880	880	<0.57	<0.57	2.3 J	<1.3	0.66	0.65	<2.2	<2.2	<6.9	<6.9
2025-03-04	40	<0.63	<0.63	5600	5400	<0.98	1 J	<0.12	<0.12	44000	43000	860	850	<0.57	<0.57	<1.3	<1.3	0.92	0.89	<2.2	<2.2	<6.9	<6.9
2025-05-07	25	<0.63	0.68 J	3500	3600	<0.98	<0.98	<0.12	<0.12	25000	26000	450	450	<0.57	<0.57	<1.3	<1.3	0.31	0.33	<2.2	<2.2	<6.9	<6.9
2025-08-06	25	<0.63	0.95 J	3300	3500	<0.98	<0.98	<0.12	<0.12	48000	48000	660	650	<0.57	<0.57	<1.3	<1.3	0.16	0.18	<2.2	<2.2	<6.9	<6.9
2025-10-29	30	<0.63	<0.63	5300	5700	<0.98	<0.98	<0.12	<0.12	64000	68000	950	1000	<0.57	<0.57	<1.3	<1.3	0.43	0.42	<2.2	<2.2	<6.9	<6.9
2026-02-10	46	<0.63	<0.63	6700	6900	<0.98	<0.98	<0.12	<0.12	91000	94000	1100	1200	<0.25	<0.25	1.4 J	1.4 J	1	1.1	0.22 J	0.35	<6.9	<6.9
2026-04-30	21	<0.63	2.5	2800	3100	<0.98	<0.98	<0.12	<0.12	21000	22000	380	380	<0.25	<0.25	<1.3	<1.3	0.28	0.31	0.54	5.6	<6.9	9 J
PRC-02																							
2024-07-22	35	<0.63	<0.63	3900	3900	<0.98	<0.98	<0.12	<0.12	86000	86000	950	940	<0.57	<0.57	<1.3	<1.3	0.36	0.36	<2.2	<2.2	<6.9	<6.9
2024-09-23	19	<0.63	<0.63	5400	5400	<0.98	<0.98	<0.12	<0.12	88000	88000	1000	1000	<0.57	<0.57	<1.3	<1.3	0.43	0.43	<2.2	<2.2	<6.9	<6.9
2024-12-02	42	<0.63	<0.63	4900	5000	<0.98	<0.98	<0.12	<0.12	68000	70000	840	840	<0.57	<0.57	<1.3	<1.3	0.7	0.69	<2.2	<2.2	<6.9	<6.9
2025-02-25	28	<0.63	<0.63	4300	4400	<0.98	<0.98	<0.12	<0.12	37000	37000	680	680	<0.57	<0.57	<1.3	<1.3	0.74	0.78	<2.2	<2.2	<6.9	<6.9
2025-04-30	22	<0.63	0.78 J	3200	3300	<0.98	<0.98	<0.12	<0.12	23000	23000	390	400	<0.57	<0.57	<1.3	<1.3	0.36	0.38	<2.2	<2.2	<6.9	<6.9
2025-08-06	23	<0.63	0.7 J	3300	3300	<0.98	<0.98	<0.12	<0.12	47000	47000	680	670	<0.57	<0.57	<1.3	<1.3	0.23	0.22	<2.2	<2.2	<6.9	<6.9
2025-10-21	22	<0.63	<0.63	5900	6000	<0.98	<0.98	<0.12	<0.12	59000	61000	900	920	<0.57	<0.57	<1.3	<1.3	0.38	0.4	<2.2	<2.2	<6.9	<6.9
2026-02-17	42	<0.63	<0.63	6300	6300	<0.98	<0.98	<0.12	<0.12	91000	90000	1300	1300	<0.25	<0.25	<1.3	<1.3	1.2	1.2	0.25 J	0.4	<6.9	<6.9
2026-04-28	21	<0.63	<0.63	2800	2800	<0.98	<0.98	<0.12	<0.12	21000	22000	320	330	<0.25	<0.25	<1.3	<1.3	0.27	0.3	0.45	1.3	<6.9	<6.9
	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
	0	19	14	0	0	19	18	19	19	0	0	0	0	19	19	17	18	0	0	15	15	19	16
	0%	100%	74%	0%	0%	100%	95%	100%	100%	0%	0%	0%	0%	100%	100%	89%	95%	0%	0%	79%	79%	100%	84%
Perch Creek Statistical Summary	48.00	0.32	2.50	6700.00	6900.00	0.49	1.00	0.06	0.06	91000.00	94000.00	1300.00	1300.00	0.29	0.29	2.30	1.40	1.20	1.20	1.10	5.60	3.45	9.00
	19.00	0.32	0.32	2800.00	2800.00	0.49	0.49	0.06	0.06	21000.00	22000.00	320.00	330.00	0.13	0.13	0.65	0.65	0.16	0.18	0.22	0.35	3.45	3.45
	30.89	--	0.53	4510.53	4589.47	--	0.52	--	--	60526.32	61210.53	800.53	809.47	--	--	0.78	0.69	0.49	0.50	0.95	1.27	--	4.20
	9.50	--	0.52	1226.96	1225.15	--	0.12	--	--	26523.30	26559.32	265.51	273.71	--	--	0.41	0.17	0.29	0.30	0.31	1.07	--	1.79
	0.41	--	3.15	0.16	0.23	--	4.01	--	--	-0.27	-0.29	-0.38	-0.30	--	--	3.17	4.01	1.10	1.14	-1.56	3.66	--	1.95
PTC-01																							
2024-08-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-11	<2.5	<0.63	<0.63	1300	1400	<0.98	<0.98	<0.12	<0.12	7000	7000	130	130	<0.57	<0.57	<1.3	<1.3	0.19	0.19	<2.2	<2.2	<6.9	<6.9
2025-03-06	<2.5	<0.63	<0.63	1100	1100	<0.98	<0.98	<0.12	<0.12	6600	6200	140	130	<0.57	<0.57	<1.3	<1.3	0.18	0.16	<2.2	<2.2	<6.9	<6.9
2025-04-29	<2.5	<0.63	<0.63	970	980	<0.98	<0.98	<0.12	<0.12	4100	4200	89	91	<0.57	<0.57	<1.3	<1.3	0.15	0.16	<2.2	<2.2	<6.9	<6.9
2025-08-11	<2.5	<0.63	<0.63	1500	1500	<0.98	<0.98	<0.12	<0.12	9900	10000	190	190	<0.57	<0.57	<1.3	<1.3	0.5	0.55	<2.2	<2.2	<6.9	<6.9
2025-10-27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2026-02-16	<2.5	<0.63	<0.63	1100	1100	<0.98	<0.98	<0.12	<0.12	8200	8300	150	150	<0.25	<0.25	<1.3	<1.3	0.28	0.29	0.37	0.52	11 J	<6.9
2026-04-27	<2.5	<0.63	<0.63	1000	1000	<0.98	<0.98	<0.12	<0.12	4100	3900	87	84	<0.25	<0.25	<1.3	<1.3	0.12	0.13	0.57	0.67	<6.9	<6.9
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	6	6	6	0	0	6	6	6	6	0	0	0	0	6	6	6	6	0	0	4	4	5	6
	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	100%	100%	100%	100%	0%	0%	67%	67%	83%	100%
Patent Creek Statistical Summary	1.25	0.32	0.32	1500.00	1500.00	0.49	0.49	0.06	0.06	9900.00	10000.00	190.00	190.00	0.29	0.29	0.65	0.65	0.50	0.55	1.10	1.10	11.00	3.45
	1.25	0.32	0.32	970.00	980.00	0.49	0.49	0.06	0.06	4100.00	3900.00	87.00	84.00	0.13	0.13	0.65	0.65	0.12	0.13	0.37	0.52	3.45	3.45
	--	--	--	1161.67	1180.00	--	--	--	--	6650.00	6600.00	131.00	129.17	--	--	--	--	0.24	0.25	0.89	0.93	4.71	--
	--	--	--	202.03	217.26	--	--	--	--	2284.51	2358.81	39.05	39.07	--	--	--	--	0.14	0.16	0.33	0.27	3.08	--
	--	--	--	0.79	0.61	--	--	--	--	0.09	0.18	0.20	0.32	--	--	--	--	1.27	1.37	-0.82	-0.81	1.79	--
	200	201	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	201	200	200
	176	187	115	0	0	195	191	200	199	0	0	0	0	200	200	190	188	3	2	153	121	198	182
	88%	93%	58%	0%	0%	98%	96%	100%	100%	0%	0%	0%	0%	100%	100%	95%	94%	2%	1%	77%	60%	99%	91%
Stream Sample Locations Statistical Summary	48.00	1.90	31.00	6700	6900	1.80	2.20	0.06	0.34	91000	94000	1300	1300	0.29	0.29	2.40	3.50	1.20	3.80	2.90	66.00	11.00	150
	1.25	0.32	0.32	490	520	0.49	0.49	0.06	0.06	490	490	11.0	11.0	0.13	0.13	0.65	0.65	0.02	0.03	0.18	0.35	3.45	3.45
	11.40	0.38	0.85	1499	1598	0.54	0.55	100% ND	0.07	10684	10798	159.2	161.0	100% ND	100% ND	0.73	0.74	0.21	0.25	0.99	1.87	4.15	5.90
	2.92	0.20	2.26	582	653	0.15	0.22	--	0.02	9160	9170	104.1	105.9	--	--	0.27	0.35	0.16	0.30	0.30	4.71	0.57	12.83

Table 4-2 (continued)

General Parameters

Stream Sampling Locations & Date	Alkalinity (mg/L)	Ammonia (mg/L)	Bicarbonate Alkalinity (as CaCO3) (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Carbonate Alkalinity (as CaCO3) (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Salinity (PSU)
	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
	0	29	0	27	0	35	5	32	30	0	29	29	35	17	9	14	0	0	10	34
	0%	83%	0%	77%	0%	100%	14%	91%	86%	0%	83%	83%	100%	49%	26%	40%	0%	0%	29%	97%
Pine Creek Statistical Summary	140.00	0.26	140.00	0.63	14.00	1.85	72.00	0.01	0.48	200.00	2.00	2.00	0.50	0.06	1.90	13.00	330.00	24.00	39.00	0.48
	15.00	0.02	15.00	0.09	6.30	1.85	0.21	0.00	0.10	15.00	0.02	0.04	0.04	0.01	0.11	0.12	14.00	6.70	0.95	0.17
	82.77	0.06	82.77	0.28	9.77	--	17.06	0.00	0.22	96.26	0.30	0.30	--	0.03	0.73	1.66	140.86	10.07	7.33	0.17
	38.26	0.04	38.26	0.14	2.00	--	18.60	0.00	0.07	53.67	0.34	0.34	--	0.02	0.50	3.18	88.12	2.98	8.60	0.05
	-0.09	3.74	-0.09	1.50	0.85	--	1.17	3.00	2.17	0.23	3.70	3.73	--	0.53	0.79	2.89	0.35	3.02	1.91	5.66
PRC-01																				
2024-07-22	74	<0.10	74	1.9	3.1	<3.7	200	<0.0036	0.33 J	240	<0.043	<0.070	<0.070	<0.024 J	30	<0.23	600	4.5	3.8 J	<0.33
2024-07-22	74	<0.10	74	1.9	4	<3.7	200	<0.0036	0.33	230	<0.043	<0.070	<0.070	<0.024 J	30	<0.23	610	3.7	3.8	<0.33
2024-09-24	110	<0.10	110	2.1	5.6	<3.7	220	<0.0036	0.73 J	270	0.46 J	0.46 J	<0.070	0.024 J	22	<0.23	550	5.6	4.8 J	0.48
2024-12-11	100	<0.10	100	1.5	4.3	<3.7	190	<0.0036	<0.43	250	<0.37	<0.37	<0.25	<0.024	34	0.94 J	550	4.4	3.6 J	<0.33
2025-03-04	150	<0.10	150	<0.45	4.8	<3.7	130	<0.0036	<0.43	280	3.7 J	3.7 J	<0.25	<0.024	28	<0.23	440	4.8	<1.9	<0.33
2025-05-07	100	<0.10	100	0.78 J	4.1	<3.7	71	<0.0036	<0.43	150	<0.37	<0.37	<0.25	<0.024	15	<0.23	210	3.8	4 J	<0.33
2025-08-06	84	<0.20	84	1.5	6	<3.7	160	<0.0036	<0.43	200	<0.37	<0.37	<0.25	0.058	15	0.3 J	370	4.5	24	<0.33
2025-10-29	130	<0.10	130	2.3	4.2	<3.7	230	<0.0036	<0.43	320	<0.37	<0.37	<0.25	0.028 J	23	<0.23	520	4.4	6.4	<0.33
2026-02-10	160	<0.10	160	2.4	5.3	<3.7	270	<0.0036	<0.43	340	<0.37	<0.37	<0.25	0.034 J	37	12	730	5.4	3.6 J	0.48
2026-04-30	87	<0.049	87	<0.45	4.2 J	<3.7	59	<0.0036	<0.43	130	1.6	1.6	<0.25	0.23 J	7.4	<0.23	190	4	27	<0.33
PRC-02																				
2024-07-22	88	<0.10	88	1.9	3.8	<3.7	190	<0.0036	0.34 J	240	<0.043	<0.070	<0.070	<0.024 J	29	<0.23	600	4.4	3 J	<0.33
2024-09-23	110	<0.10	110	2.1	5.6	<3.7	220	<0.0036	0.96 J	280	<0.043	<0.070	<0.070	<0.024	17	<0.23	680	5.4	5.2	<0.33
2024-12-02	96	<0.10	96	1.7	3.9	<3.7	210	<0.0036	<0.43	240	<0.37	<0.37	<0.25	<0.024	31	<0.23	550	3.9	3.2 J	<0.33
2025-02-25	130	<0.10	130	1	5.4	<3.7	120	<0.0036	<0.43	260	<0.37	<0.37	<0.25	0.032 J	24	<0.23	380	5.4	3.4 J	<0.33
2025-04-30	93	<0.10	93	0.54 J	4.3	<3.7	60	<0.0036	<0.43	130	<0.37	<0.37	<0.25	<0.024	13	0.83 J	220	4.3	7.2	<0.33
2025-08-06	87	<0.10	87	1.5	4.2	<3.7	160	<0.0036	<0.43	190	<0.37	<0.37	<0.25	<0.05	15	<0.23	420	4.2	6.2	<0.33
2025-10-21	120	<0.10	120	2	5.6	<3.7	220	<0.0036	<0.43	300	<0.37	<0.37	<0.25	<0.05	22	1.5	460	5.7	2.2 J	<0.33
2026-02-17	160	<0.10	160	2.2	5.7	<3.7	250	<0.0036	<0.43	360	<0.37	<0.37	<0.25	<0.024	35	0.61 J	720	5.3	6	0.48
2026-04-28	87	<0.049	87	0.45 J	13	<3.7	56	<0.0036	<0.43	120	1.5 J	1.5 J	<1	0.051	7.5	<0.23	150	13	21	<0.33
	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
	0	19	0	2	0	19	0	19	14	0	15	15	19	12	0	13	0	0	1	16
	0%	100%	0%	11%	0%	100%	0%	100%	74%	0%	79%	79%	100%	63%	0%	68%	0%	0%	5%	84%
Perch Creek Statistical Summary	160.00	0.10	160.00	2.40	13.00	1.85	270.00	0.00	0.96	360.00	3.70	3.70	0.50	0.23	37.00	12.00	730.00	13.00	27.00	0.48
	74.00	0.02	74.00	0.23	3.10	1.85	56.00	0.00	0.22	120.00	0.02	0.04	0.04	0.01	7.40	0.12	150.00	3.70	0.95	0.17
	107.37	--	107.37	1.49	5.11	--	169.26	--	0.30	238.42	0.49	0.50	--	0.03	22.89	0.93	471.05	5.09	7.33	0.21
	27.28	--	27.28	0.73	2.08	--	67.99	--	0.20	70.65	0.90	0.89	--	0.05	9.12	2.71	179.78	2.02	7.63	0.12
	0.76	--	0.76	-0.59	3.03	--	-0.53	--	2.53	-0.20	2.74	2.75	--	3.53	-0.18	3.88	-0.40	3.37	1.79	1.88
PTC-01																				
2024-08-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-09-25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2024-12-11	72	<0.10	72	<0.45	5.1	<3.7	18	<0.0036	<0.43	86	0.37 J	0.37 J	<0.25	<0.024	3.1	2.3	120	5.1	<1.9	<0.33
2025-03-06	66	<0.10	66	<0.45	6.7	<3.7	17	<0.0036	<0.43	80	2.2 J	2.2 J	<0.25	0.077	2.4	<0.23	180	6.1	2.8 J	<0.33
2025-04-29	51	<0.10	51	<0.45	7.4	<3.7	9.1	<0.0036	0.61 J	53	<0.37	<0.37	<0.25	<0.024	1.7	2.1	52	7.3	<1.9	<0.33
2025-08-11	100	<0.10	100	<0.45	4.7	<3.7	18	<0.0036	<0.43	110	<0.37	<0.37	<0.25	0.033 J	3	0.3 J	170	4.6	<1.9	<0.33
2025-10-27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2026-02-16	99	<0.10	99	<0.45	4.2	<3.7	21	<0.0036	<0.43	97	<0.37	<0.37	<0.25	0.025 J	1.9	4.1	130	4.2	3.2 J	<0.33
2026-04-27	50	<0.049	50	<0.45	8.5	<3.7	8.3	<0.0036	<0.43	50	<0.37	<0.37	<0.25	0.029 J	1.2	<0.23	130	8.5	5.2 J	<0.33
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	0	6	0	6	0	6	0	6	5	0	4	4	6	2	0	2	0	0	3	6
	0%	100%	0%	100%	0%	100%	0%	100%	83%	0%	67%	67%	100%	33%	0%	33%	0%	0%	50%	100%
Patent Creek Statistical Summary	100.00	0.05	100.00	0.23	8.50	1.85	21.00	0.00	0.61	110.00	2.20	2.20	0.13	0.08	3.10	4.10	180.00	8.50	5.20	0.17
	50.00	0.02	50.00	0.23	4.20	1.85	8.30	0.00	0.22	50.00	0.19	0.19	0.13	0.01	1.20	0.12	52.00	4.20	0.95	0.17
	73.00	--	73.00	--	6.10	--	15.23	--	0.28	79.33	0.55	0.55	--	0.03	2.22	1.51	130.33	5.97	2.34	--
	22.22	--	22.22	--	1.70	--	5.24	--	0.16	23.88	0.81	0.81	--	0.02	0.75	1.61	45.35	1.67	1.73	--
	0.28	--	0.28	--	0.25	--	-0.49	--	1.79	-0.14	1.76	1.76	--	1.28	-0.02	0.58	-0.70	0.47	0.68	--
	200	196	200	200	200	200	200	200	200	200	200	200	200	200	200	201	200	200	198	197
	0	180	0	169	0	200	16	188	176	0	163	163	199	91	17	95	2	0	38	192
	0%	92%	0%	85%	0%	100%	8%	94%	88%	0%	82%	82%	100%	46%	9%	47%	1%	0%	19%	97%
Stream Sample Locations Statistical Summary	490	1.50	490	2.40	16.00	1.85	270	0.01	0.96	360	3.70	3.70	0.50	3.90	37.0	14.0	730	24.00	2300	1.00
	15.0	0.02	15.0	0.09	1.40	1.85	0.21	0.00	0.10	15.00	0.02	0.04	0.04	0.01	0.11	0.12	2.00	1.20	0.95	0.17
	71.7	0.08	71.7	0.48	8.10	100% ND	26.5	0.00	0.23	84.6	0.35	0.35	0.12	0.05	3.84	1.13	132.5	8.14	18.4	0.18
	39.3	0.13	39.3	0.23	2.39	--	24.0	0.00	0.09	37.5	0.39	0.39	0.02	0.27	2.92	2.20	77.6	2.60	163	0.05

Units:
µg/L = microgram per liter
mg/L = milligram per liter
ng/L = nanogram per liter
PSU = Practical Salinity Unit
SU = standard units
mV = millivolts
C = degrees Celsius
NTU = Nephelometric Turbidity Units

Notes:
J-values indicate estimated results
1. Cells with dashes "--" represent an analyte not tested during that event or a non-applicable statistic.
2. Significant figures are as reported from laboratory electronic data deliverables.
3. Baseline surface water sampling conducted between July 1, 2024 and June 30, 2026.
4. For non-detected constituent results, statistics calculated using one-half of the detection limit.
5. Duplicate sample results are included in statistical summaries.

Prepared By: TPC
Checked By: GMB

Table 4-3
Non-Stream Surface Water Sampling Water Quality

		Field Parameters						*Metals (Total & Dissolved)*												
Sampling Locations & Date	**Note**	**Conductivity (Field) (mS/cm)**	**Dissolved Oxygen (Field) (mg/L)**	**pH (Field) (SU)**	**Redox Potential (Field) (mV)**	**Temperature Field (°C)**	**Turbidity (NTU)**	**Aluminum, Dissolved (µg/L)**	**Aluminum, Total (µg/L)**	**Antimony, Dissolved (µg/L)**	**Antimony, Total (µg/L)**	**Arsenic, Dissolved (µg/L)**	**Arsenic, Total (µg/L)**	**Barium, Dissolved (µg/L)**	**Barium, Total (µg/L)**	**Beryllium, Dissolved (µg/L)**	**Beryllium, Total (µg/L)**	**Boron, Dissolved (µg/L)**	**Boron, Total (µg/L)**	**Cadmium, Dissolved (µg/L)**
BNC-01																				
8/6/2024		0.179	8.21	7.39	115	22.83	0	<25	<25	<1.3	<1.3	0.33 J	0.42 J	89	87	<0.53	<0.53	35 J	60	<0.17
10/8/2024		0.158	6.9	8.79	45	14.53	0	<25	<25	<1.3	<1.3	0.24 J	0.23 J	61	58	<0.53	<0.53	18 J	20 J	<0.17
12/11/2024		0.143	4.2	8.12	161	0	700	<25	190	<1.3	<1.3	0.26 J	0.43 J	55	150	<0.53	<0.53	26 J	26 J	<0.17
3/11/2025		0.143	4.04	7.14	-5	1.56	0	41 J	140	<1.3	<1.3	0.34 J	0.34 J	61	61	<0.53	<0.53	<50	<50	<0.17
5/6/2025		0.12	7.41	7.09	124	21.95	5.1	<25	<25	<1.3	<1.3	<0.23	0.24 J	55	64	<0.53	<0.53	<50	<50	<0.17
8/6/2025		0.143	5.6	7.12	271	24.56	2.9	<25	35 J	<1.3	<1.3	<0.23	0.36 J	60	82	<0.53	<0.53	<50	<50	<0.17
10/29/2025		0.129	6.82	7.55	146	9.08	0	<25	<25	<1.3	<1.3	<0.23	0.24 J	44	44	<0.53	<0.53	23 J	21 J	<0.17
2/11/2026		0.138	1.83	7.8	-19	1.52	0	<25	<25	<0.93	<0.93	<0.23	<0.23	54	54	<0.24	<0.24	15 J	16 J	<0.17
4/21/2026		0.106	8.56	7.13	78	13.76	3.6	<25	43 J	<0.93	<0.93	<0.23	<0.23	48	53	<0.24	<0.24	28 J	32 J	<0.17
BNC Statistical Summary	**Number of Observations**	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	Number of Non-Detect	0	0	0	0	0	0	8	5	9	9	5	2	0	0	9	9	3	3	9
	% Non-Detect	0%	0%	0%	0%	0%	0%	89%	56%	100%	100%	56%	22%	0%	0%	100%	100%	33%	33%	100%
	Maximum	0.179	8.56	8.79	271	24.56	700	41	190	0.65	0.65	0.34	0.43	89	150	0.265	0.265	35	60	0.085
	Minimum	0.106	1.83	7.09	-19	0	0	12.5	12.5	0.465	0.465	0.115	0.115	44	44	0.12	0.12	15	16	0.085
	Average	0.14	5.95	7.57	101.78	13.72	177.90	15.67	52.28	--	--	0.19	0.28	58.56	72.56	--	--	24.44	27.78	--
	Standard Deviation	0.02	2.22	0.58	89.82	9.71	232.86	9.50	66.10	--	--	0.10	0.12	12.80	32.13	--	--	5.70	12.88	--
	Skewness	0.25	-0.59	1.10	0.36	-0.03	2.47	2.47	1.36	--	--	0.50	-0.10	1.51	1.70	--	--	0.08	1.93	--
BNW-01																				
7/31/2024		0.184	7.8	7.12	111	28.77	2.1	<25	<25	<1.3	<1.3	0.48 J	0.5 J	26	26	<0.53	<0.53	31 J	43 J	<0.17
10/8/2024		0.223	8.37	8.15	41	13.65	211	<25	54 J	<1.3	<1.3	0.4 J	0.41 J	26	29	<0.53	<0.53	<13	14 J	<0.17
12/11/2024		0.152	15.75	8.42	211	1.49	25.6	<25	<25	<1.3	<1.3	0.33 J	0.37 J	26	28	<0.53	<0.53	19 J	19 J	<0.17
2/25/2025		0.219	9.11	7.49	156	2.53	0	<25	<25	<1.3	<1.3	<0.23	<0.23	29	30	<0.53	<0.53	<13	<50	<0.17
5/5/2025		0.218	9.81	7.88	156	18.32	11.9	<25	<25	<1.3	<1.3	0.35 J	0.38 J	29	30	<0.53	<0.53	15 J	14 J	<0.17
8/6/2025		0.152	5.6	8.91	208	25.41	2.7	<25	45 J	<1.3	<1.3	0.38 J	0.47 J	20	21	<0.53	<0.53	<50	<50	<0.17
10/20/2025		0.218	11.58	8.32	114	16.51	0	<25	<25	<1.3	<1.3	0.33 J	0.33 J	29	28	<0.53	<0.53	<13	<13	<0.17
2/12/2026		0.312	2	7.39	90	1.64	9.7	<25	430	<0.93	<0.93	0.33 J	0.43 J	44	48	<0.24	<0.24	<13	<13	<0.17
4/27/2026		0.205	8.12	7.75	184	14.42	3.7	<25	48 J	<0.93	<0.93	0.27 J	0.37 J	33	35	<0.24	<0.24	43 J	39 J	<0.17
BNW Statistical Summary	**Number of Observations**	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	Number of Non-Detect	0	0	0	0	0	0	9	5	9	9	1	1	0	0	9	9	5	4	9
	% Non-Detect	0%	0%	0%	0%	0%	0%	100%	56%	100%	100%	11%	11%	0%	0%	100%	100%	56%	44%	100%
	Maximum	0.312	15.75	8.91	211	28.77	211	12.5	430	0.65	0.65	0.48	0.5	44	48	0.265	0.265	43	43	0.085
	Minimum	0.152	2	7.12	41	1.49	0	12.5	12.5	0.465	0.465	0.115	0.115	20	21	0.12	0.12	6.5	6.5	0.085
	Average	0.21	8.68	7.94	141.22	13.64	38.10	--	71.06	--	--	0.33	0.38	29.11	30.56	--	--	17.67	21.33	--
	Standard Deviation	0.05	3.79	0.57	56.92	10.08	68.50	--	135.78	--	--	0.10	0.11	6.60	7.52	--	--	13.14	13.05	--
	Skewness	0.85	0.12	0.22	-0.34	0.04	2.41	--	2.39	--	--	-0.89	-1.42	1.16	1.37	--	--	0.79	0.50	--
SBD-01																				
7/29/2024		0.224	5.98	7.65	123	28.82	89.5	<25	31 J	<1.3	<1.3	0.55 J	0.63 J	36	36	<0.53	<0.53	54	51	<0.17
9/24/2024		0.246	3.86	7.71	33	16.34	132	<25	280	<1.3	<1.3	0.43 J	0.54 J	35	39	<0.53	<0.53	54	52	<0.17
12/10/2024		0.235	6.18	7.67	199	3.89	57.7	<25	270	<1.3	<1.3	0.36 J	0.5 J	38	44	<0.53	<0.53	51	53	<0.17
2/24/2025		0.26	0.46	7.31	101	1.08	147	<25	730	<1.3	<1.3	0.59 J	0.78 J	56	67	<0.53	<0.53	42 J	47 J	<0.17
4/29/2025		0.109	6.35	7.28	219	10.45	9.5	<25	72 J	<1.3	<1.3	0.36 J	0.38 J	22	22	<0.53	<0.53	28 J	33 J	<0.17
8/4/2025		0.159	2.42	6.82	251	21.37	7.8	<25	360	<1.3	<1.3	0.45 J	0.53 J	18	24	<0.53	<0.53	44 J	53	<0.17
10/20/2025		0.176	4.06	7.07	153	11.47	31	<25	810	<1.3	<1.3	0.31 J	0.49 J	22	31	<0.53	<0.53	39 J	43 J	<0.17
10/20/2025	Duplicate Sample	--	--	--	--	--	--	<25	250	<1.3	<1.3	0.3 J	0.39 J	22	26	<0.53	<0.53	37 J	36 J	<0.17
2/9/2026		0.248	2.94	6.78	-22	0.46	51.8	<25	140	<0.93	<0.93	0.49 J	0.52 J	44	51	<0.24	<0.24	51	64	<0.17
4/20/2026		0.175	5.19	6.9	204	7.13	15.5	32 J	110	<0.93	<0.93	0.39 J	0.5 J	17	18	<0.24	<0.24	25 J	23 J	<0.17
SBD Statistical Summary	**Number of Observations**	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10
	Number of Non-Detect	0	0	0	0	0	0	9	0	10	10	0	0	0	0	10	10	0	0	10
	% Non-Detect	0%	0%	0%	0%	0%	0%	90%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	100%
	Maximum	0.26	6.35	7.71	251	28.82	147	32	810	0.65	0.65	0.59	0.78	56	67	0.265	0.265	54	64	0.085
	Minimum	0.109	0.46	6.78	-22	0.46	7.8	12.5	31	0.465	0.465	0.3	0.38	17	18	0.12	0.12	25	23	0.085
	Average	0.20	4.16	7.24	140.11	11.22	60.20	14.45	305.30	--	--	0.42	0.53	31.00	35.80	--	--	42.50	45.50	--
	Standard Deviation	0.05	1.99	0.37	90.70	9.54	52.19	6.17	266.28	--	--	0.10	0.11	12.88	15.08	--	--	10.38	11.97	--
	Skewness	-0.59	-0.54	0.07	-0.57	0.59	0.62	2.67	0.99	--	--	0.40	0.92	0.62	0.80	--	--	-0.45	-0.45	--

Table 4-3 (continued)

Metals (Total & Dissolved)

Sampling Locations & Date	Cadmium, Total (µg/L)	Calcium, Dissolved (µg/L)	Calcium, Total (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total (µg/L)	Cobalt, Dissolved (µg/L)	Cobalt, Total (µg/L)	Copper, Dissolved (µg/L)	Copper, Total (µg/L)	Iron, Dissolved (µg/L)	Iron, Total (µg/L)	Lead, Dissolved (µg/L)	Lead, Total (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total (ng/L)	Methyl Mercury, Dissolved (ng/L)
BNC-01																						
8/6/2024	<0.17	21000	20000	<1.1	<1.1	<0.40	<0.40	0.98 J	1.1 J	<47	920	<0.19	<0.19	2.9 J	3 J	3700	3500	31	110	0.23 J	0.27 J	<0.022
10/8/2024	<0.17	18000	18000	<1.1	<1.1	<0.40	<0.40	1.3 J	0.99 J	270	<47	<0.19	<0.19	3.1 J	3.2 J	3100	3100	36	5.3	<0.20	0.28 J	<0.022
12/11/2024	0.44 J	17000	20000	<1.1	<1.1	<0.40	<0.40	4.6	37	64 J	6800	<0.19	0.45 J	2.8 J	2.5 J	3300	3500	65	1200	1.3	12	<0.022
3/11/2025	<0.17	15000	15000	<1.1	<1.1	<0.40	<0.40	10	16	740	1300	<0.19	<0.19	<2.5	<2.5	2600	2600	330	300	2.2	3.1	0.035 J
5/6/2025	<0.17	15000	17000	<1.1	<1.1	<0.40	<0.40	2.9	4	74 J	220	<0.19	<0.19	<2.5	<2.5	2500	2900	12	42	1.2	1.2	<0.022
8/6/2025	<0.17	17000	18000	<1.1	1.1 J	<0.40	<0.40	0.82 J	3.1	69 J	1900	<0.19	<0.19	2.9 J	<10	2800	2900	6.4	350	0.28 J	0.4 J	<0.022
10/29/2025	<0.17	17000	17000	<1.1	<1.1	<0.40	<0.40	1.1 J	1.1 J	<47	80 J	<0.19	<0.19	2.9 J	2.9 J	2900	2900	3.6	8.5	0.96	<0.20	<0.022
2/11/2026	<0.17	18000	17000	<1.1	<1.1	<0.40	<0.40	1 J	1.5 J	660	760	<0.19	<0.19	<2.5	<2.5	2800	2700	270	240	0.26 J	0.6	<0.022
4/21/2026	<0.17	15000	15000	<1.1	<1.1	<0.40	<0.40	2.9	4.1	380	1400	<0.19	<0.19	2 J	<2.0	2400	2400	190	330	1.4	1.9	0.035 J
BNC Statistical Summary	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	8	0	0	9	8	9	9	0	0	2	1	9	8	3	5	0	0	0	0	1	1	7
	89%	0%	0%	100%	89%	100%	100%	0%	0%	22%	11%	100%	89%	33%	56%	0%	0%	0%	0%	11%	11%	78%
	0.44	21000	20000	0.55	1.1	0.2	0.2	10	37	740	6800	0.095	0.45	3.1	5	3700	3500	330	1200	2.2	12	0.035
	0.085	15000	15000	0.55	0.55	0.2	0.2	0.82	0.99	23.5	23.5	0.095	0.095	1.25	1	2400	2400	3.6	5.3	0.1	0.1	0.011
	0.12	17000.00	17444.44	--	0.61	--	--	2.84	7.65	256.00	1489.28	--	0.13	2.26	2.37	2900.00	2944.44	104.89	287.31	0.88	2.21	0.02
	0.12	1936.49	1810.46	--	0.18	--	--	2.97	11.97	279.76	2092.18	--	0.12	0.82	1.32	412.31	374.54	125.28	369.13	0.71	3.80	0.01
	2.47	0.77	0.09	--	2.47	--	--	1.72	1.90	0.83	2.05	--	2.47	-0.38	0.71	0.69	0.33	0.87	1.83	0.49	2.19	1.34
BNW-01																						
7/31/2024	<0.17	21000	21000	<1.1	<1.1	<0.40	<0.40	2	2.1	100	160	<0.19	<0.19	<2.5 J	<2.5 J	6300	6400	7.4	13	0.44 J	0.35 J	<0.022
10/8/2024	<0.17	28000	28000	<1.1	<1.1	<0.40	<0.40	0.94 J	1.5 J	<47	190	<0.19	<0.19	<2.5	<2.5	6700	6700	4	16	<0.20	0.51	<0.022
12/11/2024	<0.17	29000	31000	<1.1	<1.1	<0.40	<0.40	1.1 J	1.5 J	<47	62 J	<0.19	<0.19	<2.5	<2.5	7100	7500	13	4.2	<0.50	0.65	<0.022
2/25/2025	<0.17	26000	26000	<1.1	<1.1	<0.40	<0.40	1.3 J	1.6 J	110	240	<0.19	<0.19	<2.5	<2.5	5400	5300	320	330	1.7	2	<0.050
5/5/2025	<0.17	39000	39000	<1.1	<1.1	<0.40	<0.40	1.6 J	1.7 J	<47	140	<0.19	<0.19	<2.5	<2.5	6500	6500	6.7	17	0.22 J	<0.20	0.024 J
8/6/2025	<0.17	20000	20000	<1.1	<1.1	<0.40	<0.40	1 J	1.3 J	<47	120	<0.19	<0.19	<2.5	<10	6300	6400	1.8 J	9.3	0.3 J	0.22 J	<0.022
10/20/2025	<0.17	30000	30000	<1.1	<1.1	<0.40	<0.40	0.56 J	0.54 J	<47	77 J	<0.19	<0.19	<2.5	<2.5	7100	6800	1 J	4.6	0.4 J	<0.20	<0.022
2/12/2026	<0.17	53000	54000	<1.1	<1.1	<0.40	<0.40	2	5.6	170	790	<0.19	0.19 J	<2.5	<2.5	8400	8700	270	290	0.24 J	0.77	<0.022
4/27/2026	<0.17	39000	40000	<1.1	<1.1	<0.40	<0.40	1.3 J	1.5 J	<47	380	<0.19	<0.19	<2.0	<2.0	6600	6700	3.1	39	0.31 J	0.62 J	<0.033
BNW Statistical Summary	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	9	0	0	9	9	9	9	0	0	6	0	9	8	9	9	0	0	0	0	2	2	8
	100%	0%	0%	100%	100%	100%	100%	0%	0%	67%	0%	100%	89%	100%	100%	0%	0%	0%	0%	22%	22%	89%
	0.085	53000	54000	0.55	0.55	0.2	0.2	2	5.6	170	790	0.095	0.19	1.25	5	8400	8700	320	330	1.7	2	0.025
	0.085	20000	20000	0.55	0.55	0.2	0.2	0.56	0.54	23.5	62	0.095	0.095	1	1	5400	5300	1	4.2	0.1	0.1	0.011
	--	31666.67	32111.11	--	--	--	--	1.31	1.93	57.89	239.89	--	0.11	--	--	6711.11	6777.78	69.67	80.34	0.44	0.59	0.01
	--	10416.33	10717.33	--	--	--	--	0.48	1.44	54.95	227.39	--	0.03	--	--	811.55	920.30	128.41	130.99	0.48	0.58	0.01
	--	0.87	0.85	--	--	--	--	0.19	2.07	1.10	1.76	--	2.47	--	--	0.63	0.70	1.37	1.34	2.27	1.68	1.08
SBD-01																						
7/29/2024	<0.17	34000	33000	<1.1	<1.1	<0.40	<0.40	0.85 J	1.3 J	<47	300	<0.19	<0.19	7.1 J	7.2 J	6500	6400	7.7	32	<0.05	<0.050	0.025 J
9/24/2024	<0.17	35000	35000	<1.1	<1.1	<0.40	<0.40	<0.50	1 J	78 J	960	<0.19	<0.19	7.3 J	7.2 J	6300	6600	32	72	0.34 J	3.4 J	<0.022
12/10/2024	<0.17	36000	36000	<1.1	<1.1	<0.40	<0.40	0.96 J	2.1	88 J	850	<0.19	<0.19	9.4 J	9.2 J	6800	6900	27	130	0.77	0.6	<0.022
2/24/2025	<0.17	43000	42000	<1.1	1.1 J	<0.40	0.63 J	1.1 J	4.9	2700	4100	<0.19	0.32 J	8.2 J	9.1 J	7900	8100	440	330	0.91	1.5	0.32
4/29/2025	<0.17	16000	17000	<1.1	<1.1	<0.40	<0.40	12	14	150	260	<0.19	<0.19	<2.5	2.7 J	3000	3000	6.8	9.3	1.8	2.2	<0.022
8/4/2025	<0.17	23000	23000	<1.1	<1.1	<0.40	<0.40	0.53 J	1.6 J	170	1300	<0.19	<0.19	4 J	4.5 J	4100	4200	12	130	0.53	0.57	<0.022
10/20/2025	<0.17	26000	26000	<1.1	1.1 J	<0.40	0.48 J	<0.50	2.6	170	1800 J	<0.19	0.31 J	5.4 J	5.7 J	4800	4900	15	120 J	0.63	1.3	<0.022
10/20/2025	<0.17	26000	26000	<1.1	<1.1	<0.40	<0.40	2.2	1.1 J	160	790 J	<0.19	<0.19	4.6 J	5.3 J	4800	4700	17	41 J	0.96	0.88	<0.022
2/9/2026	<0.17	36000	36000	<1.1	<1.1	<0.40	<0.40	0.93 J	1.8 J	2700	3500	<0.19	<0.19	7.4 J	7.5 J	6800	6800	260	270	0.51	0.73	0.27
4/20/2026	<0.17	14000	14000	<1.1	<1.1	<0.40	<0.40	14	15	150	330	<0.19	<0.19	<2.0	<2.0	2400	2500	3.8	11	2.9	3.1	0.04 J
SBD Statistical Summary	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	0	0	10	8	10	8	2	0	1	0	10	8	2	1	0	0	0	0	1	1	6
	100%	0%	0%	100%	80%	100%	80%	20%	0%	10%	0%	100%	80%	20%	10%	0%	0%	0%	0%	10%	10%	60%
	0.085	43000	42000	0.55	1.1	0.2	0.63	14	15	2700	4100	0.095	0.32	9.4	9.2	7900	8100	440	330	2.9	3.4	0.32
	0.085	14000	14000	0.55	0.55	0.2	0.2	0.25	1	23.5	260	0.095	0.095	1	1	2400	2500	3.8	9.3	0.025	0.025	0.011
	--	28900.00	28800.00	--	0.66	--	0.27	3.31	4.54	638.95	1419.00	--	0.14	5.57	5.94	5340.00	5410.00	82.13	114.53	0.94	1.43	0.07
	--	9445.16	9077.44	--	0.23	--	0.15	5.16	5.37	1087.31	1349.45	--	0.09	2.85	2.66	1805.05	1834.51	147.68	109.00	0.83	1.13	0.12
	--	-0.25	-0.28	--	1.50	--	1.69	1.49	1.36	1.49	1.12	--	1.50	-0.46	-0.52	-0.30	-0.24	1.78	0.95	1.42	0.67	1.51

Table 4-3 (continued)

Metals (Total & Dissolved)

Sampling Locations & Date	Methyl Mercury, Total (ng/L)	Molybdenum, Dissolved (µg/L)	Molybdenum, Total (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total (µg/L)	Potassium, Dissolved (µg/L)	Potassium, Total (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total (µg/L)	Silver, Dissolved (µg/L)	Silver, Total (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total (µg/L)	Tin, Dissolved (µg/L)	Tin, Total (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total (µg/L)	Vanadium, Dissolved (µg/L)
BNC-01																						
8/6/2024	<0.022	<2.5	<2.5	<0.63	<0.63	550	530	<0.98	<0.98	<0.12	<0.12	4700	4500	100	95	<0.57	<0.57	<1.3	<1.3	<0.0098	<0.0098	<2.2
10/8/2024	<0.022	<2.5	<2.5	<0.63	<0.63	360 J	370 J	<0.98	<0.98	<0.12	<0.12	4300	4300	85	83	<0.57	<0.57	<1.3	<1.3	<0.0098	<0.0098	<2.2
12/11/2024	0.1	<2.5	<2.5	1.1 J	<0.63	1600	1700	<0.98	<0.98	<0.12	<0.12	5100	5000	71	88	<0.57	<0.57	<1.3	<1.3	<0.05	0.16	<2.2
3/11/2025	0.038 J	<2.5	<2.5	<0.63	<0.63	1800	1900	<0.98	<0.98	<0.12	<0.12	3500	3400	63	59	<0.57	<0.57	<1.3	<1.3	0.023 J	0.026 J	<2.2
5/6/2025	<0.022	<2.5	<2.5	<0.63	<0.63	980	1200	<0.98	<0.98	<0.12	<0.12	3400	3900	63	73	<0.57	<0.57	<1.3	<1.3	<0.0098	<0.0098	<2.2
8/6/2025	<0.022	<2.5	<2.5	<0.63	<0.63	360 J	340 J	<0.98	<0.98	<0.12	<0.12	3500	3600	76	78	<0.57	<0.57	<1.3	<1.3	<0.0098	<0.0098	<2.2
10/29/2025	<0.022	<2.5	<2.5	<0.63	<0.63	320 J	330 J	<0.98	<0.98	<0.12	<0.12	3700	3700	74	73	<0.57	<0.57	<1.3	<1.3	<0.0098	<0.0098	<2.2
2/11/2026	<0.022	<2.5	<2.5	<0.63	<0.63	650	630	<0.98	<0.98	<0.12	<0.12	3600	3400	73	70	<0.25	<0.25	<1.3	<1.3	<0.0098	<0.0098	<0.084
4/21/2026	0.045 J	<2.5	<2.5	<0.63	<0.63	880	880	<0.98	<0.98	<0.12	<0.12	2900	2900	57	58	<0.25	<0.25	<1.3	<1.3	<0.0098	<0.0098	<0.084
BNC Statistical Summary	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	9	9	8	9	0	0	9	9	9	9	0	0	0	0	9	9	9	9	8	7	9
	67%	100%	100%	89%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	100%	100%	100%	100%	89%	78%	100%
	0.1	1.25	1.25	1.1	0.315	1800	1900	0.49	0.49	0.06	0.06	5100	5000	100	95	0.285	0.285	0.65	0.65	0.025	0.16	1.1
	0.011	1.25	1.25	0.315	0.315	320	330	0.49	0.49	0.06	0.06	2900	2900	57	58	0.125	0.125	0.65	0.65	0.0049	0.0049	0.042
	0.03	--	--	0.40	--	833.33	875.56	--	--	--	--	3855.56	3855.56	73.56	75.22	--	--	--	--	0.01	0.02	--
	0.03	--	--	0.26	--	544.45	597.31	--	--	--	--	700.20	646.36	12.94	12.35	--	--	--	--	0.01	0.05	--
	1.71	--	--	2.47	--	0.81	0.73	--	--	--	--	0.59	0.38	0.80	0.05	--	--	--	--	1.35	2.39	--
BNW-01																						
7/31/2024	<0.022	<2.5	<2.5	<0.63	<0.63	110 J	110 J	<0.98	<0.98	<0.12	<0.12	1400	1400	76	76	<0.57	<0.57	<1.3	<1.3	0.096	0.092	<2.2
10/8/2024	<0.022	<2.5	<2.5	<0.63	<0.63	210 J	230 J	<0.98	<0.98	<0.12	<0.12	1600	1600	84	84	<0.57	<0.57	<1.3	<1.3	0.084	0.085	<2.2
12/11/2024	<0.022	<2.5	<2.5	<0.63	<0.63	750	540	<0.98	<0.98	<0.12	<0.12	1600	1700	82	87	<0.57	<0.57	<1.3	<1.3	0.099	0.1	<2.2
2/25/2025	<0.050	<2.5	<2.5	<0.63	<0.63	280 J	320 J	<0.98	<0.98	<0.12	<0.12	910	910	57	57	<0.57	<0.57	<1.3	<1.3	0.061	0.061	<2.2
5/5/2025	<0.022	<2.5	<2.5	<0.63	<0.63	1400	1400	<0.98	<0.98	<0.12	<0.12	1400	1400	87	87	<0.57	<0.57	<1.3	<1.3	0.13	0.12	<2.2
8/6/2025	<0.022	<2.5	<2.5	<0.63	<0.63	120 J	150 J	<0.98	<0.98	<0.12	<0.12	1400	1400	70	68	<0.57	<0.57	<1.3	<1.3	0.071	0.079	<2.2
10/20/2025	<0.022	<2.5	<2.5	<0.63	<0.63	490 J	470 J	<0.98	<0.98	<0.12	<0.12	1500	1400	87	83	<0.57	<0.57	<1.3	<1.3	0.077	0.071	<2.2
2/12/2026	<0.022	<2.5	<2.5	<0.63	<0.63	1200	1300	<0.98	<0.98	<0.12	<0.12	1700	1700	110	110	<0.25	<0.25	<1.3	<1.3	0.2	0.2	0.098 J
4/27/2026	<0.033	<2.5	<2.5	<0.63	<0.63	1700	1800	<0.98	<0.98	<0.12	<0.12	1400	1400	89	91	<0.25	<0.25	<1.3	<1.3	0.11	0.11	<0.084
BNW Statistical Summary	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	9	9	9	9	9	0	0	9	9	9	9	0	0	0	0	9	9	9	9	0	0	8
	100%	100%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	100%	100%	100%	100%	0%	0%	89%
	0.025	1.25	1.25	0.315	0.315	1700	1800	0.49	0.49	0.06	0.06	1700	1700	110	110	0.285	0.285	0.65	0.65	0.2	0.2	1.1
	0.011	1.25	1.25	0.315	0.315	110	110	0.49	0.49	0.06	0.06	910	910	57	57	0.125	0.125	0.65	0.65	0.061	0.061	0.042
	--	--	--	--	--	695.56	702.22	--	--	--	--	1434.44	1434.44	82.44	82.56	--	--	--	--	0.10	0.10	0.87
	--	--	--	--	--	600.77	627.93	--	--	--	--	226.23	237.02	14.54	14.89	--	--	--	--	0.04	0.04	0.45
	--	--	--	--	--	0.55	0.71	--	--	--	--	-1.33	-1.02	0.12	0.06	--	--	--	--	1.43	1.58	-1.34
SBD-01																						
7/29/2024	0.053	3.6 J	3.5 J	<0.63	<0.63	500	500	<0.98	<0.98	<0.12	<0.12	5200	5100	180	180	<0.57	<0.57	<1.3	<1.3	<0.030	0.03	<2.2
9/24/2024	<0.022	<2.5	<2.5	<0.63	<0.63	960	1100	<0.98	<0.98	<0.12	<0.12	5100	5300	170	170	<0.57	<0.57	<1.3	<1.3	0.05	0.064	<2.2
12/10/2024	<0.022	6.2	7.5	<0.63	<0.63	2000	2200	<0.98	<0.98	<0.12	<0.12	7400	7400	180	180	<0.57	<0.57	<1.3	<1.3	0.2	0.18	<2.2
2/24/2025	0.57	8.9	7.8	<0.63	0.95 J	2600	2800	<0.98	<0.98	<0.12	<0.12	7500	7500	190	190	<0.57	<0.57	<1.3	<1.3	0.28	0.35	<2.2
4/29/2025	<0.050	5.6	5.8	<0.63	<0.63	1100	1200	<0.98	<0.98	<0.12	<0.12	2200	2300	69	71	<0.57	<0.57	<1.3	<1.3	0.13	0.14	<2.2
8/4/2025	0.024 J	<2.5	<2.5	<0.63	<0.63	370 J	610	<0.98	<0.98	<0.12	<0.12	2400	2400	110	110	<0.57	<0.57	<1.3	<1.3	0.02 J	0.037 J	<2.2
10/20/2025	<0.022	<2.5	<2.5	<0.63	1.6 J	910	1100	<0.98	<0.98	<0.12	<0.12	3400	3300	120	120	<0.57	<0.57	<1.3	<1.3	0.03 J	0.048 J	<2.2
10/20/2025	0.032 J	<2.5	<2.5	<0.63	<0.63	910	920	<0.98	<0.98	<0.12	<0.12	3300	3300	120	120	<0.57	<0.57	<1.3	<1.3	0.026 J	0.037 J	<2.2
2/9/2026	0.36	4.3 J	4.7 J	<0.63	<0.63	1800	1800	<0.98	<0.98	<0.12	<0.12	6300	6300	160	170	<0.25	<0.25	<1.3	<1.3	0.17	0.17	0.19 J
4/20/2026	0.051	5	5.2	<0.63	<0.63	970	1000	<0.98	<0.98	<0.12	<0.12	1700	1800	51	51	<0.25	<0.25	<1.3	<1.3	0.089	0.1	0.29
SBD Statistical Summary	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	4	4	4	10	8	0	0	10	10	10	10	0	0	0	0	10	10	10	10	1	0	8
	40%	40%	40%	100%	80%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	100%	100%	100%	100%	10%	0%	80%
	0.57	8.9	7.8	0.315	1.6	2600	2800	0.49	0.49	0.06	0.06	7500	7500	190	190	0.285	0.285	0.65	0.65	0.28	0.35	1.1
	0.011	1.25	1.25	0.315	0.315	370	500	0.49	0.49	0.06	0.06	1700	1800	51	51	0.125	0.125	0.65	0.65	0.015	0.03	0.19
	0.11	3.86	3.95	--	0.51	1212.00	1323.00	--	--	--	--	4450.00	4470.00	135.00	136.20	--	--	--	--	0.10	0.12	0.93
	0.19	2.64	2.63	--	0.43	701.28	726.12	--	--	--	--	2151.61	2135.96	48.78	49.15	--	--	--	--	0.09	0.10	0.36
	1.72	0.49	0.20	--	1.93	0.79	0.91	--	--	--	--	0.21	0.22	-0.50	-0.51	--	--	--	--	0.77	1.32	-1.52

Table 4-3 (continued)

Sampling Locations & Date	Vanadium, Total (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total (µg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Bicarbonate Alkalinity (as CaCO3) (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Carbonate Alkalinity (as CaCO3) (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Salinity (PSU)
	Metals (Total & Dissolved)			*General Parameters*																			
BNC-01																							
8/6/2024	<2.2	<6.9	<6.9	57	<0.10	57	<0.18	8.2	<3.7	9.8	<0.0036	<0.19	64	<0.043	<0.070	<0.070	0.031 J	<0.21	<0.23	82	8.6	7.4	<0.33
10/8/2024	<2.2	<6.9	<6.9	51	<0.10	51	<0.18	8.3	<3.7	10	0.004 J	0.48 J	57	<0.043	<0.070	<0.070	<0.024	<0.21	<0.23	44	7.9	6	<0.33
12/11/2024	<2.2	<6.9	14 J	50	<0.10	50	<0.45	9.8	<3.7	13	<0.0036	<0.43	64	<0.37	<0.37	<0.25	0.25	<0.47	5.3	76	13	160	<0.33
3/11/2025	<2.2	<6.9	<6.9	44	<0.10	44	<0.45	11 J	<3.7	8.5	<0.0050 J	<0.43	48	1.7 J	1.7 J	<0.25	0.032 J	0.52 J	5.3	66	12 J	5.4	<0.33
5/6/2025	<2.2	<6.9	<6.9	44	<0.10	44	<0.45	7.2	<3.7	9.9	<0.0036	<0.43	54	<0.37	<0.37	<0.25	<0.024	<0.47	<0.23	80	7.8	3.4 J	<0.33
8/6/2025	<2.2	<6.9	<6.9	61	2.1	61	<0.45	8.1	<3.7	9.4	<0.0036	<0.43	57	<0.37	<0.37	<0.25	<0.034	<0.47	<0.23	160	8.9	27	<0.33
10/29/2025	<2.2	<6.9	<6.9	61	<0.10	61	<0.45	6.7	<3.7	8.9	<0.0036	<0.43	54	<0.37	<0.37	<0.25	<0.024	<0.47	0.39 J	90	6.7	6	<0.33
2/11/2026	<0.084	<6.9	<6.9	59	<0.10	59	<0.45	6.8	<3.7	9.5	<0.0036	<0.43	53	<0.37	<0.37	<0.25	0.028 J	<0.47	15	34	6.9	5.4	<0.33
4/21/2026	0.2 J	<6.9	<6.9	56	<0.049	56	<0.45	6.5	<3.7	9.4 J	<0.0036	<0.43	47	<0.37	<0.37	<0.25	<0.024	<0.47	<0.23	40	6.8	7.8	<0.33
BNC Statistical Summary	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	8	9	8	0	8	0	9	0	9	0	8	8	0	8	8	9	5	8	5	0	0	0	9
	89%	100%	89%	0%	89%	0%	100%	0%	100%	0%	89%	89%	0%	89%	89%	100%	56%	89%	56%	0%	0%	0%	100%
	1.1	3.45	14	61	2.1	61	0.225	11	1.85	13	0.004	0.48	64	1.7	1.7	0.125	0.25	0.52	15	160	13	160	0.165
	0.042	3.45	3.45	44	0.0245	44	0.09	6.5	1.85	8.5	0.0018	0.095	47	0.0215	0.035	0.035	0.012	0.105	0.115	34	6.7	3.4	0.165
	0.88	--	4.62	53.67	0.27	53.67	--	8.07	--	9.82	0.00	0.23	55.33	0.32	0.32	--	0.05	0.24	2.95	74.67	8.73	25.38	--
	0.43	--	3.52	6.71	0.68	6.71	--	1.51	--	1.28	0.00	0.10	6.00	0.52	0.52	--	0.08	0.12	5.04	37.87	2.28	50.98	--
	-1.37	--	2.47	-0.39	2.47	-0.39	--	0.82	--	1.80	2.10	1.64	0.20	2.39	2.40	--	2.42	1.37	1.71	1.19	0.99	2.39	--
BNW-01																							
7/31/2024	<2.2	<6.9	12 J	82	<0.10	82	<0.18	7	<3.7	0.79 J	<0.0036	0.21 J	80	<0.043	<0.070	<0.070	<0.024 J	<0.21	<0.23	76	7	<1.9	<0.33
10/8/2024	<2.2	<6.9	<6.9	100	<0.10	100	<0.18	6.8	<3.7	1.4	<0.0036	0.47 J	97	<0.043	<0.070	<0.070	<0.024	<0.21	<0.23	86	6.7	3.8 J	<0.33
12/11/2024	<2.2	<6.9	<6.9	110	<0.10	110	<0.45	6	<3.7	1.6	<0.0036	<0.43	110	<0.37	<0.37	<0.25	<0.024	<0.47	0.67 J	88	6	2 J	<0.33
2/25/2025	<2.2	<6.9	<6.9	89	<0.10	89	<0.45	4	<3.7	0.69 J	<0.0036	<0.43	87	<0.37	<0.37	<0.25	<0.024	<0.47	0.24 J	84	4.1	3.2 J	<0.33
5/5/2025	<2.2	<6.9	<6.9	120	<0.10	120	<0.45	5.4	<3.7	2	<0.0036	<0.43	120	<0.37	<0.37	<0.25	<0.024	<0.47	1.2	140	5.4	2.2 J	<0.33
8/6/2025	<2.2	<6.9	<6.9	91	<0.10	83	<0.45	6.6	8.5	1.3	<0.0036	<0.43	76	<0.37	<0.37	<0.25	<0.05	<0.47	0.3 J	66	6.3	3.6 J	<0.33
10/20/2025	<2.2	<6.9	<6.9	120	<0.10	120	<0.45	5.7	<3.7	1.7	<0.0036	<0.43	100	<0.37	<0.37	<0.25	<0.024	<0.47	<0.23	100	5.8	<1.9	<0.33
2/12/2026	1	<6.9	<6.9	180	<0.10	180	<0.45	6.5	<3.7	1.9	<0.0036	<0.43	170	<0.37	<0.37	<0.25	0.024 J	<0.47	<0.23	170	6.5	27	<0.33
4/27/2026	0.2 J	<6.9	<6.9	130	<0.049	130	<0.45	5.1	<3.7	2.3	<0.0036	<0.43	130	<0.37	<0.37	<0.25	0.026 J	<0.47	<0.23	180	5	3.8 J	<0.33
BNW Statistical Summary	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	7	9	8	0	9	0	9	0	8	0	9	7	0	9	9	9	7	9	5	0	0	2	9
	78%	100%	89%	0%	100%	0%	100%	0%	89%	0%	100%	78%	0%	100%	100%	100%	78%	100%	56%	0%	0%	22%	100%
	1.1	3.45	12	180	0.05	180	0.225	7	8.5	2.3	0.0018	0.47	170	0.185	0.185	0.125	0.026	0.235	1.2	180	7	27	0.165
	0.2	3.45	3.45	82	0.0245	82	0.09	4	1.85	0.69	0.0018	0.21	76	0.0215	0.035	0.035	0.012	0.105	0.115	66	4.1	0.95	0.165
	0.99	--	4.40	113.56	--	112.67	--	5.90	2.59	1.52	--	0.24	107.78	--	--	--	0.02	--	0.33	110.00	5.87	5.28	--
	0.30	--	2.85	29.73	--	30.60	--	0.96	2.22	0.54	--	0.09	29.39	--	--	--	0.01	--	0.37	42.32	0.91	8.22	--
	-2.42	--	2.47	1.20	--	1.12	--	-0.72	2.47	-0.28	--	2.47	0.99	--	--	--	0.73	--	1.64	0.73	-0.68	2.38	--
SBD-01																							
7/29/2024	<2.2	<6.9	<6.9	110	<0.10	110	<0.18	12	<3.7	5.4	<0.0036	0.26 J	110	<0.043	<0.070	<0.070	<0.024 J	0.38 J	<0.23	130	11	3.2 J	<0.33
9/24/2024	<2.2	<6.9	<6.9	110	<0.10	110	<0.18	12	<3.7	5.4	<0.0036	0.51 J	110	<0.043	<0.070	<0.070	0.027 J	0.25 J	<0.23	130	12	9.4	<0.33
12/10/2024	<2.2	<6.9	<6.9	110	<0.10	110	<0.45	8.2	<3.7	8.7	<0.0036	<0.43	120	<0.37	<0.37	<0.25	<0.024	1.5	1.2	160	9.3	17	<0.33
2/24/2025	<2.2	<6.9	<6.9	120	0.17 J	120	<0.45	10	<3.7	8.3	<0.0036	<0.43	140	3.3 J	3.3 J	<0.25	<0.024	3	<0.58	150	10	37	<0.33
4/29/2025	<2.2	<6.9	<6.9	57	<0.10	57	<0.45	8	<3.7	2.1	<0.0036	<0.43	54	<0.37	<0.37	<0.25	<0.024	1.5	1.8	58	8.2	10	<0.33
8/4/2025	<2.2	<6.9	<6.9	84	<0.10	84	<0.45	9.7	<3.7	2.7	<0.0036	<0.43	76	<0.37	<0.37	<0.25	0.049 J	<0.47	1.2	100	10	21	<0.33
10/20/2025	<2.2	<6.9	<6.9	94	<0.10	94	<0.45	10	<3.7	4.1	<0.0036	<0.43	84	<0.37	<0.37	<0.25	0.09	<0.47	14	120	11	120	<0.33
10/20/2025	<2.2	<6.9	<6.9	100	<0.10	100	<0.45	10	<3.7	4.4	<0.0036	<0.43	84	<0.37	<0.37	<0.25	0.031 J	<0.47	0.67 J	110	9.9	24	<0.33
2/9/2026	0.48	<6.9	<6.9	130	<0.10	130	<0.45	11	<3.7	7.3	<0.0036	<0.43	120	<0.37	<0.37	<0.25	0.053	1.3	1.7	130	12	13	<0.33
4/20/2026	0.5	<6.9	<20	54	0.05 J	54	<0.45	7.3	<3.7	1.7	<0.0036	<0.43	44	<1	<1	<1	0.041 J	1.1	1.3	68	7.6	3.6 J	<0.33
SBD Statistical Summary	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	8	10	10	0	8	0	10	0	10	0	10	8	0	9	9	10	4	3	3	0	0	0	10
	80%	100%	100%	0%	80%	0%	100%	0%	100%	0%	100%	80%	0%	90%	90%	100%	40%	30%	30%	0%	0%	0%	100%
	1.1	3.45	10	130	0.17	130	0.225	12	1.85	8.7	0.0018	0.51	140	3.3	3.3	0.5	0.09	3	14	160	12	120	0.165
	0.48	3.45	3.45	54	0.05	54	0.09	7.3	1.85	1.7	0.0018	0.215	44	0.0215	0.035	0.035	0.012	0.235	0.115	58	7.6	3.2	0.165
	0.98	--	--	96.90	0.06	96.90	--	9.82	--	5.01	--	0.25	94.20	0.50	0.50	--	0.03	0.97	2.24	115.60	10.10	25.82	--
	0.26	--	--	25.30	0.04	25.30	--	1.61	--	2.49	--	0.09	30.92	0.99	0.99	--	0.03	0.90	4.18	32.75	1.47	34.62	--
	-1.50	--	--	-0.65	2.67	-0.65	--	-0.11	--	0.18	--	2.56	-0.24	2.58	2.59	--	1.05	1.10	2.56	-0.55	-0.29	2.27	--

Table 4-3 (continued)

Sampling Locations & Date	Note	Conductivity (Field) (mS/cm)	Dissolved Oxygen (Field) (mg/L)	pH (Field) (SU)	Redox Potential (Field) (mV)	Temperature Field (°C)	Turbidity (NTU)	Aluminum, Dissolved (µg/L)	Aluminum, Total (µg/L)	Antimony, Dissolved (µg/L)	Antimony, Total (µg/L)	Arsenic, Dissolved (µg/L)	Arsenic, Total (µg/L)	Barium, Dissolved (µg/L)	Barium, Total (µg/L)	Beryllium, Dissolved (µg/L)	Beryllium, Total (µg/L)	Boron, Dissolved (µg/L)	Boron, Total (µg/L)	Cadmium, Dissolved (µg/L)
		Field Parameters						*Metals (Total & Dissolved)*												
SBW-01																				
7/29/2024		0.152	5.96	8.17	138	26.48	0	<25	<25	<1.3	<1.3	0.67	0.62	27	27	<0.53	<0.53	<50	<50	<0.17
9/24/2024		0.191	7.36	7.92	121	13.78	10.3	<25	<25	<1.3	<1.3	0.52	0.52	30	31	<0.53	<0.53	<50	<50	<0.17
12/10/2024		0.181	6.64	7.55	206	0.46	63	<25	370	<1.3	<1.3	0.4	0.54	28	53	<0.53	<0.53	<50	<50	<0.17
2/24/2025		0.428	7.69	7.32	164	0.35	40.5	<25	58	<1.3	<1.3	0.5	0.42	66	47	<0.53	<0.53	77	42	<0.17
4/29/2025		0.21	5.84	7.45	298	8.9	5.4	<25	29	<1.3	<1.3	0.37	0.38	35	37	<0.53	<0.53	46	51	<0.17
8/4/2025		0.138	3.44	6.99	339	25.17	242	<25	200	<1.3	<1.3	0.55	0.68	24	27	<0.53	<0.53	<50	<50	<0.17
10/20/2025		0.201	7	7.55	156	9.04	18	<25	<25	<1.3	<1.3	0.35	0.41	31	31	<0.53	<0.53	32	25	<0.17
2/9/2026		0.423	3.29	6.65	111	1.29	15.9	<25	59	<0.93	<0.93	0.35	0.44	51	56	<0.24	<0.24	74	80	<0.17
4/20/2026		0.175	5.19	6.9	208	7.13	15.5	--	--	--	--	--	--	--	--	--	--	--	--	--
SBW Statistical Summary	**Number of Observations**	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8
	Number of Non-Detect	0	0	0	0	0	0	8	3	8	8	0	0	0	0	8	8	4	4	8
	% Non-Detect	0%	0%	0%	0%	0%	0%	100%	38%	100%	100%	0%	0%	0%	0%	100%	100%	50%	50%	100%
	Maximum	0.428	7.69	8.17	339	26.48	242	12.5	370	0.65	0.65	0.67	0.68	66	56	0.265	0.265	77	80	0.085
	Minimum	0.138	3.29	6.65	111	0.35	0	12.5	12.5	0.465	0.465	0.35	0.38	24	27	0.12	0.12	25	25	0.085
	Average	0.23	5.82	7.39	193.44	10.29	51.33	--	94.19	--	--	0.46	0.50	36.50	38.63	--	--	41.13	37.25	--
	Standard Deviation	0.11	1.60	0.49	78.96	9.91	76.15	--	127.66	--	--	0.12	0.11	14.51	11.76	--	--	22.41	19.96	--
	Skewness	1.19	-0.58	0.06	0.82	0.67	2.19	--	1.48	--	--	0.56	0.51	1.24	0.45	--	--	0.87	1.38	--
TBN-01																				
7/31/2024		0.866	8.52	7.13	108	25.82	4.4	32 J	150	<1.3	<1.3	0.92 J	0.96 J	75	77	<0.53	<0.53	400	400	<0.17
10/7/2024		1.03	10.92	7.85	143	13.31	29.9	41 J	840	<1.3	<1.3	0.79 J	0.85 J	110	110	<0.53	<0.53	450	440	<0.17
12/11/2024		0.618	13.83	8.02	198	0.19	52.1	55 J	480	<1.3	<1.3	0.84 J	0.98 J	100	100	<0.53	<0.53	360	360	<0.17
2/24/2025		0.601	4.7	7.46	321	0.8	2.8	<25	89 J	<1.3	<1.3	2.2	2.1	61	63	<0.53	<0.53	160	180	<0.17
5/1/2025		0.376	11.57	8.25	165	11.62	47.2	<25	790	<1.3	<1.3	0.65 J	0.76 J	46	53	<0.53	<0.53	130	140	<0.17
8/6/2025		0.607	8.13	9.3	179	23.61	3.3	27 J	110	<1.3	<1.3	0.66 J	0.8 J	59	60	<0.53	<0.53	230	260	<0.17
10/29/2025		0.943	7.9	8.17	131	10.03	12.2	<25	150	<1.3	<1.3	0.62 J	0.63 J	110	110	<0.53	<0.53	350	340	<0.17
2/10/2026		0.877	3.31	7.56	101	0.14	999	<25	3400	<0.93	<0.93	1.4	9.3	120	150	<0.24	0.3 J	300	300	0.26 J
4/21/2026		0.308	10.79	7.56	--	8.76	126	<25	1400	<0.93	<0.93	0.46 J	0.67 J	38	46	<0.24	<0.24	96	110	<0.17
TBN Statistical Summary	**Number of Observations**	9	9	9	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	Number of Non-Detect	0	0	0	0	0	0	5	0	9	9	0	0	0	0	9	8	0	0	8
	% Non-Detect	0%	0%	0%	0%	0%	0%	56%	0%	100%	100%	0%	0%	0%	0%	100%	89%	0%	0%	89%
	Maximum	1.03	13.83	9.3	321	25.82	999	55	3400	0.65	0.65	2.2	9.3	120	150	0.265	0.3	450	440	0.26
	Minimum	0.308	3.31	7.13	101	0.14	2.8	12.5	89	0.465	0.465	0.46	0.63	38	46	0.12	0.12	96	110	0.085
	Average	0.69	8.85	7.92	168.3	10.48	142	24.17	823	--	--	0.95	1.89	79.89	85.44	--	0.25	275.11	281.11	0.10
	Standard Deviation	0.25	3.35	0.63	70.2	9.53	324	15.75	1063	--	--	0.54	2.81	30.71	34.31	--	0.05	126.51	116.88	0.06
	Skewness	-0.19	-0.30	1.04	1.32	0.43	2.41	0.90	1.75	--	--	1.56	2.37	-0.01	0.58	--	-2.21	-0.14	-0.21	2.47
TBS-01																				
7/28/2024		0.754	10.25	7.55	120	28.43	0	<25	35 J	<1.3	<1.3	0.65 J	0.68 J	65	65	<0.53	<0.53	350	350	<0.17
10/8/2024		1.04	12.87	8.47	116	8.6	7.8	<25	170	<1.3	<1.3	0.65 J	0.65 J	89	90	<0.53	<0.53	420	420	<0.17
12/11/2024		0.396	11.19	8.3	178	4.94	170	<25	600	<1.3	<1.3	0.64 J	0.94 J	72	86	<0.53	<0.53	240	250	<0.17
2/24/2025		0.484	6.02	7.46	426	0.61	11.1	<25	<25	<1.3	<1.3	0.69 J	0.72 J	82	84	<0.53	<0.53	160	170	<0.17
5/1/2025		0.601	11.35	8.05	164	12.44	14.8	<25	150	<1.3	<1.3	0.42 J	0.41 J	53	53	<0.53	<0.53	220	230	<0.17
8/13/2025		2.28	4.29	9.03	55	24.71	1.2	<25	<25	<1.3	<1.3	0.61 J	0.6 J	170	170	<0.53	<0.53	830	820	<0.17
10/20/2025		2.32	10.54	8.26	139	11.34	17.8	<25	27 J	<1.3	<1.3	0.53 J	0.6 J	170	180	<0.53	<0.53	850	850	<0.17
2/10/2026		1.18	2.45	7.19	-10	0.54	8.7	<25	<25	<0.93	<0.93	0.55 J	0.54 J	120	130	<0.24	<0.24	390	400	<0.17
4/20/2026		0.249	10.99	7.3	--	9.22	126	<25	1100	<0.93	<0.93	0.42 J	0.56 J	34	40	<0.24	<0.24	79	77	<0.17
TBS Statistical Summary	**Number of Observations**	9	9	9	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	Number of Non-Detect	0	0	0	0	0	0	9	3	9	9	0	0	0	0	9	9	0	0	9
	% Non-Detect	0%	0%	0%	0%	0%	0%	100%	33%	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	100%
	Maximum	2.32	12.87	9.03	426	28.43	170	12.5	1100	0.65	0.65	0.69	0.94	170	180	0.265	0.265	850	850	0.085
	Minimum	0.249	2.45	7.19	-10	0.54	0	12.5	12.5	0.465	0.465	0.42	0.41	34	40	0.12	0.12	79	77	0.085
	Average	1.03	8.88	7.96	148.50	11.20	44.68	--	235.50	--	--	0.57	0.63	95.00	99.78	--	--	393.22	396.33	--
	Standard Deviation	0.78	3.66	0.62	127.58	9.72	62.63	--	374.95	--	--	0.10	0.15	48.73	49.73	--	--	275.82	271.64	--
	Skewness	0.87	-0.76	0.29	1.22	0.71	1.42	--	1.62	--	--	-0.59	0.73	0.59	0.57	--	--	0.80	0.78	--
Non-Stream Sample Locations Statistical Summary	**Number of Observations**	54	54	54	52	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
	Number of Non-Detect	0	0	0	0	0	0	48	16	54	54	6	3	0	0	54	53	12	11	53
	% Non-Detect	0%	0%	0%	0%	0%	0%	89%	30%	100%	100%	11%	6%	0%	0%	100%	98%	22%	20%	98%
	Maximum	2.32	15.75	9.30	426	28.82	999	55.00	3400	0.65	0.65	2.20	9.30	170	180	0.27	0.30	850.00	850.00	0.26
	Minimum	0.11	0.46	6.65	-22.00	0.00	0.00	12.5	12.5	0.47	0.47	0.12	0.12	17.0	18.0	0.12	0.12	6.50	6.50	0.09
	Average	0.42	7.06	7.67	148.88	11.76	85.68	18.1	264	100% ND	100% ND	0.49	0.70	55.0	60.5	100% ND	0.25	132.34	134.88	0.10
	Standard Deviation	0.34	2.90	0.55	87.8	9.75	171	7.97	481	--	--	0.24	1.15	25.5	29.2	--	0.02	124.4	121.3	0.02

Table 4-3 (continued)

Metals (Total & Dissolved)

Sampling Locations & Date	Cadmium, Total (µg/L)	Calcium, Dissolved (µg/L)	Calcium, Total (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total (µg/L)	Cobalt, Dissolved (µg/L)	Cobalt, Total (µg/L)	Copper, Dissolved (µg/L)	Copper, Total (µg/L)	Iron, Dissolved (µg/L)	Iron, Total (µg/L)	Lead, Dissolved (µg/L)	Lead, Total (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total (ng/L)	Methyl Mercury, Dissolved (ng/L)
SBW-01																						
7/29/2024	<0.17	19000	18000	<1.1	<1.1	<0.40	<0.40	4.6	5	51	190	<0.19	<0.19	2.8	2.9	6700	6400	8.1	27	<0.20	<0.50	<0.022
9/24/2024	<0.17	25000	25000	<1.1	<1.1	<0.40	<0.40	3.4	3.9	56	180	<0.19	<0.19	2.9	2.9	6400	6400	3	24	<0.20	<0.20	<0.022
12/10/2024	<0.17	32000	32000	<1.1	1.4	<0.40	<0.40	3.9	19	<47	860	<0.19	0.21	3	3.6	7400	7400	15	82	0.53	0.53	<0.022
2/24/2025	<0.17	69000	46000	<1.1	<1.1	0.53	<0.40	0.55	4.5	330	1100	<0.19	<0.19	5.4	3.6	14000	9300	820	510	1.3	1.6	0.088
4/29/2025	<0.17	37000	38000	<1.1	<1.1	<0.40	<0.40	3.9	4.9	<47	160	<0.19	<0.19	<2.5	<2.5	6100	6300	8	20	0.52	0.87	<0.022
8/4/2025	<0.17	18000	18000	<1.1	<1.1	<0.40	<0.40	3.7	14	<47	770	<0.19	0.21	2.5	<2.5	6200	6300	13	51	<0.50	<0.50	<0.022
10/20/2025	<0.17	27000	27000	<1.1	<1.1	<0.40	<0.40	2.3	3.8	98	75	<0.19	<0.19	2.6	<2.5	6700	6200	24	9.7	<0.5	1.2	<0.022
2/9/2026	<0.17	64000	66000	<1.1	<1.1	<0.40	<0.40	0.58	3.1	150	450	<0.19	<0.19	5.2	5.7	13000	14000	390	420	0.87	2.3	0.15
4/20/2026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.98	1.4	0.038
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9
	8	0	0	8	7	7	8	0	0	3	0	8	6	1	3	0	0	0	0	4	3	6
	100%	0%	0%	100%	88%	88%	100%	0%	0%	38%	0%	100%	75%	13%	38%	0%	0%	0%	0%	44%	33%	67%
SBW Statistical Summary	0.085	69000	66000	0.55	1.4	0.53	0.2	4.6	19	330	1100	0.095	0.21	5.4	5.7	14000	14000	820	510	1.3	2.3	0.15
	0.085	18000	18000	0.55	0.55	0.2	0.2	0.55	3.1	23.5	75	0.095	0.095	1.25	1.25	6100	6200	3	9.7	0.1	0.1	0.011
	--	36375.00	33750.00	--	0.66	0.24	--	2.87	7.28	94.44	473.13	--	0.12	3.21	2.81	8312.50	7787.50	160.14	142.96	0.54	0.94	0.04
	--	19653.70	16166.54	--	0.30	0.12	--	1.56	5.88	104.92	388.03	--	0.05	1.40	1.55	3237.48	2721.05	297.72	201.47	0.42	0.74	0.05
	--	0.84	0.96	--	2.27	2.27	--	-0.66	1.29	1.59	0.49	--	1.15	0.57	0.57	1.13	1.72	1.62	1.16	0.56	0.50	1.57
TBN-01																						
7/31/2024	<0.17	54000	54000	<1.1	<1.1	<0.40	<0.40	24	32	<47	190	<0.19	<0.19	40	40	9000	9300	1 J	7.1	<0.20	0.25 J	<0.022
10/7/2024	<0.17	72000	69000	<1.1	2.3 J	<0.40	0.59 J	18	61	48 J	1300	<0.19	0.23 J	43	43	11000	11000	1.3 J	31	<0.20	0.46 J	<0.022
12/11/2024	<0.17	72000	71000	<1.1	1.7 J	<0.40	0.45 J	46	120	99 J	900	<0.19	0.39 J	40	41	9900	10000	20	32	<0.50	1.1	<0.022
2/24/2025	<0.17	65000	67000	<1.1	<1.1	<0.40	<0.40	46	87	<47	160	<0.19	0.42 J	27	28	7300	7500	26	32	8.3	20	<0.022
5/1/2025	<0.17	43000	45000	<1.1	2.1 J	<0.40	0.55 J	30	82	<47	1300	<0.19	0.28 J	18	19	5200	5900	1.2 J	28	0.52	1.1	<0.022
8/6/2025	<0.17	38000	39000	<1.1	<1.1	<0.40	<0.40	16	23	<47	140	<0.19	<0.19	29	30	7300	7400	0.98 J	7	0.27 J	0.39 J	<0.022
10/29/2025	<0.17	77000	76000	<1.1	<1.1	<0.40	<0.40	14	25	<47	230	<0.19	<0.19	39	40	11000	11000	<0.79	6.1	<0.20	<0.20	<0.022
2/10/2026	7.8	93000	100000	<1.1	9.1	<0.40	2.7	170	3000	<47	4200	<0.19	25	48	50	17000	20000	54	180	0.97	32	<0.022
4/21/2026	<0.17	36000	36000	<1.1	3.5 J	<0.40	0.94 J	21	110	<47	2300	<0.19	0.38 J	14	17	4300	5400	17	69	1.2	1.2	0.041 J
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	8	0	0	9	4	9	4	0	0	7	0	9	3	0	0	0	0	1	0	4	1	8
	89%	0%	0%	100%	44%	100%	44%	0%	0%	78%	0%	100%	33%	0%	0%	0%	0%	11%	0%	44%	11%	89%
TBN Statistical Summary	7.8	93000	100000	0.55	9.1	0.2	2.7	170	3000	99	4200	0.095	25	48	50	17000	20000	54	180	8.3	32	0.041
	0.085	36000	36000	0.55	0.55	0.2	0.2	14	23	23.5	140	0.095	0.095	14	17	4300	5400	0.395	6.1	0.1	0.1	0.011
	0.94	61111	61889	--	2.32	--	0.67	42.78	393.33	34.61	1191.11	--	3.00	33.11	34.22	9111	9722	13.5	43.6	1.31	6.29	0.01
	2.57	19573	20472	--	2.75	--	0.80	49.19	978.15	25.47	1345.62	--	8.25	11.71	11.31	3792	4370	18.2	54.8	2.65	11.58	0.01
	2.47	0.08	0.38	--	1.86	--	2.04	2.21	2.47	2.08	1.33	--	2.47	-0.46	-0.33	0.78	1.48	1.30	1.93	2.37	1.56	2.47
TBS-01																						
7/28/2024	<0.17	51000	52000	<1.1	<1.1	<0.40	<0.40	24	26	<47	47 J	<0.19	<0.19	36	36	6800	6900	2.3 J	5	<0.5	<0.20	<0.022
10/8/2024	<0.17	73000	74000	<1.1	<1.1	<0.40	<0.40	12	20	<47	260	<0.19	<0.19	42	42	7600	7700	<0.79	6.7	<0.20	0.27 J	<0.022
12/11/2024	<0.17	63000	66000	<1.1	1.4 J	<0.40	0.84 J	25	290	<47	1600	<0.19	0.41 J	28	30	5900	6300	43	77	0.82	3.3	<0.022
2/24/2025	<0.17	84000	83000	<1.1	<1.1	<0.40	<0.40	25	28	<47	56 J	<0.19	<0.19	26	28	12000	12000	5.1	36	1	1	<0.022
5/1/2025	<0.17	64000	64000	<1.1	<1.1	<0.40	<0.40	35	43	<47	250	<0.19	<0.19	22	23	5300	5400	4.1	8.3	0.7	1	<0.022
8/13/2025	<0.17	170000	170000	<1.1	<1.1	<0.40	<0.40	12	21	<47	<47	<0.19	<0.19	77	76	14000	14000	48	21	0.66	0.34 J	0.028 J
10/20/2025	<0.17	160000	160000	<1.1	<1.1	<0.40	<0.40	12	15	<47	<47	<0.19	<0.19	73	75	13000	13000	1.5 J	4.4	0.32 J	<0.20	<0.022
2/10/2026	<0.17	110000	110000	<1.1	<1.1	<0.40	<0.40	1.6 J	14	460	550	<0.19	<0.19	35	35	11000	11000	630	650	0.39 J	0.64	0.24
4/20/2026	<0.17	34000	35000	<1.1	2.2 J	<0.40	0.89 J	37	120	47 J	1800	<0.19	0.23 J	9.5 J	10	2900	3700	23	66	1.9	2.5	0.05
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	9	0	0	9	7	9	7	0	0	7	2	9	7	0	0	0	0	1	0	2	2	6
	100%	0%	0%	100%	78%	100%	78%	0%	0%	78%	22%	100%	78%	0%	0%	0%	0%	11%	0%	22%	22%	67%
TBS Statistical Summary	0.085	170000	170000	0.55	2.2	0.2	0.89	37	290	460	1800	0.095	0.41	77	76	14000	14000	630	650	1.9	3.3	0.24
	0.085	34000	35000	0.55	0.55	0.2	0.2	1.6	14	23.5	23.5	0.095	0.095	9.5	10	2900	3700	0.395	4.4	0.1	0.1	0.011
	--	89888.89	90444.44	--	0.83	--	0.35	20.40	64.11	74.61	512.22	--	0.15	38.72	39.44	8722.22	8888.89	84.16	97.16	0.68	1.03	0.04
	--	47548.51	47069.39	--	0.59	--	0.29	11.77	90.88	144.73	696.21	--	0.11	22.59	22.35	3882.90	3679.82	205.52	209.08	0.54	1.13	0.08
	--	0.73	0.74	--	1.72	--	1.34	-0.04	1.97	2.46	1.16	--	1.88	0.73	0.73	0.01	0.09	2.44	2.40	1.24	1.14	2.34
	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	55	55	55
	52	0	0	54	43	53	45	2	0	26	3	54	40	15	18	0	0	2	0	14	10	41
	96%	0%	0%	100%	80%	98%	83%	4%	0%	48%	6%	100%	74%	28%	33%	0%	0%	4%	0%	25%	18%	75%
Non-Stream Sample Locations Statistical Summary	7.80	170000	170000	0.55	9.10	0.53	2.70	170.00	3000	2700	6800	0.10	25.00	77.00	76.00	17000	20000	820	1200	8.30	32.00	0.32
	0.09	14000	14000	0.55	0.55	0.20	0.20	0.25	0.54	23.50	23.50	0.10	0.10	1.00	1.00	2400	2400	0.40	4.20	0.03	0.03	0.01
	0.53	44157	44073	100% ND	1.02	0.24	0.43	12.25	79.8	192.7	887.4	100% ND	0.61	16.57	16.96	6849	6922	85.75	127.65	0.80	2.08	0.03
	1.05	23074	22635	--	1.16	0.04	0.35	20.81	401	490	1218	--	3.37	10.48	10.32	2681	2705	171.7	203.7	1.21	4.98	0.06

Table 4-3 (continued)

Metals (Total & Dissolved)

Sampling Locations & Date	Methyl Mercury, Total (ng/L)	Molybdenum, Dissolved (µg/L)	Molybdenum, Total (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total (µg/L)	Potassium, Dissolved (µg/L)	Potassium, Total (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total (µg/L)	Silver, Dissolved (µg/L)	Silver, Total (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total (µg/L)	Tin, Dissolved (µg/L)	Tin, Total (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total (µg/L)	Vanadium, Dissolved (µg/L)
SBW-01																						
7/29/2024	<0.022	<2.5	<2.5	<0.63	<0.63	380	350	<0.98	<0.98	<0.12	<0.12	3400	3400	71	67	<0.57	<0.57	<1.3	<1.3	0.018	0.032	<2.2
9/24/2024	<0.022	<2.5	<2.5	<0.63	<0.63	570	570	<0.98	<0.98	<0.12	<0.12	3500	3500	70	70	<0.57	<0.57	<1.3	<1.3	0.014	0.013	<2.2
12/10/2024	<0.05	3.6	6	<0.63	<0.63	1000	1400	<0.98	<0.98	<0.12	0.15	4900	5400	79	79	<0.57	<0.57	<1.3	<1.3	0.053	0.089	<2.2
2/24/2025	0.14	24	11	<0.63	<0.63	2300	1800	<0.98	<0.98	<0.12	<0.12	16000	8500	180	110	<0.57	<0.57	<1.3	<1.3	0.17	0.18	<2.2
4/29/2025	<0.050	6.7	6.7	<0.63	<0.63	1800	1900	<0.98	<0.98	<0.12	<0.12	3100	3300	75	79	<0.57	<0.57	<1.3	<1.3	0.082	0.089	<2.2
8/4/2025	<0.022	<2.5	<2.5	<0.63	<0.63	1000	470	<0.98	<0.98	<0.12	<0.12	3000	2800	58	58	<0.57	<0.57	<1.3	<1.3	0.01	0.078	<2.2
10/20/2025	<0.022	<2.5	<2.5	<0.63	<0.63	1100	810	<0.98	<0.98	<0.12	<0.12	3400	3000	70	68	<0.57	<0.57	<1.3	<1.3	0.014	0.022	<2.2
2/9/2026	0.27	13	14	<0.63	<0.63	2000	2100	<0.98	<0.98	<0.12	<0.12	14000	14000	150	160	<0.25	<0.25	<1.3	<1.3	0.14	0.15	<0.084
4/20/2026	0.1 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.078	0.074	--
SBW Statistical Summary	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	8
	6	4	4	8	8	0	0	8	8	8	7	0	0	0	0	8	8	8	8	0	0	8
	67%	50%	50%	100%	100%	0%	0%	100%	100%	100%	88%	0%	0%	0%	0%	100%	100%	100%	100%	0%	0%	100%
	0.27	24	14	0.315	0.315	2300	2100	0.49	0.49	0.06	0.15	16000	14000	180	160	0.285	0.285	0.65	0.65	0.17	0.18	1.1
	0.011	1.25	1.25	0.315	0.315	380	350	0.49	0.49	0.06	0.06	3000	2800	58	58	0.125	0.125	0.65	0.65	0.01	0.013	0.042
	0.07	6.54	5.34	--	--	1268.75	1175.00	--	--	--	0.07	6412.50	5487.50	94.13	86.38	--	--	--	--	0.06	0.08	--
	0.09	8.17	5.02	--	--	689.87	707.05	--	--	--	0.03	5358.95	3928.81	44.87	33.54	--	--	--	--	0.06	0.06	--
	1.48	1.39	0.68	--	--	0.26	0.11	--	--	--	2.27	1.15	1.47	1.20	1.50	--	--	--	--	0.72	0.51	--
TBN-01																						
7/31/2024	<0.022	44	45	<0.63	<0.63	4000	4000	<0.98	<0.98	<0.12	<0.12	89000	90000	850	880	<0.57	<0.57	<1.3	<1.3	0.42	0.4	<2.2
10/7/2024	<0.022	56	54	<0.63	1.4 J	5200	5200	<0.98	<0.98	<0.12	<0.12	100000	100000	960	920	<0.57	<0.57	<1.3	<1.3	0.56	0.59	<2.2
12/11/2024	<0.022	56	53	<0.63	1.1 J	7000	7000	<0.98	<0.98	<0.12	<0.12	76000	75000	850	840	<0.57	<0.57	<1.3	<1.3	0.68	0.67	<2.2
2/24/2025	<0.022	14	14	<0.63	<0.63	4100	4200	1.5 J	1.3 J	<0.12	<0.12	35000	35000	660	680	<0.57	<0.57	<1.3	<1.3	0.63	0.67	<2.2
5/1/2025	<0.022	25	26	<0.63	1.3 J	3300	3700	<0.98	<0.98	<0.12	<0.12	24000	25000	390	410	<0.57	<0.57	<1.3	<1.3	0.38	0.4	<2.2
8/6/2025	<0.022	25	25	<0.63	<0.63	2900	3000	<0.98	<0.98	<0.12	<0.12	57000	58000	600	600	<0.57	<0.57	<1.3	<1.3	0.25	0.27	<2.2
10/29/2025	0.029 J	37	37	<0.63	<0.63	5200	5200	<0.98	<0.98	<0.12	<0.12	93000	92000	970	970	<0.57	<0.57	<1.3	<1.3	0.46	0.47	<2.2
2/10/2026	0.078	96	91	0.71 J	7	8600	9000	<0.98	<0.98	<0.12	2	76000	73000	990	910	<0.25	<0.25	<1.3	<1.3	1.9	2.1	0.9
4/21/2026	0.04 J	16	16	<0.63	1.7 J	2500	2700	<0.98	<0.98	<0.12	<0.12	21000	21000	320	330	<0.25	<0.25	<1.3	<1.3	0.27	0.29	0.46
TBN Statistical Summary	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	0	0	8	4	0	0	8	8	9	8	0	0	0	0	9	9	9	9	0	0	7
	67%	0%	0%	89%	44%	0%	0%	89%	89%	100%	89%	0%	0%	0%	0%	100%	100%	100%	100%	0%	0%	78%
	0.078	96	91	0.71	7	8600	9000	1.5	1.3	0.06	2	100000	100000	990	970	0.285	0.285	0.65	0.65	1.9	2.1	1.1
	0.011	14	14	0.315	0.315	2500	2700	0.49	0.49	0.06	0.06	21000	21000	320	330	0.125	0.125	0.65	0.65	0.25	0.27	0.46
	0.02	41.00	40.11	0.36	1.53	4756	4889	0.60	0.58	--	0.28	63444	63222	732.2	726.7	--	--	--	--	0.62	0.65	1.01
	0.02	25.90	24.17	0.13	2.12	1996	2018	0.34	0.27	--	0.65	30385	29999	253.1	235.2	--	--	--	--	0.50	0.56	0.22
	1.68	0.99	0.93	2.47	2.16	0.78	0.95	2.47	2.47	--	2.47	-0.31	-0.29	-0.55	-0.65	--	--	--	--	2.08	2.15	-2.11
TBS-01																						
7/28/2024	<0.022	5	5	<0.63	<0.63	1900	1900	<0.98	<0.98	<0.12	<0.12	70000	70000	880	880	<0.57	<0.57	<1.3	<1.3	0.086	0.08	<2.2
10/8/2024	<0.022	4.6 J	4.6 J	<0.63	<0.63	3900	4000	<0.98	<0.98	<0.12	<0.12	80000	81000	1100	1100	<0.57	<0.57	<1.3	<1.3	0.2	0.21	<2.2
12/11/2024	<0.5	4.6 J	<2.5	<0.63	1.3 J	5000	5100	<0.98	<0.98	<0.12	<0.12	46000	46000	710	750	<0.57	<0.57	<1.3	<1.3	0.33	0.63	<2.2
2/24/2025	<0.022	13	13	<0.63	<0.63	5500	5600	1.2 J	<0.98	<0.12	<0.12	32000	33000	640	660	<0.57	<0.57	<1.3	<1.3	0.8	0.83	<2.2
5/1/2025	<0.022	5.5	5.4	<0.63	<0.63	3400	3300	<0.98	<0.98	<0.12	<0.12	49000	51000	660	660	<0.57	<0.57	<1.3	<1.3	0.27	0.25	<2.2
8/13/2025	0.046 J	<2.5	<2.5	<0.63	<0.63	8200	8000	<0.98	<0.98	<0.12	<0.12	240000	240000	2500	2500	<0.57	<0.57	<1.3	<1.3	0.068	0.073	<2.2
10/20/2025	<0.022	2.7 J	3 J	<0.63	<0.63	7400	7400	<0.98	<0.98	<0.12	<0.12	230000	240000	2400	2400	<0.57	<0.57	<1.3	<1.3	0.13	0.14	<2.2
2/10/2026	0.35	3.4 J	3.7 J	<0.63	<0.63	5500	5500	<0.98	<0.98	<0.12	<0.12	100000	100000	1200	1200	<0.25	<0.25	<1.3	<1.3	0.31	0.3	0.27
4/20/2026	0.066	3.3 J	3.2 J	<0.63	1.7 J	1900	2100	<0.98	<0.98	<0.12	<0.12	15000	15000	310	310	<0.25	<0.25	<1.3	<1.3	0.13	0.15	0.36
TBS Statistical Summary	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	1	2	9	7	0	0	8	9	9	9	0	0	0	0	9	9	9	9	0	0	7
	67%	11%	22%	100%	78%	0%	0%	89%	100%	100%	100%	0%	0%	0%	0%	100%	100%	100%	100%	0%	0%	78%
	0.35	13	13	0.315	1.7	8200	8000	1.2	0.49	0.06	0.06	240000	240000	2500	2500	0.285	0.285	0.65	0.65	0.8	0.83	1.1
	0.011	1.25	1.25	0.315	0.315	1900	1900	0.49	0.49	0.06	0.06	15000	15000	310	310	0.125	0.125	0.65	0.65	0.068	0.073	0.27
	0.09	4.82	4.49	--	0.58	4744.44	4766.67	0.57	--	--	--	95777.78	97333.33	1155.56	1162.22	--	--	--	--	0.26	0.30	0.93
	0.13	3.34	3.52	--	0.53	2205.17	2144.76	0.24	--	--	--	82919.81	84726.03	779.59	775.19	--	--	--	--	0.22	0.26	0.35
	1.39	1.74	1.65	--	1.46	0.15	0.09	2.47	--	--	--	1.02	1.03	0.95	0.95	--	--	--	--	1.67	1.19	-1.35
Non-Stream Sample Locations Statistical Summary	55	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	55	55	54
	37	27	28	52	45	0	0	52	53	54	52	0	0	0	0	54	54	54	54	9	7	47
	67%	50%	52%	96%	83%	0%	0%	96%	98%	100%	96%	0%	0%	0%	0%	100%	100%	100%	100%	16%	13%	87%
	0.57	96.00	91.00	1.10	7.00	8600	9000	1.50	1.30	0.06	2.00	240000	240000	2500	2500	0.29	0.29	0.65	0.65	1.90	2.10	1.10
	0.01	1.25	1.25	0.32	0.32	110	110	0.49	0.49	0.06	0.06	910	910	51.0	51.0	0.13	0.13	0.65	0.65	0.00	0.00	0.04
	0.06	14.05	13.47	0.38	0.87	2252	2289	0.59	0.58	100% ND	0.17	29229	29301	378.8	378.2	100% ND	100% ND	100% ND	100% ND	0.19	0.21	0.93
	0.10	11.17	10.22	0.12	0.91	1321	1320	0.17	0.11	--	0.26	36124	36737	336	332	--	--	--	--	0.23	0.26	0.29

Table 4-3 (continued)

Sampling Locations & Date	Vanadium, Total (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total (µg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Bicarbonate Alkalinity (as CaCO3) (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Carbonate Alkalinity (as CaCO3) (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Salinity (PSU)
	Metals (Total & Dissolved)			*General Parameters*																			
SBW-01																							
7/29/2024	<2.2	<6.9	<6.9	78	<0.10	78	<0.18	8.2	<3.7	<1.0	<0.0036	0.26	72	<0.043	<0.070	<0.070	<0.024	<0.21	<0.23	88	7.5	4.2	<0.33
9/24/2024	<2.2	<6.9	<6.9	97	<0.10	97	<0.18	9.3	<3.7	<1.0	<0.0036	0.48	89	<0.043	<0.070	<0.070	<0.024	<0.21	<0.23	86	7.4	<1.9	<0.33
12/10/2024	<2.2	<6.9	21	120	<0.10	120	<0.45	6.2	<3.7	1.7	<0.0036	<0.43	110	<0.37	<0.37	<0.25	0.06	0.76	1.3	140	7.6	25	<0.33
2/24/2025	<2.2	<6.9	<6.9	130	<0.10	130	<0.45	10	<3.7	3.9	<0.0036	<0.43	150	<0.37	<0.37	<0.25	<0.024	1.6	<0.58	150	11	7.6	<0.33
4/29/2025	<2.2	<6.9	<6.9	120	<0.10	120	<0.45	5.9	<3.7	1.7	<0.0036	<0.43	120	<0.37	<0.37	<0.25	<0.024	<0.47	1.7	96	6.2	4.8	<0.33
8/4/2025	<2.2	<6.9	<6.9	84	<0.10	84	<0.45	7.6	<3.7	<0.42	<0.0036	<0.43	72	<0.37	<0.37	<0.25	0.14	<0.47	1.4	42	7.7	46	<0.33
10/20/2025	<2.2	<6.9	<6.9	120	<0.10	120	<0.45	9.4	<3.7	0.87	<0.0036	<0.43	93	<0.37	<0.37	<0.25	<0.024	<0.47	0.54	110	6.3	<1.9	<0.33
2/9/2026	0.17	<6.9	<6.9	230	<0.10	230	<0.45	17	<3.7	5.9	<0.0036	<0.43	220	<0.37	<0.37	<0.25	0.11	1.6	0.67	260	19	22	<0.33
4/20/2026	--	--	<20	--	--	--	--	--	--	--	--	--	--	1.6 J	1.6 J	<1	--	--	--	--	--	--	--
	8	8	9	8	8	8	8	8	8	8	8	8	8	9	9	9	8	8	8	8	8	8	8
	7	8	8	0	8	0	8	0	8	3	8	6	0	8	8	9	5	5	3	0	0	2	8
	88%	100%	89%	0%	100%	0%	100%	0%	100%	38%	100%	75%	0%	89%	89%	100%	63%	63%	38%	0%	0%	25%	100%
SBW Statistical Summary	1.1	3.45	21	230	0.05	230	0.225	17	1.85	5.9	0.0018	0.48	220	1.6	1.6	0.5	0.14	1.6	1.7	260	19	46	0.165
	0.17	3.45	3.45	78	0.05	78	0.09	5.9	1.85	0.21	0.0018	0.215	72	0.0215	0.035	0.035	0.012	0.105	0.115	42	6.2	0.95	0.165
	0.98	--	6.13	122.38	--	122.38	--	9.20	--	1.91	--	0.25	115.75	0.31	0.31	--	0.05	0.61	0.77	121.50	9.09	13.94	--
	0.33	--	5.98	47.42	--	47.42	--	3.48	--	2.00	--	0.09	49.50	0.49	0.49	--	0.05	0.65	0.62	65.27	4.27	15.91	--
	-2.27	--	1.99	1.56	--	1.56	--	1.47	--	1.15	--	2.15	1.23	2.37	2.39	--	0.96	0.87	0.35	1.14	1.81	1.08	--
TBN-01																							
7/31/2024	<2.2	<6.9	<6.9	40	<0.10	40	1.7	4.6	<3.7	210	<0.0036	0.33 J	170	<0.043	<0.070	<0.070	<0.024 J	34	<0.23	530	4.7	2 J	<0.33
10/7/2024	2.4 J	<6.9	<6.9	71	<0.10	71	1.9	4	<3.7	210	<0.0036	0.55 J	220	<0.043	<0.070	<0.070	<0.024	31	<0.23	570	3.9	13	<0.33
12/11/2024	<2.2	<6.9	<6.9	98	<0.10	98	1.7	4.6	<3.7	180	<0.0036	<0.43	220	<0.37	<0.37	<0.25	0.041 J	44	0.64 J	520	4.9	36	<0.33
2/24/2025	<2.2	<6.9	<6.9	93	<0.10	93	0.61 J	3.6	<3.7	77	<0.0036	<0.43	200	<0.37	<0.37	<0.25	<0.024	28	<0.58	320	3.9	<1.9	<0.33
5/1/2025	2.8 J	<6.9	<6.9	85	<0.10	85	0.54 J	4.2	<3.7	60	<0.0036	<0.43	140	<0.37	<0.37	<0.25	<0.024	14	<0.23	240	4.2	4 J	<0.33
8/6/2025	<2.2	<6.9	<6.9	42	<0.10	32	1.3	4.1	11	150	<0.0036	<0.43	130	<0.37	<0.37	<0.25	<0.05	16	<0.23	340	4.2	2.2 J	<0.33
10/29/2025	<2.2	<6.9	<6.9	87	<0.10	87	1.9	3.7	<3.7	230	<0.0036	<0.43	230	<0.37	<0.37	<0.25	<0.024	24	5.9	560	3.3	4.6 J	<0.33
2/10/2026	8	<6.9	56	190	<0.10	190	1.6	7.2	<3.7	170	<0.0036	<0.43	330	<0.37	<0.37	<0.25	0.11	42	6	590	7.6	150	<0.33
4/21/2026	4.2	<6.9	<20	77	0.06 J	77	0.47 J	3.3	<3.7	58	<0.0036	<0.43	110	<1	<1	<1	0.024 J	7.8	<0.23	180	3.3	28	<0.33
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	5	9	8	0	8	0	0	0	8	0	9	7	0	9	9	9	6	0	6	0	0	1	9
	56%	100%	89%	0%	89%	0%	0%	0%	89%	0%	100%	78%	0%	100%	100%	100%	67%	0%	67%	0%	0%	11%	100%
TBN Statistical Summary	8	3.45	56	190	0.06	190	1.9	7.2	11	230	0.0018	0.55	330	0.5	0.5	0.5	0.11	44	6	590	7.6	150	0.165
	1.1	3.45	3.45	40	0.05	32	0.47	3.3	1.85	58	0.0018	0.215	110	0.0215	0.035	0.035	0.012	7.8	0.115	180	3.3	0.95	0.165
	2.54	--	10.02	87.00	0.05	85.89	1.30	4.37	2.87	149.44	--	0.27	194.44	--	--	--	0.03	26.76	1.49	427.78	4.44	26.75	--
	2.32	--	17.38	43.82	0.00	45.21	0.60	1.15	3.05	67.81	--	0.11	66.92	--	--	--	0.03	12.49	2.53	157.70	1.30	47.90	--
	1.61	--	2.41	1.41	2.47	1.25	-0.48	1.82	2.47	-0.36	--	2.05	0.67	--	--	--	2.07	-0.07	1.32	-0.42	1.69	2.17	--
TBS-01																							
7/28/2024	<2.2	<6.9	<6.9	33	<0.10	19	1.4	6.8	14	150	<0.0036	0.36 J	160	<0.043	<0.070	<0.070	<0.024 J	26	<0.23	400	6.9	2.4 J	<0.33
10/8/2024	<2.2	<6.9	<6.9	54	<0.10	54	1.8	5.9	<3.7	210	<0.0036	0.55 J	220	<0.043	<0.070	<0.070	<0.024	32	<0.23	470	5.9	3 J	<0.33
12/11/2024	2.6 J	<6.9	7.8 J	99	<0.10	99	0.83 J	6.3	<3.7	110	<0.0036	<0.43	190	<0.37	<0.37	<0.25	0.14	24	1.5	350	7.7	120	<0.33
2/24/2025	<2.2	<6.9	<6.9	170	0.21	170	0.59 J	9.2	<3.7	75	<0.0036	<0.43	260	<0.37	<0.37	<0.25	<0.024	17	<0.23	350	9.6	3.2 J	<0.33
5/1/2025	<2.2	<6.9	<6.9	84	<0.10	84	1.2	5	<3.7	130	<0.0036	<0.43	180	<0.37	<0.37	<0.25	<0.024	25	<0.23	400	6	4 J	<0.33
8/13/2025	<2.2	<6.9	<6.9	37	<0.10	37	5.6	10	<3.7	650	<0.0036 J	<0.43	490	<0.37	<0.37	<0.25	<0.05	76	<1.0	1500	7.9	2 J	1.3
10/20/2025	<2.2	<6.9	<6.9	55	<0.10	55	5.9	4.4	<3.7	680	<0.0036	<0.43	460	<0.37	<0.37	<0.25	<0.024	70	8.1	1200	4.5	2.4 J	1.3
2/10/2026	0.32	<6.9	<6.9	160	0.14 J	160	2.4	9.9	<3.7	270	<0.0036	<0.43	320	<0.37	<0.37	<0.25	0.062	25	2.8	690	10	7.8	0.48
4/20/2026	3.3	<6.9	<20	67	<0.049	67	<0.45	5.5	<3.7	45	<0.0036	<0.43	100	1.1 J	1.1 J	<1	0.1	5.1	0.47 J	180	5.3	31	<0.33
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	9	8	0	7	0	1	0	8	0	9	7	0	8	8	9	6	0	5	0	0	0	6
	67%	100%	89%	0%	78%	0%	11%	0%	89%	0%	100%	78%	0%	89%	89%	100%	67%	0%	56%	0%	0%	0%	67%
TBS Statistical Summary	3.3	3.45	10	170	0.21	170	5.9	10	14	680	0.0018	0.55	490	1.1	1.1	0.5	0.14	76	8.1	1500	10	120	1.3
	0.32	3.45	3.45	33	0.0245	19	0.225	4.4	1.85	45	0.0018	0.215	100	0.0215	0.035	0.035	0.012	5.1	0.115	180	4.5	2	0.165
	1.42	--	4.66	84.33	0.07	82.78	2.22	7.00	3.20	257.78	--	0.27	264.44	0.25	0.25	--	0.04	33.34	1.54	615.56	7.09	19.53	0.45
	0.92	--	2.47	50.29	0.06	52.26	2.11	2.15	4.05	240.57	--	0.12	134.55	0.33	0.32	--	0.05	23.74	2.62	443.60	1.88	38.79	0.49
	1.14	--	1.51	0.80	1.55	0.67	1.03	0.42	2.47	1.08	--	1.87	0.68	2.24	2.28	--	1.17	0.97	1.99	1.14	0.30	2.24	1.20
	54	54	55	54	54	54	54	54	54	54	54	54	54	55	55	55	54	54	54	54	54	54	54
	41	54	50	0	48	0	37	0	51	3	53	43	0	51	51	55	33	25	27	0	0	5	51
	76%	100%	91%	0%	89%	0%	69%	0%	94%	6%	98%	80%	0%	93%	93%	100%	61%	46%	50%	0%	0%	9%	94%
Non-Stream Sample Locations Statistical Summary	8.00	3.45	56.00	230.00	2.10	230	5.90	17.0	14.0	680	0.00	0.55	490	3.30	3.30	0.50	0.25	76.0	15.0	1500	19.0	160	1.30
	0.04	3.45	3.45	33.00	0.02	19.0	0.09	3.30	1.85	0.21	0.00	0.10	44.0	0.02	0.04	0.04	0.01	0.11	0.12	34.0	3.30	0.95	0.17
	1.30	100% ND	5.97	92.97	0.12	92.4	1.76	7.39	2.89	70.9	0.00	0.25	139	0.34	0.35	100% ND	0.04	12.38	1.55	244.2	7.55	19.45	0.45
	1.05	--	7.71	36.67	0.28	37.51	0.89	1.95	2.26	102.1	0.00	0.10	66.71	0.53	0.53	--	0.05	10.96	3.13	195.71	2.22	36.60	0.20

Units:
µg/L = microgram per liter
mg/L = milligram per liter
ng/L = nanogram per liter
PSU = Practical Salinity Unit
SU = standard units
mV = millivolts
C = degrees Celsius
NTU = Nephelometric Turbidity Units

Notes:
J-values indicate estimated results
1. Cells with dashes "--" represent an analyte not tested during that event or a non-applicable statistic.
2. Significant figures are as reported from laboratory electronic data deliverables.
3. Baseline surface water sampling conducted between July 1, 2024 and June 30, 2026.
4. For non-detected constituent results, statistics calculated using one-half of the detection limit.
5. Duplicate sample results are included in statistical summaries.

Prepared By: TPC
Checked By: GMB

Table 5-1
Vertical Hydraulic Gradients
White Pine Copper LLC

Date	Groundwater Elevation (FT NAVD88) Nested Well Pair		Groundwater Elevation (FT NAVD88) Nested Well Pairs			Groundwater Elevation (FT NAVD88) Nested Well Pair		Groundwater Elevation (FT NAVD88) Nested Well Pairs		Groundwater Elevation (FT NAVD88) Nested Well Pairs			Groundwater Elevation (FT NAVD88) Nested Well Pair		Vertical Hydraulic Gradient (ft/ft) ("-" is up AND "+" is down)																	
	MW-1AR	MW-1BR	MW-2B	MW-2A	MW-2SB	MW-3B	MW-3A	MW-5A	MW-5SB	SMW-1	SMW-1SB	BMW-1	SMW-3	SMW-3SB	Paired Monitoring Wells:															
Screened Unit	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Deep Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Deep Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock
Top of Screen El. (FT NAVD88)	708.3	693.7	714.7	701.4	664.8	723.3	707.7	695.0	643.6	762.3	715.4	311.1	1028.7	977.4																
Bottom of Screen El. (FT NAVD88)	697.7	689.2	704.7	691.4	634.8	713.3	697.7	685.0	614.1	752.1	655.8	211.7	1013.7	927.3																
Midpoint Screen El. (FT NAVD88)	703.0	691.5	709.7	696.4	649.8	718.3	702.7	690.0	628.8	757.2	685.6	261.4	1021.2	952.4	MW-1A-R to MW-1B-R		MW-2B to MW-2A		MW-2A to MW-2SB		MW-3B to MW-3A		MW-5A to MW-5SB		SMW-1 to SMW-1SB		SMW-1 to BMW-1		SMW-3 to SMW-3SB	
Vertical Separation of Screen Midpoints (feet)	11.5		13.3	46.7		15.6		61.1		71.6		495.8	68.8																	
8/20/1997			716.40	716.00		720.53	719.78										0.0302	down			0.0480	down								
8/30/1997										761.70																				
8/14/1998						718.72	718.01			759.13											0.0455	down								
6/6/2006						722.90	722.94			765.03											-0.0026	up								
8/23/2006						717.86	718.08			764.65											-0.0141	up								
8/26/2006	709.80	709.18													0.0537	down														
10/26/2006	711.86	709.70				720.13	719.73			763.68					0.1871	down					0.0256	down								
5/1/2007	713.10	711.60				723.86	723.23			764.33					0.1299	down					0.0404	down								
7/29/2007										764.59																				
7/31/2007	713.01	711.63													0.1195	down														
8/1/2007						717.91	717.23														0.0436	down								
10/16/2007							721.63																							
6/11/2008	713.41	711.93				722.98	722.29			765.08					0.1282	down					0.0442	down								
8/18/2008	712.82	712.01				717.31	716.48			764.71					0.0701	down					0.0532	down								
10/22/2008	711.42	709.96				719.72	719.08			763.95					0.1264	down					0.0410	down								
5/27/2009	713.19	711.71	716.63	716.58		724.24	723.46			765.00					0.1282	down	0.0038	down			0.0500	down								
8/17/2009			713.75	713.51		718.69	717.97										0.0181	down			0.0461	down								
8/18/2009	712.41	711.01								764.85					0.1212	down														
10/6/2009										764.95																				
10/7/2009	712.08	710.61	716.52	716.30		720.66	719.83								0.1273	down	0.0166	down			0.0532	down								
6/19/2010	713.34	711.88	716.13	716.00		723.06	722.43			765.58					0.1264	down	0.0098	down			0.0404	down								
8/23/2010	713.21	711.80	715.20	715.02		720.04	719.38			765.73					0.1221	down	0.0136	down			0.0423	down								
11/1/2010	711.96	710.48	716.38	716.20		721.44	720.79			765.68					0.1282	down	0.0136	down			0.0416	down								
6/23/2011	714.08	712.39	717.36	717.10		724.15	723.40			766.13					0.1464	down	0.0196	down			0.0480	down								
8/16/2011	713.61	711.86	713.35	713.12		719.36	718.69			765.77					0.1516	down	0.0174	down			0.0429	down								
10/6/2011	712.07	710.33	715.56	715.33		719.96	719.33			765.18					0.1507	down	0.0174	down			0.0404	down								
6/26/2012	713.86	712.15	716.35	716.13		723.15	722.48			765.90					0.1481	down	0.0166	down			0.0429	down								
7/18/2012	713.82	712.05	713.78	713.51		720.23	719.86			765.90					0.1533	down	0.0204	down			0.0237	down								
9/3/2012	712.97	711.26	712.12	711.90		717.82	717.13			765.75					0.1481	down	0.0166	down			0.0442	down								
5/30/2013		712.08																												
5/31/2013	713.78		717.79	717.60		724.65	724.07			765.96							0.0143	down			0.0372	down								
8/13/2013										766.15																				
8/23/2013	713.78	712.05	714.37	714.14		720.91	720.27								0.1498	down	0.0174	down			0.0410	down								
10/29/2013	712.73	711.03	716.99	716.80		722.01	721.41			765.74					0.1472	down	0.0143	down			0.0384	down								
6/5/2014	713.73	712.15	717.65	717.49		724.72	724.18			766.10					0.1368	down	0.0121	down			0.0346	down								
8/11/2014	713.63	711.89	714.50	714.81		721.02	720.47			765.95					0.1507	down	-0.0234	up			0.0352	down								
10/8/2014	713.46	711.78	717.44	717.21		723.26	722.61			766.77					0.1455	down	0.0174	down			0.0416	down								
6/23/2015	713.76	712.05	717.58	717.27		723.99	723.43			766.48					0.1481	down	0.0234	down			0.0359	down								
8/31/2015	713.01	711.28	715.26	714.94		720.01	719.44			766.34					0.1498	down	0.0241	down			0.0365	down								
10/7/2015	712.33	710.65	713.19	715.69		720.00	719.37			766.58					0.1455	down	-0.1886	up			0.0404	down								
6/20/2016	713.74	712.04	717.05	716.80		724.01	723.46			766.70					0.1472	down	0.0189	down			0.0352	down								
8/9/2016										766.65																				
8/10/2016	713.39	711.67	712.82	712.45											0.1490	down	0.0279	down												
8/11/2016						719.45	718.40														0.0673	down								
10/13/2016	713.04	711.33	717.23	716.93		722.11	721.53			766.85					0.1481	down	0.0226	down			0.0372	down								
7/4/2017	713.79	712.03	717.30	717.06		723.86	723.29			766.65					0.1524	down	0.0181	down			0.0365	down								
8/22/2017	713.85	712.17	717.53	717.18		723.02	722.43			766.85					0.1455	down	0.0264	down			0.0378	down								
10/18/2017	716.50	714.82	717.70	717.40		723.32	722.69			767.00					0.1455	down	0.0226	down			0.0404	down								
7/10/2018	713.61	711.93	716.56	716.25		723.21	722.65			766.65					0.1455	down	0.0234	down			0.0359	down								
8/9/2018	716.50	714.79	716.80	716.42		721.56	721.00			766.77					0.1481	down	0.0287	down			0.0359	down								
10/23/2018	712.91	711.23	717.80	717.51		723.69	723.54			767.20					0.1455	down	0.0219	down			0.0096	down								
8/17/2019	713.21	711.65	713.77	713.48		719.11	718.55			766.30					0.1351	down	0.0219	down			0.0359	down								
10/17/2019	712.36	710.71	717.42	717.19		721.51	720.96			766.10					0.1429	down	0.0174	down			0.0352	down								
6/26/2020	716.62	715.02	716.94	716.65		723.35	722.78			766.72					0.1386	down	0.0219	down			0.0365	down								
8/7/2020	713.48	711.87	715.70	715.41		720.63	720.04			765.70					0.1394	down	0.0219	down			0.0378	down								
10/2/2020	712.51	710.81	716.88	716.67		720.78	720.21			766.08					0.1472	down	0.0158	down			0.0365	down								
6/18/2021	713.18	711.55	716.65	716.46		723.16	722.60			766.25		692.70			0.1412	down	0.0143	down			0.0359	down			0.1483	down				
10/18/2021	711.58	709.99	716.82	716.68		721.01	720.50			764.13		695.11			0.1377	down	0.0106	down			0.0327	down			0.1392	down				
6/3/2022	713.29	711.68	716.12	717.10		723.18	723.40			765.97					0.1394	down	-0.0739	up			-0.0141	up								
8/19/2022	713.56	711.88	716.05	715.79		721.69	721.11			766.45					0.1455	down	0.0196	down			0.0372	down								
10/14/2022	712.54	710.83	717.07	716.85		721.36	720.73			766.37					0.1481	down	0.0166	down			0.0404	down								
6/14/2023	713.28	711.65	716.45	716.20		722.52	721.86			766.65		696.44			0.1412	down	0.0189	down			0.0423	down			0.1416	down				
8/9/2023	712.81	711.09	712.15	711.90		717.36	716.58			766.00		695.85			0.1490	down	0.0189	down			0.0500	down			0.1415	down				
10/7/2023	711.31	709.68	714.59	714.35		718.40	717.85			764.70		695.59			0.1412	down	0.0181	down			0.0352	down			0.1394	down				
6/12/2024	713.29	711.65	717.08	716.90		723.90	723.35			766.18		696.65			0.1420	down	0.0136	down			0.0352	down			0.1402	down				
7/25/2024										765.43																				
7/30/2024						719.32	718.39	705.63													0.0596	down								
7/31/2024	713.30	711.67													0.1412	down														
8/1/2024			712.86	711.89													0.0732	down												
8/6/2024													1042.62																	
8/13/2024			712.70	712.37		718.40	717.66			766.10		699.60					0.0249	down			0.0474	down			0.1341	down				
9/30/2024	711.89	710.45							721.08						0.1247	down														
10/1/2024			712.70	712.37		717.57	716.95										0.0249	down			0.0397	down								
10/2/2024								708.28		765.05			1042.64																	
12/4/2024													1043.12	1046.64													-0.0511	up		

Table 5-1 (continued)

Date	Groundwater Elevation (FT NAVD88) Nested Well Pair		Groundwater Elevation (FT NAVD88) Nested Well Pairs			Groundwater Elevation (FT NAVD88) Nested Well Pair		Groundwater Elevation (FT NAVD88) Nested Well Pairs		Groundwater Elevation (FT NAVD88) Nested Well Pairs			Groundwater Elevation (FT NAVD88) Nested Well Pair	
	MW-1AR	MW-1BR	MW-2B	MW-2A	MW-2SB	MW-3B	MW-3A	MW-5A	MW-5SB	SMW-1	SMW-1SB	BMW-1	SMW-3	SMW-3SB
Screened Unit	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Deep Bedrock	Unconsolidated Deposits	Shallow Bedrock
Top of Screen El. (FT NAVD88)	708.3	693.7	714.7	701.4	664.8	723.3	707.7	695.0	643.6	762.3	715.4	311.1	1028.7	977.4
Bottom of Screen El. (FT NAVD88)	697.7	689.2	704.7	691.4	634.8	713.3	697.7	685.0	614.1	752.1	655.8	211.7	1013.7	927.3
Midpoint Screen El. (FT NAVD88)	703.0	691.5	709.7	696.4	649.8	718.3	702.7	690.0	628.8	757.2	685.6	261.4	1021.2	952.4
Vertical Separation of Screen Midpoints (feet)	11.5		13.3	46.7		15.6		61.1		71.6		495.8	68.8	
12/5/2024	711.08	709.29												
12/9/2024								713.92	721.13	764.16	762.74			
12/10/2024			717.21	716.70		721.72	721.14							
12/17/2024					640.36									
2/24/2025	711.84	710.12												
2/25/2025			717.64	716.78	641.90									
2/26/2025						724.68	724.10	714.08						
3/3/2025										764.70	762.54			
3/6/2025													1043.45	1046.93
3/10/2025									721.13					
4/28/2025						725.14								
5/5/2025			717.83	717.02	642.19		724.49							
5/6/2025	712.84	710.67												
5/7/2025								713.63	721.13					
6/27/2025			718.25	718.31		723.45	723.44			766.28				
8/4/2025						720.64		708.93	721.13					
8/5/2025			714.14	713.71	642.53		719.88							
8/6/2025	713.22	711.57												
8/15/2025			714.84	714.88		720.70	720.76			766.31				
10/20/2025	711.67	710.07	713.81		642.74									
10/21/2025								709.37	721.13					
10/29/2025				715.84		720.17	719.65							

Vertical Hydraulic Gradient (ft/ft) ("-" is up AND "+" is down)														
Paired Monitoring Wells:														
Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Shallow Bedrock	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Shallow Bedrock	Unconsolidated Deposits	Deep Bedrock	Unconsolidated Deposits	Shallow Bedrock
MW-1A-R to MW-1B-R		**MW-2B to MW-2A**		**MW-2A to MW-2SB**		**MW-3B to MW-3A**		**MW-5A to MW-5SB**		**SMW-1 to SMW-1SB**		**SMW-1 to BMW-1**		**SMW-3 to SMW-3SB**	
0.1550	down														
								-0.1179	up	0.0198	down				
		0.0385	down			0.0372	down								
0.1490	down														
		0.0649	down	1.6047	down										
						0.0372	down								
										0.0302	down				
														-0.0506	up
		0.0611	down	1.6037	down										
0.1879	down														
								-0.1227	up						
		-0.0045	up			0.0006	down								
								-0.1995	up						
		0.0324	down	1.5254	down										
0.1429	down														
		-0.0030	up			-0.0038	up								
0.1386	down														
								-0.1923	up						
						0.0333	down								

Minimum:	0.0537		-0.1886		1.5254		-0.0141		-0.1995		0.0198		0.1341		-0.0511	
Average (all data):	0.1403		0.0149		1.5779		0.0362		-0.1581		0.0250		0.1406		-0.0508	
Median:	0.1455		0.0181		1.6037		0.0378		-0.1575		0.0250		0.1402		-0.0508	
Maximum:	0.1879		0.0732		1.6047		0.0673		-0.1179		0.0302		0.1483		-0.0506	
%Upward:	**0.0**		**9.3**		**0.0**		**6.5**		**100.0**		**0.0**		**0.0**		**100.0**	
%Downward:	**100.0**		**90.7**		**100.0**		**93.5**		**0.0**		**100.0**		**100.0**		**0.0**	
%Neutral:	**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**		**0.0**	

Notes:
Groundwater elevations relative to feet (FT) above North American Vertical Datum of 1988 (NAVD88)
Vertical gradients calculated using the vertical distance between the midpoints of the paired monitoring well screen interval.

Prepared by: BNK
Checked by: GMB

Table 5-2
Horizontal Hydraulic Gradient
White Pine Copper LLC

Paired Wells	MW-1A-R to MW-35	MW-3A to MW-37	MW-3B to MW-37	MW-10 to MW-37	MW-18 to SMW-1	MW-36 to MW-41	MW-42 to MW-38
Hydrogeologic Unit	Unconsolidated Deposits					Shallow Bedrock	
Horizontal Distance (feet)	4010	3330	3330	4015	4235	1550	1600
8/14/1998		0.004	0.004	0.007	0.008	0.006	
6/6/2006		0.005	0.005			0.005	
8/23/2006		0.005	0.006	0.007	0.006	0.008	
10/26/2006	0.013	0.007	0.007	0.008	0.007	0.010	
5/1/2007	0.012	0.005	0.005		0.006	0.005	0.013
7/29/2007					0.006		
7/31/2007							0.016
10/16/2007			0.006			0.009	
6/11/2008	0.012	0.005	0.005	0.006	0.006	0.005	0.014
8/18/2008	0.013	0.005	0.005	0.007	0.006	0.006	0.016
10/22/2008	0.013	0.006	0.006	0.008	0.006	0.010	0.016
10/23/2008							
5/27/2009	0.012	0.005	0.005	0.006	0.006	0.006	
8/17/2009		0.006	0.006	0.008		0.008	
8/18/2009					0.006		0.017
10/7/2009		0.006	0.006	0.008		0.010	0.017
6/19/2010	0.013	0.006	0.006	0.007	0.006	0.007	0.015
8/23/2010	0.013	0.006	0.006	0.007	0.006	0.009	0.017
11/1/2010	0.013	0.007	0.007	0.008	0.006	0.010	0.017
6/23/2011	0.012	0.005	0.005	0.006	0.006	0.006	0.013
8/16/2011	0.013	0.006	0.006	0.007	0.006	0.007	0.017
10/6/2011	0.013	0.006	0.006	0.008	0.006	0.010	0.016
6/26/2012	0.013	0.005	0.006	0.007	0.006	0.006	0.015
7/18/2012	0.013	0.005	0.006	0.007	0.006	0.007	0.016
9/3/2012	0.013	0.005	0.005	0.008	0.006	0.007	0.017
5/31/2013	0.012	0.005	0.005	0.006	0.006	0.005	0.013
8/23/2013	0.013	0.005	0.005	0.007		0.007	0.016
10/29/2013	0.013	0.006	0.006	0.007	0.006	0.009	0.018
6/5/2014	0.012	0.005	0.005	0.006	0.006	0.005	0.013
8/11/2014	0.013	0.006	0.006	0.007	0.006	0.008	0.016
10/8/2014	0.012	0.006	0.006	0.007	0.006	0.007	0.016
6/23/2015	0.012	0.005	0.005	0.006	0.006	0.005	0.014
8/31/2015	0.013	0.006	0.006	0.008	0.006	0.009	0.017
10/7/2015	0.013	0.006	0.006	0.008	0.006	0.010	0.017
6/20/2016	0.012	0.005	0.005	0.006	0.006	0.005	0.014
8/8/2016				0.007			
8/9/2016					0.006		
10/13/2016	0.013	0.006	0.006	0.008	0.006	0.009	0.017
7/4/2017	0.012	0.005	0.005	0.007	0.006	0.005	0.014
8/22/2017	0.013	0.006	0.006	0.007	0.006	0.008	0.015
10/18/2017	0.013	0.005	0.006	0.007	0.006	0.007	0.015
1/23/2018							
7/10/2018	0.012	0.005	0.005	0.007	0.006	0.006	0.015

Table 5-2 (continued)

Paired Wells	MW-1A-R to MW-35	MW-3A to MW-37	MW-3B to MW-37	MW-10 to MW-37	MW-18 to SMW-1	MW-36 to MW-41	MW-42 to MW-38
Hydrogeologic Unit	Unconsolidated Deposits					Shallow Bedrock	
Horizontal Distance (feet)	4010	3330	3330	4015	4235	1550	1600
8/9/2018	0.013				0.006		0.016
10/23/2018	0.012				0.006		0.017
8/17/2019	0.013	0.005	0.005	0.007	0.006	0.007	0.016
10/17/2019	0.013	0.007	0.007	0.008	0.006	0.010	0.017
6/26/2020	0.013	0.005	0.005	0.007	0.006	0.006	0.015
8/7/2020	0.013	0.006	0.006	0.007	0.006	0.008	0.016
10/2/2020	0.013	0.006	0.006	0.008	0.006	0.010	0.016
6/18/2021	0.012	0.006	0.006	0.007	0.006	0.007	0.014
10/18/2021	0.013	0.007	0.007	0.008	0.006	0.010	0.017
6/3/2022	0.012	0.005	0.005	0.006	0.006	0.005	0.014
8/19/2022	0.013	0.006	0.006	0.007	0.006	0.008	0.016
10/14/2022	0.013	0.006	0.006	0.008	0.006	0.009	0.017
6/14/2023	0.012	0.006	0.006	0.007	0.006	0.007	0.014
8/9/2023	0.013	0.005	0.005	0.008	0.006	0.008	0.016
10/7/2023	0.013	0.006	0.006	0.008	0.006	0.010	0.016
6/12/2024	0.012	0.005	0.005	0.006	0.006	0.005	0.014
7/28/2024						0.006	0.016
8/13/2024		0.005	0.005	0.007	0.006	0.007	0.016
9/30/2024	0.013						
10/7/2024							0.016
12/3/2024				0.008		0.010	0.017
3/4/2025							0.015

Statistical Summary of Horizontal Gradients:

Minimum:	0.012	0.004	0.004	0.006	0.006	0.005	0.013
Average (all data):	0.013	0.006	0.006	0.007	0.006	0.007	0.016
Median:	0.013	0.006	0.006	0.007	0.006	0.007	0.016
Maximum:	0.013	0.007	0.007	0.008	0.008	0.010	0.018

Note:
Blank cells indicate dates were both well pairs did not record groundwater level monitoring event.

Prepared by: BNK
Checked by: GMB

Table 5-3
Assessment of Artesian Conditions
White Pine Copper LLC

Monitoring Well ID	Top of Casing (Collar elevation) (Ft NAVD88)	Maximum Recorded Groundwater Elevation (Aug-98 to Mar-25) (Ft NAVD88)	Ground Surface Elevation (Ft NAVD88)	Ground Surface minus Groundwater Elevation (Feet)	Note on Artesian Conditions
MW-1A	722.81	712.95	719.63	6.68	
MW-1A-R	722.81	717.30	719.68	2.38	
MW-1B	721.23	712.99	719.63	6.64	
MW-1B-R	721.23	717.12	719.44	2.32	
MW-2A	723.45	719.98	723.79	3.81	
MW-2B	723.1	719.98	722.85	2.87	
MW-3A	730.26	726.63	729.15	2.52	
MW-3B	729.13	726.84	730.43	3.59	
MW-5	721.6	718.07	781.31	63.24	
MW-5SB[2]	721.13	720.97	718.47	-2.66	artesian
MW-10	741.71	735.03	739.06	4.03	
MW-18	837.7	793.00	834.66	41.66	
MW-19R	870.1	866.23	867.20	0.97	
MW-26	871.6	815.01	868.56	53.55	
MW-30	835.5	772.13	833.26	61.13	
MW-31	829.5	784.16	826.66	42.50	
MW-32	819.68	772.90	817.26	44.36	
MW-35	680.39	666.06	677.76	11.70	
MW-36	719.73	717.86	717.16	-0.70	artesian
MW-37	718.28	710.58	715.76	5.18	
MW-38	698.46	692.23	696.06	3.83	
MW-41	704.79	710.45	710.62	0.17	near/at ground surface
MW-42	719.00	714.71	716.82	2.11	
MW-43SB[2]	790.29	790.00	787.50	-2.79	artesian
SMW-1	788.95	767.20	786.05	18.85	
Open Boreholes					
WP-585 [1]	808.93	809.90	808.90	-1.00	artesian
WP-586 [1]	807.37	808.90	807.40	-1.50	artesian
WP-587 [1]	809.48	811.73	809.50	-2.23	artesian
WP-588 [1]	786.25	787.30	786.30	-1.00	artesian
WP-598 [1]	777.66	779.45	777.70	-1.75	artesian

Note:

Prepared by: BNK

Checked by: JCB1

[1] These exploration boreholes were observed flowing after being drilled, but the casing was not extended to allow for accurate static open borehole or intervaled water level measurements.

[2] Water was flowing over the top of well riser. Additional riser(s) have not been extended to allow for true static head measurement. These wells have sealed-in transducers, but have not been assessed at the time of publication.

Table 5-4A
Summary of Historical Slug Test Results
White Pine Copper LLC

Well Name	Date	Lithologic Unit / Hydrostratigraphic Unit	Screen Interval (ft bgs)	Test Type	Hydraulic Conductivity			
					Hvorslev Method (cm/sec)	Bouwer-Rice Method (cm/sec)	Geometric Mean for Well (cm/sec)	Geometric Mean for Well (ft/day)
MW-1B	6/11/98	Unconsolidated Deposits	(14.0 - 24.0)	Falling Head Rising Head	9.1E-06 8.6E-06	1.0E-05 9.6E-06	9.3E-06	0.026
MW-3A	*6/11/98*	*Shallow Bedrock*	*(20.0 - 30.0)*	*Falling Head* *Rising Head*	*2.6E-05* *2.6E-05*	*2.6E-05* *2.8E-05*	*2.6E-05*	*0.074*
MW-5	6/11/98	Unconsolidated Deposits	(20.0 - 30.0)	Falling Head Rising Head	8.2E-06 1.5E-05	9.4E-06 1.7E-05	1.2E-05	0.034
MW-18	7/11/98	Unconsolidated Deposits	(50.0 - 60.0)	Falling Head Rising Head	1.5E-05 NA	1.3E-05 NA	1.4E-05	0.040
MW-30	7/11/98	OB / BR Interface	(69.5 - 79.5)	Falling Head Rising Head	8.6E-06 3.7E-06	9.2E-06 4.5E-06	6.0E-06	0.017
MW-31	*7/11/98*	*Unconsolidated Deposits*	*(60.0 - 70.0)*	*Falling Head* *Rising Head*	*1.1E-05* *NA*	*1.0E-05* *NA*	*1.0E-05*	*0.028*
MW-32	7/11/98	Unconsolidated Deposits	(52.5 - 62.5)	Falling Head Rising Head	5.7E-06 9.9E-06	6.6E-06 1.0E-05	7.8E-06	0.022
MW-35	*6/11/98*	*Unconsolidated Deposits*	*(9.5 - 19.5)*	*Falling Head* *Rising Head*	*3.4E-06* *4.0E-05*	*2.7E-06* *2.9E-05*	*1.0E-05*	*0.028*
MW-36	*6/11/98*	*Shallow Bedrock*	*(5.0 - 15.0)*	*Falling Head* *Rising Head*	*4.1E-06* *4.9E-06*	*4.1E-06* *5.0E-06*	*4.5E-06*	*0.013*
MW-37	*7/11/98*	*Unconsolidated Deposits*	*(9.0 - 19.0)*	*Falling Head* *Rising Head*	*4.2E-05* *8.1E-05*	*3.9E-05* *7.9E-05*	*5.7E-05*	*0.16*
MW-38	*7/11/98*	*Shallow Bedrock*	*(17.7 - 27.7)*	*Falling Head* *Rising Head*	*2.4E-06* *2.4E-06*	*3.3E-06* *2.3E-06*	*2.6E-06*	*0.007*

Notes:

Prepared by: KRM2

Checked by: GMB

cm/sec = centimeter per second

ft bgs = feet below ground surface

ft/day = feet per day

NA or dashed line = Not data available

OB/BR Interface = Well screen installed across overburden / bedrock interface

Wells listed in italics (MW-3A, MW-31, MW-35, MW-36, MW-37, and MW-38) were re-tested in 2024 and 2025. Refer to Table 5-3B for recent slug testing results.

Table 5-4B
Summary of Recent Slug Test Results (2024-2025)
White Pine Copper LLC

Well Identification	Test Date	Lithologic Unit / Hydrostratigraphic Unit	Test Method	Solution Method	K (cm/sec)	K (geometric mean per well) (cm/sec)	K (ft/d)	K (geometric mean per well) (ft/day)	Mean T T=K*B (ft^2/day)
MW-1A-R	9/16/24	Unconsolidated Deposits	Slug In	BR	4.57E-06	5.4E-06	0.013	0.015	0.2
			Slug In	Hv	6.55E-06		0.019		
			Slug Out	BR	4.86E-06		0.014		
			Slug Out	Hv	5.85E-06		0.017		
MW-1B-R	9/16/24	Shallow Bedrock	Slug In	BR	5.51E-04	6.5E-04	1.56	1.8	9.2
			Slug In	Hv	7.97E-04		2.26		
			Slug Out	BR	4.62E-04		1.31		
			Slug Out	Hv	8.84E-04		2.50		
MW-2A	9/13/24	Shallow Bedrock	Slug In	BR	1.29E-05	1.5E-05	0.04	0.04	1.0
			Slug In	Hv	1.67E-05		0.05		
			Slug Out	BR	1.45E-05		0.04		
			Slug Out	Hv	1.79E-05		0.05		
MW-2B	9/12/24	Unconsolidated Deposits	Slug In	BR	3.20E-05	4.1E-05	0.09	0.12	1.2
			Slug In	Hv	5.08E-05		0.14		
			Slug Out	BR	3.13E-05		0.09		
			Slug Out	Hv	5.54E-05		0.16		
MW-3A	9/13/24	Shallow Bedrock	Slug In	BR	3.18E-05	3.2E-05	0.09	0.09	2.0
			Slug In	Hv	3.49E-05		0.10		
			Slug Out	BR	2.94E-05		0.08		
			Slug Out	Hv	3.39E-05		0.10		
MW-3B	10/3/24	Unconsolidated Deposits	Slug Out	BR	1.48E-04	2.0E-04	0.42	0.57	2.0
			Slug Out	Hv	2.69E-04		0.76		
MW-5A	9/12/24	Unconsolidated Deposits	Slug In	BR	1.41E-05	1.5E-05	0.040	0.04	1.0
			Slug In	HV	1.80E-05		0.051		
			Slug Out	BR	1.38E-05		0.039		
			Slug Out	Hv	1.28E-05		0.036		
MW-5SB*	10/7/24	Shallow Bedrock	Slug In	BR	4.11E-05	7.0E-05	0.12	0.20	7.8
			Slug In	Hv	4.72E-05		0.13		
			Slug Out	BR	1.08E-04		0.31		
			Slug Out	Hv	1.13E-04		0.32		
MW-10	9/13/24	Unconsolidated Deposits	Slug In	BR	1.67E-04	2.5E-04	0.47	0.70	11.0
			Slug In	HV	2.16E-04		0.61		
			Slug Out	BR	2.82E-04		0.80		
			Slug Out	Hv	3.66E-04		1.04		
MW-31	6/9/25	Unconsolidated Deposits	Slug In	BR	1.52E-04	2.0E-04	0.43	0.57	13.2
			Slug In	HV	1.92E-04		0.54		
			Slug Out	BR	2.10E-04		0.60		
			Slug Out	HV	2.68E-04		0.76		
MW-35	6/12/25	Unconsolidated Deposits	Slug In	BR	3.00E-04	3.3E-04	0.85	0.93	5.5
			Slug In	HV	4.97E-04		1.41		
			Slug Out	BR	2.23E-04		0.63		
			Slug Out	HV	3.47E-04		0.98		
MW-35SB	6/12/25	Shallow Bedrock	Slug In	BR	3.63E-05	4.4E-05	0.10	0.12	2.5
			Slug In	HV	4.91E-05		0.14		
			Slug Out	BR	4.45E-05		0.13		
			Slug Out	HV	4.57E-05		0.13		
MW-36	10/8/24	Shallow Bedrock	Slug In	BR	9.18E-04	1.2E-03	2.6	3.4	33.9
			Slug In	HV	1.47E-03		4.2		
			Slug Out	BR	1.00E-03		2.8		
			Slug Out	Hv	1.53E-03		4.3		
MW-37	11/8/24	Unconsolidated Deposits	Slug In	BR	6.94E-05	8.0E-05	0.197	0.23	0.7
			Slug In	HV	9.20E-05		0.261		
			Slug Out	BR	NA		NA		
			Slug Out	Hv	NA		NA		
MW-38	10/9/24	Shallow Bedrock	Slug In	BR	7.21E-06	9.5E-06	0.020	0.027	0.3
			Slug In	Hv	1.03E-05		0.029		
			Slug Out	BR	8.67E-06		0.025		
			Slug Out	Hv	1.24E-05		0.035		
MW-42	10/9/24	Shallow Bedrock	Slug In	BR	3.31E-05	9.7E-05	0.094	0.27	2.7
			Slug In	Hv	4.33E-05		0.123		
			Slug Out	BR	2.07E-04		0.587		
			Slug Out	Hv	2.97E-04		0.842		
MW-43	9/17/24	Overburden / Bedrock Interface	Slug In	BR	1.94E-05	2.3E-05	0.055	0.065	0.7
			Slug In	Hv	2.67E-05		0.076		
			Slug Out	BR	NA		-		
			Slug Out	Hv	NA				
MW-43SB*	11/7/24	Shallow Bedrock	Slug In	BR	NA	5.2E-06	-	0.015	0.6
			Slug In	Hv	NA				
			Slug Out	BR	5.28E-06		0.015		
			Slug Out	Hv	5.10E-06		0.014		

Table 5-4B (continued)

Well Identification	Test Date	Lithologic Unit / Hydrostratigraphic Unit	Test Method	Solution Method	K (cm/sec)	K (geometric mean per well) (cm/sec)	K (ft/d)	K (geometric mean per well) (ft/day)	Mean T T=K*B (ft^2/day)
MW-44	9/17/24	Unconsolidated Deposits	Slug In	BR	7.61E-05	1.0E-04	0.216	0.29	6.2
			Slug In	Hv	1.03E-04		0.291		
			Slug Out	BR	1.03E-04		0.293		
			Slug Out	Hv	1.39E-04		0.393		
NB1-3	6/9/2025	Tailings	Slug In	BR	2.69E-05	2.6E-05	0.08	0.07	2.1
			Slug In	HV	3.37E-05		0.10		
			Slug Out	BR	1.94E-05		0.05		
			Slug Out	HV	2.42E-05		0.07		
NB2-1	10/8/24	Tailings	Slug In	BR	7.49E-04	5.7E-04	2.123	1.6	9.4
			Slug In	HV	8.40E-04		2.382		
			Slug Out	BR	3.31E-04		0.938		
			Slug Out	Hv	5.01E-04		1.419		
NB2-3	10/8/24	Tailings	Slug In	BR	2.00E-05	2.3E-05	0.057	0.065	1.6
			Slug In	HV	2.58E-05		0.073		
			Slug Out	BR	2.14E-05		0.061		
			Slug Out	Hv	2.52E-05		0.071		
SMW-1 - Test 1	10/7/24	Unconsolidated Deposits	Slug In	BR	9.10E-06	1.2E-05	0.026	0.034	0.5
			Slug In	Hv	1.20E-05		0.034		
			Slug Out	BR	1.24E-05		0.035		
			Slug Out	Hv	1.72E-05		0.049		
SMW-1 - Test 2			Slug In	BR	9.99E-06		0.028		
			Slug In	Hv	1.32E-05		0.037		
			Slug Out	BR	1.00E-05		0.028		
			Slug Out	Hv	1.32E-05		0.037		
SMW-1SB	11/8/24	Shallow Bedrock	Slug In	BR	1.50E-05	1.5E-05	0.043	0.042	2.8
			Slug In	Hv	1.31E-05		0.037		
			Slug Out	BR	1.62E-05		0.046		
			Slug Out	Hv	1.52E-05		0.043		
SMW-3	9/24/24	Unconsolidated Deposits	Slug In	BR	8.27E-05	1.2E-04	0.234	0.34	9.3
			Slug In	HV	1.10E-04		0.311		
			Slug Out	BR	1.27E-04		0.361		
			Slug Out	Hv	1.77E-04		0.502		
SMW-3SB	6/11/2025	Shallow Bedrock	Slug In	BR	2.92E-05	3.4E-05	0.08	0.10	1.9
			Slug In	HV	4.13E-05		0.12		
			Slug Out	BR	3.06E-05		0.09		
			Slug Out	HV	3.75E-05		0.11		

Minimum (all wells/tests):	4.6E-06	0.013
Maximum (all wells/tests):	1.5E-03	4.3
Geometric Mean (all wells/tests):	5.4E-05	0.15
Minimum (Unconsolidated Deposits):	4.6E-06	0.013
Maximum (Unconsolidated Deposits):	1.4E+01	1.4
Geometric Mean (Unconsolidated Deposits):	6.7E-05	0.15
Minimum (Shallow Bedrock):	5.1E-06	0.014
Maximum (Shallow Bedrock):	1.5E-03	4.3
Geometric Mean (Shallow Bedrock):	5.3E-05	0.15
Minimum (Tailings):	1.9E-05	0.055
Maximum (Tailings):	8.4E-04	2.4
Geometric Mean (Tailings):	6.9E-05	0.20

Notes:

Prepared by: KRM2
Checked by: GMB

* Artesian well
BR= Bouwer-Rice semi-log straight-line fit
cm/sec = centimeter per second
ft/day - feet per day
ft^2/day = square feet per day
ft = feet
Hv = Hvorslev semi-log straight-line fit
K = Hydraulic Conductivity
NA = Not Available
T = Transmissivity (based on saturated well screen interval)
Results from MW-43, which is screened across bedrock interface, is included in the statistical summary for unconsolidated deposits.

Table 5-4C
Slug Test Results Summary (1994-2025) Sorted by Well
White Pine Copper LLC

Well Identification	Test Date	Hydrogeologic Unit	Depth to Mid-point of Screen (ft bgs)	Hydraulic Conductivity (cm/sec)
MW-1A-R	9/16/2024	Unconsolidated Deposits	17	5.4E-06
MW-1B	6/11/1998	Unconsolidated Deposits	19.0	9.3E-06
MW-1B-R	9/16/2024	Shallow Bedrock	27.5	6.5E-04
MW-2A	9/13/2024	Shallow Bedrock	22.5	1.5E-05
MW-2B	9/12/2024	Unconsolidated Deposits	11	4.1E-05
MW-3A	9/13/2024	Shallow Bedrock	25	3.2E-05
MW-3B	10/3/2024	Unconsolidated Deposits	9	2.0E-04
MW-5	6/11/1998	Unconsolidated Deposits	20	1.2E-05
MW-5A	9/12/2024	Unconsolidated Deposits	25	1.5E-05
MW-5SB*	10/7/2024	Shallow Bedrock	120.0	7.0E-05
MW-10	9/13/2024	Unconsolidated Deposits	12.5	2.5E-04
MW-18	7/11/1998	Unconsolidated Deposits	55.0	1.4E-05
MW-30	7/11/1998	OB / BR Interface	74.5	6.0E-06
MW-31	6/9/2025	Unconsolidated Deposits	65	2.0E-04
MW-32	7/11/1998	Unconsolidated Deposits	57.5	7.8E-06
MW-35	6/12/2025	Unconsolidated Deposits	14.6	3.3E-04
MW-35SB	6/12/2025	Shallow Bedrock	100.1	4.4E-05
MW-36	10/8/2024	Shallow Bedrock	10.0	1.2E-03
MW-37	11/8/2024	Unconsolidated Deposits	14	8.0E-05
MW-38	10/9/2024	Shallow Bedrock	22.7	9.5E-06
MW-42	10/9/2024	Shallow Bedrock	22	9.7E-05
MW-43	9/17/2024	OB / BR Interface	20	2.3E-05
MW-43SB*	11/7/2024	Shallow Bedrock	126	5.2E-06
MW-44	9/17/2024	Unconsolidated Deposits	25	1.0E-04
NB1-3	6/9/2025	Tailings	27.2	2.6E-05
NB2-1	10/8/2024	Tailings	7.5	5.7E-04
NB2-3	10/8/2024	Tailings	23	2.3E-05
SMW-1	10/7/2024	Unconsolidated Deposits	30.5	1.2E-05
SMW-1SB	11/8/2024	Shallow Bedrock	100	1.5E-05
SMW-3	9/24/2024	Unconsolidated Deposits	47.5	1.2E-04
SMW-3SB	6/11/2025	Shallow Bedrock	129.7	3.4E-05

Notes:
Prepared by: KRM2
*artesian conditions noted
Checked by: GMB, LDC
ft bgs = feet below ground surface
Geometric mean (cm/sec): 4.0E-05
cm/sec = centimeter per second
(*excluding wells in tailings*)
OB/BR Interface = Well screen spans the overburden / bedrock interface
Monitoring wells that were re-tested in 2024/2025 display the superseded results from the recent testing.

Table 5-5
Open Borehole Hydrophysical Testing Results (<200 feet)
White Pine Copper LLC

Borehole	Ground Surface Elevation (FT NAVD88)	Interval No.[1]	Depth to Top of Interval (ft bgs)	Depth of Bottom of Interval (ft bgs)	Length of Interval (feet)	Interval-Specific Hydraulic Conductivity[1] (cm/s)	(ft/day)	Transmissivity (ft²/day)
WP-583	853.9	1	96	111.6	15.6	1.2E-04	0.33	5.1
		2	128.3	137.4	9.1	2.0E-05	0.06	0.53
		3	169.6	184.6	15	2.5E-04	0.71	10.6
		4	196.3	204.7	8.4	8.3E-05	0.24	2.0
WP-584	853.5	1	28.7	30	1.3	7.7E-04	2.2	2.8
		2	37.8	53.3	15.5	6.0E-04	1.7	26.5
		3	91.3	99.1	7.8	2.6E-03	7.3	56.6
		4	144.7	193.7	49	1.1E-04	0.31	15.4
WP-585	808.9	1	69.8	71.7	1.9	1.0E-04	0.30	0.56
		2	97.5	121.8	24.3	2.7E-05	0.078	1.9
		3	186.5	190.6	4.1	1.7E-04	0.48	2.0
WP-586	807.4	1	29	31.6	2.6	3.7E-04	1.0	2.7
		2	35.7	41.7	6	1.3E-04	0.36	2.2
		3	93	96.9	3.9	1.3E-04	0.38	1.5
		4	114.8	130.7	15.9	2.0E-05	0.057	0.90
		5	193.3	198	4.7	1.2E-04	0.33	1.6
WP-587	809.5	1	33.4	33.5	0.1	1.6E-01	451	45.1
		2	53.7	59.6	5.9	5.2E-04	1.5	8.7
		3	69	70.3	1.3	1.0E-03	2.9	3.8
WP-588	786.3	1	112	112.1	0.1	8.0E-03	23	2.3
		2	154.3	160.4	6.1	7.4E-04	2.1	12.8
WP-592	767.0	1	72.5	78.5	6	3.4E-05	0.10	0.57
		2	91.6	95.3	3.7	4.9E-05	0.14	0.51
		3	172.6	180.9	8.3	5.6E-06	0.016	0.13
WP-594	809.1	1	79.6	82	2.4	5.7E-05	0.16	0.39
		2	95.9	99.9	4	1.1E-04	0.32	1.3
		3	165.7	171.4	5.7	3.8E-07	0.0011	0.01
WP-598	777.7	1	48.1	49.9	1.8	2.3E-03	6.6	11.9

Notes:

[1] Bottom of casing represents top of interval.

cm/sec = centimeter per second

ft bgs = feet below ground surface

ft/day = feet per day

FT NAVD88 = Feet above North America Vertical Datum of 1988

Geometric mean: 1.8E-04
(*for HpL tests <200 ft bgs*)

Prepared by: KRM2
Checked by: GMB

Table 5-6
Historical Packer Tests
Hydraulic Property Estimates - T-4 Fault Packer Tests
White Pine Copper LLC

Test No.	Borehole Angle (degrees from vertical)	Test Interval (feet along borehole)	Test Depth Below Collar (feet)	Static Fresh Water Level Elevation (ft msl)	Static Brine-Level Elevation (ft msl)	Hydraulic Conductivity (cm/sec)	Hydraulic Conductivity (ft/day)
94-3	-2	37.5-315	1.2 - 9.9	550 ± 50	280 ± 75	1.4E-07	4.1E-04
94-4	-45	30.7-45.7	20.9 - 29.7	1060 ± 50	700 ± 75	8.3E-07	2.4E-03

Prepared by: JMW3

Checked by: VXT/GMB

Notes:

Water levels are referenced to an estimated drill collar elevation of -1158.83 ft-MSL at 94-3, and -1161.38 ft-MSL at 94-4. Brine elevations calculated from average brine density of 1.192 obtained from three samples collected from borehole 94-2.

cm/sec = centimeter per second

ft = feet

ft msl = feet mean sea level

Table 5-7
Hydraulic Conductivity Estimates from 2024 Packer Tests (at depths less than 200 feet)
White Pine Copper LLC

Borehole ID	Packer Test Type	Packer Test Top of Interval (ft bgs)[1]	Packer Test Bottom of Interval (ft bgs)[1]	Total Downhole Boring Depth (ft)	Depth to Water - Prior to Testing (ft bgs)	Test Interval Length (b, L)	Static Water Column H (ft)	Inside Radius Well Casing r(c) (ft)	Radius of Well/Hole r(w) (ft)	Radius of Downhole Equipment r(eq) ft	Dip from Horizontal (degrees)	Pumping Rate and Time (min)/(GPM)	Solution Method	Hydraulic Conductivity (per test) (cm/sec)	Hydraulic Conductivity (geomean per interval) (cm/sec)	Transmissivity (ft^2/day) (of saturated interval thickness)
WP-583	Constant Rate Extraction Test	164	189.9	2308	0.0	25.9	NA	0.0835	0.1575	0.0320	85	200 min / 1.0 GPM	Cooper-Jacob	4.0E-05	1.6E-05	2.9
													Theis/Hantush	6.8E-06		0.5
WP-584	Constant Rate Extraction Test	5.0	82.0	1683	4.96	62	NA	0.2012	0.2011	0.073	87.3	125 min / 9.9 GPM	Cooper-Jacob	2.8E-04	2.8E-04	49
													Theis/Hantush	2.9E-04		51
	Constant Rate Extraction Test	82.0	133.4			51.4	NA	0.0834	0.2011	0.0320		78 min/ 3 GPM	Cooper-Jacob	2.7E-04	2.6E-04	39
													Theis/Hantush	2.5E-04		37
WP-585	Constant Rate Extraction Test	0	233	2318	0 (flowing artesian)	203.0	NA	0.1579	0.1575	0.0360	84.4	132 mins / 2.4 GPM	Cooper-Jacob	9.5E-06	1.2E-05	5.5
													Theis recovery	1.5E-05		8.6
WP-586	Constant Rate Extraction Test	0	241	2506	0 (flowing artesian)	221.0	241.0	0.1578	0.1575	0.0360	85	122 mins / 2.5 GPM	Cooper-Jacob	2.5E-05	2.4E-05	16
													Theis	2.4E-05		15
WP-587	Constant Rate Extraction	0	370	2857.5	0 (flowing artesian)	340.0	370.0	0.1604	0.1575	0.0740	74.58	63 mins / 12.8 GPM	Cooper-Jacob	1.3E-04	1.3E-04	126
													Theis	1.4E-04		132
WP-588	Constant Rate Extraction	150	165.8	3305.2	0.95 (above ground)	15.8	NA	0.0848	0.1575	0.0330	75	110 mins / 2.9 GPM	Cooper-Jacob	9.0E-05	3.2E-04	4.0
													Theis Recovery	1.1E-03		49
WP-592	Slug Out	70	99.8	3268	0 (flowing artesian)	29.8	99.8	0.0848	0.1575	0.0310	75	NA	Bouwer-Rice	7.8E-06	8.8E-06	0.66
													Hvorslev	9.9E-06		0.84
	Slug Out	0	200			131.5	200.00	0.0848	0.1575	0.0310			Bouwer-Rice	4.6E-07	4.4E-07	0.17
													Hvorslev	4.2E-07		0.16
WP-594	Constant Rate Extraction Test	21.3	110	3080.7	21.28	31.3	88.7	0.2046	0.1575	0.0340	75	99 min / 0.4 GPM	Cooper-Jacob	2.5E-06	2.5E-06	0.2
													Theis Recovery	2.4E-06		0.2
WP-598	Constant Rate Extraction Test	0	260	3049	0 (flowing artesian)	225.88	260.0	0.1603	0.1575	0.0740	75	90 min / 24.6 GPM	Cooper-Jacob	8.7E-06	9.6E-06	5.6
													Theis Recovery	1.1E-05		6.8

Notes:

[1] Intervals refer to the downhole feet below ground surface.

[2] This test was analyzed as a slug test due to the test not reaching a constant pressure.

b = AQTESOLV® input parameter; saturated formation thickness

bgs = below ground surface

cm/sec = centimeter per second

cm^2/sec = square centimeter per second

ft/day = feet per day

ft^2/day = square feet per day

ft = feet

geomean = geometric mean

GPM = gallon per minute

H(0) = AQTESOLV® input parameter; Initial Displacement (change in water level from static)

H = AQTESOLV® input parameter; Static water column height

L = AQTESOLV® input parameter; length of open interval during testing. In tests to water level (WL), the bottom of the surface casing is considered the top of the interval.

NA = Not Applicable

r(c) = AQTESOLV®input parameter; radius of casing

r(eq) = AQTESOLV® input parameter; radius of downhole equipment

r(w) = AQTESOLV® input parameter; radius of well

WL = water level (static)

Geometric mean: 2.4E-05
(*for packer tests <200 ft bgs*)

Prepared by: MJW4
Checked by: JCB1/GMB

Table 5-8
Hydraulic Conductivity of Hydrogeologic Units
White Pine Copper LLC

Hydrogeologic Unit	Borehole ID	Hydraulic Testing Type	Midpoint of Test Interval (LF down borehole)	Hydraulic Conductivity: Geometric mean per well / Interval (cm/sec)	Hydraulic Conductivity: Geometric mean per Hydrogeological Unit (cm/sec)	Hydraulic Conductivity Statistics: Count	Minimum (cm/sec)	Maximum (cm/sec)	Median (cm/sec)
Unconsolidated Deposits	MW-1A-R	Slug Test	17.0	5.4E-06	**4.1E-05**	15	5.4E-06	3.3E-04	4.1E-05
	MW-1B	Slug Test	19.0	9.3E-06					
	MW-2B	Slug Test	11.0	4.1E-05					
	MW-3B	Slug Test	9.0	2.0E-04					
	MW-5	Slug Test	20.0	1.2E-05					
	MW-5A	Slug Test	25.0	1.5E-05					
	MW-10	Slug Test	12.5	2.5E-04					
	MW-18	Slug Test	55.0	1.4E-05					
	MW-31	Slug Test	64.8	2.0E-04					
	MW-32	Slug Test	57.5	7.8E-06					
	MW-35	Slug Test	14.6	3.3E-04					
	MW-37	Slug Test	14.0	8.0E-05					
	MW-44	Slug Test	25.0	1.0E-04					
	SMW-1	Slug Test	30.5	1.2E-05					
	SMW-3	Slug Test	47.5	1.2E-04					
Overburden / Bedrock Interface	MW-30	Slug Test	74.5	6.0E-06	**1.2E-05**	2	6.0E-06	2.3E-05	1.4E-05
	MW-43	Slug Test	20.0	2.3E-05					
			Mean Combined Overburden and Interface Wells:		**3.5E-05**	17	5.4E-06	3.3E-04	2.3E-05
	MW-36	Slug Test	10.0	1.2E-03	**8.6E-05**	49	3.85E-07	1.59E-01	1.04E-04
	MW-42	Slug Test	22.0	9.7E-05					
	MW-2A	Slug Test	22.5	1.5E-05					
	MW-38	Slug Test	22.7	9.5E-06					
	MW-3A	Slug Test	25.0	3.2E-05					
	MW-1B-R	Slug Test	27.5	6.5E-04					
	WP-584	HpL	29.4	7.7E-04					
	WP-586	HpL	30.3	3.7E-04					
	WP-587	HpL	33.5	1.6E-01					
	WP-586	HpL	38.7	1.3E-04					
	WP-584	Packer Test	43.5	2.8E-04					
	WP-584	HpL	45.6	6.0E-04					
	WP-598	HpL	49.0	2.3E-03					
	WP-587	HpL	56.7	5.2E-04					
	WP-594	Packer Test	65.7	2.5E-06					
	WP-587	HpL	69.7	1.0E-03					
	WP-585	HpL	70.8	1.0E-04					
	WP-592	HpL	75.5	3.4E-05					
	WP-594	HpL	80.8	5.7E-05					
	WP-592	Packer Test	84.9	8.8E-06					
	WP-592	HpL	93.5	4.9E-05					
	WP-586	HpL	95.0	1.3E-04					
	WP-584	HpL	95.2	2.6E-03					
	WP-594	HpL	97.9	1.1E-04					
	SMW-1SB	Slug Test	99.8	1.5E-05					
	WP-592	Packer Test	100.0	4.4E-07					
	MW-35SB	Slug Test	100.1	4.4E-05					
	WP-583	HpL	103.8	1.2E-04					
	WP-584	Packer Test	107.7	2.6E-04					
	WP-585	HpL	109.7	2.7E-05					
	WP-588	HpL	112.1	8.0E-03					
	WP-585	Packer Test	116.5	1.2E-05					
	MW-5SB	Slug Test	120.0	7.0E-05					
	WP-586	Packer Test	120.5	2.4E-05					
	WP-586	HpL	122.8	2.0E-05					
	MW-43SB	Slug Test	126.0	5.2E-06					
	SMW-3SB	Slug Test	129.7	3.4E-05					
	WP-598	Packer Test	130.0	9.6E-06					
	WP-583	HpL	132.9	2.0E-05					
	WP-588	HpL	157.4	7.4E-04					
	WP-588	Packer Test	157.9	3.2E-04					
	WP-594	HpL	168.6	3.8E-07					
	WP-584	HpL	169.2	1.1E-04					
	WP-592	HpL	176.8	5.6E-06					
	WP-583	Packer Test	177.0	1.6E-05					
	WP-583	HpL	177.1	2.5E-04					
	WP-587	Packer Test	185.0	1.3E-04					
	WP-585	HpL	188.6	1.7E-04					
	WP-586	HpL	195.7	1.2E-04					
Shallow Hydrostratigraphic Unit	(Unconsolidated Deposits, plus upper 200 feet of bedrock)				**6.8E-05**	66	3.85E-07	1.59E-01	7.49E-05
Deep Bedrock (>200 feet and <3,000 feet)	Refer to Deep Bedrock Hydrogeologic Report (Foth, in press)				**4.3E-06**	153	3.94E-11	1.34E-02	6.82E-06
Tailings	NB1-3	Slug Test	27.2	2.6E-05	**6.9E-05**	3	2.30E-05	5.68E-04	2.55E-05
	NB2-1	Slug Test	7.6	5.7E-04					
	NB2-3	Slug Test	23.1	2.3E-05					

Notes:
[1] Intervals refer to the downhole lineal feet (LF) below ground surface.
[2] This test was analyzed as a slug test due to the test not reaching a constant pressure.
bgs = below ground surface
cm/sec = centimeter per second

Prepared by: GMB
Checked by: LDC

Table 5-9
Summary of Baseline Groundwater Quality Sampling Results

		Field Parameters						General Chemistry Parameters													
Ground Water Sampling Location & Date	Note	Conductivity (Field) (mS/cm)	Dissolved Oxygen (Field) (mg/L)	pH (Field) (SU)	Redox Potential (Field) (mV)	Temperature Field (°C)	Turbidity (NTU)	Alkalinity (mg/L)	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	Alkalinity, Carbonate (as CaCO3) (mg/L)	Ammonia (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/ Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Salinity (PSU)
MW-1A-R																						
7/31/2024		0.659	0.42	8.05	136	16.98	1.7	200	200	<3.7	<0.10	0.38 J	2.5	39	<0.0036	0.44 J	140	0.44 J	0.44 J	<0.070	0.12	<0.33
7/31/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11 J	--	--	--	--
9/30/2024		0.729	0	7.24	157	12.99	6.3	200	200	<3.7	<0.10	0.55 J	1.5	45	<0.0036	0.58 J	150	0.45 J	0.45 J	<0.070	0.089	<0.33
12/5/2024		0.706	12.19	8.26	175	8.07	8.6	200	200	<3.7	<0.10	0.70 J	0.76 J	51	<0.0036	0.51 J	160	0.52 J	0.52 J	<0.25	0.074	<0.33
2/24/2025		0.777	4.87	7.91	136	7.61	29.1	180	180	<3.7	<0.10	0.65 J	1.3	63	<0.0036	<0.43	170	<0.37	<0.37	<0.25	0.12	<0.33
5/6/2025		0.685	3.27	7.76	176	10.06	31.1	190	190	<3.7	<0.10	0.84 J	0.84 J	62	<0.0036	<0.43	150	<0.37	<0.37	<0.25	0.074	<0.33
8/6/2025		0.498	0.80	7.94	105	18.03	0.3	200	200	<3.7	<0.10	0.75 J	0.86 J	67	<0.0036	<0.43	140	<0.37	<0.37	<0.25	0.11	<0.33
10/20/2025		0.659	5.11	8.00	110	11.93	0	200	200	<3.7	<0.10	0.62 J	1.9	56	<0.0036	<0.43	140	<0.37	<0.37	<0.25	0.12	<0.33
2/17/2026		0.666	9.36	8.16	188	7.48	2.6	200	200	<3.7	<0.10	0.72 J	0.80 J	61	<0.0036	<0.43	160	<0.37	<0.37	<0.25	0.095	<0.33
4/20/2026		0.625	1.99	7.81	197	9.78	9.1	190	190	<3.7	<0.049	0.7 J	0.72 J	69	<0.0036	<0.43	160	2.5 J	2.5 J	<1	0.097	<0.33
MW-1B-R																						
7/31/2024		0.707	0	7.85	-124	20.9	23.7	190	190	<3.7	<0.10	1.1	0.93 J	95	<0.0036	0.38 J	190	<0.043 J	<0.070	<0.070	0.52 J	<0.33
9/30/2024		0.859	0	7.71	-57	12.94	3.9	190	190	<3.7	<0.10	1.1	1.2	90	<0.0050	0.89 J	190	<0.043	<0.070	<0.070	<0.024	<0.33
12/5/2024		0.796	11.78	8.06	32	6.2	0	200	200	<3.7	<0.10	1.1	0.82 J	95	<0.0036	0.48 J	200	<0.37	<0.37	<0.25	<0.024	<0.33
2/24/2025		0.888	0.92	7.77	94	8.01	1.5	180	180	<3.7	<0.10	0.93 J	1.5	92	<0.0036	<0.43	190	<0.37	<0.37	<0.25	<0.024	<0.33
5/6/2025		0.704	8.95	7.89	149	11.31	20.9	180	180	<3.7	<0.10	1.6	0.69 J	120	<0.0036	<0.43	170	<0.37	<0.37	<0.25	<0.024	<0.33
8/6/2025		0.591	0.23	7.86	28	15.39	0	190	190	<3.7	<0.10	1.2	0.97 J	120	<0.0036	<0.43	190	<0.37	<0.37	<0.25	<0.050	<0.33
10/20/2025		0.767	0.40	7.83	56	11.04	0	200	200	<3.7	<0.10	1.2	0.92 J	110	<0.0036	<0.43	160	<0.37	<0.37	<0.25	0.024 J	<0.33
2/18/2026		0.786	0.66	7.95	182	7.83	2.1	200	200	<3.7	<0.10	1.1	1.0	99	<0.0036	<0.43	190	<0.37	<0.37	<0.25	0.12	<0.33
2/18/2026	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	0.99 J	--	--	--	--	--	--	--	--	--
4/20/2026		0.749	9.23	7.74	204	9.77	0	200	200	<3.7	0.053 J	1.2	0.99 J	100	<0.0036	<0.43	190	2.7 J	2.7 J	<1	0.032 J	<0.33
MW-2A																						
8/1/2024		1.230	0.24	7.30	-189	14.18	72.8	460	460	<3.7	<0.10	1.2	5.5	120	<0.0036	0.23 J	500	<0.043 J	<0.070	<0.070	0.069	0.4
10/1/2024		1.350	0	7.42	-162	13.15	0	490	490	<3.7	<0.10	0.98 J	9.7	110	<0.0036	<0.19	560	<0.043	<0.070	<0.070	0.045 J	0.48
12/10/2024		1.360	0	7.76	-68	6.88	9.5	490	490	<3.7	<0.10	1.2	7.6	120	<0.0036	<0.43	570	<0.37	<0.37	<0.25	<0.024	0.48
12/10/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/10/2024	Duplicate Sample	--	--	--	--	--	--	490	490	<3.7	<0.10	1	7.7	120	<0.0036	<0.43	570	<0.37	<0.37	<0.25	<0.024	0.48
2/25/2025		1.440	0.83	7.27	66	6.56	5.7	520	520	<3.7	<0.10	<0.45	7.2	0.51 J	<0.0036	0.45 J	640	0.47 J	0.96 J	0.49 J	0.045 J	0.55
2/25/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	0.84 J	--	110 J	--	--	--	--	--	--	--	--
2/25/2025	Duplicate Sample	--	--	--	--	--	--	530	530	<3.7	<0.10	0.84	7.2	110	<0.0036	<0.43	640	<0.37	<0.37	<0.25	0.05	0.55
5/5/2025		1.140	0.81	6.76	-78	16.72	1.0	550	550	<3.7	<0.10	1.2	6.0	100	<0.0036	<0.43	610	<0.37	<0.37	<0.25	<0.024	0.55
5/5/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/5/2025	Duplicate Sample	--	--	--	--	--	--	550	550	<3.7	<0.10	1.1	8.0	100	<0.0036	<0.43	600	<0.37	<0.37	<0.25	<0.024	0.48
8/5/2025		0.927	0.29	7.19	-142	17.97	8.0	540	540	<3.7	5.5 J	0.78 J	8.2	94	<0.0036	<0.43	600	<0.37	<0.37	<0.25	0.074	0.48
8/5/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	0.78 J	--	--	--	--	--	--	--	--	--	--
8/5/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	8.1	--	--	--	--	--	--	--	--	--
8/5/2025	Duplicate Sample	--	--	--	--	--	--	540	540	<3.7	<0.10	0.78	--	94	<0.0036	<0.43	600	<0.37	<0.37	<0.25	0.082	0.48
10/20/2025		1.110	0.34	7.10	-174	14.62	0	540	540	<3.7	<0.10	0.70 J	8.5	82	<0.0036	<0.43	570	<0.37	<0.37	<0.25	0.076	0.48
10/20/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	0.70 J	--	--	--	--	--	--	--	--	--	--
10/20/2025	Duplicate Sample	--	--	--	--	--	--	530	530	<3.7	0.38	0.70	8.4	81	<0.0036	<0.43	550	<0.37	<0.37	<0.25	0.084	0.48
2/19/2026		1.140	1.27	7.51	23	7.76	0	520	520	<3.7	<0.10	0.66 J	7.0	81	<0.0036	<0.43	600	<0.37	<0.37	<0.25	0.031 J	0.48
4/21/2026		1.15	2.75	6.96	56	9.19	0	540	540	<3.7	0.077 J	<0.45	7.7	66 J	<0.0036	<0.43	600	<1	<1	<1	<0.024	0.48
4/21/2026		0.757	0.31	7.07	-36	14.92	0	550	550	<3.7	0.069 J	0.72 J	7.5	66 J	<0.0036	<0.43	610	<0.37	<0.37	<0.25	<0.024	0.48
MW-2B																						
8/1/2024		0.937	0.33	7.15	-3	15.7	6.8	460	460	<3.7	<0.10	0.41 J	1.8	42	<0.0036	0.36 J	470	<0.043	<0.070	<0.070	0.063	<0.33
10/1/2024		1.170	4.39	7.24	22	15.34	16.2	560	560	<3.7	<0.10	0.34 J	4.7	68	<0.0036	<0.19	660	<0.043	<0.070	<0.070	0.11	0.40
12/10/2024		1.090	0.66	7.86	118	8.59	9.3	490	490	<3.7	<0.10	0.50 J	2.7	58	<0.0036	<0.43	570	<0.37	<0.37	<0.25	<0.024	0.33
2/25/2025		1.090	1.87	7.25	131	6.27	11.8	440	440	<3.7	<0.10	0.86 J	1.7	1.1	<0.0036	0.96 J	530	1.00	2.0	1.0	0.028 J	<0.33
5/5/2025		0.820	0.50	6.90	103	15.99	4.0	450	450	<3.7	<0.10	<0.45	7.0	49	<0.0036	<0.43	530	<0.37	<0.37	<0.25	<0.024	<0.33
8/5/2025		0.703	0.27	7.18	-74	18.39	49.0	450	450	<3.7	<0.10	<0.45	1.9	45	<0.0036	<0.43	490	<0.37	<0.37	<0.25	<0.05	<0.33
10/29/2025		1.040	0.39	7.20	-88	12.85	0	490	490	<3.7	<0.10	0.62 J	3.3	63	<0.0036	<0.43	600	<0.37	<0.37	<0.25	0.026 J	0.40
2/18/2026		1.000	1.66	7.45	120	3.87	16.8	460	460	<3.7	<0.10	<0.45	1.8	49	<0.0036	<0.43	520	<0.37	<0.37	<0.25	<0.024	<0.33
4/21/2026		--	--	--	--	--	--	450	450	<3.7	<0.049	<0.45	1.9	50	<0.0036	<0.43	490	<1	<1	<1	<0.024	<0.33
MW-3A																						
7/30/2024		1.580	0.20	7.13	-46	21.99	103	400	400	<3.7	<0.10	4.3	2.6	380	<0.0036 J	<0.19	700	<0.043	<0.070	<0.070	<0.024 J	1.1
10/1/2024		2.080	0	7.14	-87	15.82	19.2	450	450	<3.7	<0.10	4.7	3.9	450	<0.0036	<0.19	810	<0.043	<0.070	<0.070	<0.024	1.2
12/10/2024		2.490	0	7.65	-42	8.01	1.8	460	460	<3.7	<0.10	4.9	3.7	480	<0.0036	<0.43	840	<0.37	<0.37	<0.25	<0.024	1.3
2/26/2025		2.510	1.16	7.14	-58	6.68	3.1	450	450	<3.7	<0.10	4.6	3.2	460	<0.0036	<0.43	850	<0.37	<0.37	<0.25	<0.024	1.2
4/28/2025		2.360	0.67	7.05	4	10.21	14.8	480	480	<3.7	0.12 J	4.8	3.4	480	<0.0036	<0.43	880	<0.37	<0.37	<0.25	0.027 J	1.2
8/4/2025		1.880	0.58	7.09	-97	15.38	0.8	500	500	<3.7	<0.10	5.8	5.9	540	<0.0036	<0.43	820	<0.37	3.5	3.5 J	<0.024	1.4
10/29/2025		2.550	0.31	7.08	-107	10.36	0	520	520	<3.7	<0.10	5.7	4.7	520	<0.0036	<0.43	910	<0.37	<0.37	<0.25	0.073	1.4
2/23/2026		2.210	1.27	7.25	14	6.47	103	480	480	<3.7	<0.10	4.5	3.6	450	0.0300	<0.43	920	<0.37	<0.37	<0.25	0.057	1.2
4/22/2026		2.24	0.5	6.83	-50	10.95	12.9	500	500	<3.7	<0.049	5 J	3.9	460	<0.0036	<0.43	900	0.72 J	0.72 J	<1	<0.024	1.3

Table 5-9 (continued)

		General Chemistry Parameters					Metals (Dissolved & Total)															
Ground Water Sampling Location & Date	Note	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Aluminum, Dissolved (µg/L)	Aluminum, Total Recoverable (µg/L)	Antimony, Dissolved (µg/L)	Antimony, Total Recoverable (µg/L)	Arsenic, Dissolved (µg/L)	Arsenic, Total Recoverable (µg/L)	Barium, Dissolved (µg/L)	Barium, Total Recoverable (µg/L)	Beryllium, Dissolved (µg/L)	Beryllium, Total Recoverable (µg/L)	Boron, Dissolved (µg/L)	Boron, Total Recoverable (µg/L)	Cadmium, Dissolved (µg/L)	Cadmium, Total Recoverable (µg/L)	Calcium, Dissolved (µg/L)	Calcium, Total Recoverable (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total Recoverable (µg/L)
MW-1A-R																								
7/31/2024		82	<0.23	400	0.99 J	9.6	<25	190	<1.3	<1.3	0.79 J	1.1	45	44	<0.53	<0.53	620	560	<0.17	<0.17	37000	34000	<1.1	<1.1
7/31/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		67	<0.23	380	2.1	5.0	<25	160	<1.3	<1.3	0.67 J	0.65 J	45	47	<0.53	<0.53	730	690	<0.17	<0.17	37000	37000	<1.1	<1.1
12/5/2024		59	<0.23	370	0.74 J	3.2 J	<25	62 J	<1.3	<1.3	0.66 J	0.78 J	48	52	<0.53	<0.53	730	750	<0.17	<0.17	39000	41000	<1.1	<1.1
2/24/2025		57	<0.23	360	0.96 J	68	<25	240	<1.3	<1.3	0.46 J	0.88 J	45	54	<0.53	<0.53	730	770	<0.17	<0.17	38000	42000	1.1 J	<1.1
5/6/2025		66	<0.23	370	0.57 J	6.4	<25	370	<1.3	<1.3	0.46 J	0.97 J	42	49	<0.53	<0.53	660	810	<0.17	<0.17	35000	36000	<1.1	<1.1
8/6/2025		63	<0.23	100 J	0.68 J	<1.9	<25	44 J	<1.3	<1.3	0.88 J	1.0	39	40	<0.53	<0.53	780	750	<0.17	<0.17	35000	34000	<1.1	<1.1
10/20/2025		61	16	360	0.77 J	3.8 J	<25	85 J	<1.3	<1.3	0.69 J	0.79 J	44	43	<0.53	<0.53	720	710	<0.17	<0.17	34000	33000	<1.1	<1.1
2/17/2026		54	<0.23	320	0.68 J	17	<25	160	<0.93	<0.93	0.77 J	0.71 J	42	46	<0.24	<0.24	790	810	<0.17	<0.17	37000	39000	<1.1	<1.1
4/20/2026		54	<0.23	340	0.63 J	36	<25	980	<0.93	<0.93	0.74 J	0.9 J	46	54	<0.24	<0.24	880	910	<0.17	<0.17	38000	40000	<1.1	1.4 J
MW-1B-R																								
7/31/2024		45	<0.23	440	0.87 J	<1.9	<25	<25	<1.3	<1.3	5.0	5.6	120	130	<0.53	<0.53	1500	1400	<0.17	<0.17	65000	61000	<1.1	<1.1
9/30/2024		46	<0.23	440	1.0	<1.9	<25	<25	<1.3	<1.3	4.2	4.5	100	110	<0.53	<0.53	1600	1500	<0.17	<0.17	63000	62000	<1.1	<1.1
12/5/2024		43	0.32 J	410	0.62 J	<1.9	<25	<25	<1.3	<1.3	4.4	4.8	110	110	<0.53	<0.53	1500	1500	<0.17	<0.17	64000	65000	<1.1	<1.1
2/24/2025		39	<0.58	390	0.87 J	<1.9	<25	<25	<1.3	<1.3	3.6	3.8	96	100	<0.53	<0.53	1500	1500	<0.17	<0.17	58000	61000	<1.1	<1.1
5/6/2025		42	<0.23	400	0.50 J	6.0	<25	340	<1.3	<1.3	3.7	4.5	100	97	<0.53	<0.53	1600	1500	<0.17	<0.17	60000	50000	<1.1	<1.1
8/6/2025		45	<0.23	100 J	0.62 J	<1.9	<25	<25	<1.3	<1.3	4.2	4.7	94	95	<0.53	<0.53	1500	1600	<0.17	<0.17	61000	61000	<1.1	<1.1
10/20/2025		45	<0.23	440	0.81 J	<1.9	<25	<25	<1.3	<1.3	4.5	3.9	93	82	<0.53	<0.53	1500	1300	<0.17	<0.17	58000	52000	<1.1	<1.1
2/18/2026		40	0.43 J	410	0.92 J	<1.9	<25	<25	<0.93	<0.93	4.2	4.0	94	95	<0.24	<0.24	1600	1600	<0.17	<0.17	62000	61000	<1.1	<1.1
2/18/2026	Duplicate Sample	--	--	--	0.92 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/20/2026		38	<0.23	390	0.87 J	<1.9	<25	<25	<0.93	<0.93	3.7	3.8	90	91	<0.24	<0.24	1500	1500	<0.17	<0.17	59000	59000	<1.1	<1.1
MW-2A																								
8/1/2024		0.40 J	<0.23	680	5.4	6.2	<25	<25	<1.3	<1.3	1.3	1.7	310	310	<0.53	<0.53	500	510	<0.17	<0.17	140000	140000	<1.1	<1.1
10/1/2024		0.28 J	<0.23	730	9.3	16	<25	<25	<1.3	<1.3	3.4	4.1	390	400	<0.53	<0.53	450	440	<0.17	<0.17	150000	160000	<1.1	<1.1
12/10/2024		<0.47	<0.23	810	8.0	13	<25	<25	<1.3	<1.3	1.8	2.3	530	540	<0.53	<0.53	400	410	<0.17	<0.17	150000	160000	<1.1	<1.1
12/10/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/10/2024	Duplicate Sample	<0.47	<0.23	780	8.1	13	<25	<25	<1.3	<1.3	1.8	2.3	530	550	<0.53	<0.53	400	410	<0.17	<0.17	160000	150000	<1.1	<1.1
2/25/2025		0.47 J	<0.58	730	7.2	6.0	<25	<25	<1.3	<1.3	0.49 J	0.99 J	450	470	<0.53	<0.53	370	340	<0.17	<0.17	180000	180000	<1.1	<1.1
2/25/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	0.48 J	--	--	--	--	--	--	--	--	--	--	--	--	--
2/25/2025	Duplicate Sample	3.7	<0.58	730	7.2	5.6	<25	<25	<1.3	<1.3	0.48	1.1	460	470	<0.53	<0.53	370	350	<0.17	<0.17	180000	180000	<1.1	<1.1
5/5/2025		3.5	<0.23	780	7.9	<1.9	<25	<25	<1.3	<1.3	0.71 J	0.82 J	500	490	<0.53	<0.53	330	340	<0.17	<0.17	170000	160000	<1.1	<1.1
5/5/2025	Duplicate Sample	--	--	--	--	2.6 J	--	--	--	--	0.76 J	0.85 J	--	--	--	--	--	--	--	--	--	--	--	--
5/5/2025	Duplicate Sample	3.7	<0.23	730	7.9	2.6	<25	<25	<1.3	<1.3	0.76	0.85	490	490	<0.53	<0.53	310	310	<0.17	<0.17	160000	160000	<1.1	<1.1
8/5/2025		1.8	0.58 J	650	8.0	13	<25	<25	<1.3	<1.3	1.7	1.9	510	520	<0.53	<0.53	260	270	<0.17	<0.17	150000	160000	<1.1	<1.1
8/5/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/5/2025	Duplicate Sample	--	--	--	7.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/5/2025	Duplicate Sample	1.7	<0.23	680	--	14	<25	<25	<1.3	<1.3	1.7	1.9	500	510	<0.53	<0.53	260	270	<0.17	<0.17	150000	160000	<1.1	<1.1
10/20/2025		0.79 J	0.32 J	590	8.3	10	<25	<25	<1.3	<1.3	1.2	1.3	550	540	<0.53	<0.53	210	210	<0.17	<0.17	150000	150000	<1.1	<1.1
10/20/2025	Duplicate Sample	0.85 J	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/20/2025	Duplicate Sample	0.85	<0.23	660	8.4	9.6	<25	<25	<1.3	<1.3	1.1	1.4	530	520	<0.53	<0.53	200	210	<0.17	<0.17	140000	140000	<1.1	<1.1
2/19/2026		1.1	9.9	630	7.2	6.8	<25	<25	<0.93	<0.93	0.43 J	1.0	440	450	<0.24	<0.24	260	260	<0.17	<0.17	160000	150000	<1.1	<1.1
4/21/2026		4.2 J	0.53 J	710	7.5	4.2 J	<25	<25	<0.93	<0.93	0.46 J	0.49 J	520	460	<0.24	<0.24	240	230	<0.17	<0.17	170000	150000	<1.1	<1.1
4/21/2026		1.4 J	<0.23	720	7.6	4.2 J	<25	<25	<0.93	<0.93	0.4 J	0.53 J	490	470	<0.24	<0.24	210	240	<0.17	<0.17	160000	160000	<1.1	<1.1
MW-2B																								
8/1/2024		13	<0.23	530	1.7	4.4 J	<25	40 J	<1.3	<1.3	0.74 J	1.4	600	590	<0.53	<0.53	93	95	<0.17	<0.17	92000	92000	<1.1	<1.1
10/1/2024		7.6	1.2	700	4.3	40	<25	680	<1.3	<1.3	0.95 J	1.5	910	940	<0.53	<0.53	160	150	<0.17	<0.17	130000	140000	<1.1	1.2 J
12/10/2024		12	<0.23	710	2.6	19	<25	290	<1.3	<1.3	0.81 J	1.0	840	810	<0.53	<0.53	110	110	<0.17	<0.17	120000	110000	<1.1	<1.1
2/25/2025		1.0	<0.23	520	1.6	11	<25	140	<1.3	<1.3	0.78 J	1.1	660	680	<0.53	<0.53	77	91	<0.17	<0.17	110000	110000	<1.1	<1.1
5/5/2025		14	<0.23	550	1.8	4.0 J	<25	170	<1.3	<1.3	0.83 J	1.0	660	680	<0.53	<0.53	87	91	<0.17	<0.17	100000	100000	<1.1	<1.1
8/5/2025		13	<0.23	480	1.7	6.4	<25	140	<1.3	<1.3	1.6	1.8	650	690	<0.53	<0.53	92	100	<0.17	<0.17	92000	96000	<1.1	<1.1
10/29/2025		9.2	<0.23	560	2.8	12	<25	130	<1.3	<1.3	2.1	2.9	850	850	<0.53	<0.53	130	130	<0.17	<0.17	120000	120000	<1.1	1.9 J
2/18/2026		9.7	1.7	500	1.9	<1.9	<25	41 J	<0.93	<0.93	0.79 J	0.90 J	680	680	<0.24	<0.24	93	86.2 J	<0.17	<0.17	100000	100000	<1.1	<1.1
4/21/2026		11	<0.23	460	1.9	7.4	<25	62 J	<0.93	<0.93	0.9 J	1.1	650	650	<0.24	<0.24	78	73	<0.17	<0.17	98000	95000	<1.1	<1.1
MW-3A																								
7/30/2024		2.5	<0.23	1100	2.3	2.0 J	<25	<25	<1.3	<1.3	0.58 J	0.75 J	800	720	<0.53	<0.53	390	380	<0.17	<0.17	230000	210000	<1.1	<1.1
10/1/2024		1.9	0.64 J	1300	3.9	7.4	<25	<25	<1.3	<1.3	0.83 J	1.1	930	910	<0.53	<0.53	400	390	<0.17	<0.17	250000	240000	<1.1	<1.1
12/10/2024		1.8	<0.23	1700	3.7	14	<25	<25	<1.3	<1.3	0.91 J	1.2	970	950	<0.53	<0.53	390	390	<0.17	<0.17	250000	250000	<1.1	<1.1
2/26/2025		3.9	<0.58	1300	3.0	6.4	<25	<25	<1.3	<1.3	2.5	2.5	990	1000	<0.53	<0.53	370	370	<0.17	<0.17	250000	250000	<1.1	<1.1
4/28/2025		2.8	<0.23	1400	3.7	13	<25	<25	<1.3	<1.3	0.88 J	1.3	1000	1100	<0.53	<0.53	420	460	<0.17	<0.17	250000	260000	<1.1	<1.1
8/4/2025		1.3	<0.23	1500	5.8	19	<25	<25	<1.3	<1.3	1.7	2.1	1000	990	<0.53	<0.53	360	370	<0.17	<0.17	250000	240000	<1.1	<1.1
10/29/2025		1.4	<0.23	1500	5.6	29	<25	<25	<1.3	<1.3	3.2	3.3	1000	1100	<0.53	<0.53	390	400	<0.17	<0.17	260000	270000	<1.1	<1.1
2/23/2026		2.6	7.4	1300	3.7	31	<25	<25	<0.93	<0.93	0.88 J	2	910	960	<0.24	<0.24	400 J	410 J	<0.17	<0.17	260000	270000	<1.1	<1.1
4/22/2026		1.9 J	<0.23	1400	3.8	14	<25	<25	<0.93	<0.93	1.1	1.5	970	1000	<0.24	<0.24	390	400	<0.17	<0.17	260000	260000	<1.1	<1.1

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Cobalt, Dissolved (µg/L)	Cobalt, Total Recoverable (µg/L)	Copper, Dissolved (µg/L)	Copper, Total Recoverable (µg/L)	Iron, Dissolved (µg/L)	Iron, Total Recoverable (µg/L)	Lead, Dissolved (µg/L)	Lead, Total Recoverable (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total Recoverable (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total Recoverable (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total Recoverable (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total Recoverable (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total Recoverable (ng/L)	Molybdenum, Dissolved (µg/L)	Molybdenum, Total Recoverable (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total Recoverable (µg/L)
MW-1A-R																							
7/31/2024		<0.40	<0.40	0.60 J	1.4 J	<47	380	<0.19	0.22 J	5.8 J	6.3 J	15000	14000	1.9 J	36	0.28 J	0.35 J	<0.022	<0.022	35	36	<0.63	<0.63
7/31/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		<0.40	<0.40	0.62 J	1.4 J	<47	150	<0.19	<0.19	6.1 J	6.5 J	14000	14000	8.9	65	<0.5	0.36 J	<0.022	<0.022	31	31	<0.63	<0.63
12/5/2024		<0.40	<0.40	0.70 J	0.88 J	<47	72 J	<0.19	<0.19	5.9 J	6.3 J	15000	15000	2.8	17	0.54	0.32 J	<0.022	<0.022	31	31	<0.63	<0.63
2/24/2025		<0.40	<0.40	0.54 J	2.3	<47	210	<0.19	<0.19	6.7 J	7.8 J	15000	16000	<0.79	29	0.86	2.5	<0.022	<0.022	30	29	<0.63	<0.63
5/6/2025		<0.40	<0.40	0.75 J	4.5	<47	760	<0.19	0.24 J	5.5 J	7.9 J	14000	15000	<0.79	100	<0.20	0.38 J	<0.022	<0.022	32	31	<0.63	1.0 J
8/6/2025		<0.40	<0.40	<0.50	0.61 J	<47	63 J	<0.19	<0.19	11	<10	14000	14000	<0.79	16	0.27 J	0.27 J	--	--	28	32	<0.63	<0.63
10/20/2025		<0.40	<0.40	<0.50	0.79 J	<47	120	<0.19	<0.19	6.8 J	7.3 J	14000	13000	<0.79	15	0.45 J	0.34 J	<0.022	<0.022	30	29	<0.63	<0.63
2/17/2026		<0.40	<0.40	0.59 J	1.0 J	<47	160	<0.19	<0.19	8.9 J	7.3 J	15000	16000	<0.79	18	0.24 J	0.31 J	<0.022	<0.022	28	28	<0.63	<0.63
4/20/2026		<0.40	0.61 J	0.67 J	2.2	<47	860	<0.19	0.32 J	9.8 J	9.7 J	14000	14000	<0.79	22	0.58	0.32 J	<0.033	<0.033	21	22	<0.63	1.4 J
MW-1B-R																							
7/31/2024		<0.40	<0.40	<0.50	<0.50	88 J	250	<0.19	<0.19	40	38	10000	9400	540	740	<0.50	<0.50	<0.022	<0.022	5.7	6.2	<0.63	<0.63
9/30/2024		<0.40	<0.40	<0.50	0.73 J	<47	49 J	<0.19	<0.19	41	41	9800	9600	220	240	0.37 J	0.22 J	<0.022	<0.022	4.2 J	4.2 J	<0.63	<0.63
12/5/2024		<0.40	<0.40	<0.50	0.99 J	<47	<47	<0.19	<0.19	38	39	9600	9500	180	200	0.32 J	<0.20	<0.022	<0.022	4.7 J	4.9 J	<0.63	<0.63
2/24/2025		<0.40	<0.40	0.71 J	0.57 J	<47	<47	<0.19	<0.19	39	40	9500	10000	30	33	<0.20	<0.20	<0.022	<0.022	4.4 J	4.7 J	<0.63	<0.63
5/6/2025		<0.40	<0.40	<0.50	2.8	<47	890	<0.19	0.20 J	40	35	9900	10000	14	310	<0.20	<0.20	<0.022	<0.022	5.7	6.8	<0.63	1.1 J
8/6/2025		<0.40	<0.40	<0.50	<0.50	<47	<47	<0.19	<0.19	41	41	9900	9700	71	75	--	--	--	--	4.4 J	4.5 J	<0.63	<0.63
10/20/2025		<0.40	<0.40	<0.50	<0.50	<47	<47	<0.19	<0.19	39	35	9300	8300	80	71	<0.5	<0.20	<0.022	<0.022	4.2 J	3.8 J	<0.63	<0.63
2/18/2026		<0.40	<0.40	0.53 J	<0.50	<47	<47	<0.19	<0.19	42	41	10000	10000	7.9	25	<0.20	<0.20	<0.022	<0.022	4.7 J	4.8 J	<0.63	<0.63
2/18/2026	Duplicate Sample	--	--	--	0.50 J	--	--	--	--	--	--	--	--	--	--	0.40 J	<0.20	<0.022	<0.022	4.6 J	4.5 J	--	--
4/20/2026		<0.40	<0.40	<0.50	<0.50	<47	<47	<0.19	<0.19	36	38	9600	9700	6.1	19	0.58	0.2 J	<0.033	<0.033	4.2 J	4.4 J	<0.63	<0.63
MW-2A																							
8/1/2024		0.41 J	0.42 J	<0.50	<0.50	1500	2100	<0.19	<0.19	46	46	35000	35000	740	800	0.23 J	0.22 J	<0.022	<0.022	3.6 J	3.3 J	0.67 J	0.63 J
10/1/2024		0.97 J	0.93 J	<0.50	1.2 J	6200	7500	<0.19	0.35 J	43	47	38000	41000	1800	1600	0.28 J	0.68	<0.022	<0.022	2.6 J	2.6 J	0.85 J	0.70 J
12/10/2024		1.7	1.8	<0.50	<0.50	2800	3700	<0.19	<0.19	48	46	44000	44000	4000	4200	0.64	0.72	<0.022	<0.022	3.4 J	3.1 J	1.5 J	1.5 J
12/10/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.78	0.80	<0.022	<0.022	3.2 J	3.2 J	1.5 J	1.6 J
12/10/2024	Duplicate Sample	1.8	1.8	<0.50	<0.50	2800	3800	<0.19	<0.19	45	45	44000	45000	4000	4200	--	--	--	--	3.2	3.2	1.5	1.6
2/25/2025		0.78 J	0.78 J	<0.50	0.75 J	400	1800	<0.19	<0.19	45	44	48000	48000	1500	1500	<0.20	0.26 J	<0.022	<0.22 J	<2.5	<2.5	0.92 J	1.0 J
2/25/2025	Duplicate Sample	0.80 J	0.80 J	--	--	--	--	--	--	--	--	--	--	--	--	0.25 J	0.41 J	<0.022	0.35 J	--	--	0.93 J	1.0 J
2/25/2025	Duplicate Sample	0.80	0.80	<0.50	<0.50	520	1800	<0.19	<0.19	45	43	49000	48000	1500	1500	--	--	--	--	<2.5	<2.5	0.93	1.0
5/5/2025		0.87 J	0.88 J	<0.50	<0.50	1600	1900	<0.19	<0.19	44	45	50000	48000	1600	1500	0.57	0.22	<0.022	<0.022	<2.5	<2.5	0.92 J	0.92 J
5/5/2025	Duplicate Sample	0.85 J	0.83 J	--	--	--	--	--	--	--	--	--	--	--	--	0.39 J	0.22 J	<0.022	<0.022	--	--	0.85 J	0.93 J
5/5/2025	Duplicate Sample	0.85	0.83	<0.50	<0.50	1500	1900	<0.19	<0.19	43	43	48000	48000	1500	1500	--	--	--	--	<2.5	<2.5	0.85	0.93
8/5/2025		0.77 J	0.81 J	<0.50	<0.50	5800	6300	<0.19	<0.19	41	41	48000	50000	1400	1400	1.1	0.30 J	<0.022	<0.022	<2.5	<2.5	0.72 J	0.85 J
8/5/2025	Duplicate Sample	0.83 J	0.96 J	--	--	--	--	--	--	--	--	--	--	--	--	0.36 J	0.45 J	<0.022	0.025 J	--	--	0.70 J	0.86 J
8/5/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/5/2025	Duplicate Sample	0.83	0.96	<0.50	<0.50	5600	6200	<0.19	<0.19	42	43	48000	50000	1400	1400	--	--	--	--	<2.5	<2.5	0.70	0.86
10/20/2025		0.59 J	0.59 J	<0.50	<0.50	4200	4400	<0.19	<0.19	40	39	50000	49000	1200	1200	0.36 J	0.25 J	0.033 J	0.05	<2.5	<2.5	2.0	2.2
10/20/2025	Duplicate Sample	0.57 J	0.59 J	--	--	--	--	--	--	--	--	--	--	--	--	0.43 J	0.25 J	<0.022	0.024 J	--	--	1.9 J	--
10/20/2025	Duplicate Sample	0.57	0.59	<0.50	<0.50	4000	4500	<0.19	<0.19	37	39	48000	47000	1100	1200	--	--	--	--	<2.5	<2.5	1.9	2.5
2/19/2026		<0.40	<0.40	0.70 J	0.87 J	240	1800	<0.19	<0.19	44	45	51000	51000	100	170	0.28 J	0.35 J	<0.022	<0.022	<2.5	<2.5	0.98 J	1.1 J
4/21/2026		<0.40	<0.40	<0.50	0.52 J	1600	1400	<0.19	<0.19	50	45	58000	53000	560	430	0.64	0.33 J	<0.033	<0.033	<2.5	<2.5	<0.63	<0.63
4/21/2026		<0.40	<0.40	<0.50	<0.50	1500	1400	<0.19	<0.19	48	48	54000	54000	540	460	0.89	0.32 J	<0.033	<0.033	<2.5	<2.5	<0.63	<0.63
MW-2B																							
8/1/2024		<0.40	0.60 J	1.3 J	1.7 J	51 J	380	<0.19	<0.19	30 J	29 J	60000	59000	220	270	<0.20	0.31 J	<0.022	<0.022	<2.5	<2.5	1.7 J	1.8 J
10/1/2024		<0.40	0.74 J	1.6 J	4.1	160	880	<0.19	0.24 J	36	37	75000	79000	180	180	0.22 J	0.79	<0.022	<0.022	<2.5	<2.5	<0.63	1.5 J
12/10/2024		<0.40	<0.40	1.1 J	1.9 J	54 J	430	<0.19	<0.19	32	32	71000	69000	67	83	0.63	0.73	<0.022	<0.022	<2.5	<2.5	<0.63	0.88 J
2/25/2025		<0.40	<0.40	0.83 J	1.6 J	<47	230	<0.19	<0.19	24	26	62000	62000	39	110	0.27 J	0.47 J	<0.022	<0.022	<2.5	<2.5	<0.63	0.81 J
5/5/2025		<0.40	<0.40	0.84 J	1.9 J	63 J	220	<0.19	<0.19	28	28	63000	65000	260	300	0.33 J	0.33 J	<0.022	<0.022	<2.5	<2.5	1.2 J	1.6 J
8/5/2025		0.64 J	0.83 J	<0.50	1.2 J	240	460	<0.19	<0.19	32	32	60000	61000	300	330	--	--	--	--	<2.5	2.5 J	0.73 J	1.1 J
10/29/2025		1.2	1.6	<0.50	1.6 J	450	830	<0.19	<0.19	34	34	71000	71000	540	600	0.54	0.42 J	0.045 J	<0.022	<2.5	<2.5	1.8 J	2.4
2/18/2026		<0.40	<0.40	<0.50	0.80 J	51 J	140	<0.19	<0.19	28	27	64000	64000	63	89	<0.20	0.25 J	<0.022	<0.022	2.5 J	<2.5	0.70 J	0.67 J
4/21/2026		<0.40	<0.40	<0.50	0.81 J	93 J	200	<0.19	<0.19	27	25	62000	61000	420	450	0.46 J	0.41 J	<0.033	<0.033	<2.5	<2.5	<0.63	0.74 J
MW-3A																							
7/30/2024		0.44 J	0.44 J	0.70 J	1.3 J	1300	1100	<0.19	<0.19	96	95	47000	43000	550	540	<0.5	<0.50	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
10/1/2024		0.88 J	0.92 J	0.53 J	1.9 J	1700	2700	<0.19	<0.19	93	93	51000	49000	2400	2200	0.43 J	0.52	<0.022	<0.022	<2.5	<2.5	1.0 J	0.90 J
12/10/2024		1.3	1.3	<0.50	1.3 J	4100	4300	<0.19	<0.19	97	97	52000	51000	2600	2600	1.1	0.93	<0.022	<0.022	<2.5	<2.5	1.5 J	1.5 J
2/26/2025		1.0	1.1	<0.50	0.60 J	3000	3000	<0.19	<0.19	93	95	52000	53000	4100	4200	<0.20	<0.20	<0.022	<0.022	<2.5	<2.5	2.9	3.0
4/28/2025		2.0	2.1	<0.50	1.1 J	2800	4100	<0.19	<0.19	91	94	57000	57000	4900	4900	0.49 J	0.53	<0.022	<0.022	<2.5	<2.5	3.4	3.4
8/4/2025		1.3	1.8	<0.50	0.51 J	8200	8200	<0.19	<0.19	85	86	60000	54000	3600	4700	<0.50	<0.50	<0.022	<0.022	<2.5	2.6 J	1.5 J	2.3
10/29/2025		1.7	1.7	<0.50	<0.50	12000	12000	<0.19	<0.19	92	96	58000	59000	4100	4200	0.30 J	0.26 J	<0.022	<0.022	<2.5	2.5 J	1.5 J	1.7 J
2/23/2026		1.4	1.5	<0.50	1.6 J	830	4700	<0.19	<0.19	100	100	59000	59000	4000	4100	0.28 J	0.59	<0.022	<0.022	<2.5	<2.5	1.9 J	1.8 J
4/22/2026		1.5	1.5	<0.50	<0.50	3100	4100	<0.19	<0.19	87	87	56000	58000	3400	3500	0.65	0.4 J	<0.033	<0.033	<2.5	2.9 J	1.4 J	1.5 J

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Potassium, Dissolved (µg/L)	Potassium, Total Recoverable (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total Recoverable (µg/L)	Silver, Dissolved (µg/L)	Silver, Total Recoverable (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total Recoverable (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total Recoverable (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total Recoverable (µg/L)	Tin, Dissolved (µg/L)	Tin, Total Recoverable (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total Recoverable (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total Recoverable (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total Recoverable (µg/L)
MW-1A-R																					
7/31/2024		3100	2900	<0.98	<0.98	<0.12	<0.12	93000	98000	570	490	<0.57	<0.57	1.3 J	<1.3	16	16	<2.2	2.3 J	<6.9	<6.9
7/31/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		3200	3200	<0.98	<0.98	<0.12	<0.12	86000	87000	550	540	<0.57	<0.57	<1.3	<1.3	15	15	<2.2	<2.2	10 J	<6.9
12/5/2024		3200	3400	<0.98	<0.98	<0.12	<0.12	86000	92000	580	610	<0.57	<0.57	<1.3	2.8 J	18	16	<2.2	<2.2	<6.9	<6.9
2/24/2025		3000	3000	1.1 J	<0.98	<0.12	<0.12	84000	88000	580	610	<0.57	<0.57	<1.3	<1.3	19	15	<2.2	2.2 J	<6.9	<6.9
5/6/2025		2500	2800	<0.98	<0.98	<0.12	<0.12	80000	95000	550	540	<0.57	<0.57	<1.3	<1.3	19	15	<2.2	2.6 J	<6.9	7.5 J
8/6/2025		2600	2600	<0.98	<0.98	<0.12	<0.12	90000	93000	520	460	<0.57	<0.57	<1.3	<1.3	--	--	<2.2	<2.2	<6.9	<6.9
10/20/2025		2800	2700	<0.98	<0.98	<0.12	<0.12	84000	82000	520	490	<0.57	<0.57	<1.3	<1.3	19	18	<2.2	<2.2	<6.9	<6.9
2/17/2026		2800	2900	<0.98	<0.98	<0.12	<0.12	89000	88000	530	550	<0.25	<0.25	<1.3	<1.3	18	21	1.5	2.0	<6.9	<6.9
4/20/2026		2800	3300	<0.98	<0.98	<0.12	<0.12	82000	83000	580	600	<0.25	<0.25	<1.3	<1.3	17	17	1.6	4.2	8.9 J	23 J
MW-1B-R																					
7/31/2024		3700	3500	<0.98	<0.98	<0.12	<0.12	89000	86000	1100	1000	<0.57	<0.57	<1.3	<1.3	5.6 J	5.9	<2.2	<2.2	<6.9	<6.9
9/30/2024		3600	3600	<0.98	<0.98	<0.12	<0.12	82000	83000	1000	1000	<0.57	<0.57	<1.3	<1.3	4.2	4.4	<2.2	<2.2	<6.9	<6.9
12/5/2024		3700	3700	<0.98	<0.98	<0.12	<0.12	83000	85000	1100	1100	<0.57	<0.57	<1.3	<1.3	4.9	4.8	<2.2	<2.2	<6.9	<6.9
2/24/2025		3600	3700	<0.98	<0.98	<0.12	<0.12	83000	85000	1000	1100	<0.57	<0.57	<1.3	<1.3	4.9	5.0	<2.2	<2.2	<6.9	<6.9
5/6/2025		3500	3200	<0.98	<0.98	<0.12	<0.12	92000	87000	1100	950	<0.57	<0.57	<1.3	<1.3	6.1	9.2	<2.2	<2.2	<6.9	<6.9
8/6/2025		3300	3300	<0.98	<0.98	<0.12	<0.12	86000	88000	1100	1100	<0.57	<0.57	<1.3	<1.3	--	--	<2.2	<2.2	<6.9	<6.9
10/20/2025		3200	2900	<0.98	<0.98	<0.12	<0.12	81000	71000	1000	920	<0.57	<0.57	<1.3	<1.3	4.8	4.8	<2.2	<2.2	<6.9	<6.9
2/18/2026		3500	3500	<0.98	<0.98	<0.12	<0.12	86000	85000	1200	1100	<0.25	<0.25	<1.3	<1.3	5.5	5.6	0.16 J	0.18 J	<6.9	<6.9
2/18/2026	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17 J	0.18 J	--	--
4/20/2026		3600	3600	<0.98	<0.98	<0.12	<0.12	81000	82000	1000	1000	<0.25	<0.25	<1.3	<1.3	5.8	6	0.2 J	0.2 J	11 J	<6.9
MW-2A																					
8/1/2024		1600	1600	<0.98	<0.98	<0.12	<0.12	80000	82000	2200	2300	<0.57	<0.57	<1.3	<1.3	0.70	0.74	<2.2	<2.2	<6.9	<6.9
10/1/2024		1600	1700	<0.98	<0.98	<0.12	<0.12	65000	69000	2100	2300	<0.57	<0.57	<1.3	<1.3	0.49	0.5	<2.2	<2.2	11 J	49
12/10/2024		1700	1800	<0.98	<0.98	<0.12	<0.12	63000	64000	2200	2200	<0.57	<0.57	<1.3	<1.3	0.39	0.41	<2.2	<2.2	<6.9	12 J
12/10/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/10/2024	Duplicate Sample	1700	1800	<0.98	<0.98	<0.12	<0.12	63000	64000	2200	2200	<0.57	<0.57	<1.3	<1.3	--	--	<2.2	<2.2	<6.9	<6.9
2/25/2025		1900	1900	<0.98	<0.98	<0.12	<0.12	57000	55000	2200	2200	<0.57	<0.57	<1.3	<1.3	0.51	0.51	<2.2	<2.2	<6.9	<6.9
2/25/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/25/2025	Duplicate Sample	1900	1900	<0.98	<0.98	<0.12	<0.12	57000	55000	2200	2200	<0.57	<0.57	<1.3	<1.3	--	--	<2.2	<2.2	<6.9	<6.9
5/5/2025		1800	1800	<0.98	<0.98	<0.12	<0.12	48000	49000	2100	2100	<0.57	<0.57	<1.3	1.3 J	0.61	0.63	<2.2	<2.2	<6.9	<6.9
5/5/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.63	0.64	--	--	--	--
5/5/2025	Duplicate Sample	1800	1800	<0.98	<0.98	<0.12	<0.12	48000	49000	2100	2100	<0.57	<0.57	<1.3	<1.3	--	--	<2.2	<2.2	<6.9	<6.9
8/5/2025		1700	1700	<0.98	<0.98	<0.12	<0.12	43000	45000	2100	2100	<0.57	<0.57	<1.3	<1.3	0.69	0.74	<2.2	<2.2	<6.9	<6.9
8/5/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.69	0.72	--	--	--	--
8/5/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/5/2025	Duplicate Sample	1700	1700	<0.98	<0.98	<0.12	<0.12	43000	45000	2100	2100	<0.57	<0.57	<1.3	<1.3	--	--	<2.2	<2.2	<6.9	<6.9
10/20/2025		1700	1700	<0.98	<0.98	<0.12	<0.12	31000	32000	1900	1800	<0.57	<0.57	<1.3	<1.3	0.55	0.58	<2.2	<2.2	<6.9	<6.9
10/20/2025	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.56	0.62	--	--	--	--
10/20/2025	Duplicate Sample	1700	1700	<0.98	<0.98	<0.12	<0.12	29000	32000	1800	1800	<0.57	<0.57	<1.3	<1.3	--	--	<2.2	<2.2	<6.9	<6.9
2/19/2026		1900	1900	<0.98	<0.98	<0.12	<0.12	43000	43000	2200	2200	<0.25	<0.25	<1.3	<1.3	0.83	0.81	0.16 J	0.42	<6.9	<6.9
4/21/2026		1900	1700	<0.98	<0.98	<0.12	<0.12	37000	37000	2200	2100	<0.25	<0.25	2.2 J	1.7 J	1.3	0.93	0.44	0.39	7.8 J	<20
4/21/2026		1800	1800	<0.98	<0.98	<0.12	<0.12	35000	37000	2000	2100	<0.25	<0.25	<1.3	<1.3	1.4	1.1	0.45	0.38	14 J	<6.9
MW-2B																					
8/1/2024		3400	3300	<0.98	<0.98	<0.12	<0.12	21000	22000	1100	1100	<0.57	<0.57	<1.3	<1.3	23	23	5.8	7.9	<6.9	<6.9
10/1/2024		3600	3900	<0.98	<0.98	<0.12	<0.12	19000	19000	1500	1500	<0.57	<0.57	<1.3	<1.3	13	14	4.0 J	8.0	<6.9	<6.9
12/10/2024		3200	3200	<0.98	<0.98	<0.12	<0.12	18000	18000	1400	1300	<0.57	<0.57	<1.3	<1.3	15	16	4.2 J	5.7	<6.9	<6.9
2/25/2025		2600	2700	<0.98	<0.98	<0.12	<0.12	18000	18000	1200	1200	<0.57	<0.57	<1.3	<1.3	16	16	2.6 J	3.7 J	<6.9	<6.9
5/5/2025		2600	2700	<0.98	<0.98	<0.12	<0.12	18000	18000	1200	1200	<0.57	<0.57	<1.3	<1.3	15	15	<2.2	2.8 J	<6.9	<6.9
8/5/2025		3200	3300	<0.98	<0.98	<0.12	<0.12	19000	20000	1100	1200	<0.57	<0.57	<1.3	<1.3	--	--	<2.2	2.6 J	<6.9	<6.9
10/29/2025		3700	3600	<0.98	<0.98	<0.12	<0.12	17000	17000	1400	1400	<0.57	<0.57	<1.3	<1.3	13	12	2.8 J	4.3 J	<6.9	<6.9
2/18/2026		2600	2600	<0.98	<0.98	<0.12	<0.12	17000	17000	1300	1300	<0.25	<0.25	1.5 J	<1.3	15	14	1.0	1.3	<6.9	<6.9
4/21/2026		2400	2400	<0.98	<0.98	<0.12	<0.12	17000	17000	1300	1200	<0.25	<0.25	<1.3	<1.3	15	13	0.77	1.2	15 J	<20
MW-3A																					
7/30/2024		1900	1700	<0.98	<0.98	<0.12	<0.12	170000	170000	4800	4500	<0.57	<0.57	<1.3	<1.3	6.9	6.1	<2.2	<2.2	<6.9	<6.9
10/1/2024		2000	1900	<0.98	<0.98	<0.12	<0.12	170000	170000	4900	4800	<0.57	<0.57	<1.3	2.3 J	7.7	8.1	<2.2	<2.2	13 J	9.4 J
12/10/2024		2000	1900	<0.98	<0.98	<0.12	<0.12	160000	170000	5000	5000	<0.57	<0.57	<1.3	<1.3	7.1	7.1	<2.2	<2.2	37	10 J
2/26/2025		2100	2100	<0.98	<0.98	<0.12	<0.12	160000	160000	5000	5000	<0.57	<0.57	<1.3	<1.3	7.1	7.2	<2.2	<2.2	<6.9	<6.9
4/28/2025		2200	2300	<0.98	<0.98	<0.12	<0.12	160000	160000	5000	5100	<0.57	<0.57	<1.3	<1.3	7.9	8.0	<2.2	<2.2	11 J	14 J
8/4/2025		2300	1900	<0.98	<0.98	<0.12	<0.12	150000	160000	5200	5000	<0.57	<0.57	<1.3	<1.3	10	9.0	<2.2	<2.2	<6.9	<6.9
10/29/2025		2000	2100	<0.98	<0.98	<0.12	<0.12	160000	160000	5300	5400	<0.57	<0.57	<1.3	<1.3	10	9.8	<2.2	<2.2	<6.9	<6.9
2/23/2026		2100	2100	<0.98	<0.98	<0.12	<0.12	160000	160000	5700	5900	<0.25	<0.25	<1.3	<1.3	8.6	8.7	0.092 J	0.35	7.1 J	11 J
4/22/2026		2100	2200	<0.98	<0.98	<0.12	<0.12	150000	150000	4900	5200	<0.25	<0.25	2.7 J	4.8 J	7.9	7.6	0.14 J	0.22 J	<6.9	<6.9

Table 5-9 (continued)

		Field Parameters						General Chemistry Parameters												
Ground Water Sampling Location & Date	Note	Conductivity (Field) (mS/cm)	Dissolved Oxygen (Field) (mg/L)	pH (Field) (SU)	Redox Potential (Field) (mV)	Temperature Field (°C)	Turbidity (NTU)	Alkalinity (mg/L)	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	Alkalinity, Carbonate (as CaCO3) (mg/L)	Ammonia (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/ Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Salinity (PSU)
MW-3B																						
7/30/2024		0.903	0.19	7.19	-216	13.46	0	430	430	<3.7	<0.10	<0.18	1.3	44	<0.0036	<0.19	520	<0.043	<0.070	<0.070	<0.024 J	<0.33
10/1/2024		1.580	0.55	7.20	-60	15.83	0	480	480	<3.7	<0.10	2.3	2.3	270	<0.0036	<0.19	770	<0.043	<0.070	<0.070	0.032 J	0.77
12/10/2024		0.969	5.68	8.00	102	5.43	0	440	440	<3.7	<0.10	0.87 J	1.8	78	<0.0036	<0.43	490	<0.37	<0.37	<0.25	<0.024	0.33
2/26/2025		1.020	3.01	7.30	162	5.87	2.9	420	420	<3.7	<0.10	<0.45	0.96 J	38	<0.0036	<0.43	460	<0.37	<0.37	<0.25	0.028 J	<0.33
5/5/2025		0.818	0.69	7.28	176	9.2	3	430	430	<3.7	<0.10	<0.45	1.1	23	<0.0036	<0.43	440	<0.37	<0.37	<0.25	<0.024	<0.33
8/5/2025		0.774	1.21	7.06	159	15.12	2.4	2300	2300	<3.7	<0.10	0.54 J	1.2	59	<0.0036	<0.43	470	<0.37	<0.37	<0.25	<0.024	0.33
10/29/2025		1.900	0.37	7.05	64	11.52	0	500	500	<3.7	<0.10	3.3	2.6	340	<0.0036	<0.43	830	<0.37	<0.37	<0.25	<0.024	0.92
2/23/2026		0.845	4.61	7.44	162	1.84	12.6	430	430	<3.7	<0.10	<0.45	1.2	24	<0.0036	<0.43	440	<0.37	<0.37	<0.25	0.029 J	<0.33
4/21/2026		0.832	1.17	7.05	25	8.46	76.4	440	440	<3.7	<0.049	<0.45	1.2	34 J	0.021	<0.43	440	<0.37	<0.37	<0.25	<0.024	<0.33
MW-5A																						
7/30/2024		1.34	1.66	7.36	72	18.6	0	340	340	<3.7	<0.10	2.4	2.8	260	<0.0036 J	<0.19	430	<0.043	<0.070	<0.070	0.11 J	0.70
10/2/2024		1.65	0	7.21	46	14.38	1.9	350	350	<3.7	<0.10	2.6	3.4	270	0.0040 J	<0.19	520	<0.043	<0.070	<0.070	<0.024	0.70
12/9/2024		1.48	10.45	7.98	27	10.57	0	330	330	<3.7	<0.10 J	2.2	3.3	230	<0.0036	<0.43	480	0.47 J	0.47 J	<0.25	<0.024	0.55
2/26/2025		1.66	2.86	7.29	168	5.11	4.3	330	330	<3.7	<0.10	2.1	2.2	240	<0.0036	<0.43	490	<0.37	<0.37	<0.25	0.027 J	0.55
5/7/2025		1.36	0.38	7.30	200	9.52	6.1	340	340	<3.7	<0.10	2.2	2.8	230	<0.0036	<0.43	470	<0.37	<0.37	<0.25	<0.024	0.55
8/4/2025		1.12	0.29	7.29	-161	15.04	4.7	350	350	<3.7	<0.10	3.2	3.8	300	<0.0036	<0.43	460	<0.37	<0.37	<0.25	0.030 J	0.70
10/21/2025		1.53	0.39	7.27	-73	12.37	0	360	360	<3.7	<0.10	3.2 J	3.5	320	<0.0036	<0.43 J	550	<0.37	<0.37	<0.25	<0.024	0.77
2/11/2026		1.48	2.95	7.36	29	6.93	0	340	340	<3.7	<0.10	2.7	2.9	240	<0.0036	<0.43	440	<0.37	<0.37	<0.25	0.041 J	0.63
4/22/2026		1.37	0.62	7.03	19	12.73	0	340	340	<3.7	<0.049	2.6 J	2.9	260	<0.0036	<0.43	480	<0.37	<0.37	<1	<0.024	0.55
MW-5SB																						
9/30/2024	Installed Q3 of 2024	2.06	2.10	8.55	-35	23.3	190	25	25	<3.7	<0.10	5.2	1.3	510	<0.0036	1.4	97	<0.043	<0.070	<0.070	0.19	1.0
12/9/2024		1.27	0	9.33	-87	8.27	9.0	51	51	<3.7	<0.10	3.3	<0.47	320	<0.0036	1.3	54	<0.37	<0.37	<0.25	<0.024	<0.33
3/10/2025		1.42	0.86	8.96	-106	12.24	96.0	41	41	<3.7	<0.10	3.5	<0.47	400	<0.0036	1.3	54	<0.37	<0.37	<0.25	0.035 J	<0.33
5/7/2025		2.14	7.57	8.73	-82	10.51	128	42	36	6.0	<0.10	3.9	<0.47	390	<0.0036	1.4	60	<0.37	<0.37	<0.25	0.059	0.63
8/4/2025		1.98	0.48	8.38	-159	15.17	3.4	54	36	18	<0.10	3.5	<0.44	350	<0.0036	1.1	36	<0.37	2.6 J	2.6 J	0.038 J	0.55
10/21/2025		1.57	0.81	8.86	-131	11.37	0	35	35	<3.7	<0.10	4.3	<0.47	440	<0.0036	1.2	69	<0.37	<0.37	<0.25	<0.05	0.70
2/11/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/28/2026		0.963	0.62	8.89	-20	10.48	0	57	57	<3.7	<0.049	2.5	0.61 J	290	<0.0036	1.3	26	1.1	1.1	<0.25	0.037 J	<0.33
MW-10																						
8/6/2024		2.33	0	6.10	-24	14.77	0.4	500	500	<3.7	<0.10	5.3	5.2	440	<0.0036	<0.19	1200	<0.043	<0.070	<0.070	0.039	1.2
9/30/2024		2.49	0	6.43	-54	18.64	3.6	480	480	<3.7	<0.10	5.1	5.1	460	<0.0036	0.51	1100	<0.043	<0.070	<0.070	<0.024	1.1
12/3/2024		2.59	0	7.02	-78	7.71	7.9	490	490	<3.7	<0.10	4.9	4.7	450	<0.0036	<0.43	1200	<0.37	<0.37	<0.25	<0.024	1.3
2/25/2025		2.63	0.82	6.62	-35	7.57	7.1	510	510	<3.7	<0.10	4.6	4.4	480	<0.0036	<0.43	1200	<0.37	<0.37	<0.25	<0.024	1.4
5/7/2025		2.32	0.52	6.71	-93	11.17	38.4	570	570	<3.7	<0.10	4.3	5.1	420	<0.0036	<0.43	1200	<0.37	<0.37	<0.25	0.031	1.2
8/4/2025		1.89	0.48	6.60	-150	16.08	9.8	520	520	<3.7	<0.10	5.3	7.8	470	<0.0036	<0.43	1100	<0.37	<0.37	<0.25	0.024	1.4
10/29/2025		2.400	0.43	6.68	-59	12.04	0	510	510	<3.7	<0.10	5.0	5.9	480	<0.0036	<0.43	1100	<0.37	<0.37	<0.25	0.028	1.3
2/11/2026		2.55	0.39	6.71	-188	6.14	14.1	570	570	<3.7	<0.10	6.9	5.1	470	<0.0036	<0.43	1200	<0.37	<0.37	<0.25	0.042	1.4
4/22/2026		2.28	2.06	6.46	-128	14.16	47.9	600	600	<3.7	0.082 J	16 J	5.5	510	<0.0036	<0.43	1200	1 J	1 J	<0.25	<0.024	1.4
MW-31																						
7/30/2024		0.359	0	8.10	51	12.47	>1000	150	150	<3.7	0.12 J	0.32 J	2.5	21	<0.0036	0.68 J	110	0.43 J	0.43 J	<0.070	0.19 J	<0.33
10/7/2024		0.397	0.50	8.97	-30	10.26	278	140	140	<3.7	<0.10	0.29 J	1.4	17	<0.0036	0.69 J	140	<0.043	<0.070	<0.070	0.028 J	<0.33
12/9/2024		0.347	1.23	8.10	37	6.1	>1000	140	140	<3.7	<0.10	<0.45	2.7	17	<0.0036	0.65 J	180	<0.37	<0.37	<0.25	0.79	<0.33
3/11/2025		0.450	2.89	8.36	83	4.3	102	150	150	<3.7	<0.10	<0.45	1.2 J	19	<0.0050 J	0.51 J	120	3.3 J	3.3 J	<0.25	0.59	<0.33
4/29/2025		0.384	6.99	8.31	206	7.0	>1000	150	150	<3.7	<0.10	<0.45	1.00	20	<0.0036	0.53 J	520	<0.37	<0.37	<0.25	4.5	<0.33
8/12/2025		0.376	7.86	8.33	-65	15.63	>1000	150	150	<3.7	<0.10	<0.45	1.2	21	<0.0036	0.55 J	220	<0.37	<0.37	<0.25	0.48	<0.33
10/27/2025		0.384	11.70	8.47	126	10.74	805	160	160	<3.7	<0.10	<0.45	1.3	20	<0.0036	0.49 J	180	<0.37	<0.37	<0.25	0.53	<0.33
2/16/2026		0.371	1.39	8.35	137	7.94	>1000	160	160	<3.7	<0.10	<0.45	1.2	23	<0.0036	0.47 J	170	<0.37	<0.37	<0.25	0.38	<0.33
4/27/2026		0.331	2.37	8.28	90	13.43	258	160	160	<3.7	<0.049	<0.45	1.8	22	<0.0036	0.58 J	96	<0.37	<0.37	<0.25	0.35	<0.33
MW-35																						
7/28/2024		--	--	--	--	--	--	220	220	<3.7	1.60	<0.18	3.4	<1.0	<0.0036	0.26 J	250	<0.043	<0.070	<0.070	<0.024 J	<0.33
9/30/2024		0.612	3.19	9.40	152	9.46	28.3	270	270	<3.7	0.13 J	<0.18	1.7	<1.0	<0.0036	0.47 J	290	<0.043	<0.070	<0.070	<0.024	<0.33
12/3/2024		0.462	9.96	8.09	154	5.41	180	260	260	<3.7	--	<0.45	--	0.78 J	--	<0.43	--	<0.37	<0.37	<0.25	--	<0.33
3/10/2025		0.413	5.66	10.19	321	7.85	163	220	220	<3.7	<0.10	<0.45	1.2	0.83 J	<0.0036	<0.43	240	<0.37	<0.37	<0.25	<0.024	<0.33
4/30/2025		0.341	0.72	7.45	77	19.46	123	220	220	<3.7	<0.10	<0.45	1.8	0.80 J	<0.0036	<0.43	230	<0.37	<0.37	<0.25	<0.024	<0.33
8/12/2025		0.376	1.39	7.55	133	20.52	671	190	190	<3.7	<0.10	<0.45	1.9	0.98 J	0.0050	<0.43	200	<0.37	<0.37	<0.25	<0.024	<0.33
10/27/2025		0.403	8.58	6.15	98	11.46	115	230	230	<3.7	<0.10	<0.45	1.6	0.74 J	<0.0036	<0.43	230	<0.37	<0.37	<0.25	0.031 J	<0.33
2/16/2026		0.397	6.07	7.60	170	7.84	196	230	230	<3.7	<0.10	<0.45	1.3	0.82 J	<0.0036	<0.43	220	<0.37	<0.37	<0.25	0.047 J	<0.33
4/22/2026		0.386	3.8	7.27	99	11.2	94.2	240	240	<3.7	<0.049	<0.45	1.9	0.83 J	<0.0036	<0.43	230	<0.37	<0.37	<0.25	<0.024	<0.33

Table 5-9 (continued)

		General Chemistry Parameters					Metals (Dissolved & Total)															
Ground Water Sampling Location & Date	Note	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Aluminum, Dissolved (µg/L)	Aluminum, Total Recoverable (µg/L)	Antimony, Dissolved (µg/L)	Antimony, Total Recoverable (µg/L)	Arsenic, Dissolved (µg/L)	Arsenic, Total Recoverable (µg/L)	Barium, Dissolved (µg/L)	Barium, Total Recoverable (µg/L)	Beryllium, Dissolved (µg/L)	Beryllium, Total Recoverable (µg/L)	Boron, Dissolved (µg/L)	Boron, Total Recoverable (µg/L)	Cadmium, Dissolved (µg/L)	Cadmium, Total Recoverable (µg/L)	Calcium, Dissolved (µg/L)	Calcium, Total Recoverable (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total Recoverable (µg/L)
MW-3B																								
7/30/2024		14	<0.23	500	1.3	<1.9	<25	<25	<1.3	<1.3	0.49 J	0.61 J	570	580	<0.53	<0.53	130	130	<0.17	<0.17	97000	98000	<1.1	<1.1
10/1/2024		8.0	0.24 J	990	2.1	<1.9	<25	70 J	<1.3	<1.3	0.42 J	0.36 J	1100	1000	<0.53	<0.53	220	200	<0.17	<0.17	160000	160000	<1.1	<1.1
12/10/2024		12	<0.23	710	1.7	<1.9	<25	<25	<1.3	<1.3	0.30 J	0.29 J	520	510	<0.53	<0.53	120	120	<0.17	<0.17	91000	89000	<1.1	<1.1
2/26/2025		30	<0.58	470	0.95 J	<1.9	<25	<25	<1.3	<1.3	0.26 J	0.27 J	430	440	<0.53	<0.53	93	93	<0.17	<0.17	86000	86000	<1.1	<1.1
5/5/2025		24	<0.23	480	1.0	<1.9	<25	<25	<1.3	<1.3	0.29 J	0.34 J	410	420	<0.53	<0.53	89	92	<0.17	<0.17	81000	82000	<1.1	<1.1
8/5/2025		12	<0.23	600	1.1	<1.9	<25	<25	<1.3	<1.3	0.50 J	0.38 J	500	510	<0.53	<0.53	110	100	<0.17	<0.17	89000	87000	<1.1	<1.1
10/29/2025		4.5	<0.23	940	2.4	<1.9	<25	<25	<1.3	<1.3	0.79 J	0.47 J	1000	1000	<0.53	<0.53	250	250	<0.17	<0.17	180000	170000	<1.1	<1.1
2/23/2026		22	12	490	1.0	5.4	<25	<25	<0.93	<0.93	0.25 J	0.36 J	430	430	<0.24	<0.24	92 J	86 J	<0.17	<0.17	82000	79000	<1.1	<1.1
4/21/2026		20 J	<0.23	470	1.1	<1.9	<25	<25	<0.93	<0.93	0.28 J	0.34 J	410	410	<0.24	<0.24	96	93	<0.17	<0.17	79000	80000	<1.1	<1.1
MW-5A																								
7/30/2024		2.4	<0.23	920	2.3	2.2 J	<25	<100	<1.3	<1.3	0.30 J	0.27 J	850	840	<0.53	<0.53	230	250	<0.17	<0.17	180000	160000	<1.1	<1.1
10/2/2024		2.0	<0.23	1100	3.3	<1.9	<25	<25	<1.3	<1.3	<1.0	0.64 J	560	710	<0.53	<0.53	200	190	<0.17	<0.17	170000	180000	<1.1	<1.1
12/9/2024		1.8	<0.23	1000	3.2	2.4 J	<25	<25	<1.3	<1.3	0.37 J	0.39 J	520	560 J	<0.53	<0.53	190	190	<0.17	<0.17	170000	170000	<1.1	<1.1
2/26/2025		3.0	<0.58	760	2.3	2.4 J	<25	<25	<1.3	<1.3	0.27 J	0.31 J	640	620	<0.53	<0.53	190	180	<0.17	<0.17	170000	170000	<1.1	<1.1
5/7/2025		3.7	<0.23	880	2.6	3.0 J	<25	<25	<1.3	<1.3	0.35 J	0.35 J	560	550	<0.53	<0.53	190	170	<0.17	<0.17	160000	170000	<1.1	<1.1
8/4/2025		2.4	<0.23	850	3.6	<1.9	<25	<25	<1.3	<1.3	0.43 J	0.46 J	690	710	<0.53	<0.53	220	230	<0.17	<0.17	160000	170000	<1.1	<1.1
10/21/2025		1.9 J	2.7 J	950	3.7	2.4 J	<25	<25	<1.3	<1.3	0.45 J	0.42 J	640	670	<0.53	<0.53	210	210	<0.17	<0.17	190000	200000	<1.1	<1.1
2/11/2026		2.0	6.0	900	2.8	3.0 J	<25	<25	<0.93	<0.93	0.31 J	0.37 J	640	640	<0.24	<0.24	200	180	<0.17	<0.17	160000	160000	<1.1	<1.1
4/22/2026		1.8 J	<1 J	780	2.8	<1.9	<25	<25	<0.93	<0.93	0.35 J	0.35 J	570	580	<0.24	<0.24	160	160 J	<0.17	170000 J	170000 J	170000	<1.1	<1.1
MW-5SB																								
9/30/2024	Installed Q3 of 2024	37	1.2	990	<0.47	31	29 J	11000	<1.3	<1.3	0.24 J	0.83 J	59	150	<0.53	<0.53	250	240	<0.17	<0.17	30000	33000	<1.1	16
12/9/2024		33	<0.23	720	0.50 J	17	190	5200	<1.3	<1.3	0.40 J	0.67 J	41	87	<0.53	<0.53	390	370	<0.17	<0.17	18000	19000	<1.1	8.6
3/10/2025		36	<0.23	730	<0.47	18	55 J	3100	<1.3	<1.3	0.35 J	0.60 J	43	72	<0.53	<0.53	320	330	<0.17	<0.17	19000	20000	<1.1	5.5
5/7/2025		36	<0.23	700	<0.47	4.8 J	<25	2900	<1.3	<1.3	0.43 J	0.53 J	49	77	<0.53	<0.53	330	340	<0.17	<0.17	22000	22000	<1.1	4.4 J
8/4/2025		36	<0.23	580	<0.44	4.4 J	<25	140	<1.3	<1.3	0.43 J	0.46 J	46	34	<0.53	<0.53	320	350	<0.17	<0.17	22000	14000	<1.1	<1.1
10/21/2025		36	15 J	760	<0.47	6.0	<25	260	<1.3	<1.3	0.37 J	0.84 J	58	63	<0.53	<0.53	330	330	<0.17	<0.17	26000	27000	<1.1	1.9 J
2/11/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/28/2026		36	<0.23	440	0.47 J	5	<25	200	<0.93	<0.93	0.5 J	0.52 J	26	27	<0.24	<0.24	410	<50	<0.17	<0.17	11000	9900	<1.1	<1.1
MW-10																								
8/6/2024		9.1	<0.23	1600	5.3	4.8	<25	<25	<1.3	<1.3	0.35	0.45	2400	2500	<0.53	<0.53	180	210	<0.17	0.19	320000	340000	<1.1	<1.1
9/30/2024		11	1.9	1600	5.0	11	<25	28	<1.3	<1.3	0.37	0.41	2200	2200	<0.53	<0.53	210	210	<0.17	<0.17	300000	300000	<1.1	<1.1
12/3/2024		11	<0.23	1700	4.9	5.2	<25	160	<1.3	<1.3	0.28	0.43	2500	2500	<0.53	<0.53	180	190	<0.17	0.21	320000	330000	<1.1	<1.1
2/25/2025		9.8	<0.58	1300	4.4	9.2	<25	59	<1.3	<1.3	0.26	0.38	2600	2500	<0.53	<0.53	170	170	<0.17	<0.17	340000	340000	<1.1	<1.1
5/7/2025		4.0	<0.23	1300	5.3	21	<25	130	<1.3	<1.3	0.24	0.43	3100	3000	<0.53	<0.53	170	150	<0.17	0.27	320000	310000	<1.1	<1.1
8/4/2025		5.5	<0.23	1700	7.7	5.0	<25	<25	<1.3	<1.3	0.26	0.31	2500	2500	<0.53	<0.53	170	170	<0.17	<0.17	310000	290000	<1.1	<1.1
10/29/2025		6.8	<0.23	1400	6.0	3.4	<25	<25	<1.3	<1.3	0.40	0.38	2500	2400	<0.53	<0.53	200	200	<0.17	<0.17	300000	300000	<1.1	<1.1
2/11/2026		3.4	7.1	1700	5.3	5.6	<25	<25	<0.93	<0.93	0.27	0.27	2900	2900	<0.24	<0.24	160	170	<0.17	<0.17	320000	330000	<1.1	<1.1
4/22/2026		2.2 J	<0.23	1400	5.7	7	<25	69 J	<0.93	<0.93	0.25 J	0.28 J	3000	3200	<0.24	<0.24	190	190 J	<0.17	<0.17	320000	320000	<1.1	<1.1
MW-31																								
7/30/2024		21	<0.23	230	1.4	170	<25	9600	<1.3	<1.3	2.8	5.0	130	230	<0.53	<0.53	870	890	<0.17	<0.17	22000	29000	<1.1	17
10/7/2024		21	<0.23	280	1.3	140	<25	19000	<1.3	<1.3	2.6	7.0	120	320	<0.53	0.93 J	800	790	<0.17	<0.17	21000	35000	<1.1	32
12/9/2024		22	0.89 J	380	2.7	340	34 J	6700	<1.3	<1.3	2.9	8.7	130	370	<0.53	0.67 J	860	770	<0.17	0.21 J	21000	55000	<1.1	9
3/11/2025		22	0.30 J	270	1.1 J	460	6200	14000	<1.3	<1.3	3.6	5.2	180	230	<0.53	0.57 J	760	700	<0.17	<0.17	26000	31000	8.3	19
4/29/2025		20	<0.23	290	1.2	2600	<25	89000	<1.3	<1.3	1.7	27	110	1300	<0.53	5.1	550	740	<0.17	0.95	15000	120000	<1.1	160
8/12/2025		20	<0.58	340	1.1	350	180	34000	<1.3	<1.3	2.5	12	110	410	<0.53	1.8	820	790	<0.17	0.24 J	22000	51000	<1.1	56
10/27/2025		19	<0.58	330	0.99 J	370	<25	29000	<1.3	<1.3	2.7	8.6	120	400	<0.53	1.6	870	820	<0.17	0.29 J	23000	44000	<1.1	45
2/16/2026		20	13	300	1.0	240	45 J	23000	<0.93	<0.93	2.6	8.9	120	310	<0.24	1.0	850	810	<0.17	<0.17	23000	43000	<1.1	37
4/27/2026		43	<0.23	270	1.8	490	71 J	8300	<0.93	<0.93	2.6	4.2	100	150	<0.24	0.37 J	810	660	<0.17	<0.17	22000	26000	<1.1	12
MW-35																								
7/28/2024		7.5	<0.23	190	1.8	180	<25	430	<1.3	<1.3	1.4	11	400	3400	<0.53	<0.53	<50	<50	<0.17	2.5	73000	79000	<1.1	<1.1
9/30/2024		8.0	2.3	340	1.7	<1.9	<25	<25	<1.3	<1.3	1.2	1.3	470	570	<0.53	<0.53	58	50	<0.17	<0.17	91000	96000	<1.1	1.4 J
12/3/2024		7.5	--	320	--	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/10/2025		8.3	<0.23	240	1.1	2.2 J	<25	<25	<1.3	<1.3	1.3	1.4	450	500	<0.53	<0.53	66	69	<0.17	<0.17	81000	79000	<1.1	<1.1
4/30/2025		7.6	0.51 J	200	1.7	4.4 J	<25	27 J	<1.3	<1.3	1.4	1.7	380 J	590	<0.53	<0.53	81	77	<0.17	0.20 J	73000	75000	<1.1	<1.1
8/12/2025		11	24	250	2.0	6.4	<25	310	<1.3	<1.3	1.3	4.1	340	1400	<0.53	<0.53	53	50	<0.17	0.92	67000	65000	<1.1	1.3 J
10/27/2025		9.0	1.4	220	1.4	<1.9	<25	<25	<1.3	<1.3	1.8	1.9	370	440	<0.53	<0.53	54	61	<0.17	<0.17	74000	74000	1.1 J	1.1 J
2/16/2026		7.0	<0.23	240	1.3	2.6 J	<25	56 J	<0.93	<0.93	1.6	2.4	370	650	<0.24	<0.24	68	63	<0.17	0.24 J	73000	72000	<1.1	<1.1
4/22/2026		6.6 J	<0.23	220	1.7	8.2	<25	74 J	<0.93	<0.93	1.3	2.7	390	1000	<0.24	<0.24	84	76 J	<0.17	0.61	71000	74000	<1.1	<1.1

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Cobalt, Dissolved (µg/L)	Cobalt, Total Recoverable (µg/L)	Copper, Dissolved (µg/L)	Copper, Total Recoverable (µg/L)	Iron, Dissolved (µg/L)	Iron, Total Recoverable (µg/L)	Lead, Dissolved (µg/L)	Lead, Total Recoverable (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total Recoverable (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total Recoverable (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total Recoverable (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total Recoverable (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total Recoverable (ng/L)	Molybdenum, Dissolved (µg/L)	Molybdenum, Total Recoverable (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total Recoverable (µg/L)
MW-3B																							
7/30/2024		0.58 J	0.59 J	<0.50	0.54 J	170	180	<0.19	<0.19	41	41	64000	66000	760	780	0.41 J	0.51	0.083	0.250	<2.5	<2.5	0.93 J	0.94 J
10/1/2024		0.61 J	0.54 J	0.79 J	2.6	54 J	280	<0.19	<0.19	61	58	96000	90000	850	320	0.52	0.77	<0.022	0.027 J	<2.5	<2.5	<0.63	<0.63
12/10/2024		<0.40	<0.40	0.69 J	0.86 J	<47	<47	<0.19	<0.19	44	45	65000	64000	5.8	14	0.56 J	0.56 J	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
2/26/2025		<0.40	<0.40	0.86 J	0.59 J	<47	<47	<0.19	<0.19	37	36	59000	59000	9.4	18	<0.20	0.27 J	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
5/5/2025		<0.40	<0.40	0.60 J	1.1 J	<47	<47	<0.19	0.22 J	35	34	57000	57000	20	45	--	--	--	--	<2.5	<2.5	<0.63	<0.63
8/5/2025		0.60 J	<0.40	<0.50	1.1 J	150	59 J	<0.19	<0.19	38	41	61000	60000	1100	170	--	--	--	0.025 J	<2.5	<2.5	<0.63	<0.63
10/29/2025		1.3	0.62 J	<0.50	1.1 J	230	110	<0.19	<0.19	67	68	100000	99000	1400	1100	0.30 J	0.48 J	<0.022	0.039 J	<2.5	<2.5	2.0	1.7 J
2/23/2026		<0.40	<0.40	0.58 J	2.0	<47	180	<0.19	<0.19	38	36	62000	59000	2.7	220	0.34 J	1.4	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
4/21/2026		<0.40	<0.40	<0.50	0.59 J	<47	87 J	<0.19	<0.19	37	38	59000	59000	90	83	0.6	0.36 J	0.033 J	0.054	<2.5	<2.5	<0.63	<0.63
MW-5A																							
7/30/2024		<0.40	<0.40	1.4 J	1.7 J	<47	54 J	<0.19	<0.19	65	76	13000	8700	330	90	0.21 J	0.32 J	<0.022	<0.022	2.8 J	4.0 J	<0.63	<0.63
10/2/2024		<0.40	0.46 J	1.8 J	1.2 J	<47	70 J	<0.19	<0.19	64	57	11,000 J	17000	570 J	1000	0.30 J	0.58	<0.022	<0.022	<2.5	<2.5	0.72 J	0.72 J
12/9/2024		<0.40	<0.40	0.76 J	1.4 J	100	120	<0.19	<0.19	50	53 J	17000	14000 J	960	950 J	0.65	0.44 J	0.022 J	0.028 J	<2.5	<2.5	0.76 J	1.4 J
2/26/2025		<0.40	<0.40	1.0 J	1.3 J	<47	<47	<0.19	<0.19	61	57	12000	13000	200	350	<0.20	0.32 J	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
5/7/2025		<0.40	<0.40	<2.0	<2.0	73 J	120	<0.19	<0.19	47	49	12000	13000	690	840	<0.50	0.66	<0.022	<0.022	<2.5	<2.5	1.2 J	0.96 J
8/4/2025		0.66 J	0.63 J	<0.50	1.2 J	400	340	<0.19	<0.19	72	76	9800	10000	1700	1600	<0.50	<0.50	<0.022	<0.022	3.9 J	3.6 J	1.5 J	1.4 J
10/21/2025		0.42 J	0.47 J	0.78 J	0.51 J	290	320	<0.19	<0.19	61	68	16000	15000	1100	1200	<0.5	<0.50	<0.022	<0.022	<2.5	<2.5	<0.63	1.9 J
2/11/2026		<0.40	<0.40	1.4 J	3.1	66 J	140	<0.19	<0.19	61	58	12000	12000	310	580	0.41 J	0.62	<0.022	<0.022	3.0 J	3.2 J	3.2	3.5
4/22/2026		<0.40	<0.40	<0.50	0.56 J	64 J	76 J	<0.19	<0.19	48	45	15000	14000	630	620	0.52	0.95	<0.033	<0.033	<2.5	<2.5	<0.63	<0.63
MW-5SB																							
9/30/2024	Installed Q3 of 2024	<0.40	4.3	<0.50	12	<47	8900	<0.19	2.9	85	96	650	3400	30	210	0.45 J	1.9	<0.022	<0.022	100	110	<0.63	9.2
12/9/2024		<0.40	2.3	1.2 J	11	120	4300	<0.19	1.5	67	70	430	1800	29	110	0.59	2.4	0.029 J	0.039 J	93	91	0.67 J	5.2
3/10/2025		<0.40	1.3	<0.50	6.8	<47	2700	<0.19	1.1	60	63	280	1100	22	85	0.31 J	1.5	<0.022	<0.022	95	95	<0.63	3
5/7/2025		<0.40	1.2	<0.50	2.8	<47	2300	<0.19	1.3	64	69	310	1100	25	72	<0.50	0.5 J	<0.022	<0.022	95	96	<0.63	2.6
8/4/2025		<0.40	<0.40	<0.50	1.8 J	<47	110	<0.19	<0.19	67	56	380	290	31	23	<0.50	<0.50	<0.022	<0.022	96	91	<0.63	<0.63
10/21/2025		<0.40	0.95 J	<0.50	4.5	<47	230	<0.19	<0.19	72	74	430	640	33	40	0.28 J	0.45 J	<0.022	<0.022	100	100	<0.63	1.5 J
2/11/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/28/2026		<0.40	<0.40	<0.50	1.7 J	<47	180	<0.19	<0.19	52	51	150 J	200	15	19	0.3 J	0.71	<0.033	<0.033	87	93	<0.63	<0.63
MW-10																							
8/6/2024		1.0	1.2	0.67	1.6	870	970	<0.19	<0.19	50	52	82000	87000	5400	6300	1.2	3.4	<0.022	<0.022	<2.5	<2.5	1.6	1.5
9/30/2024		1.2	1.2	<0.50	1.1	770	890	<0.19	<0.19	46	46	74000	75000	5600	5800	1.4	2.6	<0.022	<0.022	<2.5	<2.5	1.1	1.4
12/3/2024		1.0	1.3	<0.50	2.5	790	1000	<0.19	<0.19	49	48	80000	81000	5100	5700	1.4	3.1	<0.022	<0.022	<2.5	<2.5	0.64	0.96
2/25/2025		0.89	1.1	<0.50	1.8	950	1300	<0.19	<0.19	49	49	85000	84000	5200	5400	1.0	2.7	<0.050	<0.050	<2.5	<2.5	1.1	1.8
5/7/2025		0.77	0.90	<0.50	3.7	1000	1400	<0.19	0.29	61	61	92000	90000	3300	3400	0.99	4.4	0.025	0.038	<2.5	<2.5	1.3	1.7
8/4/2025		0.94	0.90	0.58	2.1	900	960	<0.19	<0.19	51	51	84000	81000	5400	5100	1.2	--	--	--	--	--	--	--
10/29/2025		1.1	1.2	<0.50	0.71	850	890	<0.19	<0.19	53	49	83000	80000	5500	5900	0.90	1.4	<0.022	0.027	<2.5	<2.5	1.2	1.5
2/11/2026		0.7	0.72	<0.50	0.77	1100	1200	<0.19	<0.19	67	69	98000	98000	3500	3500	0.96	1.4	0.026	<0.05	<2.5	<2.5	0.64	0.63
4/22/2026		0.7 J	0.74 J	<0.50	0.52 J	1000	1300	<0.19	<0.19	62	65	92000	96000	3400	3500	1.5	1.8	0.036 J	0.064	<2.5	<2.5	1.1 J	1.4 J
MW-31																							
7/30/2024		<0.40	6.6	<0.50	18	<47	9400	<0.19	4.3	32	40	4400	8600	36	310	<0.20	1.6	<0.022	<0.022	6.5	6.6	2.4	19
10/7/2024		<0.40	14	<0.50	41	<47	20000	<0.19	9.4	23	49	3900	13000	44	500	<0.20	2.4	<0.022	<0.022	5.8	6.6	1.5 J	32
12/9/2024		0.62 J	7.3	<0.50	36	48 J	5800	<0.19	4.4	42	45	4300	10000	220	650	0.72	8.2	0.051	0.084	9.2	4.9 J	6.1	30
3/11/2025		4.6	9.3	12	28	5100	12000	2.4	5.3	33	50	7100	10000	160	310	0.26 J	2.8	<0.022	0.028 J	8.3	10	14	31
4/29/2025		<0.40	79	<0.50	330	<47	95000	<0.19	57	15	130	2800	56000	40	2600	0.62	13	<0.050	0.450	4.1 J	4.7 J	0.90 J	220
8/12/2025		<0.40	23	0.62 J	84	200	35000	0.24 J	17	24	57	4200	21000	66	860	0.50	4.0	0.030 J	0.094	6.8	6.9	1.7 J	56
10/27/2025		<0.40	19	<0.50	58	<47	29000	<0.19	13	23	55	4200	18000	48	640	0.82	4.3	<0.022	0.053	7.0	7.7	1.4 J	47
2/16/2026		<0.40	16	<0.50	52	49 J	23000	<0.19	11	20	41	4700	16000	47	550	0.24 J	1.9	<0.022	<0.05	6.3	6.9	0.82 J	35
4/27/2026		<0.40	5.6	<0.50	14	61 J	8200	<0.19	3.3	24	41	4100	7500	33	180	<0.20	3.5 J	<0.033	<0.033	8.5	14	1.8 J	16
MW-35																							
7/28/2024		<0.40	0.96 J	1.2 J	140	<47	550	<0.19	0.59	10	13	11000	12000	4.2	55000	0.91	19	<0.022	<0.022	<2.5	3.2 J	<0.63	12
9/30/2024		<0.40	<0.40	5.5	2.3	<47	<47	<0.19	<0.19	9.3 J	9.1 J	13000	13000	1.8 J	390	0.67	2.6	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
12/3/2024		--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55	1.5	<0.022	<0.022	--	--	--	--
3/10/2025		<0.40	<0.40	0.80 J	4.9	<47	<47	<0.19	<0.19	7.8 J	7.6 J	11000	11000	<0.79	1200	<0.50	0.81 J	0.820	<0.022	<2.5	<2.5	<0.63	<0.63
4/30/2025		<0.40	<0.40	1.2 J	12	<47	<47	<0.19	<0.19	8.2 J	8.4 J	11000	11000	<0.79	2900	1.1	3.1	<0.022	<0.022	<2.5	<2.5	<0.63	0.82 J
8/12/2025		<0.40	<0.40	0.97 J	54	<47	280	<0.19	0.31 J	8.3 J	9.2 J	9800	9600	0.80 J	16000	0.72 J	0.72 J	<0.022	<0.022	<2.5	<2.5	<0.63	5.1
10/27/2025		<0.40	<0.40	0.74 J	3.8	<47	<47	<0.19	<0.19	6.2 J	6.2 J	9800	9900	2.3 J	930	--	--	--	--	<2.5	<2.5	<0.63	<0.63
2/16/2026		<0.40	<0.40	0.83 J	16	<47	65 J	<0.19	<0.19	7.6 J	7.6 J	11000	11000	<0.79	4400	0.72	2.7	<0.022	<0.022	<2.5	<2.5	<0.63	1.5 J
4/22/2026		<0.40	<0.40	<0.50	31	<47	81 J	<0.19	<0.19	7.9 J	8.1 J	10000	11000	<0.79	9600	1.5	2.6	<0.033	<0.033	<2.5	<2.5	<0.63	3.1

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Potassium, Dissolved (µg/L)	Potassium, Total Recoverable (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total Recoverable (µg/L)	Silver, Dissolved (µg/L)	Silver, Total Recoverable (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total Recoverable (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total Recoverable (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total Recoverable (µg/L)	Tin, Dissolved (µg/L)	Tin, Total Recoverable (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total Recoverable (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total Recoverable (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total Recoverable (µg/L)
MW-3B																					
7/30/2024		2300	2400	<0.98	<0.98	<0.12	<0.12	37000	36000	1400	1500	<0.57	<0.57	<1.3	<1.3	37	39	3.2 J	4.6 J	<6.9	<6.9
10/1/2024		3000	3000	<0.98	<0.98	<0.12	<0.12	71000	63000	2400	2300	<0.57	<0.57	<1.3	<1.3	38	39	3.3 J	4.3 J	<6.9	13 J
12/10/2024		1200	1100	<0.98	<0.98	<0.12	<0.12	36000	36000	1300	1300	<0.57	<0.57	<1.3	<1.3	54	52	3.5 J	3.7 J	<6.9	8.4 J
2/26/2025		1300	1300	1.7 J	1.4 J	<0.12	<0.12	39000	39000	1200	1200	<0.57	<0.57	<1.3	<1.3	46	47	4.0 J	4.1 J	7.9 J	8.5 J
5/5/2025		1300	1300	1.2 J	<0.98	<0.12	<0.12	30000	30000	1100	1100	<0.57	<0.57	<1.3	<1.3	--	--	2.9 J	3.4 J	8.5 J	8.0 J
8/5/2025		1700	1600	<0.98	<0.98	<0.12	<0.12	32000	33000	1400	1300	<0.57	<0.57	<1.3	<1.3	46	49	<2.2	2.8 J	<6.9	<6.9
10/29/2025		3100	3000	<0.98	<0.98	<0.12	<0.12	79000	79000	2800	2800	<0.57	<0.57	<1.3	<1.3	40	39	<2.2	<2.2	7.5 J	14 J
2/23/2026		1200	1100	<0.98	1.3 J	<0.12	<0.12	37000	36000	1200	1200	<0.25	<0.25	<1.3	<1.3	45	46	3.7	5.0	<6.9	12 J
4/21/2026		1300	1300	<0.98	<0.98	<0.12	<0.12	38000	38000	1200	1200	<0.25	<0.25	<1.3	<1.3	43	42	1.8	2	22	<20
MW-5A																					
7/30/2024		600	620	<0.98	<0.98	<0.12	<0.12	130000	150000	3500	3200	<0.57	<0.57	<1.3	<1.3	14	15	<2.2	<2.2	<6.9	<6.9
10/2/2024		750	550	<0.98	<0.98	<0.12	<0.12	120000	110,000 J	3300	3300	<0.57	<0.57	<1.3	<1.3	12	11	<5.0	<2.2	<6.9	<6.9
12/9/2024		460 J	500	<0.98	<0.98	<0.12	<0.12	87000	97000	2800	2900 J	<0.57	<0.57	<1.3	<1.3	7.9	8.8	<2.2	<2.2	<6.9	<6.9
2/26/2025		530	510	<0.98	<0.98	<0.12	<0.12	120000	110000	3100	3200	<0.57	<0.57	<1.3	<1.3	12	11	<2.2	<2.2	<6.9	<6.9
5/7/2025		430 J	430 J	<0.98	<0.98	<0.12	<0.12	91000	89000	3000	3000	<0.57	<0.57	<1.3	1.3 J	9.2	8.9	<2.2	<2.2	<6.9	<6.9
8/4/2025		490 J	520	<0.98	<0.98	<0.12	<0.12	150000	150000	3200	3300	<0.57	<0.57	<1.3	<1.3	13	13	<2.2	<2.2	<6.9	<6.9
10/21/2025		480 J	500	<0.98	1.2 J	<0.12	<0.12	110000	120000	3300	3400	<0.57	<0.57	<1.3	<1.3	10	10	<2.2	<2.2	<6.9	<6.9
2/11/2026		520	520	<0.98	<0.98	<0.12	<0.12	120000	110000	3100	3000	<0.25	<0.25	2.1 J	1.8 J	9.7	9.1	0.61	0.84	<6.9	<6.9
4/22/2026		410 J	410 J	<0.98	<0.98	<0.12	<0.12	88000 J	86000 J	3000	3000	<0.25	<0.25	<1.3	<1.3	8.4	9	0.52	0.53	<6.9	<6.9
MW-5SB																					
9/30/2024	Installed Q3 of 2024	520	3700	<0.98	<0.98	<0.12	<0.12	310000	320000	610	670	<0.57	<0.57	<1.3	<1.3	0.28	0.53	3.1 J	19	<6.9	23
12/9/2024		420 J	1800	<0.98	<0.98	<0.12	<0.12	250000	240000	350	370	<0.57	<0.57	<1.3	<1.3	0.77	0.94	3.1 J	12	<6.9	12 J
3/10/2025		340 J	1200	<0.98	<0.98	<0.12	<0.12	230000	230000	430	450	<0.57	<0.57	<1.3	<1.3	0.68	0.81	<2.2	8.3	<6.9	8.8 J
5/7/2025		370 J	1300	<0.98	<0.98	<0.12	<0.12	250000	250000	460	460	<0.57	<0.57	1.7 J	2.0 J	0.71	0.77	<2.2	6.7	<6.9	7.6 J
8/4/2025		370 J	350 J	<0.98	<0.98	<0.12	<0.12	270000	220000	450	260	<0.57	<0.57	<1.3	<1.3	0.69	0.77	<2.2	2.2 J	<6.9	<6.9
10/21/2025		380 J	560	<0.98	1.4 J	<0.12	<0.12	58000	290000	530	540	<0.57	<0.57	2.0 J	2.8 J	0.40	0.42	<2.2	3.5 J	<6.9	13 J
2/11/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/28/2026		260 J	290 J	<0.98	<0.98	<0.12	<0.12	190000	180000	210	200	<0.25	<0.25	2.1 J	1.9 J	1.1	1.1	1.7	2.8	<6.9	17 J
MW-10																					
8/6/2024		2700	2700	1.000	<0.98	<0.12	<0.12	51000	57000	3000	3200	<0.57	<0.57	<1.3	<1.3	6.9	6.9	<2.2	2.3	<6.9	<6.9
9/30/2024		2500	2600	<0.98	<0.98	<0.12	<0.12	50000	50000	2800	2800	<0.57	<0.57	<1.3	<1.3	7.7	7.9	<2.2	2.2	<6.9	<6.9
12/3/2024		2500	2200	<0.98	<0.98	<0.12	<0.12	48000	51000	3000	3100	<0.57	<0.57	<1.3	<1.3	7.6	7.9	<2.2	3.1	<6.9	<6.9
2/25/2025		1800	1900	<0.98	<0.98	<0.12	<0.12	48000	48000	3000	3000	<0.57	<0.57	<1.3	<1.3	7.3	7.3	2.3	3.0	<6.9	<6.9
5/7/2025		960	1200	<0.98	<0.98	<0.12	<0.12	36000	36000	3200	3200	<0.57	<0.57	<1.3	1.4	6.7	6.9	2.8	4.4	<6.9	<6.9
8/4/2025		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/29/2025		2100	2100	<0.98	<0.98	<0.12	<0.12	53000	53000	3100	3000	<0.57	<0.57	<1.3	<1.3	8.0	8.1	<2.2	2.3	<6.9	<6.9
2/11/2026		1200	980	<0.98	<0.98	<0.12	<0.12	41000	40000	3200	3200	<0.25	<0.25	<1.3	<1.3	6.7	7.0	2.5	2.7	<6.9	<6.9
4/22/2026		2000	1400	<0.98	<0.98	<0.12	<0.12	39000	39000	3200	3300	<0.25	<0.25	<1.3	<1.3	6.7	6.7	2.7	3.2	<6.9	<6.9
MW-31																					
7/30/2024		3500	6100	<0.98	<0.98	<0.12	<0.12	56000	56000	400	340	<0.57	<0.57	<1.3	<1.3	1.1	1.3	<2.2	19	<6.9	27
10/7/2024		2800	7800	<0.98	1.5 J	<0.12	<0.12	50000	51000	360	420	<0.57	<0.57	<1.3	1.3 J	1	1.6	<2.2	44	<6.9	57
12/9/2024		3300	4900	<0.98	<0.98	<0.12	<0.12	57000	51000	350	500	<0.57	<0.57	<5.0	<1.3	1.1	2	<2.2	14	<6.9	24
3/11/2025		5000	6700	<0.98	1.2 J	<0.12	<0.12	54000	54000	420	450	<0.57	<0.57	<1.3	<1.3	1.2	1.8	12	26	17 J	38
4/29/2025		2000	20000	<0.98	11	<0.12	0.56	35000	46000	240	790	<0.57	0.99 J	<1.3	6.0	1.1	4.7	<2.2	230	<6.9	370
8/12/2025		2900	11000	<0.98	3.3	<0.12	0.17 J	52000	51000	330	470	<0.57	<0.57	<1.3	2.6 J	0.99	1.7	<2.2	87	<6.9	110
10/27/2025		3000	10000	<0.98	1.2 J	<0.12	<0.12	55000	54000	380	460	<0.57	<0.57	<1.3	1.7 J	1.1	2	<2.2	60	<6.9	85
2/16/2026		2900	8200	<0.98	3.7	<0.12	<0.12	57000	55000	350	440	<0.25	<0.25	<1.3	1.6 J	1.1	1.5	0.28	61	8.0 J	86
4/27/2026		2800	4700	<0.98	<0.98	<0.12	<0.12	55000	56000	350	350	<0.25	<0.25	<1.3	<1.3	1.3	1.7	0.67	17	6.9 J	100
MW-35																					
7/28/2024		1100	1300	<0.98	<0.98	<0.12	<0.12	7300	7500	190	210	<0.57	<0.57	<1.3	<1.3	1.9	2.1	2.3 J	97	<6.9	16 J
9/30/2024		1100	1100	<0.98	<0.98	<0.12	<0.12	6400	6400	150	140	<0.57	<0.57	<1.3	2.1 J	1.8	2.1	2.6 J	3.0 J	10 J	<6.9
12/3/2024		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/10/2025		1000	1000	<0.98	<0.98	<0.12	<0.12	7000	7200	120	130	<0.57	<0.57	<1.3	<1.3	2.3	2.7	2.2 J	4.3 J	<6.9	<6.9
4/30/2025		950	950	<0.98	<0.98	<0.12	<0.12	7400	7500	150 J	150 J	<0.57	<0.57	<1.3	<1.3	1.7	1.8	2.2 J	7.5	<6.9	<6.9
8/12/2025		940	1000	<0.98	<0.98	<0.12	<0.12	6100	6100	140	140	<0.57	<0.57	<1.3	<1.3	1.3	1.3	2.7 J	30	<6.9	8.1 J
10/27/2025		940	940	<0.98	<0.98	<0.12	<0.12	6200	6200	110	110	<0.57	<0.57	<1.3	<1.3	1.4	1.6	2.9 J	4.5 J	<6.9	<6.9
2/16/2026		990	990	<0.98	<0.98	<0.12	<0.12	7200	7200	130	120	<0.25	<0.25	<1.3	<1.3	2.2	2.2	2.4	9.8	<6.9	22
4/22/2026		940	1000	<0.98	<0.98	<0.12	<0.12	6900	6900	150	160	<0.25	<0.25	<1.3	<1.3	1.4	1.4	2	19	<6.9	7.2 J

Table 5-9 (continued)

		Field Parameters						General Chemistry Parameters													
Ground Water Sampling Location & Date	Note	Conductivity (Field) (mS/cm)	Dissolved Oxygen (Field) (mg/L)	pH (Field) (SU)	Redox Potential (Field) (mV)	Temperature Field (°C)	Turbidity (NTU)	Alkalinity (mg/L)	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	Alkalinity, Carbonate (as CaCO3) (mg/L)	Ammonia (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/ Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Salinity (PSU)
MW-35SB																					
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/17/2024		0.554	9.58	8.84	168	5.58	>1000	280	280	<3.7	<0.10	<0.45	0.98 J	1.7	<0.0036	0.71 J	51	<0.37	<0.37	<0.25	0.24	<0.33
3/10/2025		0.617	0.89	8.67	-215	7.65	>1000	280	270	18	<0.10	<0.45	0.55 J	1.1	<0.0036	0.71 J	21	<0.37	<0.37	<0.25	0.47	<0.33
5/7/2025		0.503	7.82	7.63	143	9.53	>1000	280	270	17	<0.10	<0.45	0.60 J	1.2	<0.0036	1.0	160	<0.37	<0.37	<0.25	1.3	<0.33
8/11/2025		0.394	1.38	8.75	90	14.61	657	260	250	18	<0.10	<0.45	0.81 J	2.2	<0.0036	1.8	34	<0.37	<0.37	<0.25	0.26	<0.33
10/22/2025		0.470	1.86	8.90	94	9.07	561	250	220	26	<0.10	<0.45	0.98 J	2.7	<0.0036	2.7	38	<0.37	<0.37	<0.25	0.35 J	<0.33
2/17/2026		0.530	0.68	8.83	90	7.75	535	290	270	16	<0.10	<0.45	1.1	1.1	<0.0036	0.75 J	30	4.2 J	4.2 J	<0.25	0.22	<0.33
4/23/2026		0.546	1.46	8.45	86	10.35	1000	310	290	11	<0.049	<0.45	0.88 J	0.9 J	<0.0036	0.67 J	55	<0.37	<0.37	<0.25	0.34	<0.33
MW-36																					
7/28/2024		0.668	0.58	7.17	-207	19.53	261	280	280	<3.7	0.36	0.47 J	7.8	41	<0.0036	0.25 J	250	0.43 J	0.43 J	<0.070	<0.024 J	<0.33
9/30/2024		0.667	0.68	8.10	-155	20.43	49.9	290	290	<3.7	<0.10	0.46 J	7.6	37	<0.0036	0.49 J	300	0.48 J	0.48 J	<0.070	<0.024	<0.33
12/3/2024		0.587	0.25	8.11	126	6.78	12.5	290	290	<3.7	<0.10	0.59 J	6.9	42	<0.0036	<0.43	300	<0.37	<0.37	<0.25	<0.024	<0.33
3/4/2025	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/30/2025		0.592	0.23	7.00	-105	17.67	4.8	300	300	<3.7	<0.10	0.58 J	8.3	46	<0.0036	<0.43	340	<0.37	<0.37	<0.25	<0.024	<0.33
8/11/2025		0.682	1.81	7.17	-99	22.12	14.8	270	270	<3.7	<0.10	<0.45	8.9	46	<0.0036	<0.43	320	<0.37	<0.37	<0.25	0.041 J	<0.33
10/23/2025		0.668	0.81	7.12	-100	13.58	20.4	290	290	<3.7	<0.10	<0.45	7.9	47	<0.0036	<0.43	280	<0.37	<0.37	<0.25	<0.05	<0.33
2/23/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/22/2026		0.593	0.88	6.9	-66	9.66	0	300	300	<3.7	0.054 J	<0.45	8.3	52	<0.0036	<0.43	300	<1	<1	<1	0.029 J	<0.33
MW-37																					
7/28/2024		0.438	0.85	7.34	-69	24.22	89.8	220	220	<3.7	0.12 J	0.29 J	1.8	23	<0.0036	0.35 J	250	0.53 J	0.53 J	<0.070	0.083 J	<0.33
10/2/2024	Insufficient volume	0.534	1.83	8.03	-11	11.55	24.7	210	210	<3.7	<0.10	<0.18	--	21	<0.0036	<0.19	240	<1.0	<1.0	<0.070	0.22	<0.33
12/3/2024	Insufficient volume	0.413	10.54	8.53	145	8.88	13.6	220	220	<3.7	--	<0.45	1.7	21	--	0.50 J	240	0.56 J	0.56 J	<0.25	--	<0.33
3/4/2025		0.473	9.81	11.59	356	3.58	27.0	210	210	<3.7	<0.10	<0.45	1.1	23	<0.0036	<0.43	280	5.4 J	5.4 J	<0.25	0.033 J	<0.33
5/1/2025		0.402	5.42	7.31	179	10.5	3.4	120	120	<3.7	<0.10	<0.45	1.6	20	<0.0036	<0.43	150	<0.37	<0.37	<0.25	0.026 J	<0.33
8/11/2025		0.529	4.40	7.51	114	14	48.1	220	220	<3.7	<0.10	<0.45	1.1	23	<0.0036	<0.43	220	<0.37	<0.37	<0.25	0.071	<0.33
10/21/2025		0.481	6.11	7.57	154	10.96	>1000	230	230	<3.7	<0.10	<0.45	2.000	22	<0.0036	<0.43	220	<0.37	<0.37	<0.25	0.36 J	<0.33
2/23/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/22/2026		0.228	4.11	7.23	149	21.33	80.7	140	140	<3.7	<0.049	<0.45	1.5	21	<0.0036	<0.43	130	<0.37	<0.37	<0.25	0.035 J	<0.33
MW-38																					
7/28/2024		0.525	0.94	7.66	115	11.7	0	210	210	<3.7	0.61	0.34 J	3.7	25	<0.0036	0.69 J	93	0.44 J	0.44 J	<0.070	<0.024	<0.33
10/7/2024		0.570	0	7.32	142	10.22	3.9	220	220	<3.7	<0.10	0.33 J	2.5	20	<0.0036	0.67 J	110	0.45 J	0.45 J	<0.070	0.15	<0.33
12/3/2024		0.597	2.47	8.65	192	7.01	4.3	170	170	<3.7	<0.10	0.64 J	2.0	58	<0.0036	0.76 J	91	<0.37	<0.37	<0.25	<0.024	<0.33
3/4/2025		0.614	4.03	8.65	269	6.4	15.1	150	150	<3.7	<0.10	<0.45	1.7	78	<0.0036	0.86 J	92	4.0 J	4.0 J	<0.25	<0.024	<0.33
5/7/2025		0.446	4.81	7.69	147	8.8	4.9	180	180	<3.7	<0.10	<0.45	2.7	29	<0.0036	0.88 J	62	<0.37	<0.37	<0.25	<0.024	<0.33
8/6/2025		0.324	0.58	7.66	136	15.31	0	210	210	<3.7	<0.20	<0.45	2.8	11	<0.0036	0.72 J	64	<0.37	<0.37	<0.25	<0.05	<0.33
10/23/2025		0.460	1.73	7.90	203	9.91	0	220	220	<3.7	<0.10	<0.45	2.3	23	<0.0036	0.56 J	82	<0.37	<0.37	<0.25	<0.05	<0.33
2/18/2026		0.520	3.74	8.06	187	6.24	6.1	210	210	<3.7	<0.10	<0.45	2.1	35	<0.0036	0.65 J	100	<0.37	<0.37	<0.25	<0.024	<0.33
4/28/2026		0.51	2.41	7.56	212	8.18	0	200	200	<3.7	<0.049	<0.45	2.3	44	<0.0036	0.6 J	100	3.4 J	3.4 J	<1	0.026 J	<0.33
MW-41																					
7/24/2024		0.539	9.10	7.40	164	14.99	78.1	140	140	<3.7	<0.10	0.46 J	1.5	51	<0.0036	0.39 J	140	0.83 J	0.83 J	<0.070	0.32 J	<0.33
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	0.47 J	--	--	--	0.39 J	--	0.80 J	0.80 J	--	0.19 J	--
7/24/2024	Duplicate Sample	--	--	--	--	--	--	140	140	<3.7	<0.10	0.47	1.7	51	<0.0036	0.39	140	0.80	0.80	<0.070	0.19	<0.33
9/30/2024	Insufficient Volume	0.610	5.89	8.43	172	14.7	172	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4th Quarter 2024	Insufficient Volume	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/4/2025	Insufficient Volume	0.582	8.51	10.42	329	2.33	35.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/1/2025		0.406	7.00	7.84	110	13.87	92.2	160	160	<3.7	<0.10	0.62 J	1.6	65	<0.0036	<0.43	130	<0.37	<0.37	<0.25	0.093	<0.33
8/11/2025		0.610	5.73	7.86	159	20.6	107	170	170	<3.7	<0.10	0.54 J	1.5	61	0.0090	<0.43	150	1.40	1.40	<0.25	0.088	<0.33
10/21/2025		0.637	8.60	7.73	157	10.41	65.6	170	170	<3.7	--	0.49 J	1.7	60	--	<0.43	--	0.45 J	0.45 J	<0.25	--	<0.33
2/23/2026		0.617	2.54	8.02	54	2.28	79.0	170	170	<3.7	<0.10	<0.45	1.3	62	<0.0036	<0.43	150	0.42 J	0.42 J	<0.25	0.093	<0.33
4/22/2026		0.505	9.51	7.65	65	17	12	180	180	<3.7	<0.049	<0.45	1.7	63	<0.0036	<0.43	160	<0.37	<0.37	<0.25	0.2	<0.33
MW-42																					
7/28/2024		0.354	3.45	8.50	51	16.37	0	150	150	<3.7	0.13 J	<0.18	3.7	1.3	<0.0036	1.6	9.0	0.64 J	0.78 J	<0.070	0.56 J	<0.33
10/7/2024		0.316	0.56	8.71	106	12.7	35.8	130	120	7.4	<0.10	<0.18	2.5	1.1	<0.0036	1.2	8.1	0.46 J	0.46 J	<0.070	0.25	<0.33
12/3/2024		0.315	2.16	8.91	174	5.74	11.9	160	160	<3.7	<0.10	<0.45	2.3	1.1	<0.0036	1.2	8.4	0.52 J	0.52 J	<0.25	0.28	<0.33
3/4/2025		0.332	4.91	9.76	255	5.66	148	140	130	14	<0.10	<0.45	3.2	1.2	0.0040 J	1.3	12	3.8 J	3.8 J	<0.25	0.36	<0.33
5/7/2025		0.276	3.20	9.11	113	11.7	18.7	140	120	18	<0.10	<0.45	3.7	1.2	<0.0036	1.3	8.5	<0.37	<0.37	<0.25	0.36	<0.33
8/6/2025		0.222	2.22	9.06	68	16.96	116	140	120	16	<0.10	<0.45	2.9	1.2	<0.0036	1.1	10	<0.37	<0.37	<0.25	0.38	<0.33
10/23/2025		0.288	1.48	9.02	141	9.97	0	140	120	10	<0.10	<0.45	2.6	1.0	<0.0036	1.2	6.7	<0.37	<0.37	<0.25	0.3 J	<0.33
2/18/2026		0.300	5.33	9.00	155	5.53	42.0	150	150	5.3	<0.10	<0.45	2.6	1.2	<0.0036	1.3	9.1	<0.37	<0.37	<0.25	0.36	<0.33
4/28/2026		0.29	6.7	8.95	192	7.62	4.1	140	130	9.8	<0.049	<0.45	2.8	0.89 J	<0.0036	1.1	7.5	2.6 J	2.6 J	<1	0.36	<0.33

Table 5-9 (continued)

		General Chemistry Parameters					Metals (Dissolved & Total)																
Ground Water Sampling Location & Date	Note	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Aluminum, Dissolved (µg/L)	Aluminum, Total Recoverable (µg/L)	Antimony, Dissolved (µg/L)	Antimony, Total Recoverable (µg/L)	Arsenic, Dissolved (µg/L)	Arsenic, Total Recoverable (µg/L)	Barium, Dissolved (µg/L)	Barium, Total Recoverable (µg/L)	Beryllium, Dissolved (µg/L)	Beryllium, Total Recoverable (µg/L)	Boron, Dissolved (µg/L)	Boron, Total Recoverable (µg/L)	Cadmium, Dissolved (µg/L)	Cadmium, Total Recoverable (µg/L)	Calcium, Dissolved (µg/L)	Calcium, Total Recoverable (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total Recoverable (µg/L)
MW-35SB																								
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/17/2024		7.2	<0.23	410	1.1	180	50 J	16000	<1.3	<1.3	1.1	5.0	9.0	97	<0.53	0.90 J	2700	2700	<0.17	<0.17	3500	7500	<1.1	25
3/10/2025		7.1	<0.23	390	<0.47	95	55 J	2400	<1.3	<1.3	0.75 J	4.6	8.5	58	<0.53	<0.53	2500	2500	<0.17	<0.17	3200	6400	<1.1	2.9 J
5/7/2025		7.1	1.8	360	<0.47	440	52 J	50000	<1.3	<1.3	0.96 J	16	8.1	290	<0.53	2.9	3000	2800	<0.17	<0.17	3100	17000	<1.1	85
8/11/2025		7.2	<0.23	310	0.97 J	260	<25	9000	<1.3	<1.3	1.5	3.2	6.4	55	<0.53	0.56 J	4500	4400	<0.17	<0.17	3100	5500	<1.1	14
10/22/2025		8.3	0.80 J	290	0.82 J	310	55 J	11000	<1.3	<1.3	4.1	6.3	5.6	68	<0.53	0.59 J	6100	5900	<0.17	<0.17	2700	6100	<1.1	17
2/17/2026		5.9	6.1	320	0.59 J	250	<25	6200	<0.93	<0.93	0.87 J	2.6	7.4	42	<0.24	0.37 J	2700	2600	<0.17	<0.17	3400	5900	<1.1	9.5
4/23/2026		5.7 J	<0.23	330	0.7 J	490	110	18000	<0.93	<0.93	0.89	5.7 J	12	120	<0.24	0.85	2600	2400	<0.17	<0.17	3400	7500	<1.1	24
MW-36																								
7/28/2024		0.40 J	<0.23	380	6.8	4.2 J	<25	<25	<1.3	<1.3	1.5	1.2	270	240	<0.53	<0.53	81	77	<0.17	<0.17	91000	83000	<1.1	<1.1
9/30/2024		1.8	0.29 J	360	7.2	4.2 J	<25	<25	<1.3	<1.3	1.7	2.0	330	310	<0.53	<0.53	120	150	<0.17	<0.17	98000	100000	<1.1	<1.1
12/3/2024		0.60 J	<0.23	390	6.7	4.6 J	<25	25 J	<1.3	<1.3	0.84 J	1.2	330	310	<0.53	<0.53	110	120	<0.17	<0.17	100000	99000	<1.1	<1.1
3/4/2025	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/30/2025		0.55 J	<0.23	350	8.4	4.8 J	<25	31 J	<1.3	<1.3	0.99 J	1.2	390 J	390 J	<0.53	<0.53	83	86	<0.17	<0.17	110000	110000	<1.1	<1.1
8/11/2025		<0.47	0.49 J	420	7.3	7.0	<25	<25	<1.3	<1.3	1.0	1.5	300	310	<0.53	<0.53	100	120	<0.17	<0.17	100000	110000	<1.1	<1.1
10/23/2025		<0.47	2.5	320	7.7	4.8 J	<25	<25	<1.3	<1.3	0.68 J	1.3	290	310	<0.53	<0.53	120	120	<0.17	<0.17	90000	91000	<1.1	<1.1
2/23/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/22/2026		<0.47	<0.23	330	7.5	7.6	<25	<25	<0.93	<0.93	0.72 J	0.73 J	330	340	<0.24	<0.24	98	95 J	<0.17	<0.17	100000	98000	<1.1	<1.1
MW-37																								
7/28/2024		2.0	<0.23	340	1.5	13	<25	200	<1.3	<1.3	0.75 J	1.2	240	210	<0.53	<0.53	<50	<50	<0.17	<0.17	77000	77000	1.2 J	1.6 J
10/2/2024	Insufficient volume	1.8	<0.23	300	1.4	19	--	990	--	<1.3	--	1.9	--	92	--	<0.53	--	220	--	<0.17	--	74000	--	4.0 J
12/3/2024	Insufficient volume	2.2	--	280	1.3	120	--	800	--	<1.3	--	1.7	--	85	--	<0.53	--	320	--	<0.17	--	74000	--	2.9 J
3/4/2025		1.9	<0.23	260	1.0	2.2 J	<25	280	<1.3	<1.3	0.72 J	1.2	250	260	<0.53	<0.53	42 J	63	<0.17	<0.17	73000	86000	<1.1	1.7 J
5/1/2025		1.3	<0.23	160	1.7	<1.9	<25	110	<1.3	<1.3	0.45 J	0.90 J	140	120	<0.53	<0.53	25 J	46 J	<0.17	<0.17	34000	45000	<1.1	<1.1
8/11/2025		2.3	0.33 J	290	1.2	6.2	<25	170	<1.3	<1.3	1.2	1.5	90	93	<0.53	<0.53	230	90	<0.17	<0.17	70000	69000	1.2 J	1.7 J
10/21/2025		2.8	<0.23	280	1.2	2100	<25	2300	<1.3	<1.3	1.5	2.1	87	100	<0.53	<0.53	180	180	<0.17	<0.17	68000	68000	2.7 J	6.3
2/23/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/22/2026		<0.47	<0.23	200	1.4	2.2 J	<25	150	<0.93	<0.93	0.46 J	0.5 J	160	160	<0.24	<0.24	42 J	<50	<0.17	<0.17	38000	38000	<1.1	<1.1
MW-38																								
7/28/2024		31	<0.23	310	2.4	<1.9	<25	<25	<1.3	<1.3	0.67 J	0.77 J	76	78	<0.53	<0.53	320	320	<0.17	<0.17	35000	33000	<1.1	<1.1
10/7/2024		23	<0.23	300	2.6	2.6 J	<25	39 J	<1.3	<1.3	0.60 J	0.68 J	80	90	<0.53	<0.53	350	350	<0.17	<0.17	39000	40000	<1.1	<1.1
12/3/2024		25	<0.23	320	2.1	<1.9	39 J	36 J	<1.3	<1.3	0.53 J	0.52 J	82	81	<0.53	<0.53	370	360	<0.17	<0.17	34000	33000	<1.1	<1.1
3/4/2025		27	<0.23	280	1.6	<1.9	<25	30 J	<1.3	<1.3	0.64 J	0.66 J	80	86	<0.53	<0.53	400	420	<0.17	<0.17	34000	33000	<1.1	<1.1
5/7/2025		16	<0.23	250	2.8	<1.9	<25	42 J	<1.3	<1.3	0.60 J	0.63 J	62	64	<0.53	<0.53	360	350	<0.17	<0.17	23000	23000	<1.1	<1.1
8/6/2025		13	<0.23	100 J	2.6	<1.9	<25	<25	<1.3	<1.3	0.58 J	0.64 J	60	61	<0.53	<0.53	330	340	<0.17	<0.17	23000	23000	<1.1	2.0 J
10/23/2025		22	2.2	250	2.4	<1.9	<25	<25	<1.3	<1.3	0.52 J	0.60 J	75	71	<0.53	<0.53	320	320	<0.17	<0.17	32000	29000	<1.1	<1.1
2/18/2026		20	0.32 J	280	2.0	<1.9	<25	<25	<0.93	<0.93	0.67 J	0.73 J	72	76	<0.24	<0.24	370	380	<0.17	<0.17	35000	36000	<1.1	<1.1
4/28/2026		20	<0.23	240	2.2	<1.9	<25	<25	<0.93	<0.93	0.59 J	0.56 J	80	79	<0.24	<0.24	340	350	<0.17	<0.17	36000	36000	<1.1	<1.1
MW-41																								
7/24/2024		48	<0.23	370	1.5	170 J	1900 J	<25 J	<1.3	<1.3	0.88 J	0.42 J	120	84 J	<0.53	<0.53	1500	1300	<0.17	<0.17	50000	50000	3.4 J	<1.1
7/24/2024	Duplicate Sample	--	--	--	--	32 J	34 J	3000 J	--	--	0.48 J	--	--	130 J	--	--	--	--	--	--	--	--	--	--
7/24/2024	Duplicate Sample	41	<0.23	340	1.6	32	34	3000	<1.3	<1.3	0.48	1.1	86	130	<0.53	<0.53	1300	1300	<0.17	<0.17	48000	48000	<1.1	5.0
9/30/2024	Insufficient Volume	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4th Quarter 2024	Insufficient Volume	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/4/2025	Insufficient Volume	--	--	--	--	--	--	130	--	<1.3	--	0.52 J	--	80	--	<0.53	--	1400	--	<0.17	--	43000	--	<1.1
5/1/2025		22	<0.23	290	1.6	7.8	<25	730	<1.3	<1.3	0.37 J	0.55 J	76	90	<0.53	<0.53	1200	1300	<0.17	<0.17	45000	47000	<1.1	1.8 J
8/11/2025		49	0.36 J	330	1.5	8.0	<25	280	<1.3	<1.3	0.34 J	0.42 J	91	90	<0.53	<0.53	1200	1200	<0.17	<0.17	57000	54000	<1.1	<1.1
10/21/2025		63	--	380	--	61	<25	--	<1.3	--	0.65 J	--	96	--	<0.53	--	1200	--	0.17 J	--	56000	--	1.8 J	--
2/23/2026		47	0.79 J	360	1.1	13	<25	230	<0.93	<0.93	0.41 J	0.44 J	86	87	<0.24	<0.24	1200 J	1300 J	<0.17	<0.17	55000	53000	<1.1	<1.1
4/22/2026		35	--	290	1.9	54	<25	2800	<0.93	<0.93	0.42 J	1	85	130	<0.24	<0.24	1200	1200	<0.17	<0.17	52000	55000	<1.1	4.9 J
MW-42																								
7/28/2024		17	<0.23	190	2.9	4.0 J	540	470	<1.3	<1.3	5.2	5.3	10	10	<0.53	<0.53	610	600	<0.17	<0.17	3400	3200	1.9 J	2.1 J
10/7/2024		13	<0.23	190	2.5	5.6	260	1500	<1.3	<1.3	3.7	3.6	6.6	18	<0.53	<0.53	640	620	<0.17	<0.17	2400	2500	<1.1	2.1 J
12/3/2024		14	0.58 J	190	2.3	4.0 J	<25	1000	<1.3	<1.3	3.8	4.0	4.9	15	<0.53	<0.53	680	670	<0.17	<0.17	2600	2700	<1.1	1.7 J
3/4/2025		15	<0.23	170	2.2	3.8 J	<25	1200	<1.3	<1.3	4.8	6.5	5.7	17	<0.53	<0.53	710	700	<0.17	<0.17	3600	3700	<1.1	1.8 J
5/7/2025		15	<0.23	170	2.4	<1.9	26 J	1000	<1.3	<1.3	4.3	4.4	4.5	14	<0.53	<0.53	660	680	<0.17	<0.17	2600	2800	<1.1	1.6 J
8/6/2025		14	0.71 J	9.8 J	2.5	9.8	160	2500	<1.3	<1.3	3.9	4.4	5.2	24	<0.53	<0.53	620	670	<0.17	<0.17	2300	2800	<1.1	4.6 J
10/23/2025		13	<0.58	110	2.5	<1.9	<25	650	<1.3	<1.3	3.8	4.0	3.8	9.4	<0.53	<0.53	640	620	<0.17	<0.17	2300	2300	<1.1	1.1 J
2/18/2026		13	0.23 J	190	2.4	4.2 J	<25	930	<0.93	<0.93	4.6	4.8	4.5	13	<0.24	<0.24	710	730	<0.17	<0.17	2900	2900	<1.1	1.5 J
4/28/2026		11	<0.23	150	2.6	4 J	<25	410	<0.93	<0.93	4.4	4	4.7	9.3	<0.24	<0.24	650	690	<0.17	<0.17	2600	2600	<1.1	<1.1

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Cobalt, Dissolved (µg/L)	Cobalt, Total Recoverable (µg/L)	Copper, Dissolved (µg/L)	Copper, Total Recoverable (µg/L)	Iron, Dissolved (µg/L)	Iron, Total Recoverable (µg/L)	Lead, Dissolved (µg/L)	Lead, Total Recoverable (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total Recoverable (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total Recoverable (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total Recoverable (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total Recoverable (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total Recoverable (ng/L)	Molybdenum, Dissolved (µg/L)	Molybdenum, Total Recoverable (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total Recoverable (µg/L)
MW-35SB																							
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/17/2024		<0.40	12	1.4 J	27	<47	17000	<0.19	14	57	65	570	7800	4.7	420	1.0	2.0	<0.022	<0.022	5.4	5.4	<0.63	25
3/10/2025		<0.40	1.4	<0.50	14	<47	2300	<0.19	11	66	69	270	1200	8.1	86	0.38 J	1.3	0.024 J	<0.022	4.2 J	2.8 J	<0.63	3
5/7/2025		<0.40	51	<0.50	91	<47	64000	<0.19	62	61	130	500	28000	6.4	1400	0.52	2.5	<0.022	<0.022	3.6 J	3.4 J	<0.63	110
8/11/2025		<0.40	7.7	1.6 J	16	<47	9500	<0.19	8.2	51	64	340	5000	<0.79	250	0.61 J	0.61 J	<0.022	<0.022	6.5	6.1	<0.63	16
10/22/2025		<0.40	8.2	2.3	21	<47	10000	<0.19	10	34	48	330	5600	1.3 J	280	1.3	2.2	<0.022	<0.022	9.7	9.3	<0.63	18
2/17/2026		<0.40	5.6	1.4 J	12	<47	7000	<0.19	6.6	76	83	250	3600	1.4 J	210	0.47 J	1.3	<0.022	<0.022	3.5 J	2.9 J	<0.63	12
4/23/2026		<0.40	13	<0.50	26	90 J	18000	<0.19	16	82	100	230	8800	7.1	410	1.2	0.79	<0.033	<0.033	<2.5	<2.5	<0.63	31
MW-36																							
7/28/2024		<0.40	<0.40	<0.50	1.0 J	1900	1200	<0.19	0.20 J	18	16	12000	11000	910	710	0.20 J	0.32 J	0.034 J	0.025 J	<2.5	<2.5	<0.63	<0.63
9/30/2024		<0.40	<0.40	0.50 J	<0.50	2000	2800	<0.19	<0.19	22	23	14000	11000	920	1100	<0.5	0.83	<0.022	<0.022	<2.5	<2.5	<0.63	1.2 J
12/3/2024		<0.40	<0.40	0.76 J	2.0	1000	1000	<0.19	<0.19	20	20	13000	12000	580	310	0.46 J	0.76	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
3/4/2025	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/30/2025		<0.40	<0.40	<0.50	0.81 J	2200	2700	<0.19	<0.19	16	17	16000	16000	1900	1800	0.27 J	0.64	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
8/11/2025		<0.40	<0.40	<0.50	0.68 J	1900	2600	<0.19	<0.19	20	21	15000	14000	1000	1200	0.36 J	0.69	<0.022	<0.022	<2.5	<2.5	<0.63	0.77 J
10/23/2025		<0.40	<0.40	<0.50	1.3 J	520	1500	<0.19	<0.19	18	19	14000	14000	630	670	0.57	1.0	<0.022	<0.022	<2.5	<2.5	<0.63	0.71 J
2/23/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/22/2026		<0.40	<0.40	<0.50	<0.50	2900	2200	<0.19	<0.19	15	14	15000	14000	1300	1400	1.3	1.9	<0.033	<0.033	<2.5	<2.5	1.3 J	<0.63
MW-37																							
7/28/2024		<0.40	<0.40	1.0 J	2.0	<47	290	<0.19	0.21 J	12	12	14000	14000	1.7 J	60	<0.20	1.0	<0.022	<0.022	<2.5	<2.5	<0.63	0.63 J
10/2/2024	Insufficient volume	--	0.80 J	--	3.9	--	820	--	2.7	--	15	--	13000	--	67	--	0.71	--	--	--	<2.5	--	1.6 J
12/3/2024	Insufficient volume	--	0.68 J	--	3.1	--	990	--	0.37 J	--	16	--	13000	--	150	<0.50	6.5	<0.022	0.028 J	--	<2.5	--	0.97 J
3/4/2025		<0.40	<0.40	0.77 J	1.2 J	<47	270	<0.19	<0.19	9.7 J	12	14000	15000	0.93 J	11	0.38 J	0.50	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
5/1/2025		<0.40	<0.40	0.98 J	1.2 J	<47	120	<0.19	<0.19	7.7 J	9.2 J	7900	9000	<0.79	16	0.24 J	0.40 J	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
8/11/2025		<0.40	<0.40	1.0 J	1.5 J	<47	170	<0.19	<0.19	14	14	12000	12000	1.6 J	23	0.35 J	0.44 J	<0.022	<0.022	<2.5	<2.5	<0.63	0.67 J
10/21/2025		<0.40	1.6	0.95 J	4.3	<47	2100	<0.19	0.89	13	16	12000	13000	7.7	66	0.66	12	<0.022	0.200	<2.5	<2.5	<0.63	3.3
2/23/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/22/2026		<0.40	<0.40	<0.50	<0.50	<47	130	<0.19	<0.19	7.5 J	7.7 J	8900	8500	1.7 J	9.7	0.48 J	0.39 J	<0.033	<0.033	<2.5	<2.5	<0.63	<0.63
MW-38																							
7/28/2024		<0.40	<0.40	1.6 J	2.4	<47	<47	<0.19	<0.19	29	28	3000	2700	13	130	0.26 J	0.46 J	<0.022	<0.022	16	17	<0.63	<0.63
10/7/2024		<0.40	<0.40	1.5 J	3.2	<47	85 J	1.2	2.8	32	30	3600	3600	<0.79	150	0.45 J	0.73	<0.022	<0.022	12	11	<0.63	<0.63
12/3/2024		<0.40	<0.40	2.2	2.3	56 J	54 J	0.19 J	0.19 J	31	30	2500	2400	52	53	0.51	0.70	<0.022	<0.022	22	22	<0.63	<0.63
3/4/2025		<0.40	<0.40	1.0 J	2.1	<47	57 J	<0.19	<0.19	31	30	2600	2300	1.6 J	75	<0.50	0.59	<0.022	<0.022	26	29	<0.63	<0.63
5/7/2025		<0.40	<0.40	2.2	2.7	<47	65 J	<0.19	<0.19	29	28	1400	1400	1.9 J	55	<0.50	0.85	<0.022	<0.022	26	25	<0.63	<0.63
8/6/2025		<0.40	<0.40	1.9 J	2.4	<47	<47	<0.19	<0.19	31	30	1600	1500	37	47	0.53	0.57	<0.022	<0.022	12	12	<0.63	0.75 J
10/23/2025		<0.40	<0.40	1.6 J	1.8 J	<47	<47	<0.19	<0.19	31	29	2500	2300	31	32	0.58 J	0.51 J	<0.022	<0.022	12	13	<0.63	<0.63
2/18/2026		<0.40	<0.40	1.2 J	1.7 J	<47	<47	<0.19	<0.19	30	31	2800	2900	0.94 J	43	0.39 J	0.73	<0.022	<0.022	15	15	<0.63	<0.63
4/28/2026		<0.40	<0.40	1.4 J	1 J	<47	<47	<0.19	<0.19	33	34	3000	2900	1.1 J	3.9	0.4 J	0.34 J	<0.033	<0.033	25	17	<0.63	<0.63
MW-41																							
7/24/2024		1.3	<0.40	4.3	1.7 J	2000 J	49 J	0.58	<0.19	6.4 J	5.4 J	4500	3500	62 J	28 J	0.42 J	0.52	<0.022	<0.022	31	19	2.7	<0.63
7/24/2024	Duplicate Sample	--	--	1.2 J	--	54 J	--	--	--	5.5 J	7.7 J	--	--	2.7 J	140 J	0.55	0.74	<0.022	<0.022	--	--	--	--
7/24/2024	Duplicate Sample	<0.40	2.5	1.2	6.3	54	3400	<0.19	0.90	5.5	7.7	4000	4800	2.7	140	--	--	--	--	31	30	<0.63	4.2
9/30/2024	Insufficient Volume	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4th Quarter 2024	Insufficient Volume	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/4/2025	Insufficient Volume	--	<0.40	--	1.6 J	--	160	--	<0.19	--	4.4 J	--	2900	--	15	--	--	--	--	--	17	--	<0.63
5/1/2025		<0.40	0.87 J	1.2 J	3.0	<47	850	<0.19	0.24 J	4.0 J	4.9 J	2800	3100	1.7 J	57	<0.50	2.9	<0.022	<0.022	16	17	<0.63	1.2 J
8/11/2025		<0.40	<0.40	1.9 J	1.9 J	<47	330	<0.19	<0.19	5.0 J	5.0 J	3700	3500	1.8 J	20	<0.50	1.1	<0.022	<0.022	20	19	<0.63	<0.63
10/21/2025		<0.40	--	1.7 J	--	48 J	--	0.27 J	--	5.5 J	--	3600	--	2.9	--	--	--	--	--	20	--	<0.63	--
2/23/2026		<0.40	<0.40	0.90 J	1.5 J	<47	300	<0.19	<0.19	4.4 J	5.3 J	3400	3300	1.1 J	23	0.80	2.6	<0.022	<0.022	20	20	<0.63	<0.63
4/22/2026		<0.40	3	<0.50	5.9	<47	3000	<0.19	0.65	3.9 J	6.1 J	3200	4400	<0.79	190	1.6	1.3	<0.033	<0.033	21	22	0.79 J	4.4
MW-42																							
7/28/2024		<0.40	<0.40	3.4	3.2	480	420	0.34 J	0.22 J	8.4 J	9.0 J	270	220	17	14	1.8	5.0	<0.022	<0.022	17	17	0.86 J	<0.63
10/7/2024		<0.40	0.61 J	3.3	4.9	200	1000	<0.19	0.35 J	14	15	170 J	460	5.0	22	1.5	3.5	<0.022	<0.022	11	10	<0.63	1.3 J
12/3/2024		<0.40	0.53 J	4.0	8.6	<47	910	<0.19	0.39 J	14	15	120 J	400	<0.79	24	1.6	2.6	<0.022	<0.022	12	12	<0.63	0.78 J
3/4/2025		<0.40	0.55 J	3.0	5.9	<47	910	<0.19	0.34 J	14	15	300	630	<0.79	29	1.8	4.0	<0.022	<0.022	13	12	<0.63	1.3 J
5/7/2025		<0.40	0.45 J	3.0	5.2	<47	770	<0.19	0.31 J	12	12	130 J	380	<0.79	21	0.55 J	0.55 J	<0.022	<0.022	11	11	<0.63	1.0 J
8/6/2025		<0.40	1.4	3.4	7.3	110	2900	<0.19	0.87	12	16	120 J	810	4.0	56	--	3.5	<0.022	<0.022	9.9	10	<0.63	3.1
10/23/2025		<0.40	<0.40	3.2	4.5	<47	420	<0.19	<0.19	13	12	89 J	240	<0.79	10	2.4	3.2	<0.022	<0.022	10	9.9	<0.63	<0.63
2/18/2026		<0.40	0.47 J	3.5	4.8	<47	720	<0.19	0.27 J	12	14	170 J	420	<0.79	24	2.0	3.7	<0.022	<0.022	12	11	<0.63	1.1 J
4/28/2026		<0.40	<0.40	2.2	4.1	<47	300	<0.19	<0.19	12	14	85 J	210	<0.79	11	2.1	3.2	<0.033	<0.033	13	10	<0.63	<0.63

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Potassium, Dissolved (µg/L)	Potassium, Total Recoverable (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total Recoverable (µg/L)	Silver, Dissolved (µg/L)	Silver, Total Recoverable (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total Recoverable (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total Recoverable (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total Recoverable (µg/L)	Tin, Dissolved (µg/L)	Tin, Total Recoverable (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total Recoverable (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total Recoverable (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total Recoverable (µg/L)
MW-35SB																					
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/17/2024		1500	5500	<0.98	2.2 J	<0.12	<0.12	140000	130000	23	40	<0.57	<0.57	<1.3	1.4 J	12	12	6.7	39	<6.9	59
3/10/2025		1300	2000	<0.98	2.3 J	<0.12	<0.12	120000	120000	38	55	<0.57	<0.57	<1.3	<1.3	13	14	3.3 J	11	<6.9	7.9 J
5/7/2025		1300	13000	<0.98	9.0	<0.12	<0.12	120000	120000	19	72	<0.57	0.75 J	<1.3	2.6 J	9.9	12	5.9	110	<6.9	240
8/11/2025		1300	3800	<0.98	1.1 J	<0.12	<0.12	130000	130000	28	32	<0.57	<0.57	<1.3	<1.3	7.8	8.5	11	27	<6.9	35
10/22/2025		1200	4200	1.7 J	2.7	<0.12	<0.12	120000	110000	20	31	<0.57	<0.57	1.3 J	1.4 J	7.6	8.4	16	35	<6.9	43
2/17/2026		1400	2900	<0.98	<0.98	<0.12	<0.12	130000	130000	44	53	<0.25	<0.25	1.8 J	<1.3	11	11	4.0	16	<6.9	28
4/23/2026		1400	5900	<0.98	3.5	<0.12	<0.12	140000	140000	49	79	<0.25	<0.25	<1.3	<1.3	10	11	2.3	36	<6.9	70
MW-36																					
7/28/2024		410 J	340 J	<0.98	<0.98	<0.12	<0.12	31000	29000	1100	990	<0.57	<0.57	<1.3	<1.3	0.086	0.11	<2.2	2.3 J	<6.9	<6.9
9/30/2024		490 J	440 J	<0.98	<0.98	<0.12	<0.12	30000	37000	1100	1300	<0.57	<0.57	<1.3	2.4 J	0.38	0.13	<2.2	<2.2	<6.9	<6.9
12/3/2024		430 J	440 J	<0.98	<0.98	<0.12	<0.12	30000	32000	1100	1200	<0.57	<0.57	<1.3	<1.3	0.29	0.37	<2.2	<2.2	<6.9	9.4 J
3/4/2025	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/30/2025		320 J	320 J	<0.98	<0.98	<0.12	<0.12	28000	29000	1,200 J	1200 J	<0.57	<0.57	<1.3	<1.3	0.11	0.11	2.3 J	3.1 J	<6.9	<6.9
8/11/2025		390 J	410 J	<0.98	<0.98	<0.12	<0.12	29000	32000	1100	1200	<0.57	<0.57	<1.3	<1.3	0.12	0.17	<2.2	<2.2	<6.9	<6.9
10/23/2025		390 J	420 J	<0.98	<0.98	<0.12	<0.12	28000	28000	1100	1200	<0.57	<0.57	<1.3	<1.3	0.09	0.099	<2.2	<2.2	<6.9	<6.9
2/23/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/22/2026		330 J	310 J	<0.98	<0.98	<0.12	<0.12	27000	26000	1100	1100	<0.25	<0.25	<1.3	<1.3	0.04 J	0.058	2.1	2.6	<6.9	7.4 J
MW-37																					
7/28/2024		690	830	<0.98	<0.98	<0.12	<0.12	8900	9200	270	320	<0.57	<0.57	<1.3	<1.3	1.6	1.9	5.1	6.4	<6.9	<6.9
10/2/2024	Insufficient volume	--	1700	--	<0.98	--	<0.12	--	12000	--	530	--	<0.57	--	3.7 J	--	11	--	8.1	--	<6.9
12/3/2024	Insufficient volume	--	1900	--	<0.98	--	<0.12	--	13000	--	600	--	<0.57	--	<1.3	--	--	--	5.8	--	22
3/4/2025		670	870	<0.98	1.1 J	<0.12	<0.12	7700	8600	210	320	<0.57	<0.57	<1.3	<1.3	0.81	1.3	4.3 J	6.0	<6.9	<6.9
5/1/2025		420 J	680	<0.98	<0.98	<0.12	<0.12	7300	7900	96	230	<0.57	<0.57	<1.3	<1.3	0.26	0.38	2.5 J	4.3 J	<6.9	<6.9
8/11/2025		1300	950	<0.98	<0.98	<0.12	<0.12	11000	9500	520	500	<0.57	<0.57	<1.3	<1.3	5.6	4.6	4.9 J	8.0	<6.9	<6.9
10/21/2025		1300	1900	<0.98	<0.98	<0.12	<0.12	11000	11000	460	480	<0.57	<0.57	<1.3	<1.3	4.8	6.2	5.9	11	<6.9	13 J
2/23/2026	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/22/2026		420 J	480 J	<0.98	<0.98	<0.12	<0.12	7500	7400	110	120	<0.25	<0.25	<1.3	<1.3	0.34	0.45	2.5	3	<6.9	<6.9
MW-38																					
7/28/2024		880	860	<0.98	<0.98	<0.12	<0.12	86000	87000	560	530	<0.57	<0.57	<1.3	<1.3	7.5	6.9	7.5	8.3	<6.9	<6.9
10/7/2024		960	970	<0.98	<0.98	<0.12	<0.12	86000	86000	590	610	<0.57	<0.57	<1.3	<1.3	7.8	8.8	8.0	8.9	<6.9	6.9 J
12/3/2024		860	820	<0.98	<0.98	<0.12	<0.12	90000	88000	550	540	<0.57	<0.57	<1.3	<1.3	4.9	4.8	7.4	7.3	<6.9	<6.9
3/4/2025		910	920	1.5 J	1.4 J	<0.12	<0.12	93000	97000	580	570	<0.57	<0.57	<1.3	<1.3	4.4	3.6	7.1	7.5	<6.9	<6.9
5/7/2025		640	660	<0.98	<0.98	<0.12	<0.12	82000	80000	390	390	<0.57	<0.57	<1.3	<1.3	4.3	4.4	8.4	8.9	<6.9	<6.9
8/6/2025		590	600	<0.98	<0.98	<0.12	<0.12	80000	79000	390	340	<0.57	<0.57	<1.3	<5.0	5.1	5.1	8.8	9.2	<6.9	<6.9
10/23/2025		760	740	2.1 J	1.2 J	<0.12	<0.12	80000	78000	510	480	<0.57	<0.57	<1.3	<1.3	6.6	6.4	8.4	8.5	<6.9	<6.9
2/18/2026		880	890	<0.98	<0.98	<0.12	<0.12	84000	86000	570	590	<0.25	<0.25	<1.3	<1.3	6.6	6.1	7.1	7.4	<6.9	<6.9
4/28/2026		810	810	<0.98	<0.98	<0.12	<0.12	85000	89000	560	550	<0.25	<0.25	<1.3	<1.3	6.6	6	7.4	7.6	<6.9	<6.9
MW-41																					
7/24/2024		1500	1,100 J	1.0 J	1.0 J	<0.12	<0.12	66000	65000	850	830	<0.57	<0.57	<1.3	<1.3	8.4	8.5	6.1	<2.2	<6.9	<6.9
7/24/2024	Duplicate Sample	--	1600 J	--	1.1 J	--	--	--	--	--	--	--	--	--	--	8.5	8.9	--	--	--	8.5 J
7/24/2024	Duplicate Sample	1100	1600	<0.98	1.1	<0.12	<0.12	67000	65000	820	830	<0.57	<0.57	<1.3	<1.3	--	--	<2.2	8.8	<6.9	8.5
9/30/2024	Insufficient Volume	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4th Quarter 2024	Insufficient Volume	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/4/2025	Insufficient Volume	--	1200	--	1.7 J	--	<0.12	--	67000	--	800	--	<0.57	--	<1.3	--	7.6	--	<2.2	--	<6.9
5/1/2025		1100	1300	<0.98	<0.98	<0.12	<0.12	64000	66000	800	830	<0.57	<0.57	<1.3	<1.3	13	12	<2.2	3.1 J	<6.9	<6.9
8/11/2025		1200	1200	<0.98	<0.98	<0.12	<0.12	74000	72000	1000	960	<0.57	<0.57	<1.3	<1.3	17	18	<2.2	<2.2	<6.9	<6.9
10/21/2025		1200	--	<0.98	--	<0.12	--	73000	--	1000	--	<0.57	--	<1.3	--	12	--	<2.2	--	<6.9	--
2/23/2026		1200	1200	<0.98	<0.98	<0.12	<0.12	73000	73000	1000	990	<0.25	<0.25	<1.3	<1.3	16	15	1.3	2.0	<6.9	<6.9
4/22/2026		1100	1700	<0.98	<0.98	<0.12	<0.12	71000	72000	930	990	<0.25	<0.25	2.1 J	2.7 J	13	14	1.3	8.9	<6.9	11 J
MW-42																					
7/28/2024		380 J	320 J	<0.98	1.2 J	<0.12	<0.12	83000	82000	47	44	<0.57	<0.57	<1.3	<1.3	7.3	7.4	14	15	<6.9	<6.9
10/7/2024		270 J	600	<0.98	<0.98	<0.12	<0.12	65000	65000	31	33	<0.57	<0.57	<1.3	<1.3	7.5	7.7	18	20	<6.9	<6.9
12/3/2024		220 J	510	<0.98	<0.98	<0.12	<0.12	70000	68000	33	34	<0.57	<0.57	<1.3	<1.3	7.4	7.5	18	20	<6.9	24
3/4/2025		290 J	640	1.7 J	1.5 J	<0.12	<0.12	77000	77000	44	46	<0.57	<0.57	<1.3	<1.3	6.5	6.5	18	21	<6.9	9.9 J
5/7/2025		170 J	460 J	<0.98	<0.98	<0.12	<0.12	69000	69000	35	37	<0.57	<0.57	<1.3	<1.3	7.0	7.1	18	20	<6.9	<6.9
8/6/2025		180 J	820	<0.98	<0.98	<0.12	<0.12	69000	69000	31	33	<0.57	<0.57	<1.3	<5.0	7.6	7.8	18	24	<6.9	10 J
10/23/2025		160 J	350 J	1.6 J	1.7 J	<0.12	<0.12	67000	65000	33	34	<0.57	<0.57	<1.3	<1.3	7.2	7.7	18	19	<6.9	<6.9
2/18/2026		190 J	430 J	<0.98	<0.98	<0.12	<0.12	74000	73000	38	39	<0.25	<0.25	<1.3	<1.3	7.0	6.9	20	22	<6.9	<6.9
4/28/2026		170 J	270 J	<0.98	<0.98	<0.12	<0.12	74000	74000	35	34	<0.25	<0.25	<1.3	<1.3	7.4	7.4	17	20	<6.9	<6.9

Table 5-9 (continued)

		Field Parameters						General Chemistry Parameters													
Ground Water Sampling Location & Date	Note	Conductivity (Field) (mS/cm)	Dissolved Oxygen (Field) (mg/L)	pH (Field) (SU)	Redox Potential (Field) (mV)	Temperature Field (°C)	Turbidity (NTU)	Alkalinity (mg/L)	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	Alkalinity, Carbonate (as CaCO3) (mg/L)	Ammonia (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/ Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Salinity (PSU)
MW-43																					
7/31/2024		0.419	0.40	8.02	-33	18.32	274	260	260	<3.7	<0.10	<0.18	1.0	1.0	<0.0036	0.36 J	53	<0.043	<0.070	<0.070	<0.024 J	<0.33
9/25/2024		0.501	0	7.98	167	11.93	17.7	250	250	<3.7	<0.10	<0.18	0.90 J	1.4	<0.0036	0.61 J	57	<0.043	<0.070	<0.070	<0.024	<0.33
12/4/2024		0.452	0	8.21	134	7.43	38.1	260	260	<3.7	<0.10	<0.45	0.55 J	1.2	<0.0036	0.46 J	55	<0.37	<0.37	<0.25	<0.024	<0.33
2/26/2025		0.511	0	8.87	323	6.69	50.3	250	250	<3.7	<0.10	<0.45	0.59 J	1.4	<0.0036	<0.43	56	<0.37	<0.37	<0.25	<0.024	<0.33
5/6/2025		0.447	0.76	7.96	112	11	61.0	1300	1300	18	<0.10	<0.45	0.52 J	1.4	<0.0036	<0.43	53	<0.37	<0.37	<0.25	<0.024	<0.33
8/5/2025		0.506	0.87	8.03	204	12.37	30.1	260	260	<3.7	<0.10	<0.45	0.65 J	1.4	<0.0036	<0.43	55	<0.37	<0.37	<0.25	<0.05	<0.33
10/22/2025		0.522	0.86	8.02	35	9.3	108	270	270	<3.7	<0.10	<0.45	0.87 J	1.4	<0.0036	<0.43	54	<0.37	<0.37	<0.25	<0.024	<0.33
2/11/2026		0.487	1.99	8.10	92	2.62	36.8	260	260	<3.7	<0.10	<0.45	1.9	1.3	<0.0036	<0.43	56	<0.37	<0.37	<0.25	0.033 J	<0.33
5/4/2026		0.428	1.47	7.87	130	7.83	38.4	270	270	<3.7	<0.049	<0.45	1.3	1.4	<0.0036	<0.43	58	<1	<1	<1	0.025 J	<0.33
MW-43SB																					
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/1/2024		4.520	1.51	8.51	17	12.23	1.7	28	28	<3.7	<0.10	11 J	<0.47	1300	0.0070 J	9.6 J	400	8.6 J	19 J	10 J	<0.024	2.9
10/1/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.0036	--	--	--	--	--	--	--
12/16/2024	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/27/2025		4.740	1.26	7.24	73	6.53	33.5	44	44	<3.7	<0.10	15	<0.47	1300	<0.0036	<0.43	410	<0.37	<0.37	<0.25	<0.024	2.8
5/6/2025		4.170	5.80	7.18	60	15.02	14.3	45	45	<3.7	<0.10	16	<0.47	1400	<0.0036	<0.43	410	<0.37	<0.37	<0.25	0.15	2.9
8/5/2025		4.330	1.16	7.14	94	16.3	3.4	26	26	<3.7	<0.10	14	0.87 J	1300	<0.0036	0.63 J	270	<0.37	<0.37	<0.25	0.056	2.6
10/22/2025		4.080	1.11	7.09	-82	9.43	6.9	25	25	<3.7	<0.10	13	0.69 J	1200	<0.0036	1.3	230	<0.37	<0.37	<0.25	<0.05	2.5
2/11/2026		4.440	1.17	7.24	0	5.96	27.5	66	66	<3.7	<0.10	19	<0.47	1400	<0.0036	<0.43	370	<0.37	<0.37	<0.25	0.040 J	2.9
5/4/2026		3.64	0.95	7.15	6	11.06	226	50	50	<3.7	0.064 J	36	0.48 J	1500	<0.0036	0.78 J	330	<0.37	<0.37	<0.25	0.17	2.6
MW-44																					
7/31/2024		0.614	0.06	7.69	-194	13.58	50.6	260	260	<3.7	<0.10	0.46 J	1.1	43	<0.0036 J	0.50 J	170	<0.043	<0.070	<0.070	0.11 J	<0.33
9/25/2024		0.809	0	8.38	-141	13.72	89.4	210	210	<3.7	<0.10	0.88 J	1.1	67	<0.0036	1.2	120	<0.043	<0.070	<0.070	0.038 J	<0.33
12/4/2024		0.633	0	8.33	-61	8.74	15.0	220	220	<3.7	<0.10	0.62 J	0.52 J	59	<0.0036	0.87 J	130	<0.37	<0.37	<0.25	<0.024	<0.33
2/26/2025		0.800	0	8.76	285	6	18.4	210	210	<3.7	<0.10	0.68 J	0.55 J	77	<0.0036	0.98 J	130	<0.37	<0.37	<0.25	0.033 J	<0.33
5/6/2025		0.690	1.74	8.20	140	13.06	48.1	220	220	<3.7	<0.10	0.67 J	0.52 J	80	<0.0036	1.0	120	<0.37	<0.37	<0.25	0.029 J	<0.33
8/5/2025		0.738	0.83	7.93	-107	14.2	8.2	250	250	<3.7	0.11 J	0.55 J	0.93 J	61	<0.0036	0.97 J	140	<0.37	<0.37	<0.25	0.066	<0.33
10/22/2025		0.769	0.81	8.16	-34	9.24	12.7	150	150	<3.7	<0.10	0.81 J	0.76 J	88	<0.0036	1.2	94	<0.37	<0.37	<0.25	<0.05	<0.33
2/11/2026		0.725	1.42	8.22	58	5.07	22.9	200	200	<3.7	<0.10	0.81 J	0.72 J	82	<0.0036	0.83 J	110	<0.37	<0.37	<0.25	0.042 J	<0.33
5/4/2026		0.599	1.12	7.71	139	8.68	0	230	230	<3.7	<0.049	0.63 J	0.91 J	73	<0.0036	0.65 J	130	<1	<1	<1	0.032 J	<0.33
SMW-1																					
7/23/2024		0.403	14.06	8.21	-84	9.22	73.0	190	180	5.1	0.18 J	<0.18	1.1	4.6	<0.0036 J	0.66 J	83	<0.043	<0.070	<0.070	0.09 J	<0.33
7/23/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--
10/2/2024		0.463	0	8.12	-106	10.08	212	180	180	<3.7	<0.10	<0.18	1.3	4.9	<0.0036	0.48 J	80	0.50 J	0.50 J	<0.070	0.15	<0.33
12/9/2024		0.337	0	8.32	107	8.17	71.9	180	180	<3.7	<0.10	<0.45	0.92 J	5.1	<0.0036	0.85 J	82	0.46 J	0.50 J	<0.25	0.036 J	<0.33
3/3/2025		0.388	1.94	8.85	82	8.32	119	180	180	<3.7	<0.10	<0.45	2.7	5.5	<0.0036	0.77 J	81	<0.37	<0.37	<0.25	0.091	<0.33
4/29/2025		0.371	9.18	8.20	178	6.64	794	170	170	<3.7	<0.10	<0.45	0.80 J	6.1	<0.0036	0.83 J	110	<0.37	<0.37	<0.25	0.22	<0.33
8/13/2025		0.401	1.8	7.85	155	11.12	9.4	190	190	<3.7	<0.10	<0.45	1.0	5.6	<0.0036	0.77 J	97	<0.37	<0.37	<0.25	0.06	<0.33
10/27/2025		0.386	5.59	7.99	38	9.44	20.8	190	190	<3.7	<0.10	<0.45	0.63 J	5.3	<0.0036	0.67 J	83	<0.37	<0.37	<0.25	0.074	<0.33
2/16/2026		0.357	11.09	8.20	129	7.84	28.5	180	180	<3.7	<0.10	<0.45	1.1	5.8	<0.0036	0.71 J	81	<0.37	<0.37	<0.25	0.089	<0.33
4/29/2026		0.338	4.57	7.84	192	8.28	16.6	180	180	<3.7	<0.049	<0.45	1.5	5.3	<0.0036	0.64 J	81	3 J	3 J	<1	0.081 J	<0.33
SMW-1SB																					
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/9/2024		0.362	15.83	8.99	134	5.58	73.2	160	140	18	<0.10	<0.45	2.1	22	<0.0036	5.6	13	<0.37	<0.37	<0.25	0.22	<0.33
3/3/2025		0.399	7.95	9.60	158	9.08	108	160	120	34	<0.10	<0.45	3.2	15	<0.0036	5.4	9.0	<0.37	<0.37	<0.25	0.18	<0.33
4/30/2025		0.195	8.59	8.39	37	8.01	16.9	160	130	29	5.20	<0.45	2.1	15	<0.0036	6.1	8.7	<0.37	<0.37	<0.25	0.14	<0.33
8/13/2025		0.368	7.14	9.01	-49	12.74	6.1	160	140	22	<0.10	<0.45	3.3	9.8	<0.0036	4.0	6.6	<0.37	<0.37	<0.25	0.16	<0.33
10/27/2025		0.345	2.15	8.97	-47	13.25	18.5	160	130	25	<0.10	<0.45	2.7	9.1	<0.0036	4.0	7.9	<0.37	<0.37	<0.25	0.2	<0.33
2/16/2026		0.358	10.34	8.96	91	7.51	6.8	170	150	18	<0.10	<0.45	1.9	9.5	<0.0036	3.6	6.6	<0.37	<0.37	<0.25	0.17	<0.33
4/29/2026		0.325	5.8	8.79	131	8.33	0	170	140	25	<0.049	<0.45	2.4 J	9.2	<0.0036	4.2	6.4	2.5 J	2.5 J	<1	0.16 J	<0.33
SMW-3																					
8/6/2024		0.262	5.41	8.14	88	10.84	11.1	71	71	<3.7	0.40	<0.18	2.4	38	<0.0036	<0.19	38	<0.043	<0.070	<0.070	0.063	<0.33
10/2/2024		0.249	0	8.58	-125	12.52	14.7	74	74	<3.7	<0.10	<0.18	2.6	43	<0.0036	<0.19	35	<0.043	<0.070	<0.070	<0.024	<0.33
10/2/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	0.18 J	--	--	--	--	--	--	--	--	--	--
10/2/2024	Duplicate Sample	--	--	--	--	--	--	69	69	<3.7	<0.10	0.18	2.7	43	<0.0036	<0.19	33	<0.043	<0.070	<0.070	<0.024	<0.33
12/4/2024		0.272	10.74	8.39	-60	7.36	8.7	75	75	<3.7	<0.10	0.51 J	3.0	39	<0.0036	0.54 J	34	<0.37	<0.37	<0.25	<0.024	<0.33
3/6/2025		0.265	0	8.38	69	8.65	21.6	69	69	<3.7	<0.10	<0.45	2.1	39	0.0080	<0.43	34	2.1	2.1	<0.25	<0.024	<0.33
5/8/2025		0.212	4.13	8.19	-64	14.14	5.8	77	77	<3.7	<0.10	<0.45	3.4	39	<0.0036	<0.43	33	<0.37	<0.37	<0.25	0.042 J	<0.33
8/7/2025		0.191	2.70	8.69	-164	13.71	3.7	80	80	<3.7	<0.10	0.49 J	2.9	40 J	<0.0036	0.44 J	32	<0.37	<0.37	<0.25	0.054	<0.33
10/22/2025		0.258	8.12	8.29	-18	8.78	0	87	87	<3.7	<0.10	<0.45	3.4	33	<0.0036	<0.43	32	<0.37	<0.37	<0.25	0.085 J	<0.33
2/18/2026		0.249	1.00	8.75	-95	8.55	9	79	79	<3.7	<0.10	0.46 J	2.3	37	<0.0036	<0.43	33	<0.37	<0.37	<0.25	<0.024	<0.33
4/27/2026		0.23	6.89	8.51	-110	9.27	0	72	72	<3.7	<0.049	<0.45	2.5	47	0.006	<0.43	33	<1	<1	<1	0.04 J	<0.33

Table 5-9 (continued)

		General Chemistry Parameters					Metals (Dissolved & Total)																
Ground Water Sampling Location & Date	Note	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Aluminum, Dissolved (µg/L)	Aluminum, Total Recoverable (µg/L)	Antimony, Dissolved (µg/L)	Antimony, Total Recoverable (µg/L)	Arsenic, Dissolved (µg/L)	Arsenic, Total Recoverable (µg/L)	Barium, Dissolved (µg/L)	Barium, Total Recoverable (µg/L)	Beryllium, Dissolved (µg/L)	Beryllium, Total Recoverable (µg/L)	Boron, Dissolved (µg/L)	Boron, Total Recoverable (µg/L)	Cadmium, Dissolved (µg/L)	Cadmium, Total Recoverable (µg/L)	Calcium, Dissolved (µg/L)	Calcium, Total Recoverable (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total Recoverable (µg/L)
MW-43																								
7/31/2024		9.6	<0.23	290	0.87 J	2.2 J	<25	140	<1.3	<1.3	0.69 J	1.2	160	500	<0.53	<0.53	82	85	<0.17	<0.17	19000	19000	<1.1	<1.1
9/25/2024		9.2	<0.23	280	0.75 J	<1.9	<25	99 J	<1.3	<1.3	0.62 J	0.67 J	170	210	<0.53	<0.53	75	78	<0.17	<0.17	20000	21000	<1.1	<1.1
12/4/2024		9.4	<0.23	300	0.69 J	7.4	<25	62 J	<1.3	<1.3	0.68 J	0.83 J	180	310	<0.53	<0.53	73	76	<0.17	<0.17	20000	20000	<1.1	<1.1
2/26/2025		10	<0.23	280	0.53 J	4.0 J	<25	70 J	<1.3	<1.3	0.67 J	0.84 J	170	310	<0.53	<0.53	81	79	<0.17	<0.17	20000	20000	<1.1	<1.1
5/6/2025		9.4	<0.23	290	0.61 J	14	<25	77 J	<1.3	<1.3	0.69 J	0.81 J	180	320	<0.53	<0.53	110	110	<0.17	<0.17	20000	19000	<1.1	<1.1
8/5/2025		8.9	<0.23	250	0.64 J	6.0	<25	39 J	<1.3	<1.3	0.60 J	0.70 J	170	260	<0.53	<0.53	70	70	<0.17	<0.17	20000	20000	<1.1	<1.1
10/22/2025		9.0	<1.0	280	0.73 J	25	<25	140	<1.3	<1.3	0.64 J	0.85 J	170	290	<0.53	<0.53	75	76	<0.17	<0.17	19000	19000	<1.1	<1.1
2/11/2026		9.3	6.2	250	0.72 J	10	<25	58 J	<0.93	<0.93	0.62 J	0.73 J	170	270	<0.24	<0.24	69	67	<0.17	<0.17	21000	20000	<1.1	<1.1
5/4/2026		8.8	6.2 J	260	1.2	5.6	<25	83 J	<0.93	<0.93	0.63 J	0.77 J	180	280	<0.24	<0.24	76	100	<0.17	<0.17	20000	21000	<1.1	<1.1
MW-43SB																								
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/1/2024		18 J	<0.23	4100	0.47 J	3.2 J	<25	170	<1.3	<1.3	<0.23	0.26 J	310	320	<0.53	<0.53	110	110	<0.17	<0.17	160000	160000	<1.1	<1.1
10/1/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/16/2024	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/27/2025		10	<0.58	1500	<0.47	130	<25	5100	<1.3	<1.3	0.29 J	1.9	330	350	<0.53	<0.53	92	90	<0.17	<0.17	150000	140000	<1.1	9.5
5/6/2025		11	<0.23	2500	<0.47	25	<25	5700	<1.3	<1.3	0.29 J	1.7	320	360	<0.53	<0.53	110	120	<0.17	<0.17	140000	140000	<1.1	10
8/5/2025		6.3	<0.23	2300	0.98 J	3.6 J	<25	180	<1.3	<1.3	<0.23	0.26 J	190	210	<0.53	<0.53	100	110	<0.17	<0.17	97000	100000	<1.1	<1.1
10/22/2025		4.2	1.2 J	2000	0.71 J	4.6 J	<25	40 J	<1.3	<1.3	<0.23	0.51 J	170	170	<0.53	<0.53	100	110	<0.17	<0.17	88000	89000	<1.1	<1.1
2/11/2026		11	<0.23	2800	0.48 J	130	<25	220	<0.93	<0.93	0.26 J	0.47 J	260	290	<0.24	<0.24	83	85	<0.17	<0.17	120000	130000	<1.1	<1.1
5/4/2026		7.9	14	2100	0.51 J	60	27 J	2200	<0.93	<0.93	0.25 J	0.81 J	250	280	<0.24	<0.24	95	96	<0.17	<0.17	120000	120000	<1.1	3.7 J
MW-44																								
7/31/2024		10	<0.23	340	0.92 J	<1.9	<25	42 J	<1.3	<1.3	0.43 J	0.46 J	380	390	<0.53	<0.53	190	200	<0.17	<0.17	49000	49000	<1.1	<1.1
9/25/2024		25	<0.23	360	0.97 J	7.8	<25	380	<1.3	2.7 J	0.43 J	0.64 J	290	240	<0.53	<0.53	220	240	<0.17	<0.17	40000	33000	<1.1	<1.1
12/4/2024		23	<0.23	380	0.52 J	<1.9	<25	53 J	<1.3	<1.3	0.29 J	0.32 J	250	260	<0.53	<0.53	260	250	<0.17	<0.17	35000	38000	<1.1	<1.1
2/26/2025		23	<0.58	360	<0.47	<1.9	<25	83 J	<1.3	<1.3	0.42 J	0.39 J	300	280	<0.53	<0.53	230	230	<0.17	<0.17	41000	38000	<1.1	<1.1
5/6/2025		25	1.5	390	<0.47	2.4 J	<25	490	<1.3	<1.3	0.32 J	0.31 J	290	260	<0.53	<0.53	250	270	<0.17	<0.17	39000	33000	<1.1	<1.1
8/5/2025		15	<0.23	340	1.0	<1.9	<25	180	<1.3	<1.3	0.33 J	0.33 J	300	290	<0.53	<0.53	200	220	<0.17	<0.17	42000	39000	<1.1	<1.1
10/22/2025		27	<1.0	440	0.60 J	6.4	<25	37 J	<1.3	<1.3	0.40 J	0.41 J	180	180	<0.53	<0.53	230	220	<0.17	<0.17	28000	28000	<1.1	<1.1
2/11/2026		22	6.5	350	0.59 J	3.8 J	<25	68 J	<0.93	<0.93	0.35 J	0.37 J	210	230	<0.24	<0.24	230	220	<0.17	<0.17	32000	34000	<1.1	<1.1
5/4/2026		16	2.3 J	370	0.67 J	2.6 J	<25	71 J	<0.93	<0.93	0.36 J	0.38 J	310	280	<0.24	<0.24	240	240	<0.17	<0.17	43000	39000	<1.1	<1.1
SMW-1																								
7/23/2024		13	<0.23	230	0.99 J	3.8 J	<25	140	<1.3	<1.3	1.2	1.1	69	72	<0.53	<0.53	1300	1300	<0.17	<0.17	18000	19000	<1.1	<1.1
7/23/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024		14	<0.23	220	1.4	89	4700	<25	<1.3	<1.3	1.9	1.3	100	57	<0.53	<0.53	1200	1200	<0.17	<0.17	24000	18000	6.1	<1.1
12/9/2024		13	<0.23	280	0.87 J	12	<25	290	<1.3	<1.3	1.3	1.4	68	73	<0.53	<0.53	1500	<50	<0.17	<0.17	18000	19000	<1.1	<1.1
3/3/2025		14	<2.5	200	0.67 J	16	87 J	850	<1.3	<1.3	1.1	1.5	62	77	<0.53	<0.53	1200	1300	<0.17	<0.17	16000	19000	<1.1	1.5 J
4/29/2025		16	1.9	210	0.73 J	170	<25	6800	<1.3	<1.3	1.1	2.4	66	130	<0.53	<0.53	1400	1400	<0.17	<0.17	18000	25000	<1.1	11
8/13/2025		16	<0.23	240	0.82 J	5.8	<25	140	<1.3	<1.3	0.94 J	0.99 J	69	71	<0.53	<0.53	1100	1200	<0.17	<0.17	22000	22000	<1.1	<1.1
10/27/2025		15	7.2	180	1.0	5.6	<25	190	<1.3	<1.3	1.2	1.3	70	73	<0.53	<0.53	1400	1400	<0.17	<0.17	19000	19000	<1.1	<1.1
2/16/2026		15	0.67 J	210	0.78 J	13	<25	760	<0.93	<0.93	1.2	1.4	63	73	<0.24	<0.24	1300	1300	<0.17	<0.17	18000	18000	<1.1	1.3 J
4/29/2026		13	<0.23	200	1.3	3.6 J	<25	99 J	<0.93	<0.93	1.1	1.1	67	70	<0.24	<0.24	1400	1400	<0.17	<0.17	19000	19000	<1.1	<1.1
SMW-1SB																								
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/9/2024		15	<0.23	320	2.2	32	31 J	1600	<1.3	<1.3	3.0	3.4	7.5	18	<0.53	<0.53	7300	7300	<0.17	<0.17	2700	3500	<1.1	2.9 J
3/3/2025		14	6.0	210	1.5	8.0	<25	940	<1.3	<1.3	3.0	3.4	8.2	14	<0.53	<0.53	6600	6500	<0.17	<0.17	2100	2700	<1.1	1.6 J
4/30/2025		14	0.80 J	250	1.9	15	26 J	680	<1.3	<1.3	3.5	3.5	10 J	14 J	<0.53	<0.53	6800	6800	<0.17	<0.17	2400	2700	<1.1	1.4 J
8/13/2025		13	0.27 J	270	2.9	19	34 J	200	<1.3	<1.3	1.8	1.9	4.8	6.3	<0.53	<0.53	4100	4100	<0.17	<0.17	2000	2200	<1.1	<1.1
10/27/2025		13	6.8	210	2.7	16	26 J	670	<1.3	<1.3	2.7	2.3	8.5	9.6	<0.53	<0.53	4800	4800	<0.17	<0.17	2100	2400	<1.1	<1.1
2/16/2026		12	1.3	240	2.0	3.8 J	26 J	120	<0.93	<0.93	2.5	2.1	8.6	5.0	<0.24	<0.24	4900	4600	<0.17	<0.17	2100	2200	<1.1	<1.1
4/29/2026		10	<0.23	200	2.2	2.4 J	<25	72 J	<0.93	<0.93	3.2	3	11	11	<0.24	<0.24	4900	5000	<0.17	<0.17	2200	2300	<1.1	<1.1
SMW-3																								
8/6/2024		<0.21	<0.23	160	2.5	19	<25	310	<1.3	<1.3	1.0	1.2	39	45	<0.53	<0.53	290	300	<0.17	<0.17	11000	12000	<1.1	<1.1
10/2/2024		<0.21	1.1	160	2.7	<1.9	<25	25 J	<1.3	<1.3	1.4	1.3	34	33	<0.53	<0.53	280	270	<0.17	<0.17	11000	11000	<1.1	<1.1
10/2/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024	Duplicate Sample	<0.21	<0.23	140	2.7	<1.9	<25	<25	<1.3	<1.3	1.3	1.2	33	32	<0.53	<0.53	270	260	<0.17	<0.17	11000	11000	<1.1	<1.1
12/4/2024		<0.47	<0.23	140	2.5	<1.9	<25	34 J	<1.3	<1.3	1.1	1.0	33	35	<0.53	<0.53	270	270	<0.17	<0.17	11000	11000	<1.1	<1.1
3/6/2025		<0.47	<0.23	130	2.3	<1.9	<25	<25	<1.3	<1.3	0.89 J	1.1	30	32	<0.53	<0.53	270	290	<0.17	<0.17	10000	11000	<1.1	<1.1
5/8/2025		<0.47	<0.23	120	3.3	<1.9	<25	34 J	<1.3	<1.3	1.3	1.4	28	29	<0.53	<0.53	300	280	<0.17	<0.17	10000	11000	<1.1	<1.1
8/7/2025		<0.47	9.1	100 J	2.6	<1.9	<25	77 J	<1.3	<1.3	0.97 J	1.2	27	26	<0.53	<0.53	280	290	<0.17	<0.17	10000	10000	<1.1	<1.1
10/22/2025		<0.47	6.7 J	110	3.2	14	<25	130	<1.3	<1.3	1.3	1.3	28	29	<0.53	<0.53	270	290	<0.17	<0.17	9900	10000	<1.1	<1.1
2/18/2026		<0.47	0.71 J	96	2.6	<1.9	<25	25 J	<0.93	<0.93	0.95 J	1.0	29	29	<0.24	<0.24	280	300	<0.17	<0.17	10000	10000	<1.1	<1.1
4/27/2026		<0.47	<0.23	150	2.5	3 J	<25	35 J	<0.93	<0.93	0.82 J	0.89 J	28	28	<0.24	<0.24	350	350	<0.17	<0.17	10000	10000	<1.1	<1.1

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Cobalt, Dissolved (µg/L)	Cobalt, Total Recoverable (µg/L)	Copper, Dissolved (µg/L)	Copper, Total Recoverable (µg/L)	Iron, Dissolved (µg/L)	Iron, Total Recoverable (µg/L)	Lead, Dissolved (µg/L)	Lead, Total Recoverable (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total Recoverable (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total Recoverable (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total Recoverable (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total Recoverable (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total Recoverable (ng/L)	Molybdenum, Dissolved (µg/L)	Molybdenum, Total Recoverable (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total Recoverable (µg/L)
MW-43																							
7/31/2024		<0.40	0.71 J	<0.50	3.0	<47	290	<0.19	<0.19	41 J	43 J	1200	1300	39	4400	<0.20	0.50	<0.022	<0.022	7.1	8.7	<0.63	0.64 J
9/25/2024		<0.40	<0.40	0.51 J	0.70 J	<47	110	<0.19	0.41 J	47	48	1300	1300	58	600	0.22 J	0.26 J	<0.022	<0.022	7.1	7.2	<0.63	<0.63
12/4/2024		<0.40	<0.40	<0.50	1.4 J	<47	140	<0.19	<0.19	45	44	1200	1200	35	1700	0.54	0.77	<0.022	<0.022	7.5	7.8	<0.63	<0.63
2/26/2025		<0.40	0.40 J	<0.50	2.3	<47	140	<0.19	<0.19	46	46	1300	1300	19	1700	<0.20	0.33 J	<0.022	<0.022	10	12	<0.63	<0.63
5/6/2025		<0.40	<0.40	0.67 J	1.4 J	<47	120	0.43 J	<0.19	47	44	1300	1300	<0.79	2200	<0.20	<0.20	<0.022	<0.022	7.6	7.5	<0.63	<0.63
8/5/2025		<0.40	<0.40	<0.50	0.89 J	<47	76 J	<0.19	<0.19	45	44	1300	1300	59	1100	<0.50	<0.50	<0.022	<0.022	6.6	5.5	<0.63	<0.63
10/22/2025		<0.40	0.46 J	<0.50	1.7 J	<47	210	<0.19	<0.19	42	42	1200	1300	60	1400	0.49 J	0.60	<0.022	<0.022	6.9	5.8	<0.63	<0.63
2/11/2026		<0.40	<0.40	0.54 J	1.5 J	<47	100	<0.19	<0.19	49	46	1200	1200	9.3	990	0.71	1.7	0.023 J	<0.022	6.6	4.0 J	<0.63	<0.63
5/4/2026		<0.40	<0.40	0.6 J	1.6 J	<47	120	<0.19	<0.19	46	48	1300	1400	25	1300	0.4 J	0.66	<0.033	<0.033	7.2	6.9	<0.63	<0.63
MW-43SB																							
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/1/2024		<0.40	<0.40	0.56 J	1.4 J	<47	100	<0.19	<0.19	130	130	4000	4000	190	190	<0.5	<0.20	<0.022	<0.022	33	33	<0.63	<0.63
10/1/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/16/2024	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/27/2025		0.54 J	4.0	<0.50	13	<47	3700	<0.19	1.6	35	40	10000	11000	550	630	0.46 J	1.0	<0.022	0.025 J	13	12	1.0 J	8.1
5/6/2025		0.52 J	3.5	<0.50	14	<47	4100	<0.19	1.5	23	24	9200	12000	610	790	0.27 J	1.0	<0.022	<0.022	11	9.9	1.0 J	8.2
8/5/2025		<0.40	<0.40	<0.50	1.3 J	<47	150	<0.19	<0.19	93	81	2600	3400	220	280	0.58	0.82	<0.022	<0.022	27	24	<0.63	<0.63
10/22/2025		<0.40	<0.40	<0.50	<0.50	55 J	81 J	<0.19	<0.19	94	96	1700	1800	160	160	0.43 J	0.42 J	<0.022	<0.022	27	27	<0.63	<0.63
2/11/2026		0.43 J	0.72 J	<0.50	3.2	59 J	190	<0.19	<0.19	17	8.8 J	6100	7700	650	870	0.97	2.7	<0.022	<0.05	8.6	5.6	<0.63	0.76 J
5/4/2026		<0.40	1.5	<0.50	5	67 J	1500	<0.19	0.6	24	21	5300	6500	610	710	0.37 J	1.3	<0.033	0.056	12	10	0.72 J	3.3
MW-44																							
7/31/2024		<0.40	<0.40	<0.50	0.71 J	<47	89 J	<0.19	<0.19	31	34	12000	13000	410	450	<0.20	<0.20	<0.022	<0.022	18	20	<0.63	<0.63
9/25/2024		<0.40	<0.40	<0.50	1.6 J	65 J	380	<0.19	85	33	33	9300	7700	270	230	0.24 J	0.41 J	<0.022	<0.022	49	75	<0.63	<0.63
12/4/2024		<0.40	<0.40	<0.50	0.52 J	47 J	96 J	<0.19	<0.19	32	31	7600	8400	160	180	0.28 J	0.24 J	<0.022	<0.022	67	55	<0.63	<0.63
2/26/2025		<0.40	<0.40	<0.50	<0.50	<47	85 J	<0.19	<0.19	33	33	10000	8800	150	130	<0.20	0.36 J	<0.022	<0.022	49	66	<0.63	<0.63
5/6/2025		<0.40	<0.40	<0.50	1.6 J	<47	390	<0.19	0.30 J	32	33	9400	8500	73	91	<0.20	<0.20	<0.022	<0.022	58	87	<0.63	0.75 J
8/5/2025		<0.40	<0.40	<0.50	0.91 J	<47	200	<0.19	<0.19	32	31	11000	9700	150	160	0.21 J	0.25 J	<0.022	<0.022	39	54	<0.63	<0.63
10/22/2025		<0.40	<0.40	<0.50	<0.50	<47	<47	<0.19	<0.19	30	28	5900	5900	83	84	0.48 J	0.21 J	<0.022	<0.022	74	73	<0.63	<0.63
2/11/2026		<0.40	<0.40	<0.50	1.7 J	<47	54 J	<0.19	<0.19	35	34	6600	7100	63	72	0.30 J	0.91	0.071	<0.022	75	65	<0.63	<0.63
5/4/2026		<0.40	<0.40	<0.50	0.68 J	<47	56 J	<0.19	<0.19	34	33	10000	9200	61	57	0.28 J	0.48 J	<0.033	<0.033	48	59	<0.63	<0.63
SMW-1																							
7/23/2024		<0.40	<0.40	<0.50	1.4 J	<47	270	<0.19	0.48 J	11	11	9000	9000	28	39	0.37 J	1.1	0.054	0.12	6.2	5.8	<0.63	<0.63
7/23/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024		1.8	<0.40	6.0	1.6 J	3700	69 J	1.6	<0.19	11	10	11000	8500	86	14	--	1.3	<0.022	<0.022	6.6	6.3	5	<0.63
12/9/2024		<0.40	<0.40	0.59 J	3.6	<47	360	<0.19	0.36 J	12	12	8300	8600	4.8	16	0.44 J	0.68	<0.022	0.028 J	6.2	6.0	<0.63	0.97 J
3/3/2025		<0.40	0.50 J	<0.50	3.1	180	810	<0.19	0.76	11	11	6800	8200	43	21	<0.20	0.71	<0.022	<0.022	9.9	6.3	<0.63	1.6 J
4/29/2025		<0.40	3.9	0.51 J	13	<47	6400	<0.19	3.4	10	17	7800	11000	4.4	130	0.24 J	3.0	<0.022	<0.050	7.8	7.8	<0.63	8.9
8/13/2025		<0.40	<0.40	1.5 J	2.4	<47	180	<0.19	0.23 J	10	9.9 J	10000	10000	<0.79	7.6	0.42 J	0.60	<0.022	<0.022	6.4	6.4	<0.63	0.66 J
10/27/2025		<0.40	<0.40	0.68 J	1.8 J	<47	200	<0.19	0.25 J	9.7 J	11	8500	8700	2.5	9.7	0.28 J	0.41 J	<0.022	<0.022	6.0	6.2	<0.63	0.68 J
2/16/2026		<0.40	0.48 J	<0.50	2.2	<47	750	<0.19	0.46 J	10	11	8000	8500	2.6	22	0.31 J	1.3	0.190	<0.022	5.3	5.6	<0.63	1.5 J
4/29/2026		<0.40	<0.40	0.94 J	1.8 J	<47	130	<0.19	0.19 J	11	11	8100	8200	<0.79	5.8 J	0.33 J	0.93	<0.033	<0.033	6	5.9	<0.63	<0.63
SMW-1SB																							
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/9/2024		<0.40	1.1	3.3	11	<47	1600	<0.19	0.71	17	18	430	1100	5.0	56	0.88	2.0	<0.022	0.023 J	7.5	7.9	0.73 J	2.7
3/3/2025		<0.40	<0.40	1.3 J	8.6	<47	700	<0.19	0.58	17	17	230	560	2.6	14	0.78	1.5	<0.022	<0.022	7.3	7.0	<0.63	1.3 J
4/30/2025		<0.40	<0.40	1.7 J	8.3	<47	510	<0.19	0.47 J	19	19	240	480	2.3 J	11	0.80	3.6	<0.022	<0.022	7.0	7.2	<0.63	0.95 J
8/13/2025		<0.40	<0.40	1.5 J	3.5	<47	180	1.6	13	12	13	220	280	2.9	5.8	0.90	0.72	<0.022	<0.022	4.9 J	4.8 J	<0.63	<0.63
10/27/2025		<0.40	<0.40	0.75 J	6.7	<47	370	<0.19	7.2	15	14	190 J	440	2.7	9.4	0.79	1.4	<0.022	<0.022	6.0	6.0	<0.63	0.71 J
2/16/2026		<0.40	<0.40	1.8 J	4.6	<47	74 J	0.52	3.6	15	13	180 J	250	1.5 J	2.5	0.62	1.1	<0.022	<0.05	5.0	5.0	<0.63	<0.63
4/29/2026		<0.40	<0.40	3.1	6.3	<47	54 J	0.98	2.8	17	18	170 J	190 J	1 J	2.5 J	0.8	1.3	<0.033	<0.033	5.7	5.4	<0.63	<0.63
SMW-3																							
8/6/2024		<0.40	<0.40	<0.50	1.1 J	<47	270	<0.19	0.37 J	<2.5	<2.5	1800	2000	15	21	0.22 J	0.25 J	<0.022	<0.022	18	18	<0.63	0.89 J
10/2/2024		<0.40	<0.40	<0.50	<0.50	<47	<47	<0.19	<0.19	<2.5	<2.5	1700	1700	13	15	0.34 J	0.28 J	--	--	17	17	<0.63	<0.63
10/2/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.34 J	0.34 J	<0.022	<0.022	--	--	--	--
10/2/2024	Duplicate Sample	<0.40	<0.40	<0.50	<0.50	<47	<47	<0.19	<0.19	<2.5	<2.5	1700	1700	13	15	--	--	--	--	16	17	<0.63	<0.63
12/4/2024		<0.40	<0.40	<0.50	<0.50	<47	59 J	<0.19	<0.19	<2.5	<2.5	1600	1600	15	15	0.42 J	0.40 J	<0.022	<0.022	18	19	<0.63	<0.63
3/6/2025		<0.40	<0.40	<0.50	<0.50	<47	47 J	<0.19	<0.19	<2.5	<2.5	1600	1700	15	17	0.30 J	<0.20	<0.022	<0.022	18	19	<0.63	<0.63
5/8/2025		<0.40	<0.40	<0.50	<0.50	<47	81 J	<0.19	<0.19	<2.5	<2.5	1600	1700	20	23	<0.50	<0.50	<0.022	<0.022	18	19	<0.63	<0.63
8/7/2025		<0.40	<0.40	<0.50	0.59 J	<47	120	<0.19	0.29 J	<2.5	<10	1700	1700	16	19	<0.50	<0.50	<0.022	<0.022	19	18	<0.63	<0.63
10/22/2025		<0.40	<0.40	<0.50	2.2	<47	160	<0.19	0.56	<2.5	<2.5	1600	1700	19	25	0.45 J	0.67	<0.022	<0.022	19	18	0.76 J	1.2 J
2/18/2026		<0.40	<0.40	<0.50	<0.50	<47	50 J	<0.19	<0.19	<2.5	<2.5	1600	1700	15	17	0.32 J	0.49 J	<0.022	<0.022	18	19	<0.63	<0.63
4/27/2026		<0.40	<0.40	<0.50	<0.50	<47	48 J	<0.19	<0.19	<2.0	<2.0	1600	1700	14	15	<0.20	<0.20	<0.033	<0.033	17	18	<0.63	<0.63

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Potassium, Dissolved (µg/L)	Potassium, Total Recoverable (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total Recoverable (µg/L)	Silver, Dissolved (µg/L)	Silver, Total Recoverable (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total Recoverable (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total Recoverable (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total Recoverable (µg/L)	Tin, Dissolved (µg/L)	Tin, Total Recoverable (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total Recoverable (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total Recoverable (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total Recoverable (µg/L)
MW-43																					
7/31/2024		220 J	250 J	<0.98	<0.98	<0.12	<0.12	98000	98000	370	380	<0.57	<0.57	<1.3	<1.3	67	68	15	44	<6.9	<6.9
9/25/2024		240 J	260 J	<0.98	<0.98	<0.12	<0.12	100000	100000	380	380	<0.57	<0.57	<1.3	<1.3	66	67	16	20	<6.9	<6.9
12/4/2024		250 J	260 J	<0.98	<0.98	<0.12	<0.12	100000	100000	390	390	<0.57	<0.57	<1.3	<1.3	72 J	74 J	17	25	<6.9	<6.9
2/26/2025		250 J	340 J	<0.98	<0.98	<0.12	<0.12	100000	100000	390	400	<0.57	<0.57	<1.3	<1.3	68	68	16	27	<6.9	<6.9
5/6/2025		240 J	240 J	<0.98	<0.98	<0.12	<0.12	110000	100000	380	360	<0.57	<0.57	<1.3	<1.3	64	67	16	28	<6.9	<6.9
8/5/2025		220 J	230 J	<0.98	<0.98	<0.12	<0.12	99000	97000	370	350	<0.57	<0.57	<1.3	<1.3	67	73	15	20	<6.9	<6.9
10/22/2025		220 J	240 J	<0.98	<0.98	<0.12	<0.12	95000	95000	380	380	<0.57	<0.57	<1.3	<1.3	58	70	15	25	<6.9	<6.9
2/11/2026		230 J	260 J	<0.98	<0.98	<0.12	<0.12	96000	97000	390	380	<0.25	<0.25	<1.3	<1.3	62	62	15	23	<6.9	<6.9
5/4/2026		270 J	310 J	<0.98	<0.98	<0.12	<0.12	100000	100000	410	420	<0.25	<0.25	<1.3	<1.3	62	60	16	25	<6.9	<6.9
MW-43SB																					
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/1/2024		1600	1600	<0.98	<0.98	<0.12	<0.12	800000	790000	2900	2900	<0.57	<0.57	<1.3	2.0 J	0.069	0.11	<2.2	<2.2	<6.9	8.8 J
10/1/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/16/2024	Inaccessible: Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/27/2025		2700	4200	<0.98	1.1 J	<0.12	<0.12	780000	740000	2400	2300	<0.57	<0.57	<1.3	2.3 J	0.230	0.9	<2.2	50	18 J	48
5/6/2025		2400	4000	<0.98	<0.98	<0.12	<0.12	780000	760000	2400	2400	<0.57	<0.57	<1.3	15	0.210	1.0	<2.2	47	27	47
8/5/2025		1300	1500	<0.98	<0.98	<0.12	<0.12	700000	710000	2000	2000	<0.57	<0.57	<1.3	2.7 J	0.064	0.2	<2.2	2.2 J	37	53
10/22/2025		1200	1300	<0.98	1.4 J	<0.12	<0.12	640000	660000	2000	2000	<0.57	<0.57	<1.3	1.5 J	0.039 J	0.055	<2.2	<2.2	<6.9	20
2/11/2026		1600	1900	<0.98	<0.98	<0.12	<0.12	720000	790000	2400	2600	<0.25	<0.25	<1.3	1.8 J	0.250	0.28	1.0	3.3	<6.9	120
5/4/2026		1700	2400	<0.98	0.98 J	<0.12	<0.12	750000	710000	2500	2600	<0.25	<0.25	<1.3	1.4 J	0.21	1	1	19	170	880
MW-44																					
7/31/2024		1200	1300	<0.98	<0.98	<0.12	<0.12	73000	77000	950	950	<0.57	<0.57	<1.3	<1.3	15	14	<2.2	<2.2	<6.9	<6.9
9/25/2024		980	980	<0.98	<0.98	<0.12	<0.12	96000	110000	770	640	<0.57	<0.57	<1.3	<1.3	12	9.4	<2.2	<2.2	<6.9	<6.9
12/4/2024		830	890	<0.98	<0.98	<0.12	<0.12	110000	98000	700	750	<0.57	<0.57	<1.3	<1.3	9.7	11	<2.2	<2.2	<6.9	<6.9
2/26/2025		1000	970	<0.98	<0.98	<0.12	<0.12	96000	100000	830	760	<0.57	<0.57	<1.3	<1.3	12	8.2	<2.2	<2.2	<6.9	<6.9
5/6/2025		950	1000	<0.98	<0.98	<0.12	<0.12	99000	120000	810	710	<0.57	<0.57	<1.3	<1.3	11	8.6	<2.2	<2.2	<6.9	<6.9
8/5/2025		940	960	<0.98	<0.98	<0.12	<0.12	87000	94000	870	810	<0.57	<0.57	<1.3	<1.3	13	13	<2.2	<2.2	<6.9	<6.9
10/22/2025		670	690	<0.98	<0.98	<0.12	<0.12	110000	110000	610	600	<0.57	<0.57	<1.3	<1.3	8.9	8.5	<2.2	<2.2	<6.9	<6.9
2/11/2026		750	800	<0.98	<0.98	<0.12	<0.12	110000	110000	660	680	<0.25	<0.25	<1.3	<1.3	9.0	7.6	0.4	0.51	<6.9	<6.9
5/4/2026		980	950	<0.98	<0.98	<0.12	<0.12	94000	98000	940	870	<0.25	<0.25	<1.3	<1.3	12	11	0.48	0.6	<6.9	<6.9
SMW-1																					
7/23/2024		3300	3400	<0.98	<0.98	<0.12	<0.12	58000	58000	310	310	<0.57	<0.57	<1.3	<1.3	5.3	5.1	<2.2	<2.2	<6.9	<6.9
7/23/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024		4600	3200	<0.98	<0.98	<0.12	<0.12	54000	55000	350	310	<0.57	<0.57	<1.3	<1.3	4.8	5.4	11	2.6 J	13 J	<6.9
12/9/2024		3400	3400	<0.98	<0.98	<0.12	<0.12	61000	61000	280	280	<0.57	<0.57	<1.3	<1.3	4.3	4.5	<2.2	2.2 J	<6.9	<6.9
3/3/2025		2800	3400	<0.98	<0.98	<0.12	<0.12	53000	57000	250	280	<0.57	<0.57	<1.3	<1.3	4.8	4.5	<2.2	2.9 J	<6.9	7.2 J
4/29/2025		3300	5200	<0.98	<0.98	<0.12	<0.12	57000	57000	280	310	<0.57	<0.57	<1.3	<1.3	5.2	6.6	<2.2	14	<6.9	25
8/13/2025		3200	3300	<0.98	<0.98	<0.12	<0.12	56000	56000	320	320	<0.57	<0.57	<1.3	<1.3	5.0	5.1	<2.2	<2.2	<6.9	<6.9
10/27/2025		3000	3200	<0.98	<0.98	<0.12	<0.12	58000	59000	300	300	<0.57	<0.57	<1.3	<1.3	4.6	4.7	<2.2	<2.2	<6.9	<6.9
2/16/2026		3000	3200	<0.98	<0.98	<0.12	<0.12	59000	59000	260	260	<0.25	<0.25	<1.3	<1.3	4.5	4.5	1.4	2.8	150	130
4/29/2026		3100	3200	<0.98	<0.98	<0.12	<0.12	57000	58000	290	290	<0.25	<0.25	<1.3	<1.3	4.6	4.5	1.5	1.7	24	29
SMW-1SB																					
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/9/2024		1500	1800	<0.98	<0.98	<0.12	<0.12	100000	100000	19	21	<0.57	<0.57	<1.3	<5.0	1.0	1.3	6.6	11	<6.9	7.1 J
3/3/2025		1300	1600	<0.98	1.3 J	<0.12	<0.12	85000	92000	20	22	<0.57	<0.57	<1.3	<1.3	0.75	0.87	5.2	6.8	<6.9	8.9 J
4/30/2025		1300	1500	<0.98	<0.98	<0.12	<0.12	96000	98000	23 J	24 J	<0.57	<0.57	<1.3	<1.3	0.67	0.82	4.9 J	6.6	<6.9	<6.9
8/13/2025		1500	1500	<0.98	<0.98	<0.12	<0.12	86000	86000	13	13	<0.57	<0.57	<1.3	<1.3	0.95	0.94	5.2	7.2	<6.9	25
10/27/2025		1400	1500	<0.98	<0.98	<0.12	<0.12	91000	89000	20	18	<0.57	<0.57	<1.3	1.6 J	0.76	0.93	2.6 J	6.0	<6.9	11 J
2/16/2026		1300	1400	<0.98	<0.98	<0.12	<0.12	90000	90000	17	13	<0.25	<0.25	<1.3	<1.3	0.87	0.99	3.9	6.5	13 J	29
4/29/2026		1400	1400	<0.98	<0.98	<0.12	<0.12	90000	90000	22	21	<0.25	<0.25	<1.3	<1.3	0.71	0.74	3.6	4.1	12 J	33
SMW-3																					
8/6/2024		1000	1100	<0.98	<0.98	<0.12	<0.12	44000	46000	130	130	<0.57	<0.57	<1.3	<1.3	0.200	0.270	<2.2	2.2 J	<6.9	<6.9
10/2/2024		970	960	<0.98	<0.98	<0.12	<0.12	42000	43000	120	120	<0.57	<0.57	3.4 J	<1.3	0.037 J	0.046 J	<5	<2.2	<6.9	<6.9
10/2/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.037 J	0.036 J	--	--	--	--
10/2/2024	Duplicate Sample	970	930	<0.98	<0.98	<0.12	<0.12	42000	42000	120	120	<0.57	<0.57	<1.3	<1.3	--	--	<5	<2.2	<6.9	<6.9
12/4/2024		890	900	<0.98	<0.98	<0.12	<0.12	42000	43000	110	110	<0.57	<0.57	<1.3	<1.3	0.074	0.056	<2.2	<2.2	<6.9	<6.9
3/6/2025		860	900	<0.98	<0.98	<0.12	<0.12	41000	42000	110	120	<0.57	<0.57	<1.3	<1.3	0.064	0.041 J	<2.2	<2.2	<6.9	<6.9
5/8/2025		860	930	<0.98	<0.98	<0.12	<0.12	39000	41000	100	110	<0.57	<0.57	<1.3	<1.3	0.076	0.088	<2.2	<2.2	<6.9	<6.9
8/7/2025		830	840	<0.98	<0.98	<0.12	<0.12	43000	42000	110	98	<0.57	<0.57	<1.3	<1.3	0.021 J	0.041 J	<2.2	<2.2	<6.9	<6.9
10/22/2025		840	860	1.1 J	1.2 J	<0.12	<0.12	40000	40000	100	110	<0.57	<0.57	<1.3	<1.3	0.110	0.120	<2.2	<2.2	<6.9	<6.9
2/18/2026		840	850	<0.98	<0.98	<0.12	<0.12	43000	43000	110	110	<0.25	<0.25	<1.3	<1.3	0.024 J	0.033 J	0.12 J	0.24 J	32	66
4/27/2026		830	860	<0.98	<0.98	<0.12	<0.12	42000	43000	110	110	<0.25	<0.25	<1.3	<1.3	0.0099 J	0.015 J	<0.084	0.16 J	<6.9	<6.9

Table 5-9 (continued)

		Field Parameters						General Chemistry Parameters													
Ground Water Sampling Location & Date	Note	Conductivity (Field) (mS/cm)	Dissolved Oxygen (Field) (mg/L)	pH (Field) (SU)	Redox Potential (Field) (mV)	Temperature Field (°C)	Turbidity (NTU)	Alkalinity (mg/L)	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	Alkalinity, Carbonate (as CaCO3) (mg/L)	Ammonia (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/ Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Salinity (PSU)
SMW-3SB																					
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/4/2024	No field parameters available	--	--	--	--	--	--	110	110	<3.7	<0.10	0.89 J	2.0	88	<0.0036	1.5	44	<0.37	<0.37	<0.25	0.27	<0.33
3/6/2025		0.556	0	9.05	255	7.27	36.9	100	79	24	<0.10	<0.45	2.5	93	<0.0036	1.6	9.8	2.7	2.7	<0.25	0.056	<0.33
5/8/2025		0.510	1.14	9.27	54	9.77	13.9	110	85	28	<0.10	0.92 J	1.7	99	<0.0036	1.8	9.4	<0.37	<0.37	<0.25	0.057	<0.33
8/7/2025		0.400	0.94	9.12	-32	15.54	0.9	110	85	23	<0.10	0.93 J	1.7	93	<0.0036	1.5	9.5	<0.37	<0.37	<0.25	0.073	<0.33
10/22/2025		0.513	0.97	9.10	-63	8.99	0	110	87	20	<0.1 J	0.87 J	2.0	92	<0.0036	1.6	8.6	<0.37	<0.37	<0.25	0.062 J	<0.33
2/18/2026		0.519	0.99	9.16	19	7.32	21.9	110	89	24	<0.10	0.94 J	1.3	92	<0.0036	1.7	18000	<0.37	<0.37	<0.25	0.035 J	<0.33
4/27/2026		0.467	1.35	8.87	-43	9.7	49.4	110	110	<3.7	<0.049	0.96 J	1.8	79	<0.0036	1.3	10	<1	<1	<1	0.071	<0.33
NB1-1	**Tailings**																				
7/24/2024		1.290	0.16	6.86	-128	13.2	0	240	240	<3.7	1.30	2.5	2.7	230	<0.0036	0.53 J	290	<0.043	<0.070	<0.070	0.13 J	0.48
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--
10/2/2024		1.080	0	7.74	-228	16.04	29.0	130	130	<3.7	0.68	2.2	3.3	240	0.0050	0.39 J	210	<0.043	<0.070	<0.070	0.081	0.40
12/17/2024	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/3/2025		1.190	0	8.08	-85	6.01	25.1	83	83	<3.7	0.29	2.5	3.4	270	0.0590	0.64 J	190	<0.37	<0.37	<0.25	0.15	0.40
5/5/2025		1.050	0.37	8.23	-262	13.64	18.1	65	65	<3.7	0.28	2.5	3.5 J	270	<0.0036 J	0.81 J	210	<0.37	<0.37	<0.25	0.097	0.40
8/7/2025		0.972	0.54	7.82	-280	18.63	6.3	130	130	<3.7	0.28	2.4	3.7	270	<0.0036	0.66 J	200	<0.37	<0.37	<0.25	0.094	0.40
10/28/2025		1.090	0.63	7.85	-181	10.77	41.2	100	100	<3.7	--	2.8	3.2	270	<0.0036	0.73 J	190	<0.37	<0.37	<0.25	0.12	0.40
2/10/2026		1.110	0.88	7.94	-152	7.18	28.0	97	97	<3.7	0.11 J	3.0	3.8	280	<0.0036	0.45 J	190	<0.37	<0.37	<0.25	0.14	0.48
4/29/2026		1	0.52	7.83	-140	8.63	3.1	70	70	<3.7	0.11 J	2.6 J	4 J	320	0.04	0.65 J	190	1.4	1.4	<0.25	0.093 J	0.4
NB1-3																					
7/24/2024		1.000	0.31	7.89	-273	13.64	54.2	70	70	<3.7	0.22	2.6	3.0	230	<0.0036	0.58 J	180	<0.043	<0.070	<0.070	0.16 J	<0.33
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--
10/2/2024		1.000	0.37	7.82	-175	14.05	22.3	73	73	<3.7	0.56	2.3	3.8	240	<0.0036	<0.19	190	<0.043	<0.070	<0.070	0.14	<0.33
12/17/2024	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/3/2025		1.030	0	7.97	86	7.07	46.3	66	66	<3.7	0.50	2.5	2.2	250	<0.0036	<0.43	180	<0.37	<0.37	<0.25	0.057	<0.33
5/5/2025		0.846	0.22	7.50	-125	16.79	17.6	65	65	<3.7	<0.10	2.6	2.6 J	260	<0.0036 J	<0.43	200	<0.37	<0.37	<0.25	0.043 J	<0.33
8/7/2025		0.880	1.45	7.37	-156	21.78	8.5	89	89	<3.7	2.00	2.9	5.3	260	<0.0036	<0.43	180	<0.37	<0.37	<0.25	0.28	<0.33
10/28/2025		1.030	1.14	7.45	-140	10.59	9.9	85	85	<3.7	--	2.8	2.9	260	<0.0036	<0.43	190	<0.37	<0.37	<0.25	0.17	<0.33
2/10/2026		0.812	0.82	6.81	50	7.46	18.4	96	96	<3.7	0.11 J	2.1	2.5	190	<0.0036	<0.43	220	<0.37	<0.37	<0.25	0.18	<0.33
4/29/2026		0.84	0.66	7.57	-105	8.38	7.3	74	74	<3.7	0.073 J	2.7 J	3.4 J	310	<0.0036	<0.43	180	1.4	1.4	<0.25	0.088 J	<0.33
NB2-1																					
7/24/2024		2.260	0.32	6.93	-166	17.91	62.4	760	760	<3.7	0.36	2.9	4.1	280	<0.0036	0.27 J	800	0.42 J	0.42 J	<0.070	0.026 J	1.2
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.026 J	--
9/30/2024		2.020	0.10	7.21	-124	25.97	0	770	770	<3.7	0.31	3.0	4.2	300	<0.0050	0.54 J	820	<0.043	<0.070	<0.070	0.026 J	1.3
12/2/2024		1.100	0	8.10	-177	7.19	13.7	430	430	<3.7	0.39	0.91 J	6.6	130	<0.0036	<0.43	490	<0.37	<0.37	<0.25	<0.024	0.48
3/2/2025	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/30/2025		0.974	0.49	7.41	-255	10.23	4.9	400	400	<3.7	0.19 J	0.65 J	7.9	89	<0.0036	<0.43	430	<0.37	<0.37	<0.25	<0.024	0.40
8/12/2025		2.240	0.82	6.93	-62	19.1	40.4	750	750	<3.7	0.23	2.5	5.8	300	<0.0036	<0.43	750	<0.37	<0.37	<0.25	0.058	1.2
10/28/2025		1.480	0.55	7.11	-93	15.36	7.4	560	560	<3.7	--	1.6	6.6	180	<0.0036	<0.43	530	<0.37	<0.37	<0.25	0.052	0.70
2/10/2026	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/2026		0.913	0.56	7.23	-148	8.31	0	420	420	<3.7	0.21	<0.45	7.5	94 J	<0.0036	<0.43	420	<0.37	<0.37	<0.25	<0.048	0.33
NB2-3																					
7/24/2024		1.110	0	6.54	-42	13.99	0	270	270	<3.7	0.54	1.9	6.2	180	<0.0036	0.31 J	140	<0.043	<0.070	<0.070	0.16 J	0.40
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		0.889	0.01	7.88	-189	26.73	0	230	230	<3.7	0.26	2.2	5.4	200	0.0040 J	0.58 J	79	<0.043	<0.070	<0.070	0.11	0.40
12/2/2024		1.030	13.01	8.40	-78	8.18	14.9	150	150	<3.7	0.12 J	2.5	4.2	250	<0.0036	0.54 J	59	<0.37	<0.37	<0.25	0.14	0.40
3/3/2025		1.120	0	8.45	14	7.87	20.3	170	170	<3.7	0.21	2.4	4.1	240	<0.0036	0.45 J	53	<0.37	<0.37	<0.25	0.21	0.40
4/30/2025		1.030	1.20	7.54	-119	13.72	9.1	200	200	<3.7	0.31	2.3	5.0	230	<0.0036	<0.43	65	<0.37	<0.37	<0.25	0.18	0.40
8/12/2025		1.100	3.59	7.44	-76	17.22	80.4	250	250	<3.7	0.32	2.2	7.0	220	<0.0036	<0.43	82	<0.37	<0.37	<0.25	0.16	0.48
10/28/2025		1.090	0.81	7.87	-80	13.47	0	200	200	<3.7	--	2.4	4.7	240	<0.0036	<0.43	52	<0.37	<0.37	<0.25	0.15	0.40
2/10/2026	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/2026		0.947	0.73	7.44	-100	9.46	8.2	210	210	<3.7	0.33	2.3 J	4.7	260 J	<0.0036	<0.43	120	<0.37	<0.37	<0.25	0.14	0.4

Table 5-9 (continued)

Ground Water Sampling Location & Date	Note	General Chemistry Parameters					Metals (Dissolved & Total)																
		Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Aluminum, Dissolved (µg/L)	Aluminum, Total Recoverable (µg/L)	Antimony, Dissolved (µg/L)	Antimony, Total Recoverable (µg/L)	Arsenic, Dissolved (µg/L)	Arsenic, Total Recoverable (µg/L)	Barium, Dissolved (µg/L)	Barium, Total Recoverable (µg/L)	Beryllium, Dissolved (µg/L)	Beryllium, Total Recoverable (µg/L)	Boron, Dissolved (µg/L)	Boron, Total Recoverable (µg/L)	Cadmium, Dissolved (µg/L)	Cadmium, Total Recoverable (µg/L)	Calcium, Dissolved (µg/L)	Calcium, Total Recoverable (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total Recoverable (µg/L)
SMW-3SB																								
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/4/2024	No field parameters available	8.0	<0.23	330	2.5	160	25 J	11000	<1.3	<1.3	0.51 J	2.7	8.6	74	<0.53	0.53 J	4700	4700	<0.17	0.17 J	4500	8100	<1.1	17
3/6/2025		7.8	<0.23	280	1.3	2.4 J	30 J	110	<1.3	<1.3	0.46 J	0.48 J	5.2	6.0	<0.53	<0.53	4800	4700	<0.17	<0.17	3300	3300	<1.1	1.2 J
5/8/2025		7.8	<0.23	240	1.3	4.0 J	25 J	190	<1.3	<1.3	0.45 J	0.51 J	4.7	5.9	<0.53	<0.53	4900	5000	<0.17	<0.17	2900	3200	<1.1	<1.1
8/7/2025		7.3	3.2	100 J	1.4	5.0	<25	300	<1.3	<1.3	0.39 J	0.58 J	4.1	6.1	<0.53	<0.53	4800	5200	<0.17	<0.17	3000	3200	<1.1	1.9 J
10/22/2025		7.3	<1.0	290	1.4	4.2 J	<25	95 J	<1.3	<1.3	0.42 J	0.45 J	4.2	4.7	<0.53	<0.53	4700	4400	<0.17	<0.17	2900	3000	<1.1	<1.1
2/18/2026		7.5	0.26 J	260	1.4	3.2 J	<25	220	<0.93	<0.93	0.48 J	0.49 J	4.8	6.0	<0.24	<0.24	5200	5200	<0.17	<0.17	3200	3400	<1.1	<1.1
4/27/2026		9.7	2.7	290	1.7	7.6	<25	580	<0.93	<0.93	0.48 J	0.55 J	4.7	8.1	<0.24	<0.24	5000	4900	<0.17	<0.17	3100	3300	<1.1	1.6 J
NB1-1	**Tailings**																							
7/24/2024		4.2	1.3	820	3.4	7.0	<25	130	<1.3	<1.3	0.69 J	0.67 J	860	880	<0.53	<0.53	1500	1400	<0.17	<0.17	97000	97000	<1.1	<1.1
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024		17	1.7	660	4.0	51	<25	270	<1.3	<1.3	1.3	1.1	670	620	<0.53	<0.53	1400	1300	<0.17	<0.17	74000	69000	<1.1	<1.1
12/17/2024	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/3/2025		44	8.7	580	3.3	6.8	<25	31 J	<1.3	<1.3	1.1	1.4	330	360	<0.53	<0.53	1000	1100	<0.17	<0.17	62000	68000	<1.1	<1.1
5/5/2025		61 J	8.3	610	3.6 J	7.2	<25	61 J	<1.3	<1.3	1.5	1.5	310	310	<0.53	<0.53	1100	1100	<0.17	<0.17	74000	74000	<1.1	<1.1
8/7/2025		7.9	2.8	100 J	3.8	35	<25	81 J	<1.3	<1.3	0.87 J	0.97 J	420	440	<0.53	<0.53	1300	1400	<0.17	<0.17	66000	67000	<1.1	<1.1
10/28/2025		13	4.4	610	4.1	39	<25	260	<1.3	<1.3	0.98 J	1.2	380	430	<0.53	<0.53	1300	1300	<0.17	0.19 J	64000	68000	<1.1	<1.1
2/10/2026		56	6.9	660	4.2	21	<25	71 J	<0.93	<0.93	0.99 J	1.2	290	290	<0.24	<0.24	1100	1100	<0.17	<0.17	65000	65000	<1.1	<1.1
4/29/2026		62	2	610	4.2	3.8 J	<25	<25	<0.93	<0.93	1.3	1.5	300	300	<0.24	<0.24	1100	1100	<0.17	<0.17	71000	69000	<1.1	<1.1
NB1-3																								
7/24/2024		0.71 J	0.69 J	560	3.8	3.6 J	<25	33 J	<1.3	<1.3	2	2.1	470	480	<0.53	<0.53	1300	1300	<0.17	<0.17	66000	66000	<1.1	<1.1
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024		0.24 J	<0.23	540	3.4	8.2	<25	64 J	<1.3	<1.3	2.4	2.3	480	460	<0.53	<0.53	1200	1200	<0.17	<0.17	66000	67000	<1.1	<1.1
12/17/2024	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/3/2025		1.3	<0.58	500	2.1	8.0	<25	92 J	<1.3	<1.3	1.7	1.9	460	500	<0.53	<0.53	1100	1200	<0.17	<0.17	59000	64000	<1.1	<1.1
5/5/2025		1.0 J	<0.23	510	2.6 J	3.0 J	<25	31 J	<1.3	<1.3	2.0	2.2	520	540	<0.53	<0.53	1400	1400	<0.17	<0.17	68000	70000	<1.1	<1.1
8/7/2025		<0.47	0.27 J	100 J	5.5	7.8	<25	110	<1.3	<1.3	1.8	2.2	450	460	<0.53	<0.53	1200	1300	<0.17	<0.17	64000	64000	<1.1	<1.1
10/28/2025		<0.47	1.2	530	2.9	8.0	<25	56 J	<1.3	<1.3	2.1	2.4	470	520	<0.53	<0.53	1200	1200	<0.17	<0.17	64000	68000	<1.1	<1.1
2/10/2026		45	<0.23	520	2.6	24	<25	71 J	<0.93	<0.93	1.3	1.8	420	410	<0.24	<0.24	910	840	<0.17	<0.17	70000	74000	<1.1	<1.1
4/29/2026		0.54 J	<0.23	450	3.2	4.4 J	<25	42 J	<0.93	<0.93	2.2	2.2	510	520	<0.24	<0.24	1300	1300	<0.17	<0.17	65000	66000	<1.1	<1.1
NB2-1																								
7/24/2024		14	<0.23	1300	4.9	11	<25	65 J	<1.3	<1.3	0.28 J	0.32 J	6600	6300	<0.53	<0.53	1300	1400	<0.17	<0.17	210000	210000	<1.1	<1.1
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		9.6	<0.23	1400	4.1	5.8	<25	<25	<1.3	<1.3	<0.23	<0.23	8200	7400	<0.53	<0.53	1600	1600	<0.17	<0.17	220000	220000	<1.1	<1.1
12/2/2024		58	2.5	760	6.6	<1.9	<25	<25	<1.3	<1.3	0.38 J	0.40 J	1600	1200	<0.53	<0.53	690	730	<0.17	<0.17	130000	130000	<1.1	<1.1
3/2/2025	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/30/2025		59	6.1	680	7.8	<1.9	<25	32 J	<1.3	<1.3	0.52 J	0.53 J	1100 J	960 J	<0.53	<0.53	540	540	<0.17	<0.17	120000	120000	<1.1	<1.1
8/12/2025		17	1.1	1300	5.5	2.4 J	<25	40 J	<1.3	<1.3	0.26 J	0.31 J	6500	6900	<0.53	<0.53	1400	1400	<0.17	<0.17	200000	200000	<1.1	<1.1
10/28/2025		12	2.9	810	6.7	<1.9	<25	<25	<1.3	<1.3	0.29 J	0.31 J	3900	3800	<0.53	<0.53	950	950	<0.17	<0.17	140000	140000	1.2 J	<1.1
2/10/2026	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/2026		43 J	4.1	620	7.6	<1.9	<25	<25	<0.93	<0.93	0.45 J	0.39 J	1500	1400	<0.24	<0.24	560	550	<0.17	<0.17	120000	110000	<1.1	<1.1
NB2-3																								
7/24/2024		<0.21	<0.23	660	7.0	8.5	<25	33 J	<1.3	<1.3	6.3	6.000	440	380	<0.53	<0.53	2200	2100	<0.17	<0.17	51000	45000	<1.1	<1.1
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		<0.21	<0.23	620	5.1	5.2	<25	<25	<1.3	<1.3	6.0	6.1	280	240	<0.53	<0.53	2100	2100	<0.17	<0.17	30000	26000	<1.1	<1.1
12/2/2024		<0.47	<0.23	620	4.2	5.6	<25	<25	<1.3	<1.3	6.4	7.3	150	160	<0.53	<0.53	1600	1700	<0.17	<0.17	20000	20000	<1.1	<1.1
3/3/2025		<0.47	7.3	590	4.3	9.8	<25	42 J	<1.3	<1.3	6.3	7.9	140	160	<0.53	<0.53	1700	1800	<0.17	<0.17	17000	18000	<1.1	<1.1
4/30/2025		<0.47	<0.23	570	5.2	6.8	<25	27 J	<1.3	<1.3	6.1	6.7	200	210 J	<0.53	<0.53	1900	2000	<0.17	<0.17	21000	22000	<1.1	<1.1
8/12/2025		<0.47	<0.23	660	5.5	5.5 J	<25	30 J	<1.3	<1.3	5.7	5.8	250	250	<0.53	<0.53	1900	1900	<0.17	<0.17	28000	27000	<1.1	<1.1
10/28/2025		<0.47	0.33 J	590	4.7	7.6	<25	25 J	<1.3	<1.3	5.7	5.7	160	160	<0.53	<0.53	1900	1800	<0.17	<0.17	18000	18000	<1.1	<1.1
2/10/2026	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/2026		<0.47	<0.23	560	4.8	5.8	<25	32 J	<0.93	<0.93	5.7	6.1	150	160	<0.24	<0.24	2000	2000	<0.17	<0.17	18000	18000	<1.1	<1.1

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Cobalt, Dissolved (µg/L)	Cobalt, Total Recoverable (µg/L)	Copper, Dissolved (µg/L)	Copper, Total Recoverable (µg/L)	Iron, Dissolved (µg/L)	Iron, Total Recoverable (µg/L)	Lead, Dissolved (µg/L)	Lead, Total Recoverable (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total Recoverable (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total Recoverable (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total Recoverable (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total Recoverable (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total Recoverable (ng/L)	Molybdenum, Dissolved (µg/L)	Molybdenum, Total Recoverable (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total Recoverable (µg/L)
SMW-3SB																							
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/4/2024	No field parameters available	<0.40	6.9	0.72 J	55	<47	10000	<0.19	4.4	17	26	820	5700	18	200	0.71	3.9	<0.022	<0.022	13	14	<0.63	15
3/6/2025		<0.40	<0.40	<0.50	3.7	<47	84 J	<0.19	<0.19	23	24	360	380	2.3 J	6.1	0.30 J	0.50	<0.022	0.026 J	10	9.7	<0.63	6.8
5/8/2025		<0.40	<0.40	<0.50	4.0	<47	160	<0.19	<0.19	28	31	300	360	2.2 J	4.9	<0.50	<0.50	<0.022	<0.022	9.7	10	<0.63	<0.63
8/7/2025		<0.40	<0.40	<0.50	4.9	<47	380	<0.19	0.23 J	31	32	290	390	2.8	7	<0.50	<0.50	<0.022	<0.022	9.4	9.8	<0.63	0.80 J
10/22/2025		<0.40	<0.40	<0.50	2.8	<47	86 J	<0.19	<0.19	26	25	260	290	4.1	5.4	0.62	0.45 J	<0.022	<0.022	9.7	9.9	<0.63	<0.63
2/18/2026		<0.40	<0.40	<0.50	3.1	<47	180	<0.19	<0.19	28	29	280	350	4.8	8.0	0.22 J	0.41 J	<0.022	<0.022	9.9	10	<0.63	<0.63
4/27/2026		<0.40	0.4 J	<0.50	4.3	<47	510	<0.19	0.25 J	30	30	270	470	2.5	12	0.24 J	0.43 J	<0.033	<0.033	9.5	9.2	<0.63	1 J
NB1-1	**Tailings**																						
7/24/2024		<0.40	<0.40	<0.50	2	<47	430	<0.19	<0.19	25	25	12000	12000	87	94	<0.20	0.45 J	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024		<0.40	<0.40	0.55 J	16	250	2600	<0.19	1.0	19	16	10000	10000	110	120	0.42 J	1.9	<0.022	0.032 J	<2.5	3.6 J	<0.63	0.98 J
12/17/2024	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/3/2025		<0.40	<0.40	<0.50	1.9 J	<47	480	<0.19	<0.19	7.5 J	8.1 J	5000	5700	28	33	0.29 J	0.39 J	<0.022	<0.022	<2.5	3.1 J	<0.63	<0.63
5/5/2025		<0.40	<0.40	<0.50	2.3	<47	950	<0.19	0.31 J	6.8 J	7.4 J	5100	5300	24	28	0.21 J	0.85	<0.022	0.030 J	<2.5	3.0 J	<0.63	<0.63
8/7/2025		<0.40	<0.40	<0.50	6.9	84 J	640	<0.19	0.24 J	15	16	7500	7400	65	71	0.24 J	0.45 J	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
10/28/2025		<0.40	<0.40	<0.50	22	<47	2000	<0.19	0.71	9.8 J	11	5300	5700	47	64	<0.40	0.92 J	<0.022	<0.022	<2.5	5.5	<0.63	1.3 J
2/10/2026		<0.40	<0.40	<0.50	4.6	200	1600	<0.19	0.53	7.7 J	7.6 J	5400	5700	31	40	0.41 J	2.3	<0.022	0.038 J	<2.5	4.5 J	<0.63	<0.63
4/29/2026		<0.40	<0.40	<0.50	0.9 J	<47	250	<0.19	<0.19	6.6 J	6.2 J	5000	4900	33	32	0.29 J	0.67	0.053	0.049 J	3.8 J	4.1 J	<0.63	<0.63
NB1-3																							
7/24/2024		<0.40	<0.40	<0.50	1.4 J	1100	1400	<0.19	<0.19	17	17	4600	4700	150	150	0.21 J	0.89	<0.022	<0.022	18	18	<0.63	<0.63
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024		<0.40	<0.40	<0.50	3.2	780	1100	<0.19	<0.19	17	16	4100	4300	160	170	0.34 J	1.0	<0.022	<0.022	15	15	<0.63	<0.63
12/17/2024	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/3/2025		<0.40	<0.40	<0.50	3.8	180	1800	<0.19	<0.19	18	19	4500	5000	150	170	0.23 J	0.47 J	<0.022	<0.022	17	18	<0.63	<0.63
5/5/2025		<0.40	<0.40	<0.50	1.5 J	960	1800	<0.19	<0.19	21	21	5000	5400	170	180	<0.20	0.58	<0.022	<0.022	19	20	<0.63	<0.63
8/7/2025		<0.40	<0.40	<0.50	4.4	1300	1800	<0.19	<0.19	19	19	4200	4200	180	190	0.39 J	0.48 J	<0.022	<0.022	16	16	<0.63	<0.63
10/28/2025		<0.40	<0.40	<0.50	2.5 J	820	1300	<0.19	<0.19	18	18	4200	4600	180	200	0.31 J	0.37 J	<0.022	<0.022	17	18	<0.63	<0.63
2/10/2026		<0.40	<0.40	<0.50	9.6	720	6400	<0.19	<0.19	32	37	7800	8800	230	250	<0.20	0.91	<0.022	<0.022	10	12	<0.63	<0.63
4/29/2026		<0.40	<0.40	<0.50	1.2 J	510	990	<0.19	<0.19	21	22	4700	4900	150	160	0.21 J	0.29 J	<0.033	<0.033	19	19	<0.63	<0.63
NB2-1																							
7/24/2024		<0.40	<0.40	0.94 J	4	1900	2400	<0.19	<0.19	64	65	65000	67000	2200	2300	<0.20	0.26 J	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		<0.40	<0.40	<0.50	<0.50	2600	2400	<0.19	<0.19	67	69	69000	68000	2900	2800	<0.20	<0.20	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
12/2/2024		<0.40	<0.40	<0.50	<0.50	<47	47 J	<0.19	<0.19	42 J	43 J	37000	38000	770	750	0.26 J	0.31 J	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
3/2/2025	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/30/2025		<0.40	<0.40	<0.50	<0.50	<47	91 J	<0.19	<0.19	38	40	34000	34000	390	400	0.25 J	0.23 J	<0.022	<0.022	<2.5	<2.5	<0.63	0.72 J
8/12/2025		<0.40	<0.40	<0.50	4.1	1100	1600	<0.19	<0.19	58	60	63000	63000	1800	1900	0.21 J	0.27 J	<0.022	<0.022	<2.5	<2.5	<0.63	<0.63
10/28/2025		<0.40	<0.40	<0.50	<2	<47	84 J	<0.19	<0.19	54	54	45000	44000	930	920	0.33 J	0.21 J	<0.022	<0.022	<2.5	<2.5	0.65 J	0.71 J
2/10/2026	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/2026		<0.40	<0.40	0.68 J	<0.50	<47	<47	<0.19	<0.19	40	39	35000	34000	360	360	0.93	0.37 J	<0.033	<0.034	<2.5	<2.5	<0.63	<0.63
NB2-3																							
7/24/2024		0.84 J	0.76 J	<0.50	3.9	7900	7100	<0.19	<0.19	16	15	7700	6800	730	640	<0.20	0.24 J	<0.022	<0.022	52	50	1.1 J	1.0 J
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		<0.40	<0.40	<0.50	1.4 J	2000	1700	<0.19	<0.19	13	12	3700	3100	340	280	0.56	0.47 J	<0.022	<0.022	74	71	<0.63	<0.63
12/2/2024		<0.40	<0.40	0.75 J	0.99 J	130	460	<0.19	<0.19	7.2 J	7.6 J	2000	2100	98	94	0.71	0.70	<0.022	<0.022	170	170	<0.63	<0.63
3/3/2025		<0.40	<0.40	<0.50	2.5	170	820	<0.19	<0.19	8.2 J	8.1 J	1800	1900	82	100	<0.20	0.36 J	<0.022	<0.022	130	130	<0.63	0.78 J
4/30/2025		<0.40	<0.40	<0.50	2.2	670	1000	<0.19	<0.19	12	12	2300	2500	140	140	0.20 J	0.53	<0.022	<0.022	110	110	<0.63	<0.63
8/12/2025		<0.40	<0.40	<0.50	2.4	1900	2500	<0.19	<0.19	14	15	3600	3400	300	320	<0.20	<0.50	<0.022	<0.022	79	79	<0.63	0.79 J
10/28/2025		<0.40	<0.40	<0.50	2.3 J	260	530	<0.19	<0.19	12	11	1900	1900	110	110	<0.20	0.34 J	0.022 J	<0.022	84	85	<0.63	0.65 J
2/10/2026	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/2026		<0.40	<0.40	<0.50	3.6	200	580	<0.19	<0.19	13	13	1900	1900	95	99	0.73	1	<0.033	<0.033	81	78	<0.63	<0.63

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Potassium, Dissolved (µg/L)	Potassium, Total Recoverable (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total Recoverable (µg/L)	Silver, Dissolved (µg/L)	Silver, Total Recoverable (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total Recoverable (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total Recoverable (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total Recoverable (µg/L)	Tin, Dissolved (µg/L)	Tin, Total Recoverable (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total Recoverable (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total Recoverable (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total Recoverable (µg/L)
SMW-3SB																					
3rd Quarter 2024	Well not installed	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/4/2024	No field parameters available	1600	4300	<0.98	1.4 J	<0.12	0.19 J	110000	110000	18	32	<0.57	<0.57	<1.3	3.2 J	1.0	2.1 J	6.0	39	<6.9	31
3/6/2025		1800	1700	<0.98	<0.98	<0.12	<0.12	110000	110000	23	25	<0.57	<0.57	<1.3	<1.3	0.51	0.52	3.9 J	4.2 J	<6.9	<6.9
5/8/2025		2600	2800	<0.98	<0.98	<0.12	<0.12	100000	110000	27	28	<0.57	<0.57	<1.3	<1.3	0.43	0.45	2.2 J	3.0 J	<6.9	<6.9
8/7/2025		1800	2000	<0.98	<0.98	<0.12	<0.12	110000	110000	29	28	<0.57	<0.57	<1.3	<5.0	0.40	0.50	<2.2	3.7 J	<6.9	<6.9
10/22/2025		1400	1400	<0.98	1.1 J	<0.12	<0.12	100000	100000	32	31	<0.57	<0.57	<1.3	<1.3	0.45	0.46	<2.2	<2.2	<6.9	<6.9
2/18/2026		1400	1500	<0.98	<0.98	<0.12	<0.12	110000	110000	35	36	<0.25	<0.25	<1.3	<1.3	0.51	0.51	1.3	3.2	<6.9	<6.9
4/27/2026		1600	1700	<0.98	<0.98	<0.12	<0.12	110000	110000	33	33	<0.25	<0.25	<1.3	<1.3	0.5	0.56	1.6	4.1	<6.9	<6.9
NB1-1	**Tailings**																				
7/24/2024		13000	12000	<0.98	<0.98	<0.12	<0.12	130000	130000	1600	1600	<0.57	<0.57	<1.3	<1.3	0.023 J	0.021 J	<2.2	<2.2	<6.9	<6.9
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024		13000	12000	<0.98	<0.98	<0.12	<0.12	130000	120000	1400	1300	<0.57	<0.57	<1.3	<1.3	<0.0098	0.015 J	<5	2.4 J	<6.9	9.3 J
12/17/2024	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/3/2025		9300	10000	<0.98	<0.98	<0.12	<0.12	130000	140000	1000	990	<0.57	<0.57	<1.3	<1.3	<0.0098	0.014 J	<2.2	<2.2	<6.9	<6.9
5/5/2025		9700	9700	<0.98	<0.98	<0.12	<0.12	140000	140000	1000	1000	<0.57	<0.57	<1.3	<1.3	0.0098 J	0.013 J	<2.2	<2.2	<6.9	<6.9
8/7/2025		11000	11000	<0.98	<0.98	<0.12	<0.12	130000	130000	1100	1100	<0.57	<0.57	<1.3	<1.3	<0.0098	<0.0098	<2.2	<2.2	<6.9	<6.9
10/28/2025		10000	10000	2.4 J	<0.98	<0.12	<0.12	130000	130000	1100	1100	<0.57	<0.57	<1.3	<1.3	<0.0098	0.018 J	<2.2	<2.2	<6.9	8.2 J
2/10/2026		9900	10000	<0.98	<0.98	<0.12	<0.12	150000	150000	980	980	<0.25	<0.25	<1.3	<1.3	<0.0098	<0.0098	0.097 J	0.69	<6.9	<6.9
4/29/2026		9800	9500	<0.98	<0.98	<0.12	<0.12	140000	140000	1100	1100	<0.25	<0.25	<1.3	<1.3	<0.0098	<0.0098	0.085 J	0.19 J	<6.9	<6.9
NB1-3																					
7/24/2024		11000	11000	<0.98	<0.98	<0.12	<0.12	110000	110000	1000	1000	<0.57	<0.57	<1.3	<1.3	0.012 J	0.016 J	<2.2	<2.2	<6.9	<6.9
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/2/2024		11000	11000	<0.98	<0.98	<0.12	<0.12	100000	110000	1100	1000	<0.57	<0.57	<1.3	<1.3	<0.0098	<0.0098	<5	<2.2	<6.9	<6.9
12/17/2024	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/3/2025		11000	12000	<0.98	<0.98	<0.12	<0.12	95000	100000	1100	1000	<0.57	<0.57	<1.3	<1.3	<0.0098	0.012 J	<2.2	<2.2	<6.9	<6.9
5/5/2025		12000	12000	<0.98	<0.98	<0.12	<0.12	110000	110000	1100	1100	<0.57	<0.57	<1.3	<1.3	0.012 J	0.014 J	<2.2	<2.2	<6.9	<6.9
8/7/2025		12000	12000	<0.98	<0.98	<0.12	<0.12	110000	110000	1000	1000	<0.57	<0.57	<1.3	<1.3	<0.0098	0.014 J	<2.2	<2.2	<6.9	7.4 J
10/28/2025		12000	12000	<0.98	<0.98	<0.12	<0.12	100000	110000	1100	1200	<0.57	<0.57	<1.3	<1.3	<0.0098	<0.0098	<2.2	<2.2	<6.9	<6.9
2/10/2026		10000	9700	<0.98	<0.98	<0.12	<0.12	82000	78000	1000	1100	<0.25	<0.25	<1.3	<1.3	0.024 J	0.067	<0.084	0.3	<6.9	<6.9
4/29/2026		12000	12000	<0.98	<0.98	<0.12	<0.12	100000	100000	1100	1100	<0.25	<0.25	<1.3	<1.3	0.016 J	0.022 J	<0.084	0.17 J	<6.9	<6.9
NB2-1																					
7/24/2024		25000	26000	<0.98	<0.98	<0.12	<0.12	200000	210000	3700	3800	<0.57	<0.57	<1.3	<1.3	0.17	0.16	3.4 J	3.8 J	<6.9	<6.9
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		28000	27000	<0.98	<0.98	<0.12	<0.12	220000	220000	4100	3800	<0.57	<0.57	<1.3	<1.3	0.20	0.12	2.9 J	3.1 J	<6.9	<6.9
12/2/2024		16000	16000	<0.98	<0.98	<0.12	<0.12	86000	85000	2000	2000	<0.57	<0.57	<1.3	<1.3	0.13	0.12	<2.2	<2.2	<6.9	<6.9
3/2/2025	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/30/2025		14000	15000	<0.98	<0.98	<0.12	<0.12	66000	67000	1700	1700	<0.57	<0.57	<1.3	<1.3	0.10	0.10	<2.2	<2.2	<6.9	<6.9
8/12/2025		25000	25000	<0.98	<0.98	<0.12	<0.12	180000	190000	3600	3600	<0.57	<0.57	<1.3	<1.3	0.13	0.14	3.1 J	3.2 J	<6.9	<6.9
10/28/2025		20000	20000	<0.98	<0.98	<0.12	<0.12	120000	110000	2800	2700	<0.57	<0.57	<1.3	<1.3	0.15	0.12	<2.2	<2.2	<6.9	<6.9
2/10/2026	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/2026		14000	13000	<0.98	<0.98	<0.12	<0.12	65000	65000	1900	1900	<0.25	<0.25	<1.3	<1.3	0.11	0.11	1.5	1.4	<6.9	<20
NB2-3																					
7/24/2024		11000	10000	<0.98	<0.98	<0.12	<0.12	210000	200000	630	550	<0.57	<0.57	<1.3	<1.3	0.028 J	0.027 J	<2.2	<2.2	<6.9	<6.9
7/24/2024	Duplicate Sample	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2024		9400	9000	<0.98	<0.98	<0.12	<0.12	210000	210000	400	350	<0.57	<0.57	<1.3	<1.3	<0.0098	<0.0098	<2.2	<2.2	<6.9	<6.9
12/2/2024		8000	8100	<0.98	<0.98	<0.12	<0.12	200000	200000	260	260	<0.57	<0.57	<1.3	<1.3	<0.05	<0.05	<2.2	<2.2	<6.9	<6.9
3/3/2025		7500	8200	<0.98	<0.98	<0.12	<0.12	190000	200000	230	230	<0.57	<0.57	<1.3	<1.3	0.014 J	0.024 J	<2.2	<2.2	<6.9	<6.9
4/30/2025		8600	8900	<0.98	<0.98	<0.12	<0.12	200000	210000	280	300 J	<0.57	<0.57	1.4 J	<1.3	0.014 J	0.016 J	<2.2	<2.2	<6.9	<6.9
8/12/2025		8800	8900	<0.98	<0.98	<0.12	<0.12	210000	210000	350	340	<0.57	<0.57	<1.3	<1.3	0.013 J	0.014 J	<2.2	<2.2	<6.9	<6.9
10/28/2025		7900	7800	<0.98	<0.98	<0.12	<0.12	210000	200000	240	230	<0.57	<0.57	<1.3	1.5 J	0.024 J	0.026 J	<2.2	<2.2	<6.9	<6.9
2/10/2026	Inaccessible: frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/2026		8000	8000	<0.98	<0.98	<0.12	<0.12	210000	210000	230	240	<0.25	<0.25	<1.3	<1.3	0.019 J	0.023 J	0.27	0.49	<6.9	<20

Table 5-9 (continued)

		Field Parameters						General Chemistry Parameters													
Ground Water Sampling Location & Date	Note	Conductivity (Field) (mS/cm)	Dissolved Oxygen (Field) (mg/L)	pH (Field) (SU)	Redox Potential (Field) (mV)	Temperature Field (°C)	Turbidity (NTU)	Alkalinity (mg/L)	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	Alkalinity, Carbonate (as CaCO3) (mg/L)	Ammonia (mg/L)	Bromide (mg/L)	Carbon, Dissolved Organic (mg/L)	Chloride (mg/L)	Cyanide, Total (mg/L)	Fluoride (mg/L)	Hardness (mg/L)	Nitrate as N (mg/L)	Nitrate/ Nitrite as N (N) (mg/L)	Nitrite as N (mg/L)	Phosphorus-Total (as P) (mg/L)	Salinity (PSU)
Unconsolidated Deposits	Number of Observations	105	105	105	105	105	105	108	108	108	106	109	106	108	106	108	107	109	108	108	107	108
	Number of Non-Detect	0	0	0	0	0	0	0	0	106	98	55	0	2	100	66	0	91	91	106	40	82
	% Non-Detect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.1	92.5	50.5	0.0	1.9	94.3	61.1	0.0	83.5	84.3	98.1	37.4	75.9
	Maximum	2.63	14.06	11.59	356	24.22	1000	2300	2300	18	1.6	16	7.8	510	0.021	1.2	1200	5.4	5.4	1	4.5	1.4
	Minimum	0.191	0	6.1	-216	1.84	0	69	69	1.85	0.0245	0.09	0.52	0.5	0.0018	0.095	32	0.0215	0.035	0.035	0.012	0.165
	Average	0.81	2.92	7.81	58.3	10.85	115.1	300.4	300.3	2.03	0.07	1.07	2.09	91.0	0.00	0.37	318.0	0.35	0.37	0.14	0.12	0.32
	Standard Deviation	0.61	3.46	0.78	121.7	4.27	256.6	257.8	257.8	1.58	0.16	2.02	1.46	136.7	0.00	0.26	318.8	0.71	0.72	0.13	0.45	0.34
	Skewness	1.59	1.36	1.06	-0.19	0.55	2.80	4.93	4.93	9.72	9.27	4.43	1.56	1.89	8.13	1.29	1.55	4.94	4.70	3.67	9.06	2.20
Shallow Bedrock	Number of Observations	95	95	95	95	95	95	100	100	100	99	104	101	101	100	101	99	101	101	100	100	100
	Number of Non-Detect	0	0	0	0	0	0	0	0	73	87	37	9	0	96	41	0	76	74	96	34	65
	% Non-Detect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.0	87.9	35.6	8.9	0.0	96.0	40.6	0.0	75.2	73.3	96.0	34.0	65.0
	Maximum	4.74	15.83	10.42	329	23.3	1000	550	550	34	5.5	36	9.7	1500	0.03	9.6	18000	8.6	19	10	1.3	2.9
	Minimum	0	0	0	-215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Average	1.10	2.83	8.00	37.2	11.09	91.25	239.1	233.9	6.34	0.17	2.29	3.06	202.2	0.002	1.03	431.3	0.58	0.75	0.30	0.12	0.51
	Standard Deviation	1.08	3.37	1.16	122.1	4.68	220.9	161.3	164.1	8.34	0.75	4.86	2.67	346.0	0.003	1.46	1804.2	1.18	2.06	1.07	0.18	0.70
	Skewness	1.96	1.49	-3.26	-0.05	0.50	3.32	0.69	0.71	1.61	6.73	4.31	1.00	2.55	8.59	3.28	9.47	4.26	7.22	7.93	3.56	2.38
Tailings	Number of Observations	31	31	31	31	31	31	31	31	31	27	31	31	31	31	31	31	31	31	31	34	31
	Number of Non-Detect	0	0	0	0	0	0	0	0	31	1	1	0	0	27	16	0	28	28	31	3	8
	% Non-Detect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	3.7	3.2	0.0	0.0	87.1	51.6	0.0	90.3	90.3	100.0	8.8	25.8
	Maximum	2.26	13.01	8.45	86	26.73	80.4	770	770	1.85	2	3	7.9	320	0.059	0.81	820	1.4	1.4	0.125	0.28	1.3
	Minimum	0.812	0	6.54	-280	6.01	0	65	65	1.85	0.05	0.225	2.2	89	0.0018	0.095	52	0.0215	0.035	0.035	0.012	0.165
	Average	1.15	0.98	7.59	-128.68	13.18	19.26	236	236	1.85	0.38	2.29	4.43	237	0.01	0.37	261	0.23	0.24	0.10	0.11	0.44
	Standard Deviation	0.37	2.34	0.48	86	5.48	20.27	215	215	--	0.41	0.65	1.55	56	0.01	0.20	213	0.32	0.32	--	0.06	0.29
	Skewness	2.19	4.66	-0.27	0.39	0.81	1.35	1.47	1.47	--	2.81	-1.82	0.69	-1.15	3.77	0.67	1.53	3.14	3.18	--	0.21	1.83

Units:
µg/L = microgram per liter
mg/L = milligram per liter
ng/L = nanogram per liter
PSU = Practical Salinity Unit
SU = standard units
mV = millivolts
C = degrees Celsius
NTU = Nephelometric Turbidity Units

Notes:
J-values indicate estimated results
1. Cells with dashes "--" represent an analyte not tested during that event.
2. Significant figures are as reported from the database obtained from White Pine Copper.
3. Baseline groundwater quality sampling conducted July 2024 through February 2026
4. For non-detected constituent results, statistics calculated using one-half of the detection limit.
5. Duplicate sample results are included in statistical summaries.

Prepared by: DCF1
Checked by: GMB

Table 5-9 (continued)

		General Chemistry Parameters					Metals (Dissolved & Total)																
Ground Water Sampling Location & Date	Note	Sulfate (mg/L)	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Suspended Solids (mg/L)	Aluminum, Dissolved (µg/L)	Aluminum, Total Recoverable (µg/L)	Antimony, Dissolved (µg/L)	Antimony, Total Recoverable (µg/L)	Arsenic, Dissolved (µg/L)	Arsenic, Total Recoverable (µg/L)	Barium, Dissolved (µg/L)	Barium, Total Recoverable (µg/L)	Beryllium, Dissolved (µg/L)	Beryllium, Total Recoverable (µg/L)	Boron, Dissolved (µg/L)	Boron, Total Recoverable (µg/L)	Cadmium, Dissolved (µg/L)	Cadmium, Total Recoverable (µg/L)	Calcium, Dissolved (µg/L)	Calcium, Total Recoverable (µg/L)	Chromium, Dissolved (µg/L)	Chromium, Total Recoverable (µg/L)
Unconsolidated Deposits	**Number of Observations**	108	106	108	107	108	105	107	105	107	105	107	105	107	105	107	105	107	105	107	105	107	105	107
	Number of Non-Detect	11	76	0	2	28	97	27	104	105	1	0	0	0	104	98	2	4	104	93	0	0	97	82
	% Non-Detect	10.2	71.7	0.0	1.9	25.9	92.4	25.2	99.0	98.1	1.0	0.0	0.0	0.0	99.0	91.6	1.9	3.7	99.0	86.9	0.0	0.0	92.4	76.6
	Maximum	82	24	1700	7.7	2600	6200	89000	0.65	2.7	3.6	27	3100	3400	0.265	5.1	1500	1400	0.085	170000	340000	340000	8.3	160
	Minimum	0.105	0.115	96	0.235	0.95	12.5	12.5	0.465	0.465	0.24	0.27	27	26	0.12	0.12	25	25	0.085	0.085	9900	10000	0.55	0.55
	Average	14.62	1.45	477.8	1.88	78.4	119.4	2388	0.61	0.63	0.92	1.78	494.2	574.2	0.23	0.33	360.2	345.2	0.09	1589	81704	84243	0.72	4.42
	Standard Deviation	16.72	3.58	389.1	1.41	328.3	753.8	10027	0.08	0.22	0.69	3.27	709.5	756.9	0.06	0.52	381.8	366.4	0.00	16435	86935	85632	0.95	17.42
	Skewness	2.09	3.85	1.76	1.67	6.49	7.24	6.72	-1.36	8.26	1.61	5.16	2.43	2.24	-1.36	7.65	1.48	1.54	-1.00	10.20	1.68	1.70	6.74	7.22
Shallow Bedrock	**Number of Observations**	101	98	100	100	102	101	101	100	100	103	101	100	101	100	100	100	100	100	100	100	100	100	100
	Number of Non-Detect	5	65	0	9	19	76	43	100	100	3	0	0	0	100	93	0	1	99	99	0	0	97	66
	% Non-Detect	5.0	66.3	0.0	9.0	18.6	75.2	42.6	100.0	100.0	2.9	0.0	0.0	0.0	100.0	93.0	0.0	1.0	99.0	99.0	0.0	0.0	97.0	66.0
	Maximum	63	15	4100	9.3	490	1900	50000	0.65	0.65	5.2	16	1000	1100	0.265	2.9	7300	7300	0.17	0.17	260000	270000	3.4	85
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Average	15.56	1.01	625.4	2.92	34.17	47.3	1848.4	0.60	0.60	1.57	2.16	220.8	233.8	0.23	0.28	1411.0	1396.7	0.09	0.09	74716	74598	0.60	3.31
	Standard Deviation	15.60	2.56	649.4	2.68	82.78	196.4	5811.2	--	--	1.49	2.16	284.9	283.5	--	0.29	1835.3	1820.1	0.01	0.01	78410	77978	0.34	9.50
	Skewness	1.00	3.90	2.65	1.00	3.71	8.62	6.21	--	--	1.03	2.92	1.53	1.62	--	7.49	1.63	1.65	0.00	0.00	0.98	1.01	6.53	6.78
Tailings	**Number of Observations**	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
	Number of Non-Detect	10	13	0	0	4	31	7	31	31	1	1	0	0	31	31	0	0	31	30	0	0	30	31
	% Non-Detect	32.3	41.9	0.0	0.0	12.9	100.0	22.6	100.0	100.0	3.2	3.2	0.0	0.0	100.0	100.0	0.0	0.0	100.0	96.8	0.0	0.0	96.8	100.0
	Maximum	62	8.7	1400	7.8	51	12.5	270	0.65	0.65	6.4	7.9	8200	7400	0.265	0.265	2200	2100	0.085	0.19	220000	220000	1.2	0.55
	Minimum	0.11	0.115	100	2.1	0.95	12.5	12.5	0.465	0.465	0.115	0.115	140	160	0.12	0.12	540	540	0.085	0.085	17000	18000	0.55	0.55
	Average	17.1	2.07	648	4.54	10.18	12.50	58.60	0.61	0.61	2.41	2.60	1242	1200	0.24	0.24	1347	1358	0.09	0.09	78645	78710	0.57	0.55
	Standard Deviation	22.8	2.71	274	1.46	11.79	--	62.71	--	--	2.26	2.43	2086	2004	--	--	425	420	--	0.02	54217	54005	0.12	--
	Skewness	1.04	1.30	1.05	0.63	2.19	--	2.37	--	--	0.88	0.95	2.38	2.36	--	--	0.16	0.05	--	5.29	1.28	1.28	5.29	--

Units:
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ng/L = nanogram per liter
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SU = standard units
mV = millivolts
C = degrees Celsius
NTU = Nephelometric Turbidity Units

Notes:
J-values indicate estimated results
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3. Baseline groundwater quality sampling conducted July 2024 through February 2026
4. For non-detected constituent results, statistics calculated using one-half of the detection limit.
5. Duplicate sample results are included in statistical summaries.

Prepared by: DCF1
Checked by: GMB

Table 5-9 (continued)

Metals (Dissolved & Total)

Ground Water Sampling Location & Date	Note	Cobalt, Dissolved (µg/L)	Cobalt, Total Recoverable (µg/L)	Copper, Dissolved (µg/L)	Copper, Total Recoverable (µg/L)	Iron, Dissolved (µg/L)	Iron, Total Recoverable (µg/L)	Lead, Dissolved (µg/L)	Lead, Total Recoverable (µg/L)	Lithium, Dissolved (µg/L)	Lithium, Total Recoverable (µg/L)	Magnesium, Dissolved (µg/L)	Magnesium, Total Recoverable (µg/L)	Manganese, Dissolved (µg/L)	Manganese, Total Recoverable (µg/L)	Mercury, Dissolved (ng/L)	Mercury, Total Recoverable (ng/L)	Methyl Mercury, Dissolved (ng/L)	Methyl Mercury, Total Recoverable (ng/L)	Molybdenum, Dissolved (µg/L)	Molybdenum, Total Recoverable (µg/L)	Nickel, Dissolved (µg/L)	Nickel, Total Recoverable (µg/L)
Unconsolidated Deposits	Number of Observations	105	107	105	107	105	107	105	107	105	107	105	107	105	107	102	103	100	101	104	106	104	106
	Number of Non-Detect	84	67	55	11	68	11	100	72	10	11	0	0	14	0	26	10	86	83	45	46	72	49
	% Non-Detect	80.0	62.6	52.4	10.3	64.8	10.3	95.2	67.3	9.5	10.3	0.0	0.0	13.3	0.0	25.5	9.7	86.0	82.2	43.3	43.4	69.2	46.2
	Maximum	4.6	79	12	330	5100	95000	2.4	85	72	130	100000	99000	5600	55000	1.5	19	0.82	0.45	75	87	14	220
	Minimum	0.2	0.2	0.25	0.25	23.5	23.5	0.095	0.095	1	1	1200	1200	0.395	5.8	0.1	0.1	0.011	0.011	1.25	1.25	0.315	0.315
	Average	0.37	2.06	0.74	10.00	210.1	2568.0	0.14	2.16	27.86	30.41	24867	25772	552	1608	0.44	1.52	0.03	0.03	11.34	11.97	0.81	5.53
	Standard Deviation	0.51	8.35	1.37	36.34	646.7	10511.9	0.27	10.07	19.99	22.73	29785	29176	1344	5676	0.33	2.71	0.08	0.05	16.24	18.20	1.57	23.01
	Skewness	5.89	7.73	6.29	7.04	5.80	6.99	7.31	6.86	0.33	0.88	1.23	1.21	2.92	8.08	1.43	4.17	8.99	5.82	2.20	2.32	6.39	7.96
Shallow Bedrock	Number of Observations	104	104	101	101	101	100	100	100	101	101	100	100	101	101	98	99	99	99	102	102	105	104
	Number of Non-Detect	75	51	55	21	56	11	92	61	0	0	0	0	9	0	19	14	95	89	28	25	70	41
	% Non-Detect	72.1	49.0	54.5	20.8	55.4	11.0	92.0	61.0	0.0	0.0	0.0	0.0	8.9	0.0	19.4	14.1	96.0	89.9	27.5	24.5	66.7	39.4
	Maximum	2	51	4.3	91	12000	64000	1.6	62	130	130	60000	59000	4900	4900	2.4	5	0.034	0.35	100	110	3.4	110
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Average	0.41	1.67	0.96	5.25	920.9	2966.8	0.14	1.86	39.26	40.78	14355	14956	633.08	707.38	0.58	1.05	0.01	0.02	14.47	14.25	0.64	3.44
	Standard Deviation	0.42	5.35	1.05	11.24	1916.0	7046.3	0.21	6.80	28.02	30.01	20243	19731	1154.00	1187.92	0.47	1.09	0.00	0.04	23.39	23.69	0.60	11.61
	Skewness	2.02	7.85	1.47	5.49	3.16	6.81	5.12	7.27	0.95	1.02	1.22	1.19	2.15	2.20	1.84	1.60	3.09	8.32	2.83	2.92	2.31	7.78
Tailings	Number of Observations	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
	Number of Non-Detect	30	30	27	5	9	1	31	26	0	0	0	0	0	0	10	2	29	27	14	9	29	23
	% Non-Detect	96.8	96.8	87.1	16.1	29.0	3.2	100.0	83.9	0.0	0.0	0.0	0.0	0.0	0.0	32.3	6.5	93.5	87.1	45.2	29.0	93.5	74.2
	Maximum	0.84	0.76	0.94	22	7900	7100	0.095	1	67	69	69000	68000	2900	2800	0.93	2.3	0.053	0.049	170	170	1.1	1.3
	Minimum	0.2	0.2	0.25	0.25	23.5	23.5	0.095	0.095	6.6	6.2	1800	1900	24	28	0.1	0.1	0.011	0.011	1.25	1.25	0.315	0.315
	Average	0.22	0.22	0.31	3.66	837	1512	0.10	0.17	23.19	23.55	15074	15168	421	425	0.28	0.60	0.01	0.01	30.07	30.45	0.35	0.46
	Standard Deviation	0.11	0.10	0.17	4.62	1489	1601	--	0.21	17.52	18.07	20352	20342	678	679	0.21	0.48	0.01	0.01	44.77	44.24	0.15	0.27
	Skewness	5.29	5.29	2.61	2.74	3.64	2.26	--	2.95	1.29	1.28	1.67	1.68	2.50	2.46	1.55	2.13	4.54	2.48	1.65	1.69	4.34	1.70

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Prepared by: DCF1
Checked by: GMB

Table 5-9 (continued)

Metals (Dissolved & Total)

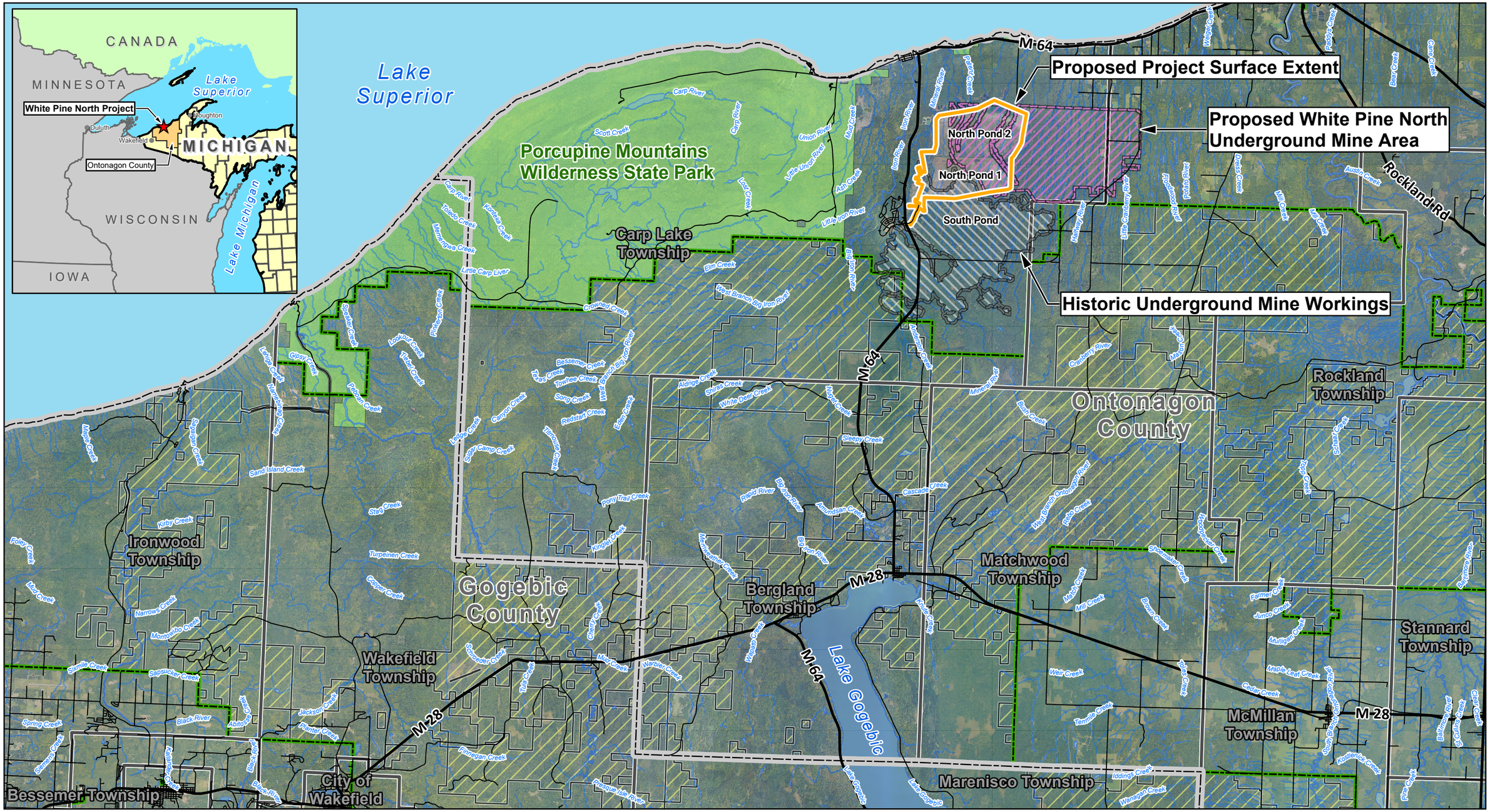
Ground Water Sampling Location & Date	Note	Potassium, Dissolved (µg/L)	Potassium, Total Recoverable (µg/L)	Selenium, Dissolved (µg/L)	Selenium, Total Recoverable (µg/L)	Silver, Dissolved (µg/L)	Silver, Total Recoverable (µg/L)	Sodium, Dissolved (µg/L)	Sodium, Total Recoverable (µg/L)	Strontium, Dissolved (µg/L)	Strontium, Total Recoverable (µg/L)	Thallium, Dissolved (µg/L)	Thallium, Total Recoverable (µg/L)	Tin, Dissolved (µg/L)	Tin, Total Recoverable (µg/L)	Uranium, Dissolved (µg/L)	Uranium, Total Recoverable (µg/L)	Vanadium, Dissolved (µg/L)	Vanadium, Total Recoverable (µg/L)	Zinc, Dissolved (µg/L)	Zinc, Total Recoverable (µg/L)
Unconsolidated Deposits	Number of Observations	104	106	104	106	104	106	104	106	104	106	104	106	104	106	101	102	104	106	104	106
	Number of Non-Detect	0	0	98	94	103	103	0	0	0	0	103	104	99	94	0	0	49	28	88	77
	% Non-Detect	0.0	0.0	94.2	88.7	99.0	97.2	0.0	0.0	0.0	0.0	99.0	98.1	95.2	88.7	0.0	0.0	47.1	26.4	84.6	72.6
	Maximum	5000	20000	1.7	11	0.06	0.56	150000	150000	3500	3400	0.285	0.99	3.4	6	72	74	17	230	150	370
	Minimum	220	230	0.49	0.49	0.06	0.06	6100	6100	96	98	0.125	0.125	0.65	0.65	0.0099	0.015	0.042	0.16	3.45	3.45
	Average	1732	2253	0.53	0.70	0.06	0.07	57711	57685	996	998	0.25	0.26	0.72	0.83	15.23	15.38	3.17	11.22	6.23	15.27
	Standard Deviation	1175	2632	0.17	1.11	0.00	0.05	35187	36074	1050	1039	0.07	0.10	0.36	0.69	19.44	19.94	4.26	26.99	14.90	41.59
	Skewness	0.48	3.74	5.13	8.01	1.00	9.54	0.28	0.33	1.26	1.30	-1.34	3.52	5.65	5.25	1.68	1.77	2.32	5.75	8.84	6.44
Shallow Bedrock	Number of Observations	100	101	100	101	100	100	100	100	100	100	100	100	100	100	97	97	101	101	100	101
	Number of Non-Detect	0	0	94	79	100	99	0	0	0	0	100	99	92	79	0	0	46	36	86	59
	% Non-Detect	0.0	0.0	94.0	78.2	100.0	99.0	0.0	0.0	0.0	0.0	100.0	99.0	92.0	79.0	0.0	0.0	45.5	35.6	86.0	58.4
	Maximum	3700	13000	2.1	9	0.06	0.19	800000	790000	5700	5900	0.285	0.75	2.7	15	17	18	20	110	170	880
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Average	1419.4	1867.8	0.55	0.79	0.06	0.06	140310	142130	1244.2	1246.8	0.25	0.25	0.75	1.17	4.30	4.39	3.96	8.74	6.72	22.71
	Standard Deviation	922.8	1630.5	0.28	0.98	--	0.01	173969	173573	1457.9	1466.2	--	0.09	0.39	1.60	4.30	4.31	5.13	14.75	17.45	90.80
	Skewness	0.74	3.52	3.90	6.37	--	6.63	2.91	2.87	1.56	1.57	--	1.02	3.30	6.74	0.76	0.79	1.86	3.94	8.43	8.60
Tailings	Number of Observations	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
	Number of Non-Detect	0	0	30	31	31	31	0	0	0	0	31	31	30	30	12	7	24	21	31	28
	% Non-Detect	0.0	0.0	96.8	100.0	100.0	100.0	0.0	0.0	0.0	0.0	100.0	100.0	96.8	96.8	38.7	22.6	77.4	67.7	100.0	90.3
	Maximum	28000	27000	2.4	0.49	0.06	0.06	220000	220000	4100	3800	0.285	0.285	1.4	1.5	0.2	0.16	3.4	3.8	3.45	10
	Minimum	7500	7800	0.49	0.49	0.06	0.06	65000	65000	230	230	0.125	0.125	0.65	0.65	0.0049	0.0049	0.042	0.17	3.45	3.45
	Average	12513	12477	0.55	0.49	0.06	0.06	144000	145000	1297	1280	0.25	0.25	0.67	0.68	0.04	0.04	1.24	1.25	3.45	4.34
	Standard Deviation	5191	5165	0.34	--	--	--	49400	49749	1014	994	--	--	0.13	0.15	0.06	0.05	0.84	0.81	--	2.11
	Skewness	1.79	1.81	5.29	--	--	--	0.18	0.16	1.44	1.40	--	--	5.29	5.29	1.53	1.28	1.02	1.77	--	1.99

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Prepared by: DCF1
Checked by: GMB

Figures



NOTES:

1. 2024 - 18in resolution air photo from the USDA NAIP.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Road, boundary and hydrographic data from Michigan GIS Open Data.

LEGEND

- Major Road
- Minor Road
- River/Stream
- Lake/Pond
- Proposed Project Surface Extent
- Proposed White Pine North Underground Mine Area
- Historic Underground Mine Workings
- Municipal Boundary
- County Boundary
- Ottawa National Forest Boundary
- Porcupine Mountains Wilderness State Park
- USDA Forest Service Owned Property

WHITE PINE COPPER

Foth

N

Foth Infrastructure & Environment, LLC			
REVISED	DATE	BY	DESCRIPTION
PREPARED BY:		DATE:	
REVIEWED BY:		DATE:	
APPROVED BY:		DATE:	

WHITE PINE COPPER LLC

FIGURE 1-1
PROJECT LOCATION MAP
GROUNDWATER AND SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

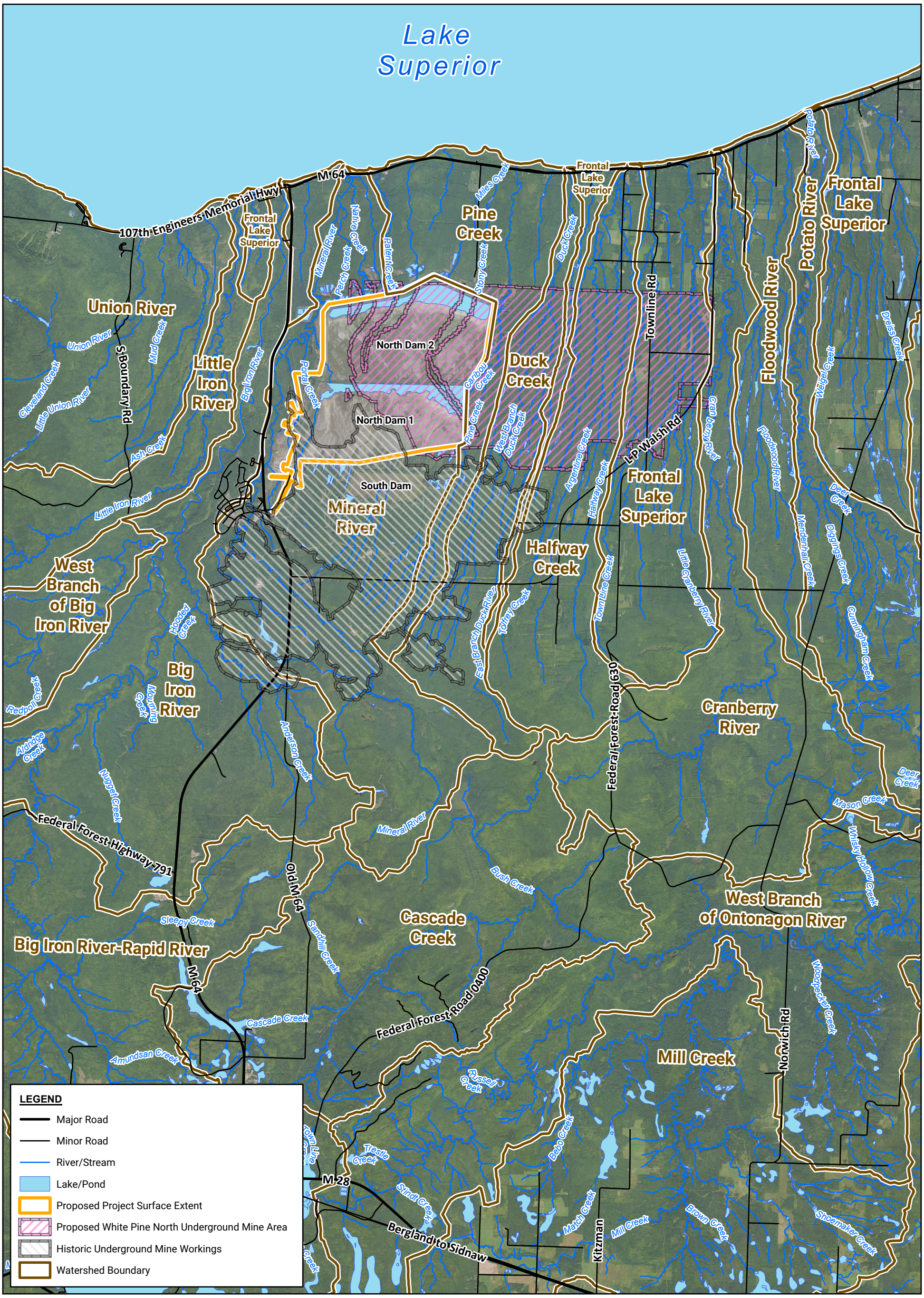
Scale: 0 1.5 3 Miles

Date: JUNE 2026

Drafted By: BJW1

Project: 25W006

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NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.
5. Watershed boundaries from Michigan OpenGIS.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

N

0 4,000 8,000 Feet

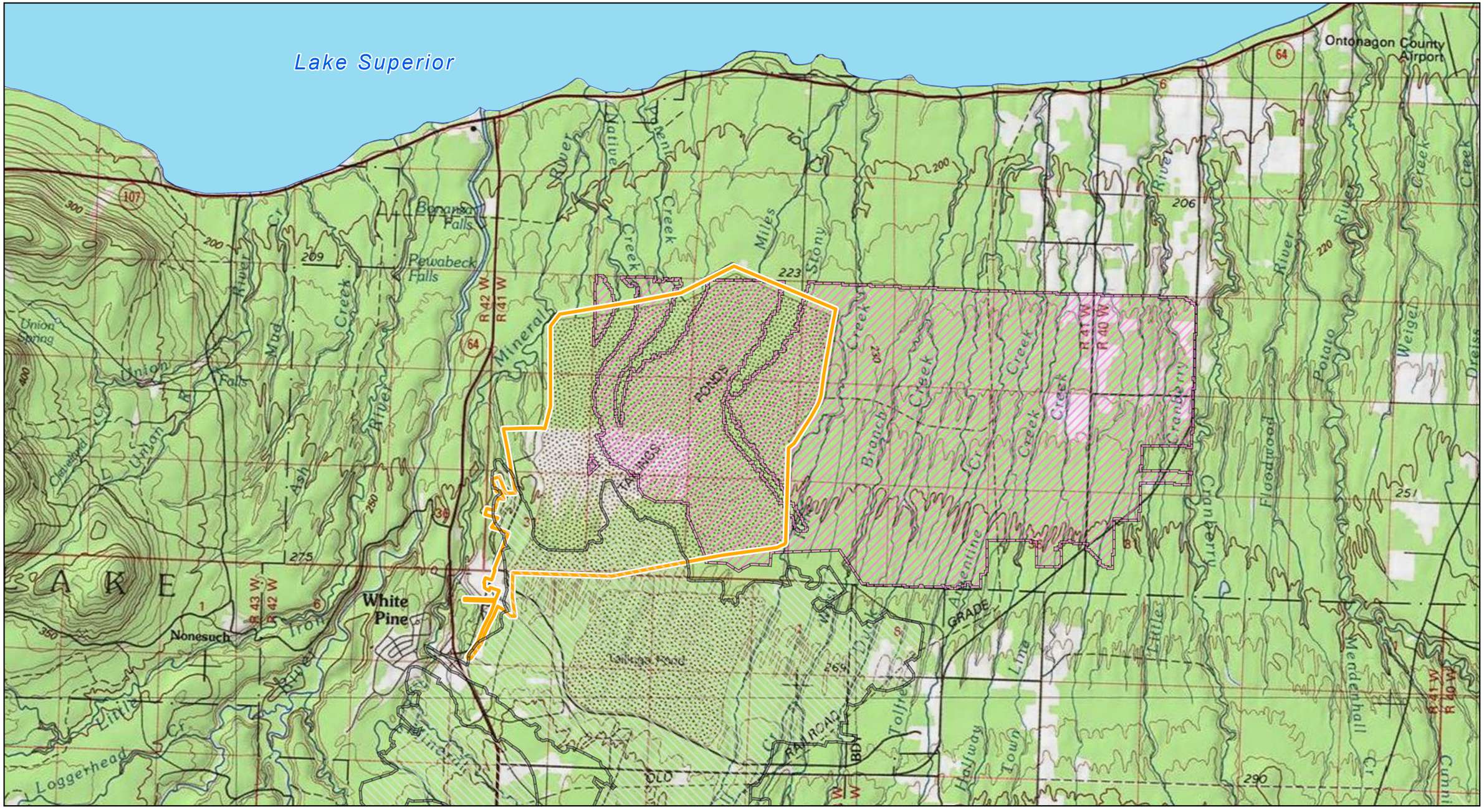
WHITE PINE COPPER LLC

FIGURE 2-1

WATERSHEDS AND HYDRAULIC FEATURES
GROUNDWATER AND SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

Date: JUNE 2026		Revision Date:	
Drawn By: BJW1	Checked By: MAN	Project: 23W200	

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NOTES:

1. Topographic map from Esri, courtesy of the USGS.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.

LEGEND

- Proposed Project Surface Extent
- Proposed White Pine North Underground Mine Area
- Historic Underground Mine Workings

Foth

N

0 2,500 5,000 Feet

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WHITE PINE COPPER LLC

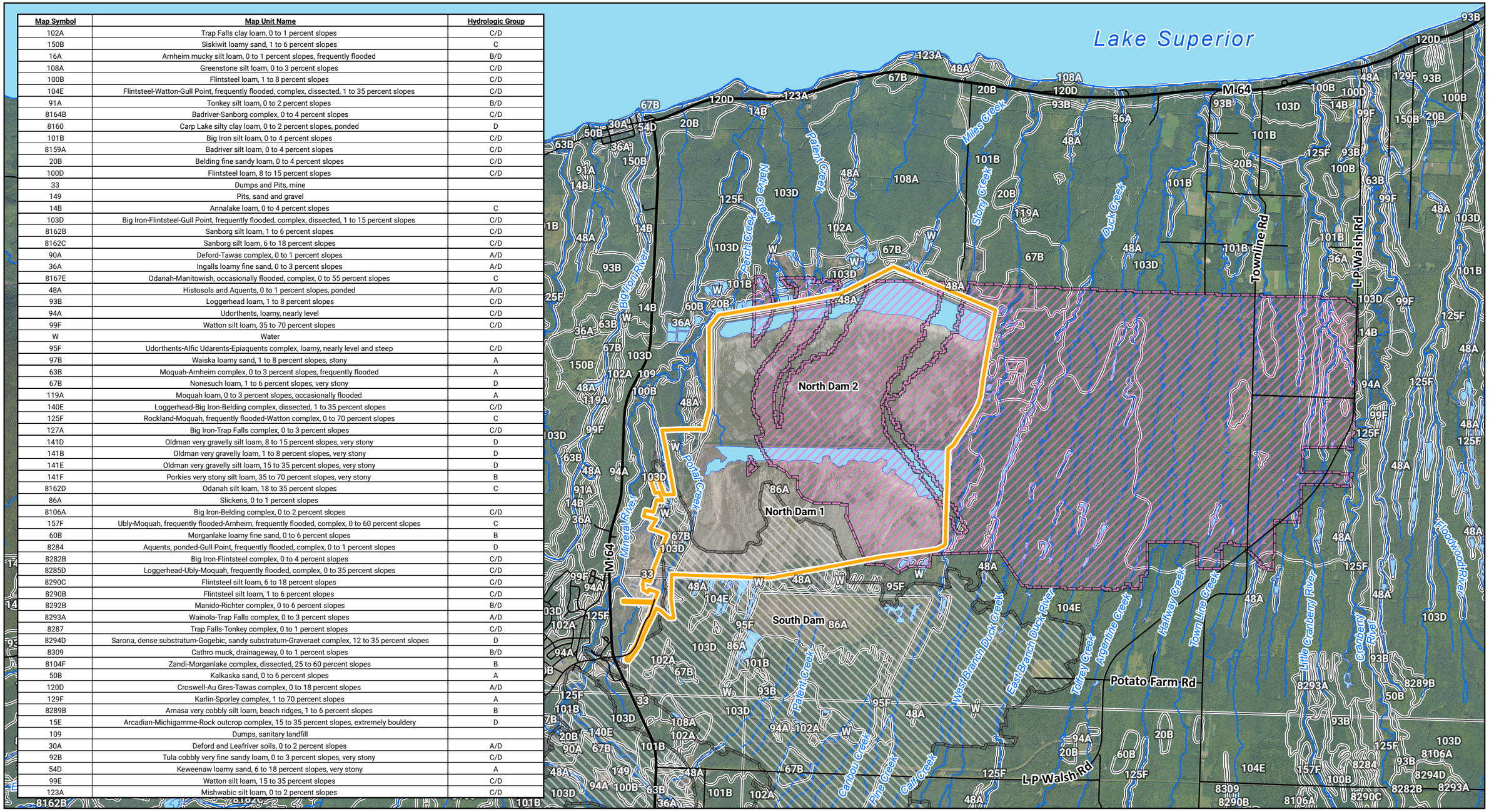
FIGURE 2-2

USGS 1:24K TOPOGRAPHIC MAP
GROUNDWATER AND SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

Date: JUNE 2026	Revision Date:	
Drawn By: BJW1	Checked By: MAN	Project: 23W200

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Map Symbol	Map Unit Name	Hydrologic Group
102A	Trap Falls clay loam, 0 to 1 percent slopes	C/D
150B	Siskiwit loamy sand, 1 to 6 percent slopes	C
16A	Arnheim mucky silt loam, 0 to 1 percent slopes, frequently flooded	B/D
108A	Greenstone silt loam, 0 to 3 percent slopes	C/D
100B	Flintsteel loam, 1 to 8 percent slopes	C/D
104E	Flintsteel-Watton-Gull Point, frequently flooded, complex, dissected, 1 to 35 percent slopes	C/D
91A	Tonkey silt loam, 0 to 2 percent slopes	B/D
8164B	Badriver-Sanborg complex, 0 to 4 percent slopes	C/D
8160	Carp Lake silty clay loam, 0 to 2 percent slopes, ponded	D
101B	Big Iron silt loam, 0 to 4 percent slopes	C/D
8159A	Badriver silt loam, 0 to 4 percent slopes	C/D
20B	Belding fine sandy loam, 0 to 4 percent slopes	C/D
100D	Flintsteel loam, 8 to 15 percent slopes	C/D
33	Dumps and Pits, mine	
149	Pits, sand and gravel	
14B	Annalake loam, 0 to 4 percent slopes	C
103D	Big Iron-Flintsteel-Gull Point, frequently flooded, complex, dissected, 1 to 15 percent slopes	C/D
8162B	Sanborg silt loam, 1 to 6 percent slopes	C/D
8162C	Sanborg silt loam, 6 to 18 percent slopes	C/D
90A	Deford-Tawas complex, 0 to 1 percent slopes	A/D
36A	Ingalls loamy fine sand, 0 to 3 percent slopes	A/D
8167E	Odanah-Manitowish, occasionally flooded, complex, 0 to 55 percent slopes	C
48A	Histosols and Aquents, 0 to 1 percent slopes, ponded	A/D
93B	Loggerhead loam, 1 to 8 percent slopes	C/D
94A	Udorthents, loamy, nearly level	C/D
99F	Watton silt loam, 35 to 70 percent slopes	C/D
W	Water	
95F	Udorthents-Alfic Udarents-Epiaquents complex, loamy, nearly level and steep	C/D
97B	Waiska loamy sand, 1 to 8 percent slopes, stony	A
63B	Moquah-Arnheim complex, 0 to 3 percent slopes, frequently flooded	A
67B	Nonesuch loam, 1 to 6 percent slopes, very stony	D
119A	Moquah loam, 0 to 3 percent slopes, occasionally flooded	A
140E	Loggerhead-Big Iron-Belding complex, dissected, 1 to 35 percent slopes	C/D
125F	Rockland-Moquah, frequently flooded-Watton complex, 0 to 70 percent slopes	C
127A	Big Iron-Trap Falls complex, 0 to 3 percent slopes	C/D
141D	Oldman very gravelly silt loam, 8 to 15 percent slopes, very stony	D
141B	Oldman very gravelly loam, 1 to 8 percent slopes, very stony	D
141E	Oldman very gravelly silt loam, 15 to 35 percent slopes, very stony	D
141F	Porkies very stony silt loam, 35 to 70 percent slopes, very stony	B
8162D	Odanah silt loam, 18 to 35 percent slopes	C
86A	Slickens, 0 to 1 percent slopes	
8106A	Big Iron-Belding complex, 0 to 2 percent slopes	C/D
157F	Ubly-Moquah, frequently flooded-Arnheim, frequently flooded, complex, 0 to 60 percent slopes	C
60B	Morganlake loamy fine sand, 0 to 6 percent slopes	B
8284	Aquents, ponded-Gull Point, frequently flooded, complex, 0 to 1 percent slopes	D
8282B	Big Iron-Flintsteel complex, 0 to 4 percent slopes	C/D
8285D	Loggerhead-Ubly-Moquah, frequently flooded, complex, 0 to 35 percent slopes	C/D
8290C	Flintsteel silt loam, 6 to 18 percent slopes	C/D
8290B	Flintsteel silt loam, 1 to 6 percent slopes	C/D
8292B	Manido-Richter complex, 0 to 6 percent slopes	B/D
8293A	Wainola-Trap Falls complex, 0 to 3 percent slopes	A/D
8287	Trap Falls-Tonkey complex, 0 to 1 percent slopes	C/D
8294D	Sarona, dense substratum-Gogebic, sandy substratum-Graveraet complex, 12 to 35 percent slopes	D
8309	Cathro muck, drainageway, 0 to 1 percent slopes	B/D
8104F	Zandi-Morganlake complex, dissected, 25 to 60 percent slopes	B
50B	Kalkaska sand, 0 to 6 percent slopes	A
120D	Croswell-Au Gres-Tawas complex, 0 to 18 percent slopes	A/D
129F	Karlin-Sporley complex, 1 to 70 percent slopes	A
8289B	Amasa very cobbly silt loam, beach ridges, 1 to 6 percent slopes	B
15E	Arcadian-Michigamme-Rock outcrop complex, 15 to 35 percent slopes, extremely bouldery	D
109	Dumps, sanitary landfill	
30A	Deford and Leafriver soils, 0 to 2 percent slopes	A/D
92B	Tula cobbly very fine sandy loam, 0 to 3 percent slopes, very stony	C/D
54D	Keweenaw loamy sand, 6 to 18 percent slopes, very stony	A
99E	Watton silt loam, 15 to 35 percent slopes	C/D
123A	Mishwabic silt loam, 0 to 2 percent slopes	C/D



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.
5. Soils data from USDA NRCS.

LEGEND

- Major Road
- Minor Road
- River/Stream
- Lake/Pond
- Proposed Project Surface Extent
- Proposed White Pine North Underground Mine Area
- Historic Underground Mine Workings
- USDA NRCS SSURGO Soils

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

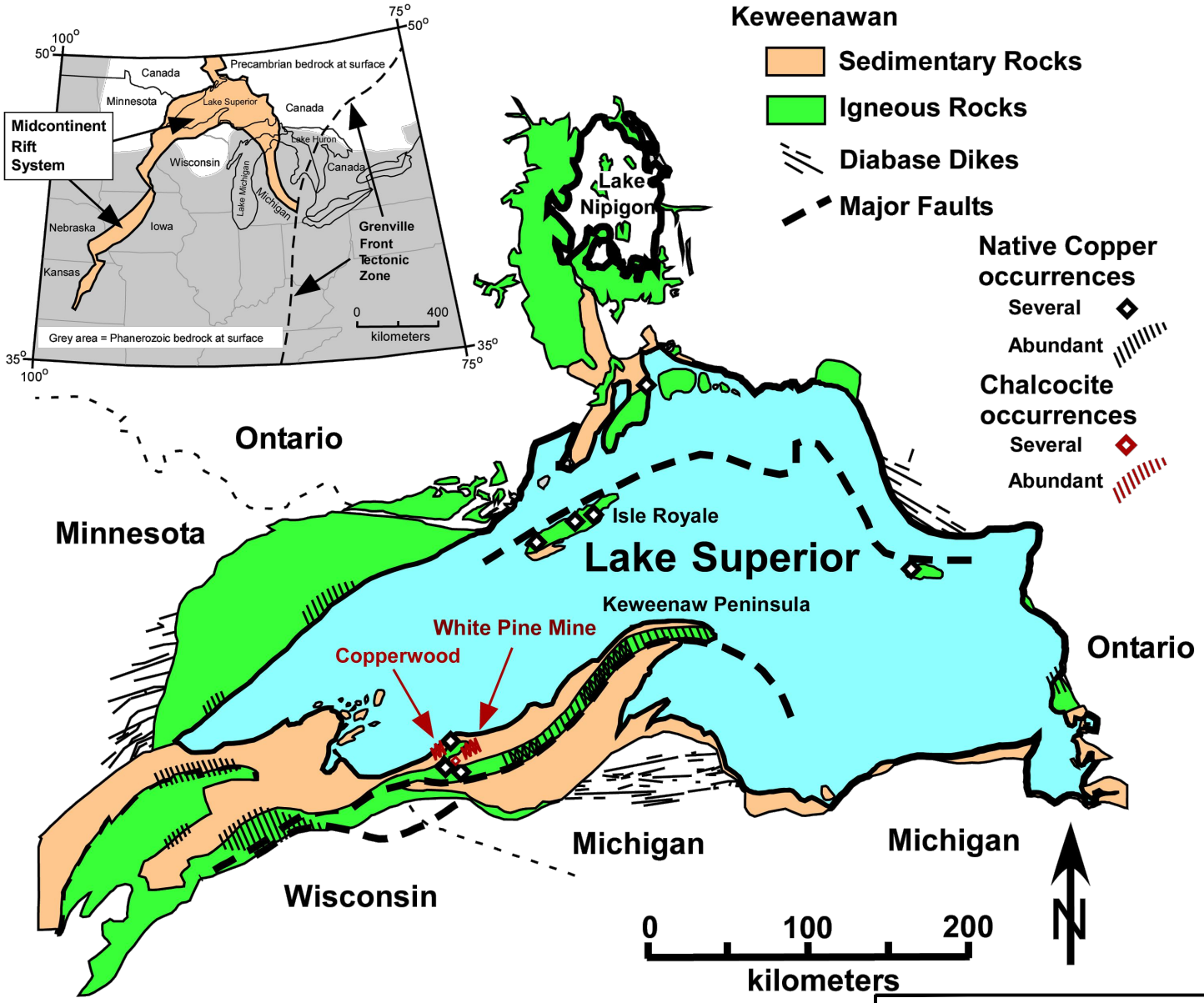
N

0 2,500 5,000 Feet

WHITE PINE COPPER LLC

FIGURE 2-3
USDA NRCS SOILS MAP
GROUNDWATER AND SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

Date: JUNE 2026	Revision Date:		
Drawn By: BJW1	Checked By: MAN	Project: 23W200	



SOURCE:

WILLIAMS, W. C., & BORNHORST, T.J. (2023). CONTROLS ON THE STRATIFORM COPPER MINERALIZATION IN THE WESTERN SYNCLINE, UPPER PENINSULA, MICHIGAN. MINERALS, 13(7), 927. https://doi.org/10.3390/min130170927

WHITE PINE COPPER

Foth

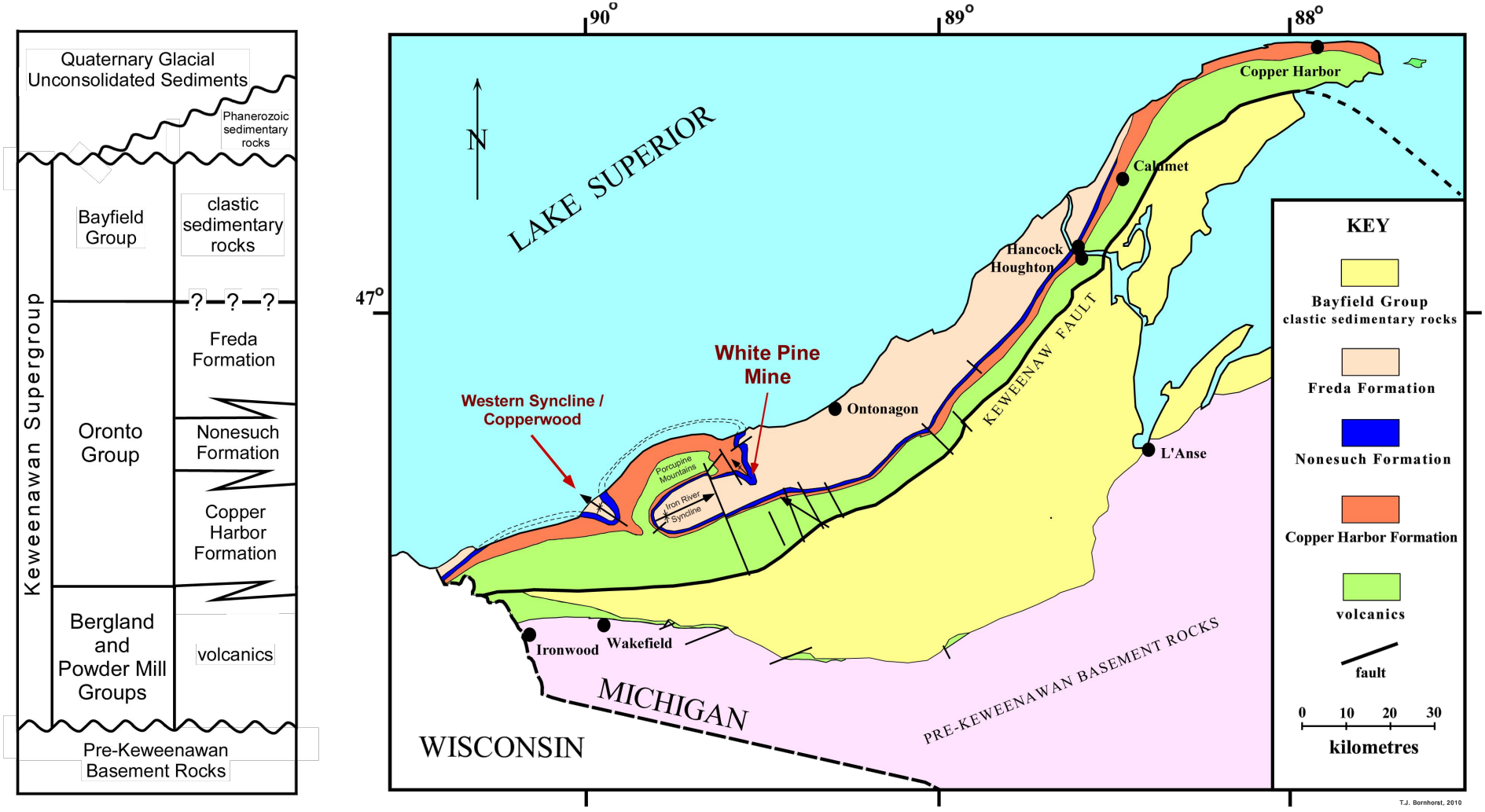
FIGURE 2-4

REGIONAL GEOLOGIC SETTING AND DISTRIBUTION OF KEWEENAWAN COPPER DEPOSITS BASELINE HYDROLOGY REPORT

SCALE: AS SHOWN

Date Completed: NOV. 2025	Revision Date:	
Drawn By: JRB2	Checked By: GMB	Project No: 025W006

Wednesday, November 26, 2025 9:14:53 AM
DWG Filename: fig 2-5 reg geo setting and dist of keweenawan copper deposits.dwg Layout: layout1



SOURCE:

WILLIAMS, W. C., & BORNHORST, T.J. (2023). CONTROLS ON THE STRATIFORM COPPER MINERALIZATION IN THE WESTERN SYNCLINE, UPPER PENINSULA, MICHIGAN. MINERALS, 13(7), 927. https://doi.org/10.3390/min130170927

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SCALE: AS SHOWN

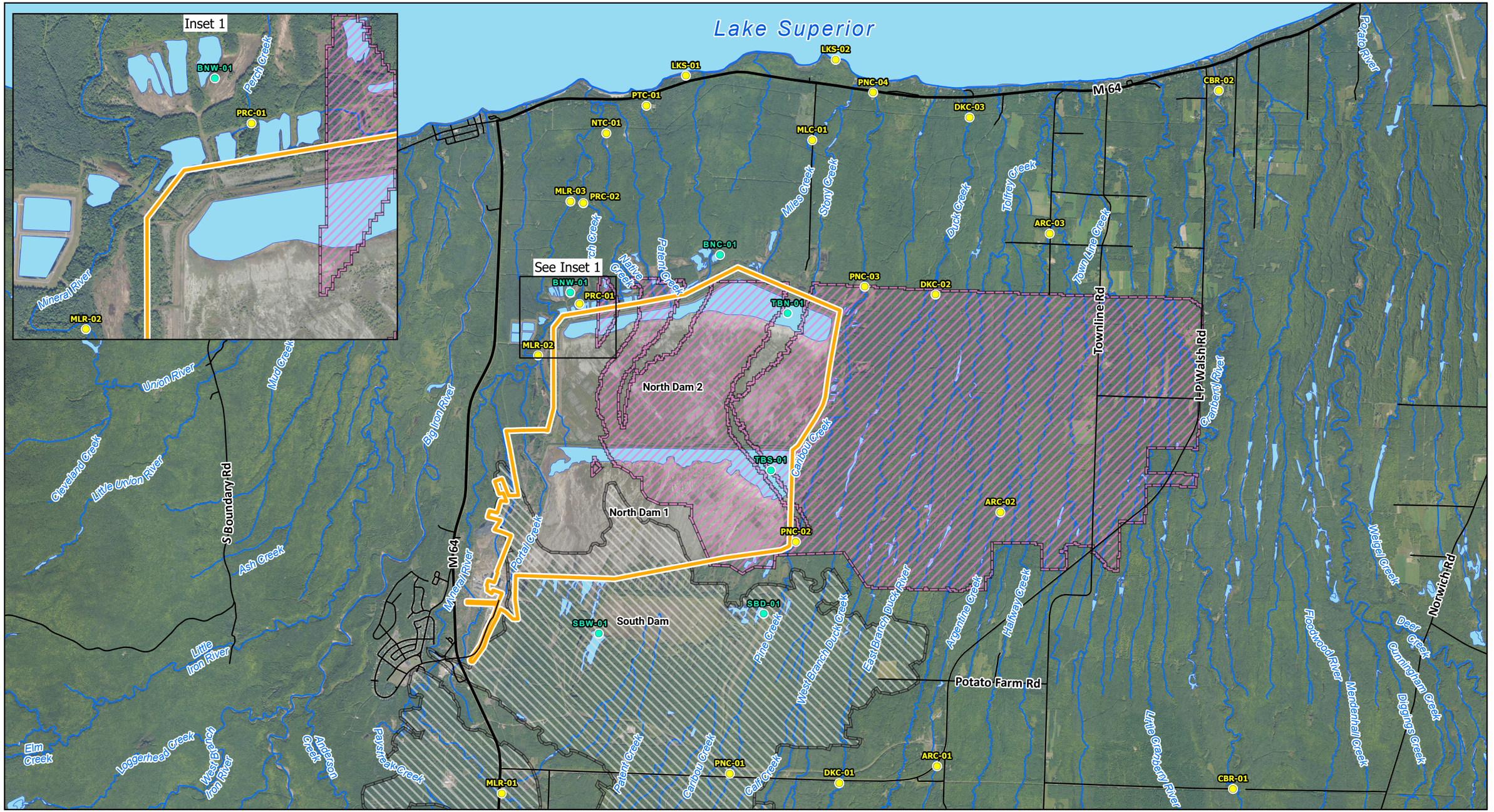
WHITE PINE COPPER

FIGURE 2-5

GENERAL BEDROCK GEOLOGY AND LITHOSTRATIGRAPHY OF THE WESTERN UPPER PENINSULA, MI
BASELINE HYDROLOGY REPORT

Date Completed: NOV. 2025		Revision Date:
Drawn By: JRB2	Checked By: GMB	Project No: 025W006

Wednesday, November 26, 2025 9:15:23 AM
DWG Filename: fig 2-6 gen bedrock geo and lith of western up.dwg Layout: layout1



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

LEGEND

- Stream / Lake Superior Monitoring Location
- Ponded Surface Water Monitoring Location
- River/Stream
- Major Road
- Minor Road
- Lake/Pond
- Proposed Project Surface Extent
- Proposed White Pine North Underground Mine Area
- Historic Underground Mine Workings

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

N

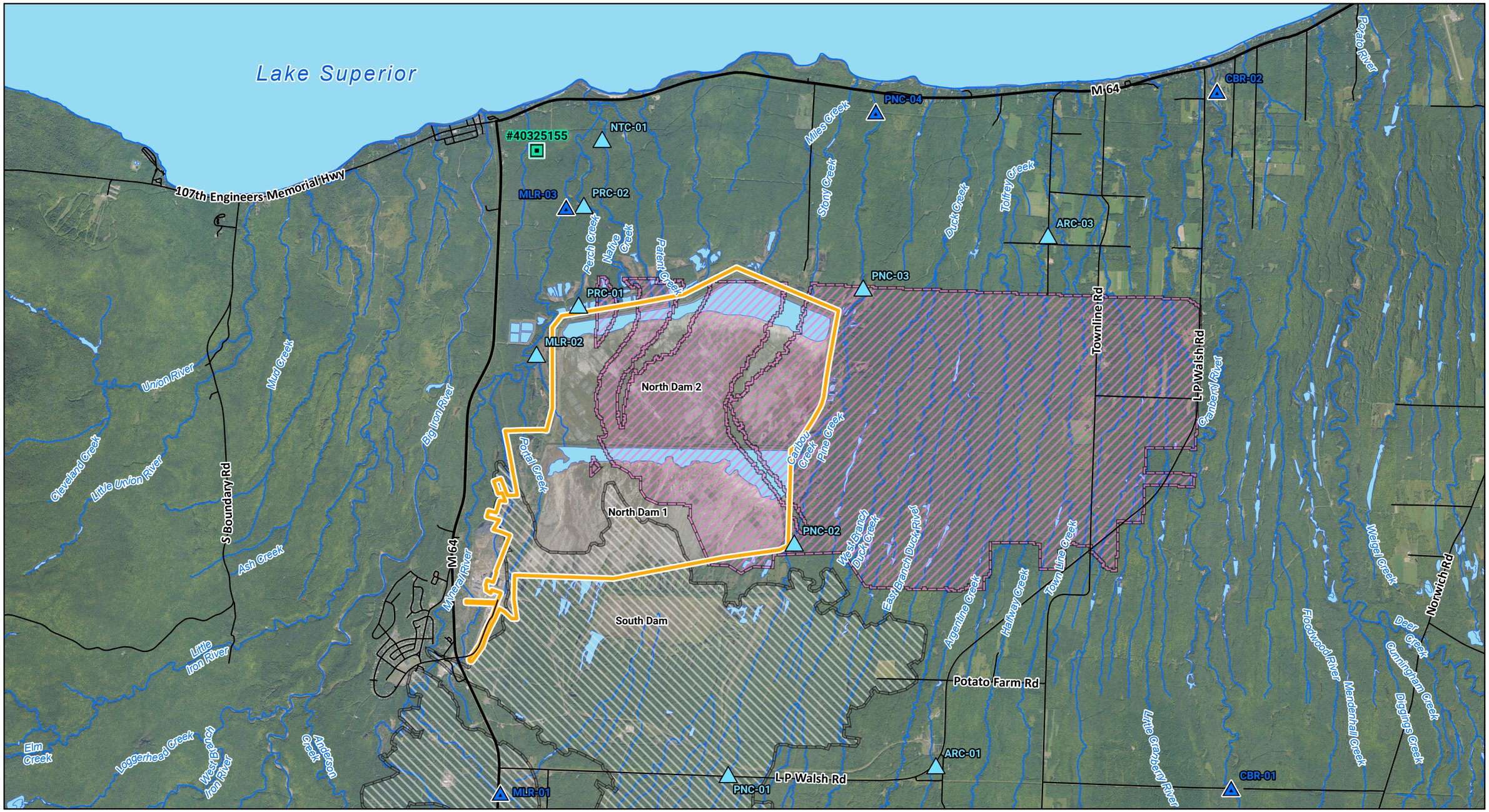
0 2,500 5,000 Feet

WHITE PINE COPPER LLC

FIGURE 3-1

PART 632 BASELINE SURFACE WATER MONITORING LOCATIONS
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

Date: JULY 2026	Revision Date:	
Drawn By: DAT	Checked By: MAN	Project: 23W200



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

LEGEND

- Staff Gauge
- Staff Gauge and Continous Flow Monitoring Location
- USGS Flow Gage
- Major Road
- Minor Road
- River/Stream
- Lake/Pond
- Proposed Project Surface Extent
- Proposed White Pine North Underground Mine Area
- Historic Underground Mine Workings

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

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0 2,500 5,000 Feet

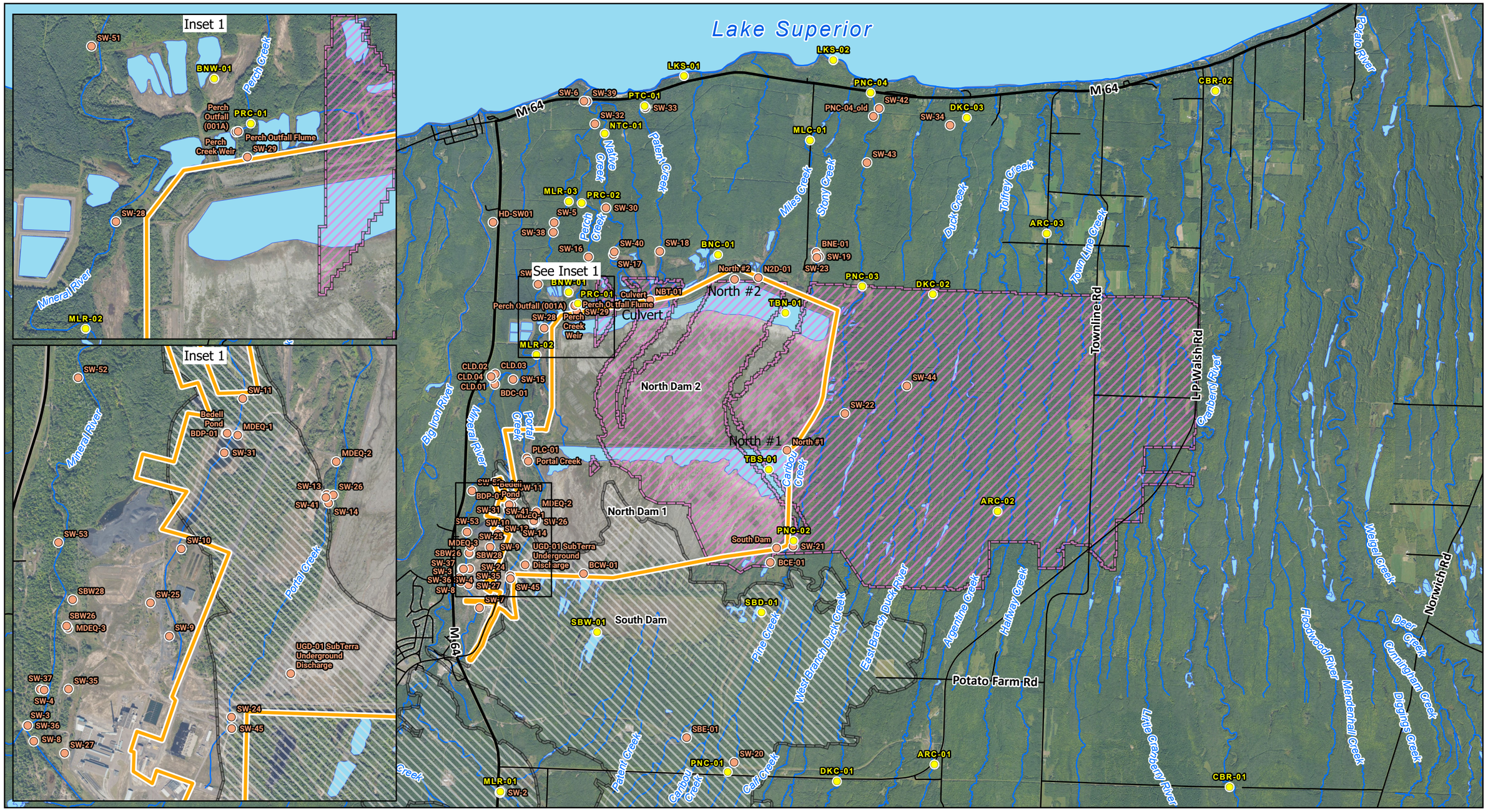
WHITE PINE COPPER LLC

FIGURE 3-2

STAFF GAUGE AND CONTINUOUS FLOW MONITORING LOCATIONS
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JUNE 2026	Revision Date:	
Drawn By: BJW1	Checked By: MAN	Project: 25W006

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NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

LEGEND

- Part 632 Monitoring Location
- Other Surface Water Monitoring Location with Supplemental Data
- River/Stream
- Major Road
- Minor Road
- Lake/Pond
- Proposed Project Surface Extent
- Proposed White Pine North Underground Mine Area
- Historic Underground Mine Workings

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

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0 2,500 5,000 Feet

WHITE PINE COPPER LLC

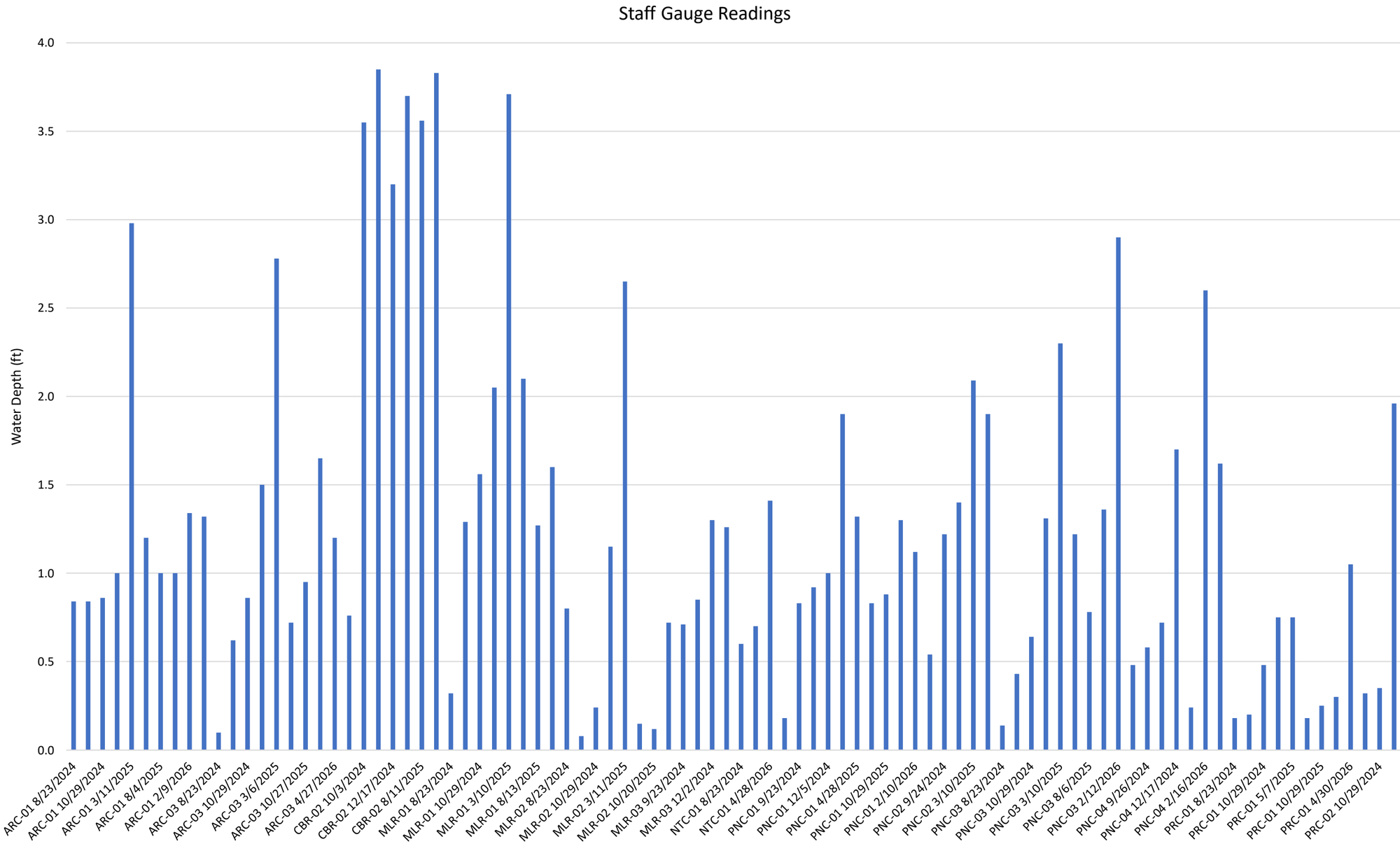
FIGURE 3-3

SURFACE WATER MONITORING LOCATIONS
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

Date: JULY 2026	Revision Date:		
Drawn By: DAT	Checked By: MAN	Project: 23W200	

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NOTES:

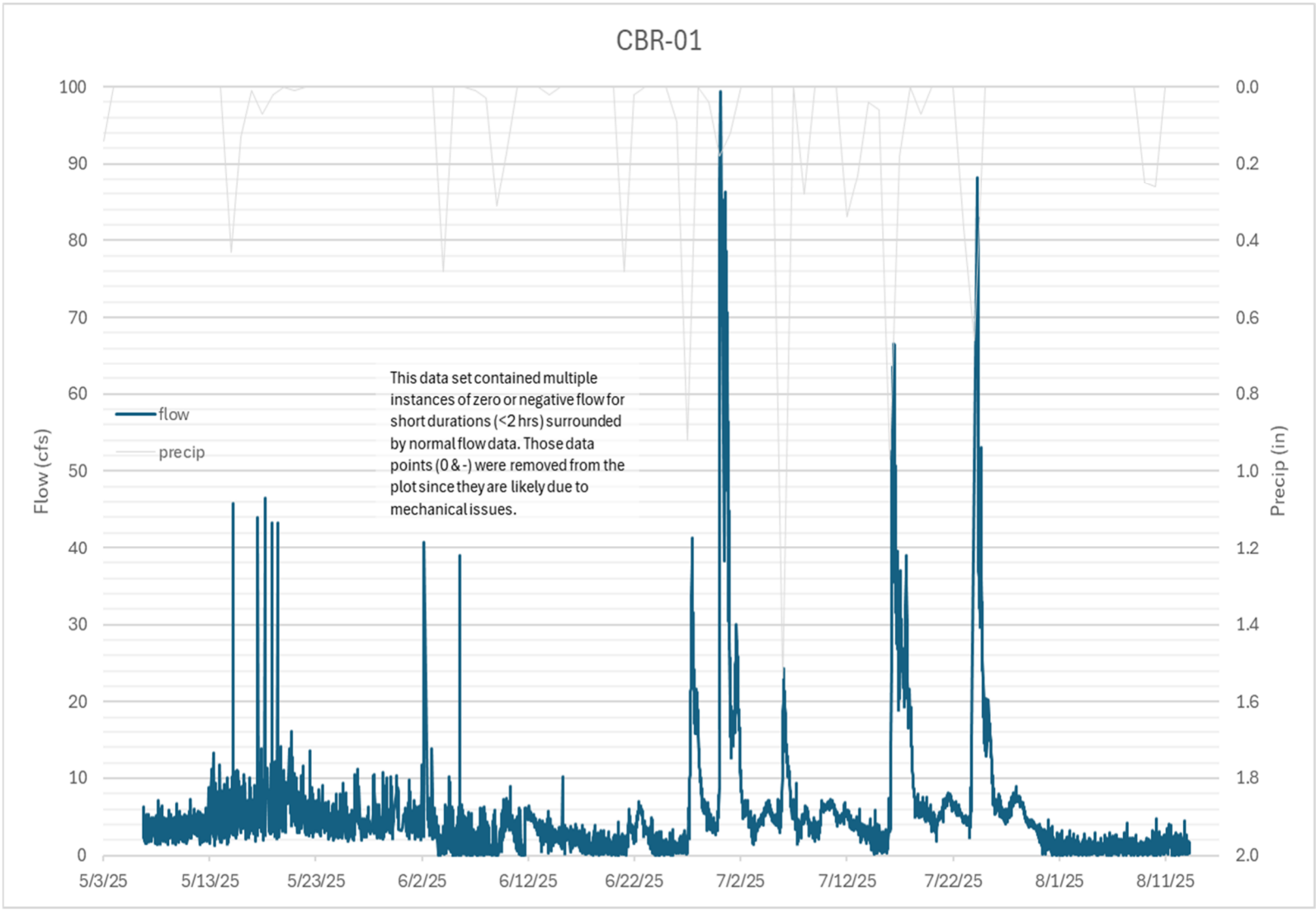
1. Manual readings collected from staff gages installed in August 2024. Locations were selected to provide spatial coverage in area streams.
2. Water depths measured using top of sediment as the datum; conversion to mean sea level elevation to be completed as needed and pending survey.

WHITE PINE COPPER, LLC

FIGURE 3-4

STREAM STAFF GAGE READINGS
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JUNE 2026	Revision Date:	
Drawn By: KRM2	Checked By: MAN	Project: 23W200.00



NOTES:

1. Flow data from SonTek continuous flow monitoring units (doppler units installed on stream beds).
2. Precipitation data from the PRISM Climate Group website (4 km grid).

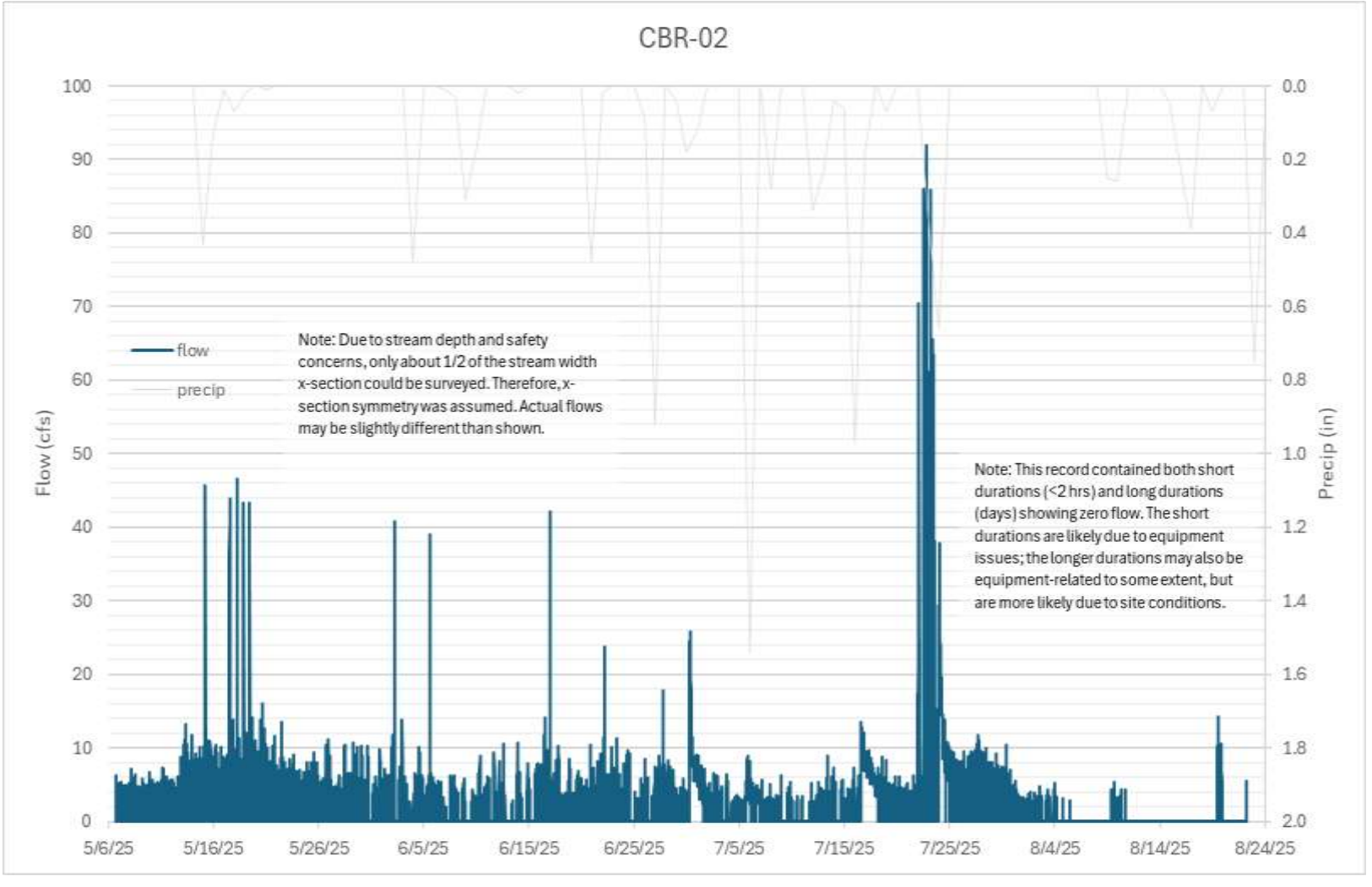
WHITE PINE COPPER, LLC

FIGURE 3-5

STREAM FLOW AT CBR-01
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JUNE 2026	Revision Date:	
Drawn By: MAN	Checked By: KRM2	Project: 23W200.00

Foth



NOTES:

1. Flow data from SonTek continuous flow monitoring units (doppler units installed on stream beds).
2. Precipitation data from the PRISM Climate Group website (4 km grid).

WHITE PINE COPPER, LLC

FIGURE 3-6

STREAM FLOW AT CBR-02

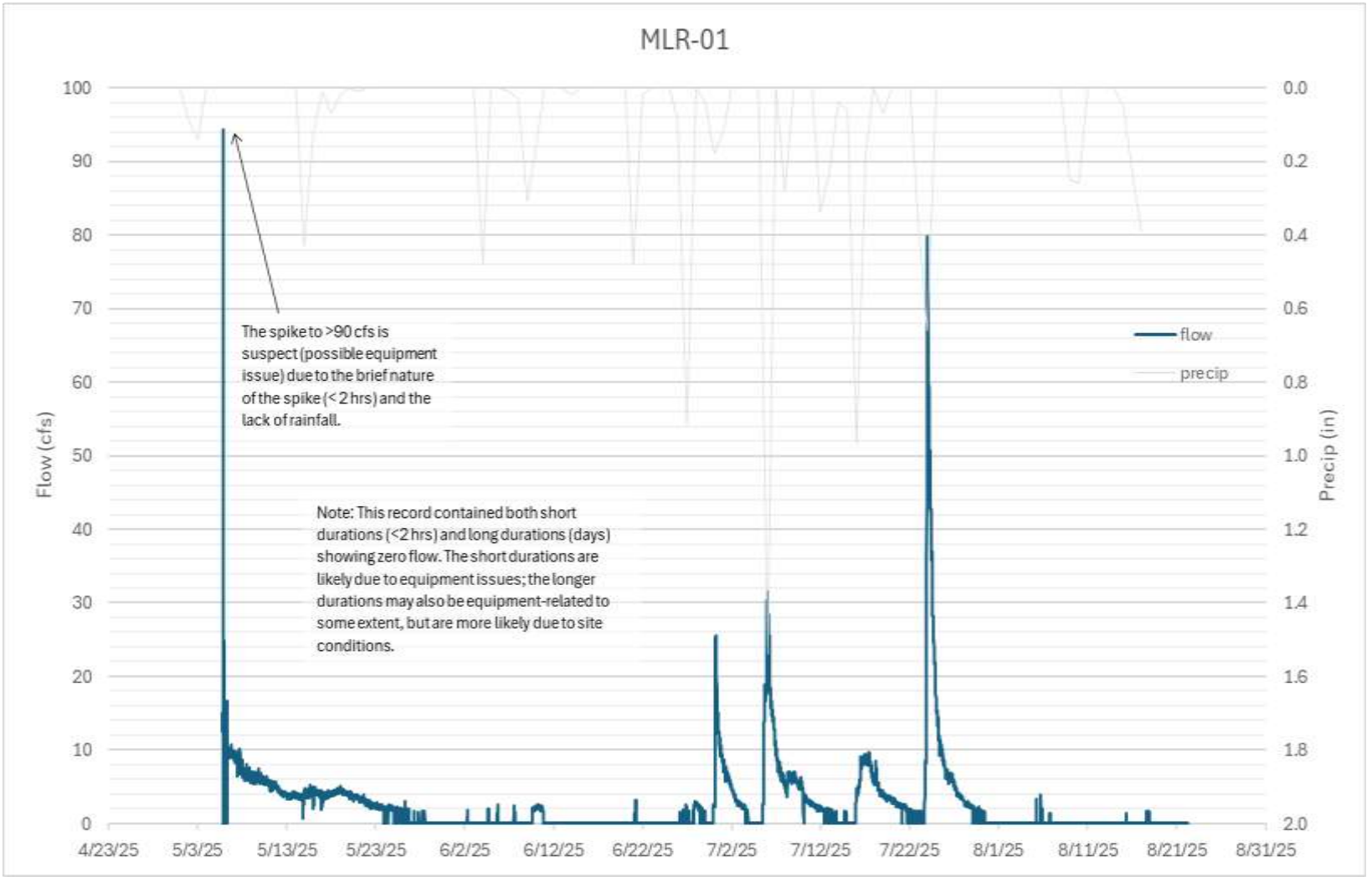
GROUNDWATER & SURFACE WATER

BASELINE HYDROLOGY REPORT

WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JUNE 2026	Revision Date:	
Drawn By: MAN	Checked By: KRM2	Project: 23W200.00

Foth



NOTES:

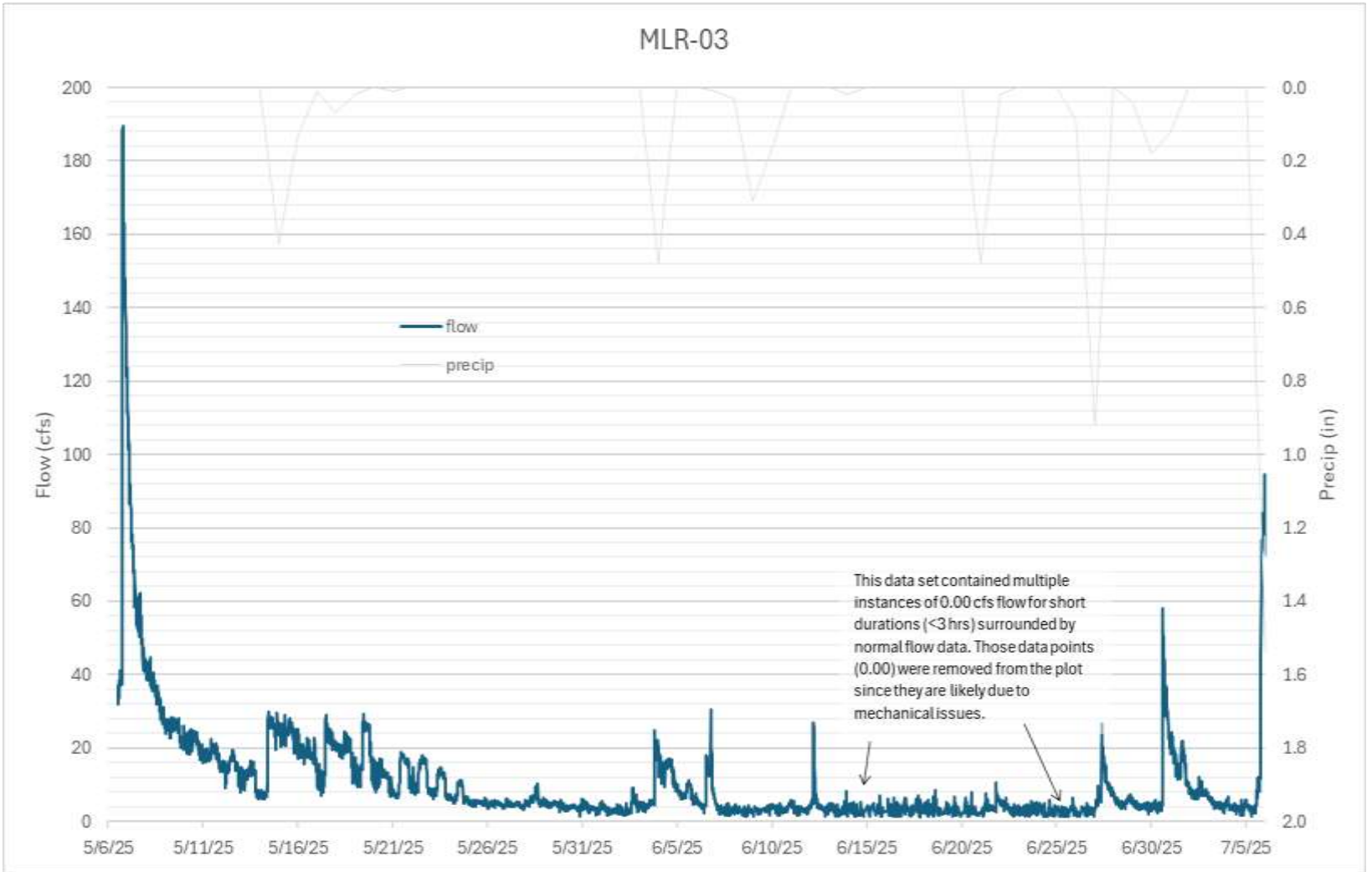
1. Flow data from SonTek continuous flow monitoring units (doppler units installed on stream beds).
2. Precipitation data from the PRISM Climate Group website (4 km grid).

WHITE PINE COPPER, LLC

FIGURE 3-7

STREAM FLOW AT MLR-01
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JUNE 2026	Revision Date:	
Drawn By: MAN	Checked By: KRM2	Project: 23W200.00



NOTES:

1. Flow data from SonTek continuous flow monitoring units (doppler units installed on stream beds).
2. Precipitation data from the PRISM Climate Group website (4 km grid).

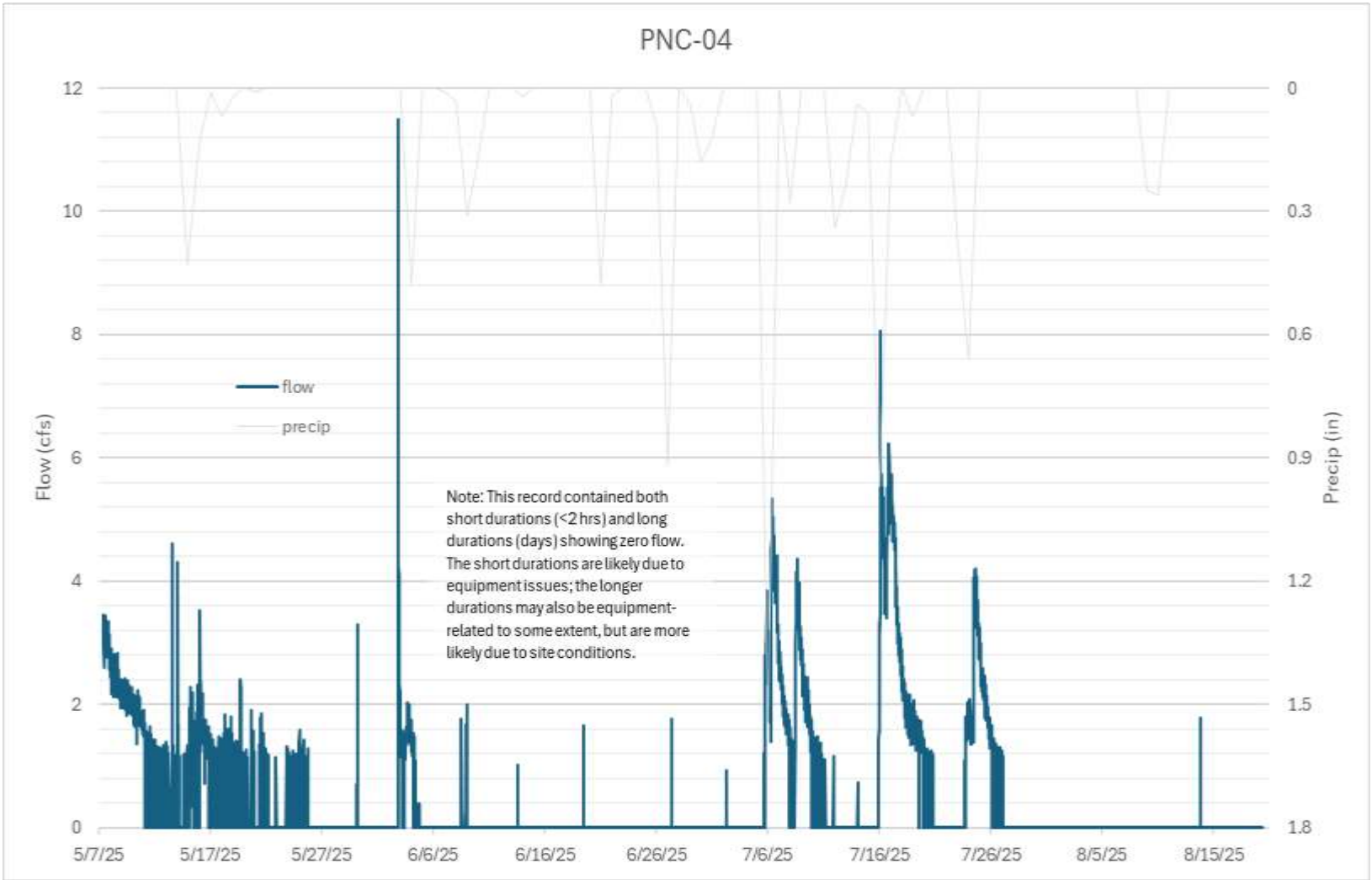
WHITE PINE COPPER, LLC

FIGURE 3-8

STREAM FLOW AT MLR-03
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JUNE 2026	Revision Date:	
Drawn By: MAN	Checked By: KRM2	Project: 23W200.00

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NOTES:

1. Flow data from SonTek continuous flow monitoring units (doppler units installed on stream beds).
2. Precipitation data from the PRISM Climate Group website (4 km grid).

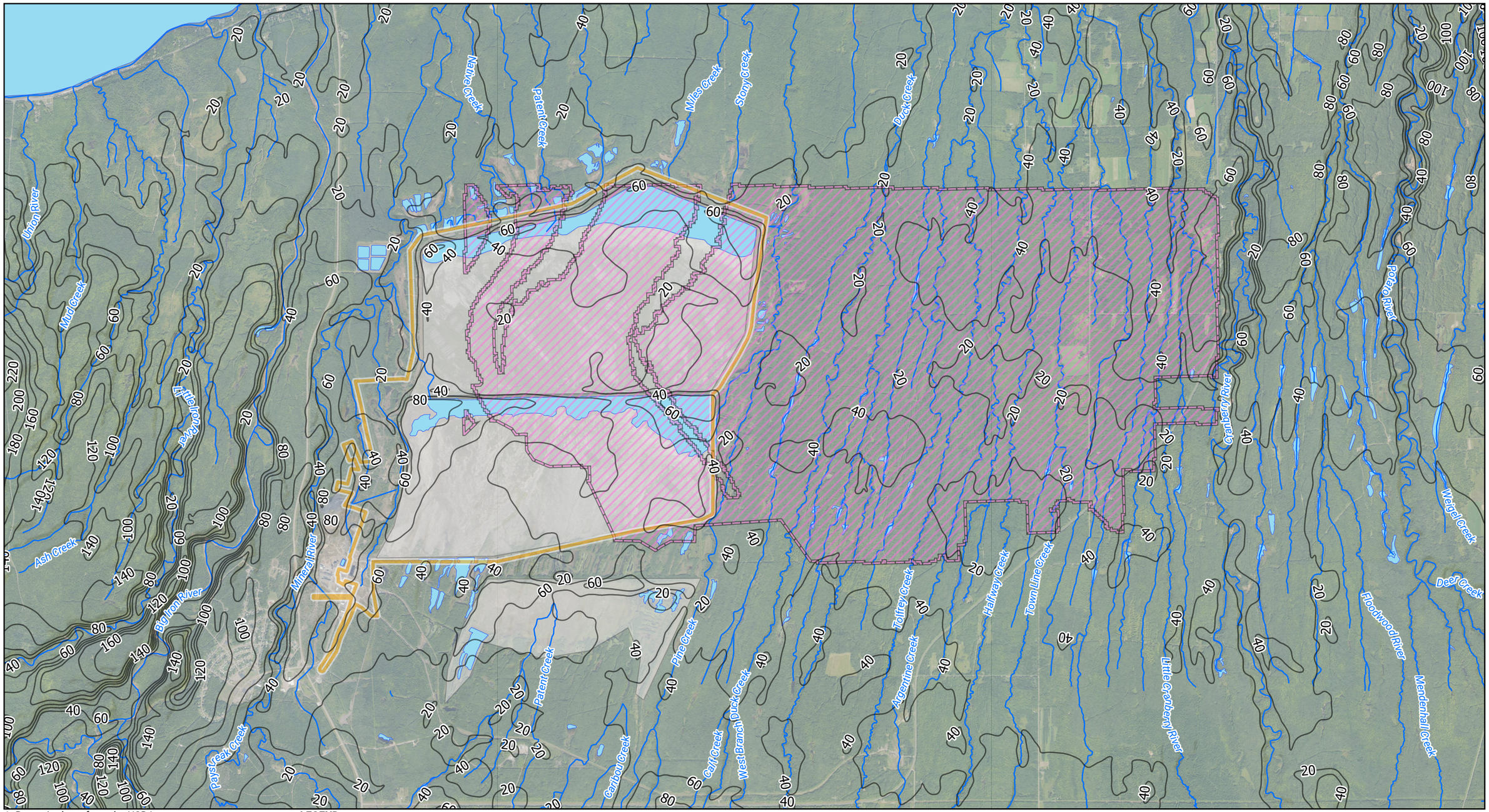
WHITE PINE COPPER, LLC

FIGURE 3-9

STREAM FLOW AT PNC-04
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JUNE 2026	Revision Date:	
Drawn By: MAN	Checked By: KRM2	Project: 23W200.00

Foth



1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Overburden includes all unconsolidated materials overlying bedrock including but not limited to fill, soil, alluvium, glacial and lacustrine deposits, and decomposed/weathered bedrock. Overburden thickness calculated from WPC geologic model surfaces.

LEGEND

- River/Stream
- Lake/Pond
- Overburden Thickness Contour (ft)
- Proposed Project Surface Extent
- Proposed White Pine North Underground Mine Area

Foth

N

0 0.5 1 Miles

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

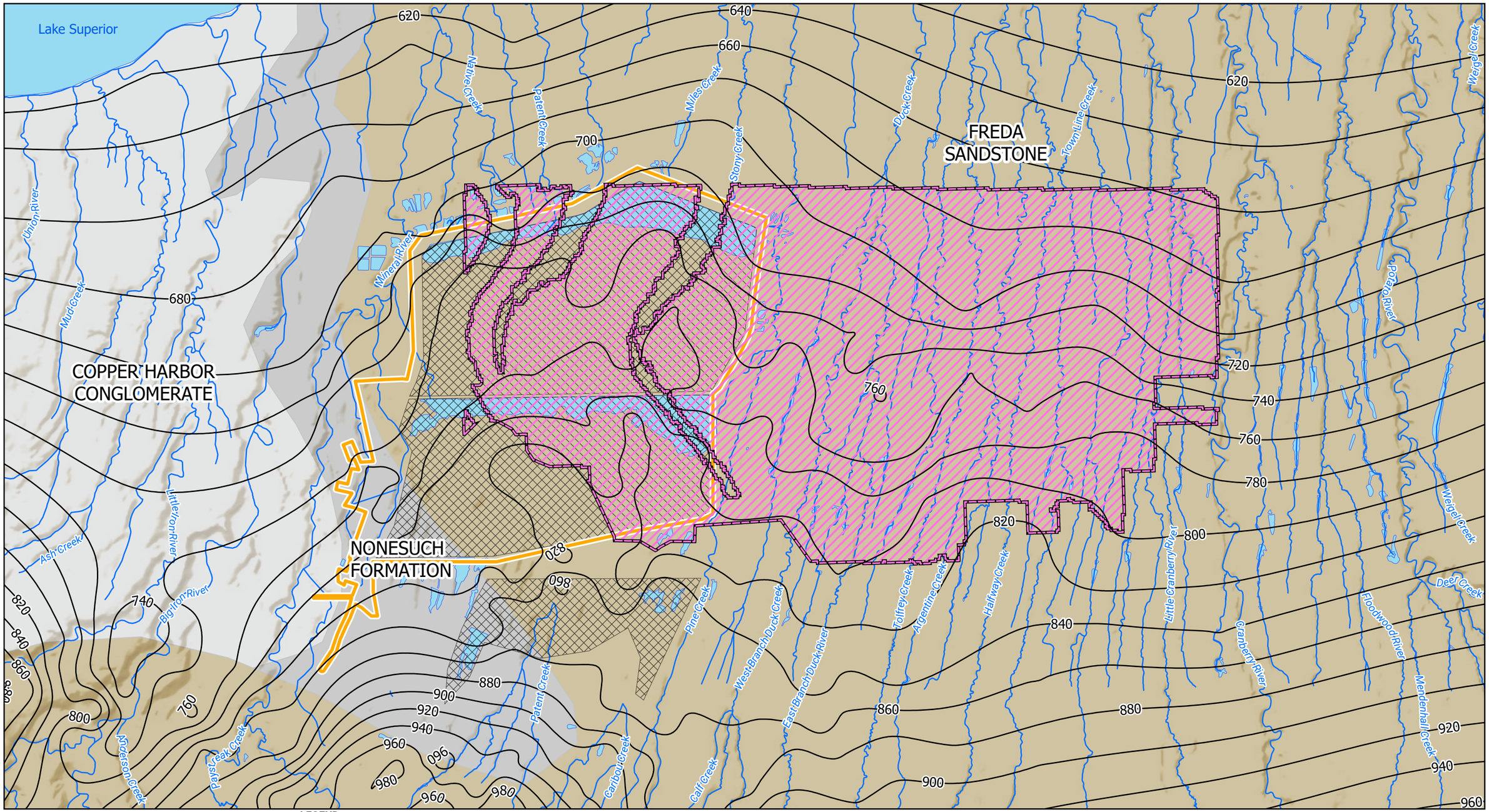
WHITE PINE COPPER LLC

FIGURE 3-10

THICKNESS OF OVERBURDEN
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: AUGUST 2025	Revision Date:		
Drawn By: MJG4	Checked By: GMB	Project: 25W006	

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NOTES:

1. Geology Basemap from Michigan Dept. of EGLE
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Geology basemap derived from EGLE Bedrock Geology Map.
5. Bedrock elevation calculated from WPC Geologic Model and borehole data.

LEGEND

- River/Stream
- Bedrock Elevation Contour (20ft)
- Lake/Pond
- Proposed Project Surface Extent
- Proposed White Pine North Underground Mine Area
- Existing Tailing Storage Facilities

Bedrock Surface Formation

- COPPER HARBOR CONGLOMERATE
- FREDA SANDSTONE
- NONESUCH FORMATION

Foth

N

0 0.5 1 Miles

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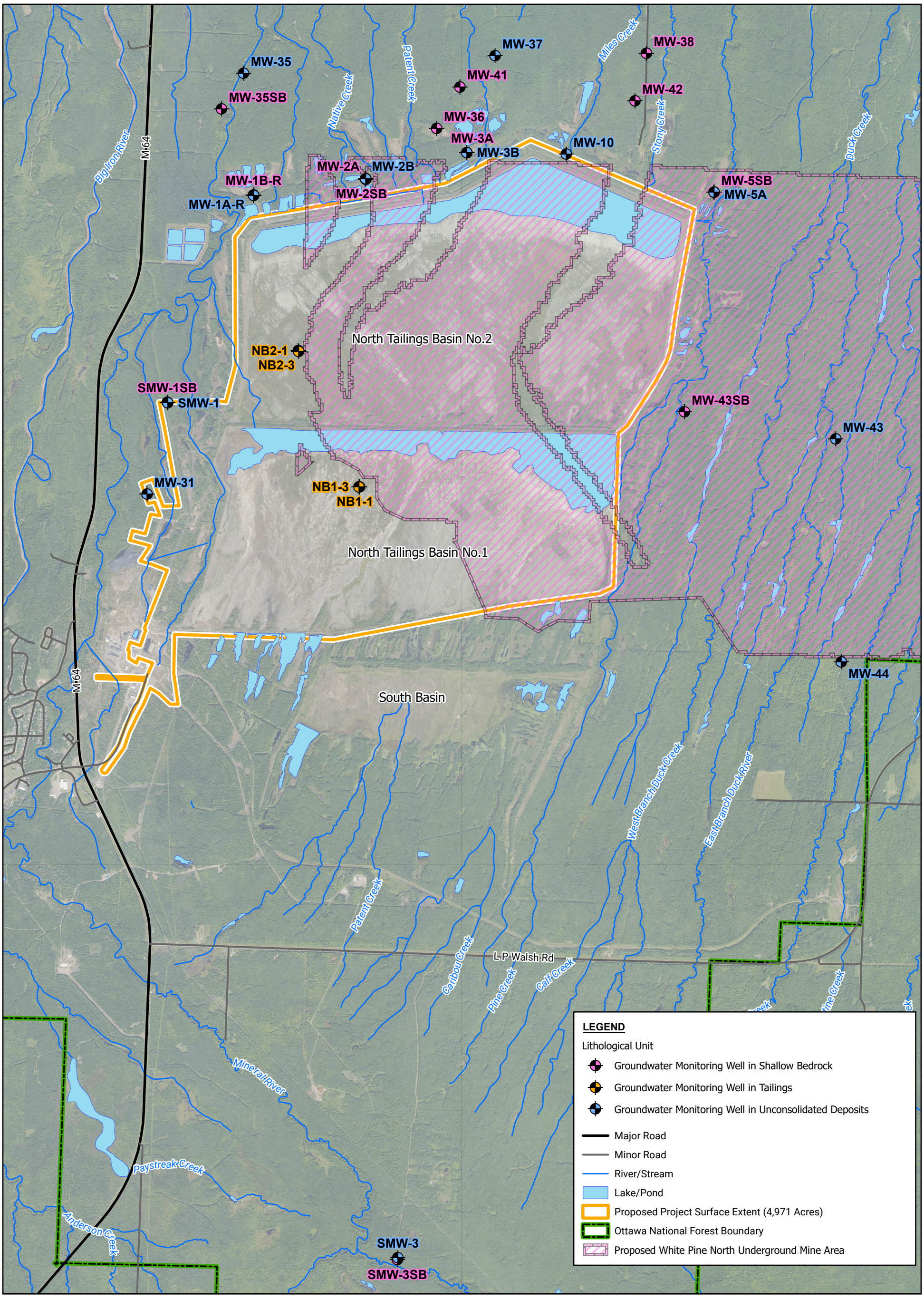
WHITE PINE COPPER LLC

FIGURE 3-11

ELEVATION OF BEDROCK SURFACE
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JULY 2026		Revision Date:	
Drawn By: NEE		Checked By:	Project: 25W006

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NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.
5. Site layout and infrastructure data from Ausenco, March 2026.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

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0 1,500 3,000 Feet

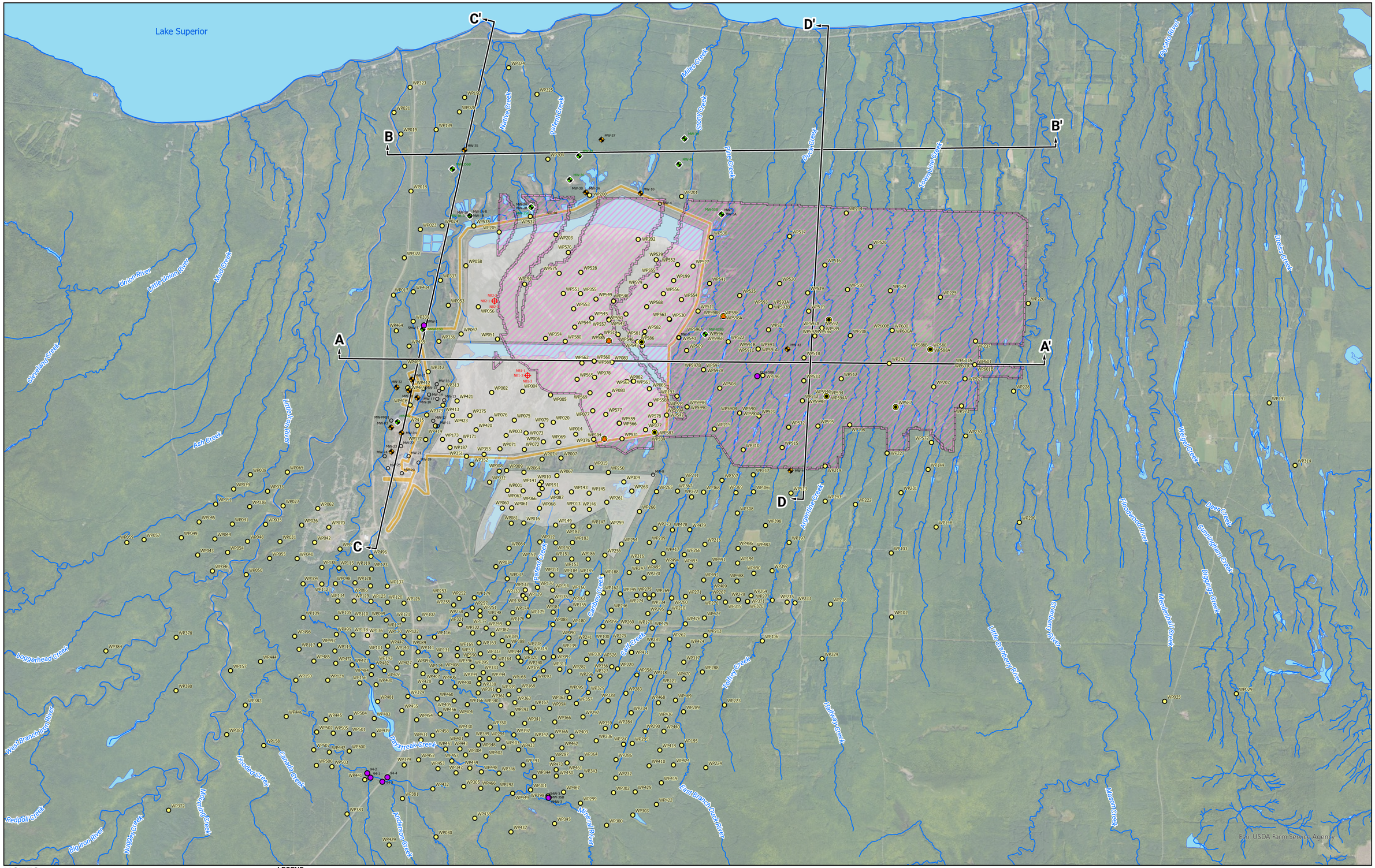
WHITE PINE COPPER LLC

FIGURE 3-12

GROUNDWATER MONITORING NETWORK
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JULY 2026	Revision Date:		
Drawn By: DAT	Checked By: GMB	Project: 23W200	

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NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

LEGEND

- Exploration Borehole
- Open Bore Hole HpL and Packer Tested
- Vibrating Wire Piezometers
- Bedrock / Other
- Overburden
- Tailings
- Shallow Bedrock
- Inactive, Removed, or Unknown
- Cross Section Locations
- Proposed White Pine North Underground Mine Area
- Proposed Project Surface Extent
- River/Stream
- Lake/Pond
- Existing Tailing Storage Facilities

Foth

N

0 0.5 1 Miles

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

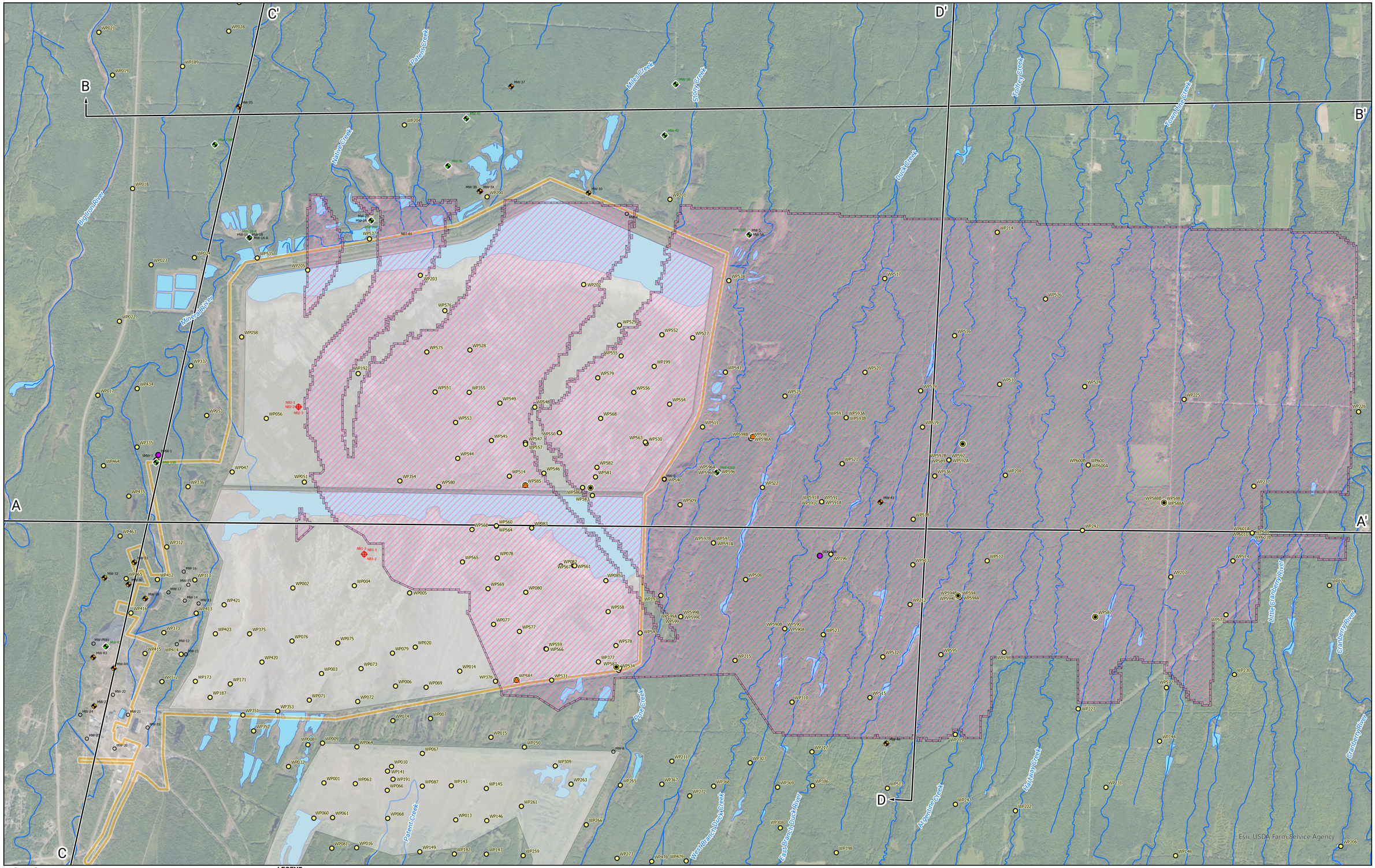
WHITE PINE COPPER LLC

FIGURE 5-1A

BOREHOLE AND CROSS-SECTION LOCATIONS
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JUNE 2026	Revision Date:	
Drawn By: MJG4	Checked By: GMB	Project: 25W006

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NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

LEGEND

- Exploration Borehole
- Open Bore Hole HpL and Packer Tested
- Vibrating Wire Piezometers
- Bedrock / Other
- Overburden
- Tailings
- Shallow Bedrock
- Inactive, Removed, or Unknown
- Cross Section Locations
- Proposed White Pine North Underground Mine Area
- Proposed Project Surface Extent
- River/Stream
- Lake/Pond
- Existing Tailing Storage Facilities

N

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

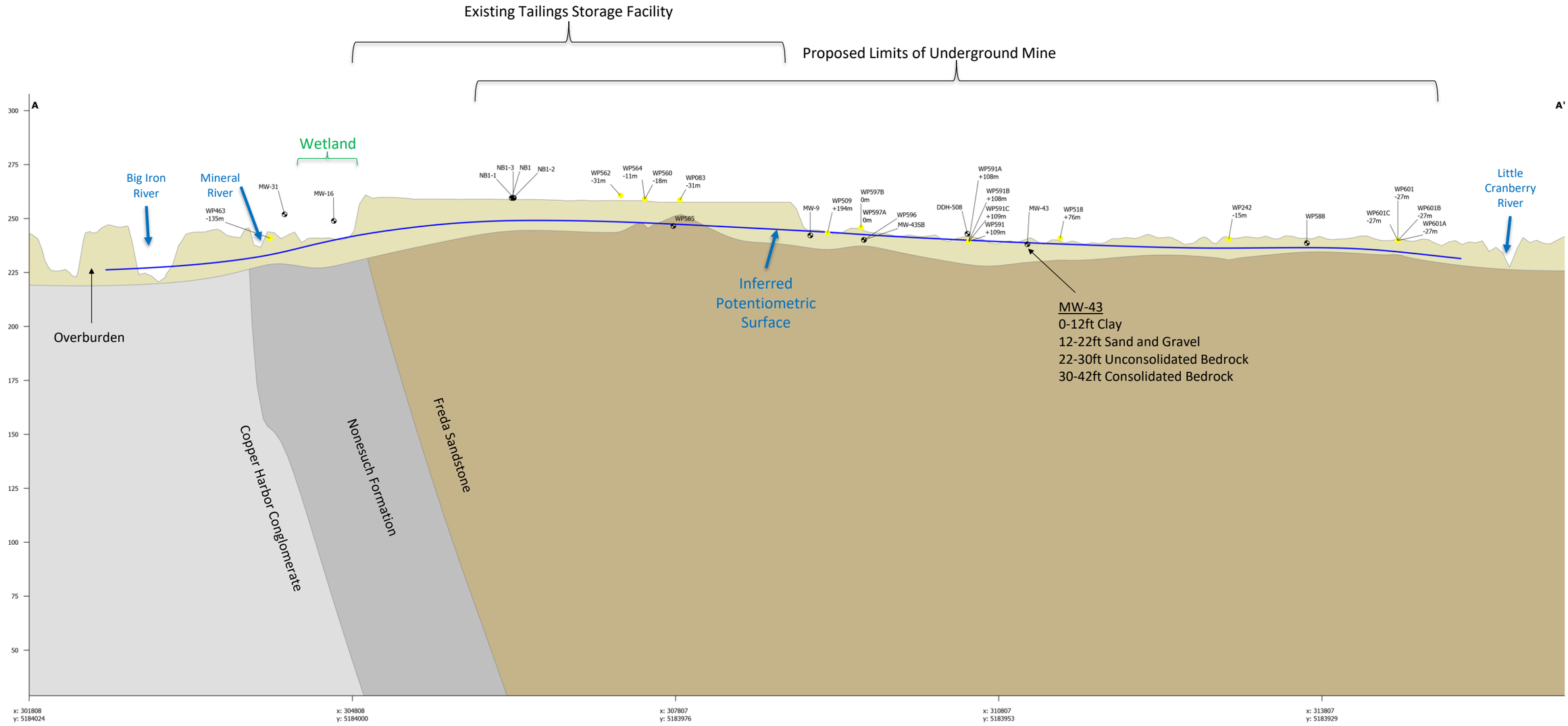
0 0.25 0.5 Miles

WHITE PINE COPPER LLC

FIGURE 5-1B
BOREHOLE AND CROSS-SECTION LOCATIONS
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: JUNE 2026	Revision Date:	
Drawn By: MJG4	Checked By: GMB	Project:25W006

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NOTES:

1. All Units in Meters and Vertical Exaggeration of 20x
2. Inferred Potentiometric surface generated from WPC GW water depths on latest date measured, where it exists
3. Wetlands located using Barr Engineering- 2024 Wetland Delineation and Characterization Report
4. Exploration boreholes limited to 200m of section line.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

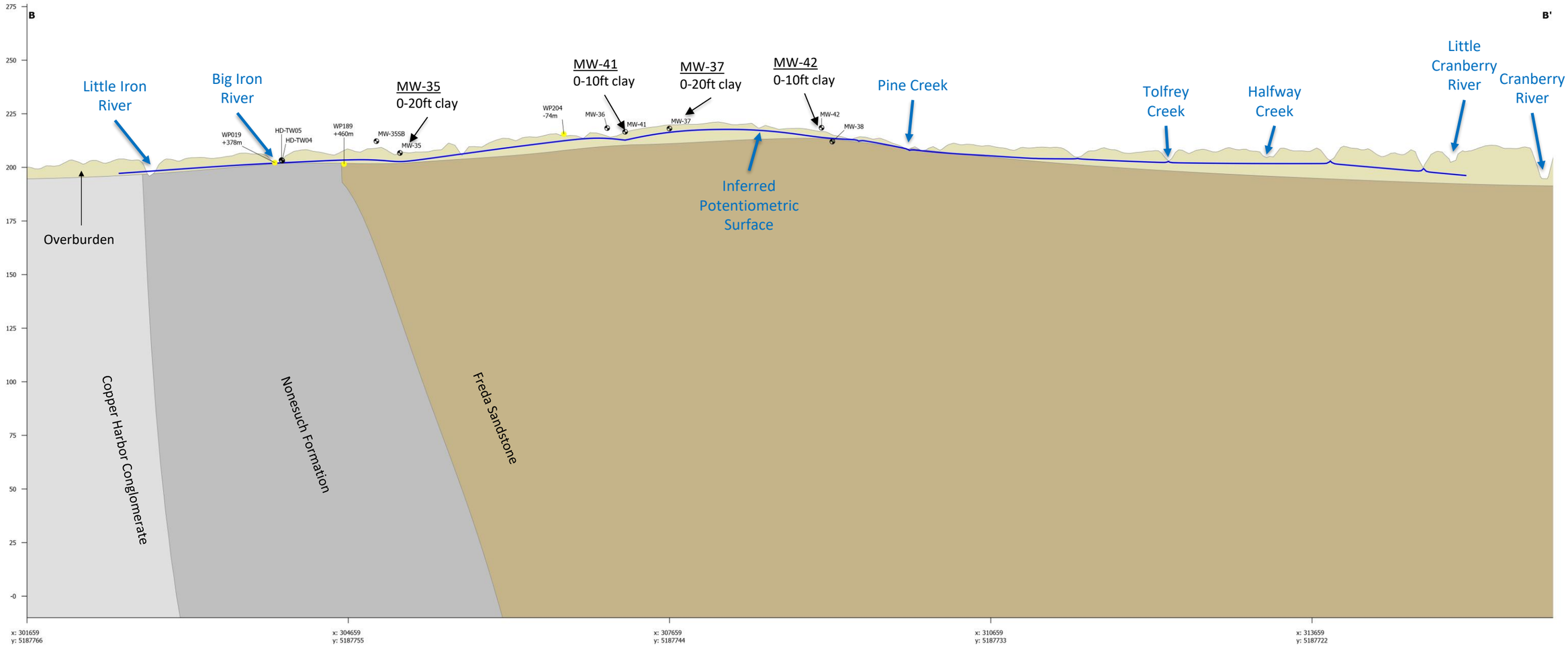
WHITE PINE COPPER LLC

FIGURE 5-2

GEOLOGIC CROSS SECTION A-A'
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

Date: JUNE 2026	Revision Date: :	
DRAWN BY: MJG4	CHECKED BY: GMB	PROJECT: 25W006

Path: pw:\\foth-pw.bentley.com:foth-pw-01\Documents\Clients\White Pine Copper\23W200\10000 Reports\2025 Baseline GW and SW\



NOTES:

1. All Units in Meters and Vertical Exaggeration of 20x
2. Inferred Potentiometric surface generated from WPC GW water depths on latest date measured, where it exists
3. Wetlands located using Barr Engineering- 2024 Wetland Delineation and Characterization Report
4. Exploration boreholes limited to 200m of section line.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

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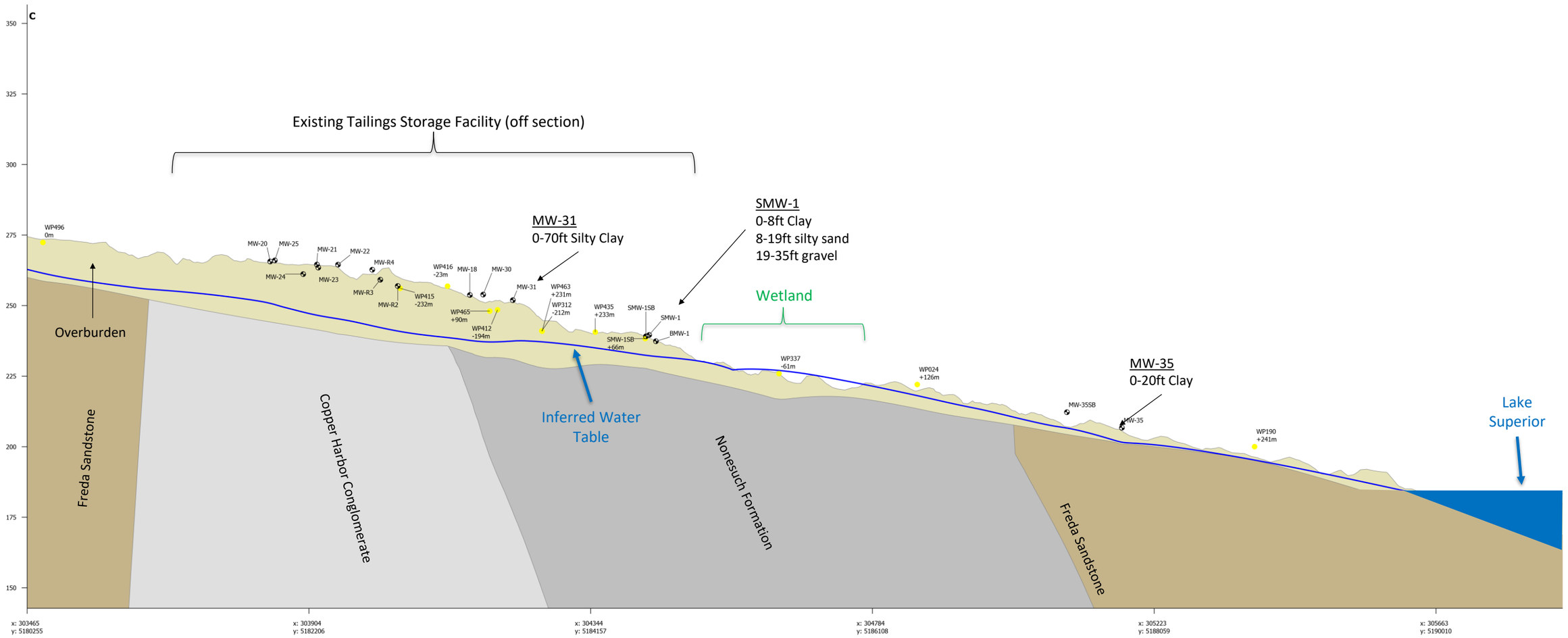
WHITE PINE COPPER LLC

FIGURE 5-3

GEOLOGIC CROSS SECTION B-B'
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

Date: JUNE 2026	Revision Date: :	
DRAWN BY: MJG4	CHECKED BY: GMB	PROJECT: 25W006

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NOTES:

1. All Units in Meters and Vertical Exaggeration of 20x
2. Inferred Potentiometric surface generated from WPC GW water depths on latest date measured, where it exists
3. Wetlands located using Barr Engineering- 2024 Wetland Delineation and Characterization Report
4. Exploration boreholes limited to 200m of section line.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

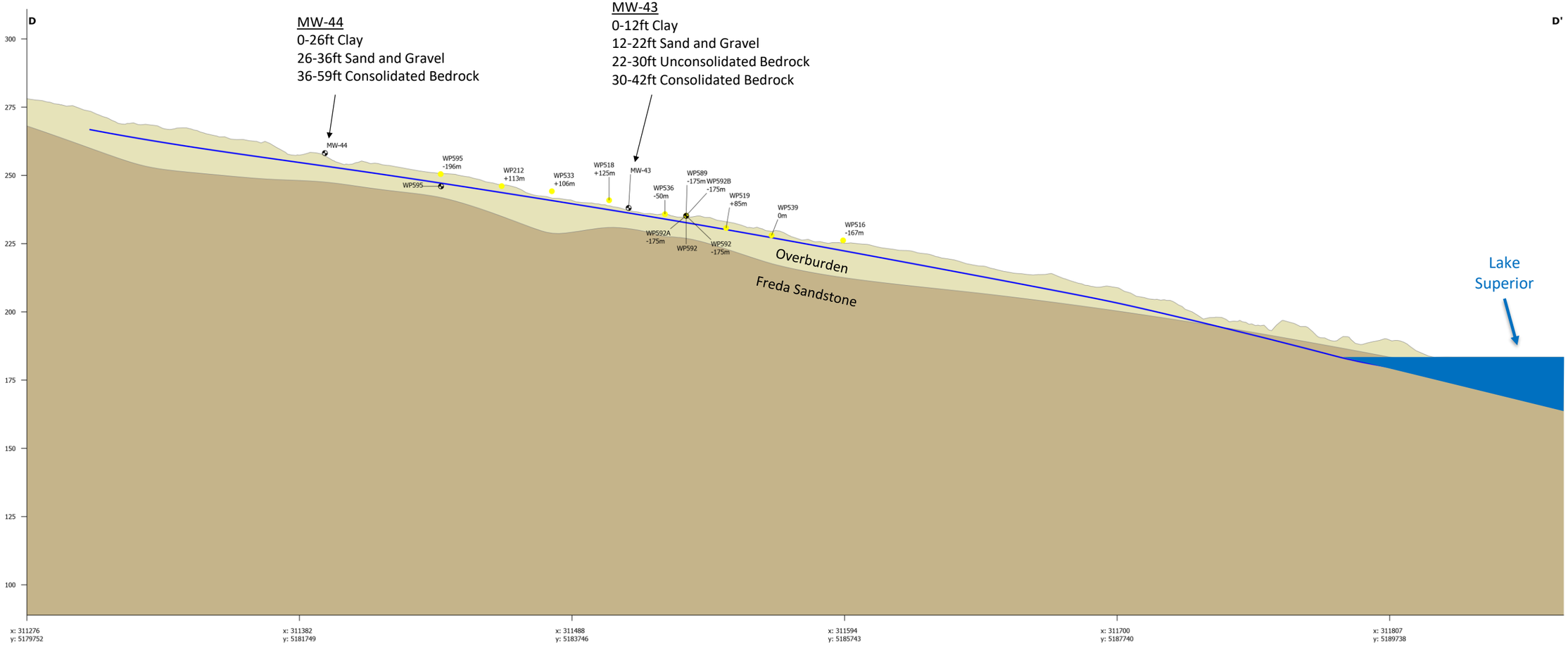
WHITE PINE COPPER LLC

FIGURE 5-4

GEOLOGIC CROSS SECTION C-C'
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

Date: JUNE 2026	Revision Date: :	
DRAWN BY: MJG4	CHECKED BY: GMB	PROJECT: 25W006

Path: pw:\\foth-pw.bentley.com:foth-pw-01\Documents\Clients\White Pine Copper\23W200\10000 Reports\2025 Baseline GW and SW\



Scale: 1:14,000
Vertical exaggeration: 20x
0m 1000m

Location
D: 311276, 5179752, 311
D': 311874, 5191014, 311

Section Thickness: 500m

Legend

Lithology
- Overburden
- Freda Sandstone
- Nonesuch Formation
- Copper Habor Conglomerate

Surfaces
- Modeled Water Table

Boreholes
- Boreholes with Hydrologic Data Available
- Exploration Boreholes

NOTES:

1. All Units in Meters and Vertical Exaggeration of 20x
2. Inferred Potentiometric surface generated from WPC GW water depths on latest date measured, where it exists
3. Wetlands located using Barr Engineering- 2024 Wetland Delineation and Characterization Report
4. Exploration boreholes limited to 200m of section line.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

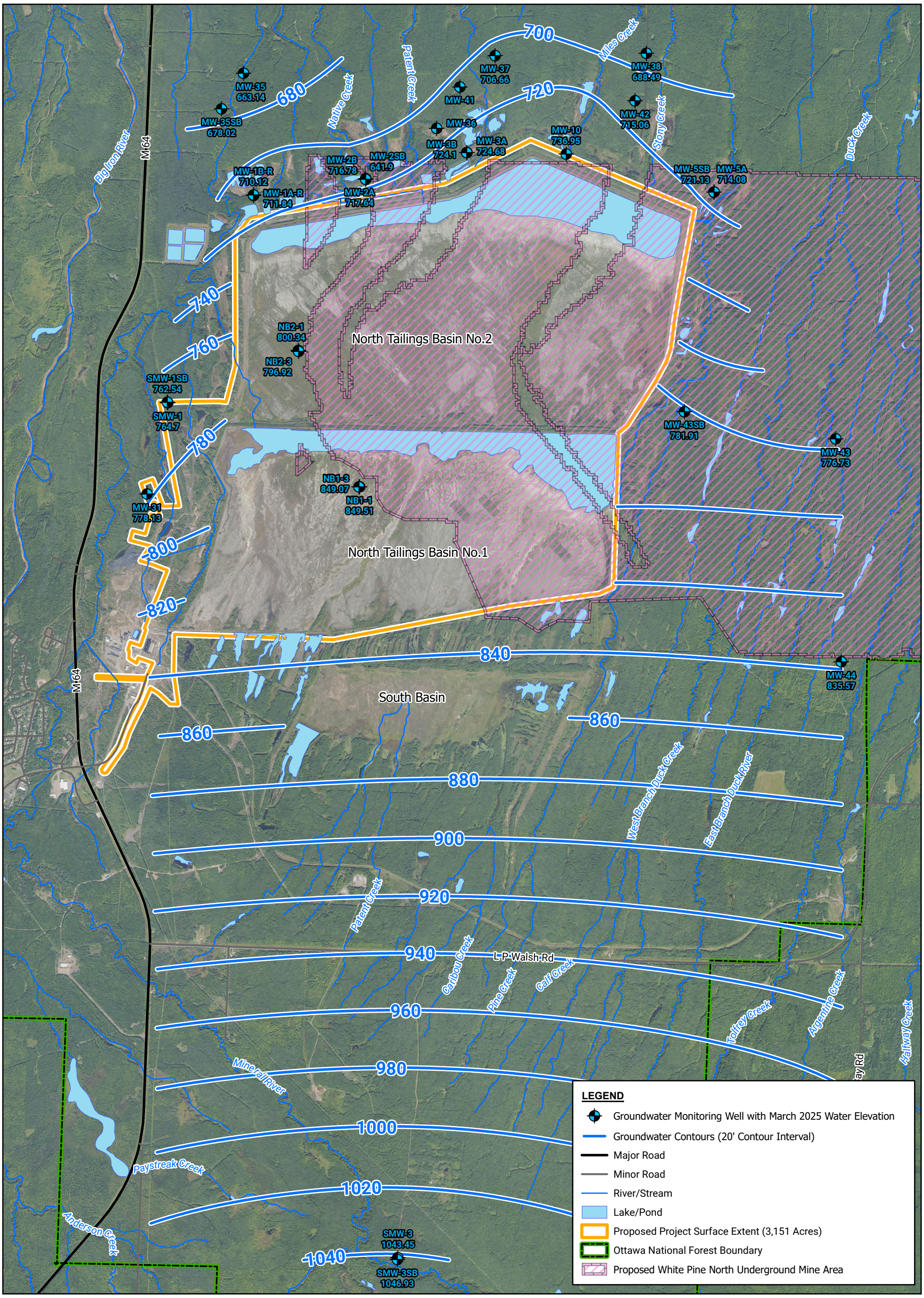
WHITE PINE COPPER LLC

FIGURE 5-5

GEOLOGIC CROSS SECTION D-D'
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MI

Date: JUNE 2026	Revision Date: :	
DRAWN BY: MJG4	CHECKED BY: GMB	PROJECT: 25W006

Path: pw:\\foth-pw.bentley.com:foth-pw-01\Documents\Clients\White Pine Copper\23W200\10000 Reports\2025 Baseline GW and SW\



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.
5. Site layout and infrastructure is based on 2019 White Pine North Copper Project PEA.
6. Groundwater elevations calculated by converting elevation data from site datum to NAVD 1988.
7. Groundwater level in MW-2SB has not recovered to static conditions.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

N

0 1,500 3,000 Feet

WHITE PINE COPPER LLC

FIGURE 5-6

GROUNDWATER POTENTIOMETRIC MAP
GROUNDWATER & SURFACE WATER
BASELINE HYDROLOGY REPORT
WHITE PINE NORTH, ONTONAGON COUNTY, MICHIGAN

Date: DECEMBER 2025	Revision Date:	
Drawn By: DAT	Checked By: GMB	Project: 23W200

Appendix A

White Pine Copper Climate Data and Climate Change/Resiliency Memorandum

Memorandum

2121 Innovation Court, Suite 100
P.O. Box 5095
De Pere, WI 54115-5095
(920) 497-2500
foth.com

March 19, 2025

TO: Amanda Zeidler, White Pine Copper LLC

CC: Kris Benusa, Foth Infrastructure & Environment, LLC
Steve Donohue, Foth Infrastructure & Environment, LLC
Jakob Wartman, Foth Infrastructure & Environment, LLC

FR: Brian Symons, P.E., Foth Infrastructure & Environment, LLC

RE: White Pine Copper Climate Data and Climate Change/Resiliency

Foth Infrastructure & Environment, LLC (Foth) is supporting White Pine Copper LLC (WPC) in the development of the White Pine North Project (Project) from its Prefeasibility Study through Permitting. As the Project moves forward, one of the initial tasks for developing a site-wide water balance and a site-wide water model is to obtain updated climate data. Based on recent experience and regulatory expectations, it is expected that stakeholders will want to see that the Project has assessed climate change in water models to understand potential impacts and changes based on future climate scenarios and projection. To advance this task, Foth has obtained climate data from the Project on-site weather station, two regional locations, and a National Oceanic and Atmospheric Administration – National Weather Service (NWS) weather station. Data were pulled from the NWS weather station as this location also had climate change predictions for precipitation and temperature. Foth is providing this memorandum (memo) to summarize these data and document future collaboration with the water modeling team, Tetra Tech, Inc. (Tetra Tech), to finalize the completeness and usability of these data for the Project water modeling tasks. This memo documents:

- the data pulled from Project weather station,
- the publicly available data,
- climate change/climate resiliency data, and
- next steps.

White Pine Copper Project Meteorological Station Data

The Project meteorological station (met station) is located in a cleared, unobstructed area approximately 244 meters (800 feet) south of the decline to the historic underground workings and 1.6 kilometers (1 mile) northeast of the community of White Pine, Michigan. The met station is surrounded by a security fence with a locking gate that provides an adequate level of security for the equipment. Access to the site is via paved road and provides sufficient all-season access.

Data collected by the WPC met station was downloaded on January 26, 2025, and includes met station data from September 7, 2022 15:10 to January 26, 2025, 11:10 as referenced in Table 1.

These data include the following types of parameters in 56 columns of data at 10-minute and/or hourly intervals:

- Site/sampling point/data source
- Date/time
- Sample type
- Precipitation
- Wind speed/wind direction
- Temperature
- Relative humidity/dew point
- Irradiance/solar radiation
- Barometric pressure
- Battery

Regional Weather Data

The NWS web site (https://www.weather.gov/wrh/Climate?wfo=dlh) was used to locate and download regional weather data as referenced in Table 1. The downloaded precipitation and temperature daily data were from three regional weather stations:

- USC00200718-BERGLAND_DAM
- USC00206220-ONTONAGAN_6_SE
- USC00204104-IRONWOOD, MI

These regional data sources provided daily or monthly data for the date ranges and types of weather data shown in Table 1.

Climate Change/Climate Resiliency Data

The objective of the climate resiliency data development for use in water modeling is to provide appropriate consideration of climate change effects on various components of hydrological cycle (such as precipitation and extreme precipitation events, storm durations and intensities, temperature, and evapotranspiration). The anticipated changes have a bearing on the various modeling projections used to evaluate adequacy of infrastructure designs, capital expense, and operating costs that are associated with changes in precipitation pattern, intensity, frequency, and duration.

Climate change data were downloaded from three sources:

- National Oceanic and Atmospheric Administration – Climate Explorer (https://crt-climate-explorer.nemac.org/).

- U.S. Environmental Protection Agency – Climate Resilience Evaluation and Awareness Tool Climate Scenarios (https://epa.maps.arcgis.com/apps/MapSeries/index.html?appid=3805293158d54846a29f750d63c6890e).

- Climate Mapping for Resilience and Adaptation, v1.3.2 (https://livingatlas.arcgis.com/assessment-tool/explore/details).

These three data sources, the years for climate projections, and the types of data provided, are summarized in Table 1.

Future discussion with Tetra Tech and WPC will define how climate change is incorporated into the Project given the current understanding of the projections and the operating life of the Project. Based on a consensus from Tetra Tech and WPC, it is envisioned that the climate resiliency data will be provided for the WPC water modeling by:

1. Developing publicly available projections:

    - Summarizing climate data from WPC and regional meteorological stations.
    - Obtaining climate change model projections from the following sources of state county specific data:
        - National Oceanic and Atmospheric Administration – Climate Explorer
        - U.S. Environmental Protection Agency – Climate Resilience Evaluation and Awareness Tool Climate Scenarios
        - Climate Mapping for Resilience and Adaptation

2. Conducting a review of model input variables and interrelated model dependencies that are potentially affected by climate change.

3. Establishing climate-related (precipitation, temperature, evaporation, and storm intensity and duration) input parameter ranges and uncertainty ranges.

4. Considering factors of safety and uncertainties.

It may be advantageous for Foth to proceed with Step 1 in advance of climate change discussions to better understand future projections and how they would potentially apply to the Project.

Next Steps

The climate data referenced in this memo and listed in Table 1 are representative of historic and projected climate data for the WPC facility and surrounding area. The data files listed are attached as electronic data files with this memo. On WPC's approval, Foth can begin Step 1 and schedule a meeting with Tetra Tech and WPC to discuss how climate change/climate resiliency is handled with the Project.

Attachments

Table 1 Summary of Selected Regional Climate Data Sources
Electronic Data Files

Table

Table 1
Summary of Selected Regional Climate Data Sources
White Pine Copper, Ontonagan County, MI

Weather Station Location	Weather Station ID	Distance (mi) from White Pine Copper	Data File Name	Data Start Date	Data End Date	Type of Weather Data	Comment
Local Site Data							
White Pine Copper, MI	On-Site Weather Station	0	Met Data-Export Data - Grid - Full.csv	9/7/2022	1/26/2025	precipitation, wind speed/direction, temperature, relative humidity/dew point, irradiance/solar radiation, barometric pressure	Data include 56 columns of information at 10-minute and/or hourly intervals.
Regional Weather Data							
USC00200718	Bergland Dam, MI	11 (S)	USC00200718-BERGLAND DAM, MI - 3937853.xlsx	1/1/2000	1/1/2005	DAPR, MDPR, PRCP, SNOW, SNWD, TMAX, TMIN, TOBS	
			USC00200718-BERGLAND_DAM-precipitation-inch.csv	11/19/1888	2/20/2025	min, max, normal_min, normal_max	Missing data 11/20/1988-6/30/1909; 8/3/1909-9/30/1909; 4/1/1925 - 8/31/1942
			USC00200718-BERGLAND_DAM-temperature-degreeF.csv	11/19/1888	2/20/2025	precipitation, precipitation_norma (cumulative monthly)	Missing data 1/2/1989-6/30/1989; 1/2/1926-9/30/1938; 4/1/1925 -
USC00206220	Ontonagan County (6 SE), MI	18 (SW)	USC00206220-ONTONAGAN_6_SE-temperature-degreeF.csv	10/1/1977	11/16/2014	min, max, normal_min, normal_max	Missing data: 1/2/1999-1/31/1999
			USC00206220-ONTONAGON_6_SE-precipitation-inch.csv	10/1/1977	11/16/2014	precipitation, precipitation_norma (cumulative monthly)	Missing data: 8/1/1994-8/31/1994, 1/1/1999-1/31/1999
USC00204104	Ironwood, MI	35 (NW)	USC00204104-IRONWOOD, MI - 3940313.xlsx	1/1/1902	12/31/2024	DAPR, DASF, MDPR, MDSF, PRCP, SNOW, SNWD, TMAX, TMIN, TOBS	
			USC00204104-IRONWOOD, MI Historic Monthly Precip.pdf	1/1/1902	12/31/2024	Historic daily average precipitation (in) by month.	PDF Table.
			USC00204104-IRONWOOD, MI Historic Daily Ave Temp.pdf	1/1961	12/2024	Historic daily average temperature (°F) by month.	PDF Table.
			USC00204104-IRONWOOD, MI Historic Daily Max Temp.pdf	1/1961	2/2025	Historic daily max temperature (°F) by month.	PDF Table.
Climate Change Data							
White Pine Copper, MI	White Pine Copper, MI	0	CREATE Projections White Pine Copper.pdf	2035	2060	Change in Ave Annual Precip; Ave Annual Temp, and 100-yr Storm Intensity	Hot/Dry, Central, and Warm/Wet scenarios for 2035 and 2060
USC00206220	Ontonagon County, MI	County-wide	CMRA Ontonagan County MI Projections.pdf	2015	2099	Drought (Average annual total precipitation); Extreme Heat (Annual single hightest max temp)	Drought and extreme heat data for Early, Mid, and Late Century
USC00206220	Ontonagan County (6 SE), MI	18 (SW)	Ontonagon_County-annual-proj_mod-pcpn.csv; Climate Explor	2025	2075	RCP45 and RCP85 max, min, mean	Monthly for 2025, 2050, and 2075
			Ontonagon_County-monthly-proj_mod-tmax.csv; Climate Explo	2005	2099	RCP45 and RCP85 max, min, mean	Monthly for 2025, 2050, and 2075

Notes:
Prepared by: BDS1
Checked by: JMW3

CMRA = Climate Mapping for Resilience and Adaptation; https://livingatlas.arcgis.com/assessment-tool/search
CREAT = U.S. Environmental Protection Agency – Climate Resilience Evaluation and Awareness Tool Climate Scenarios; https://epa.maps.arcgis.com/apps/MapSeries/index.html?appid=3805293158d54846a29f750d63c6890e.
Climate Explorer – National Oceanic and Atmospheric Administration. The Climate Explorer; https://crt-climate-explorer.nemac.org/

Electronic Data Files

Met Data-Export Data - Grid - Full.csv
USC00200718-BERGLAND DAM, MI - 3937853.xlsx
USC00200718-BERGLAND_DAM-precipitation-inch.csv
USC00200718-BERGLAND_DAM-temperature-degreeF.csv
USC00206220-ONTONAGAN_6_SE-temperature-degreeF.csv
USC00206220-ONTONAGON_6_SE-precipitation-inch.csv
USC00204104-IRONWOOD, MI - 3940313.xlsx
USC00204104-IRONWOOD, MI Historic Monthly Precip.pdf
USC00204104-IRONWOOD, MI Historic Daily Ave Temp.pdf
USC00204104-IRONWOOD, MI Historic Daily Max Temp.pdf
CREATE Projections White Pine Copper.pdf
CMRA Ontonagan County MI Projections.pdf
Ontonagon_County-annual-proj_mod-pcpn.csv; Climate Explorer
Ontonagon_County-monthly-proj_mod-tmax.csv; Climate Explorer

Appendix B

Baseline Surface Water and Groundwater Quality Data

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

July & August 2024

September 16, 2024

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Sampling Field Results

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in July and August, 2024 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's June 21, 2024 *Proposal for Groundwater and Surface Water Sampling*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). Figure 1, *Groundwater Monitoring Locations* and Figure 2, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between July 24 and August 6, 2024, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (Figure 1) using low-flow sampling procedures with a peristaltic or bladder pump depending on the depth to groundwater. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in *Table 1, Groundwater Field Parameter Summary*. Copies of the field sheets are provided in *Appendix A, Field Sheets*.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were collected in the field using FlipMate™ 50 Filtration System 0.45 um filters. To ensure low level mercury certification, MSG contracted with Trace Analytical Laboratories, Inc. (Trace) to randomly test five percent (%) of the filters for low level mercury. Trace also provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was used for sample collection. A copy of the laboratory analysis report is included in *Appendix B, Low Level Mercury Laboratory Confirmation*. Teflon tubing used during sample collection was retained for reuse during subsequent sampling events and is stored at MSG's Houghton, Michigan office. Existing poly tubing encountered in most of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection.

MSG collected a total of 23 groundwater samples, plus one complete field blank, duplicate from MW-41, matrix spike/matrix spike duplicate from MW-5A, and equipment blank from the bladder pump which was used to sample MW-31, SMW-1, and SMW-3. Please note that during the sampling event, MSG encountered a thick black particulate material in MW-35. MW-35 was purged to remove this material, drawing down the groundwater level in the well, and was then sampled later in the day without further purging. Photographs of the encountered material in the tubing are included at the end of *Appendix C, Photograph Log.*

SURFACE WATER GAUGING AND SAMPLING

Between July 22 and August 7, 2024, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (Figure 2) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein. An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements. Copies of the stream gauging field sheets and stream flow calculation sheets are included in Appendix A. Calculated stream flows are summarized in *Table 2, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in Table 2. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw from the surface water body and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were collected in the field using FlipMate™ 50 Filtration System 0.45 um filters as described above.

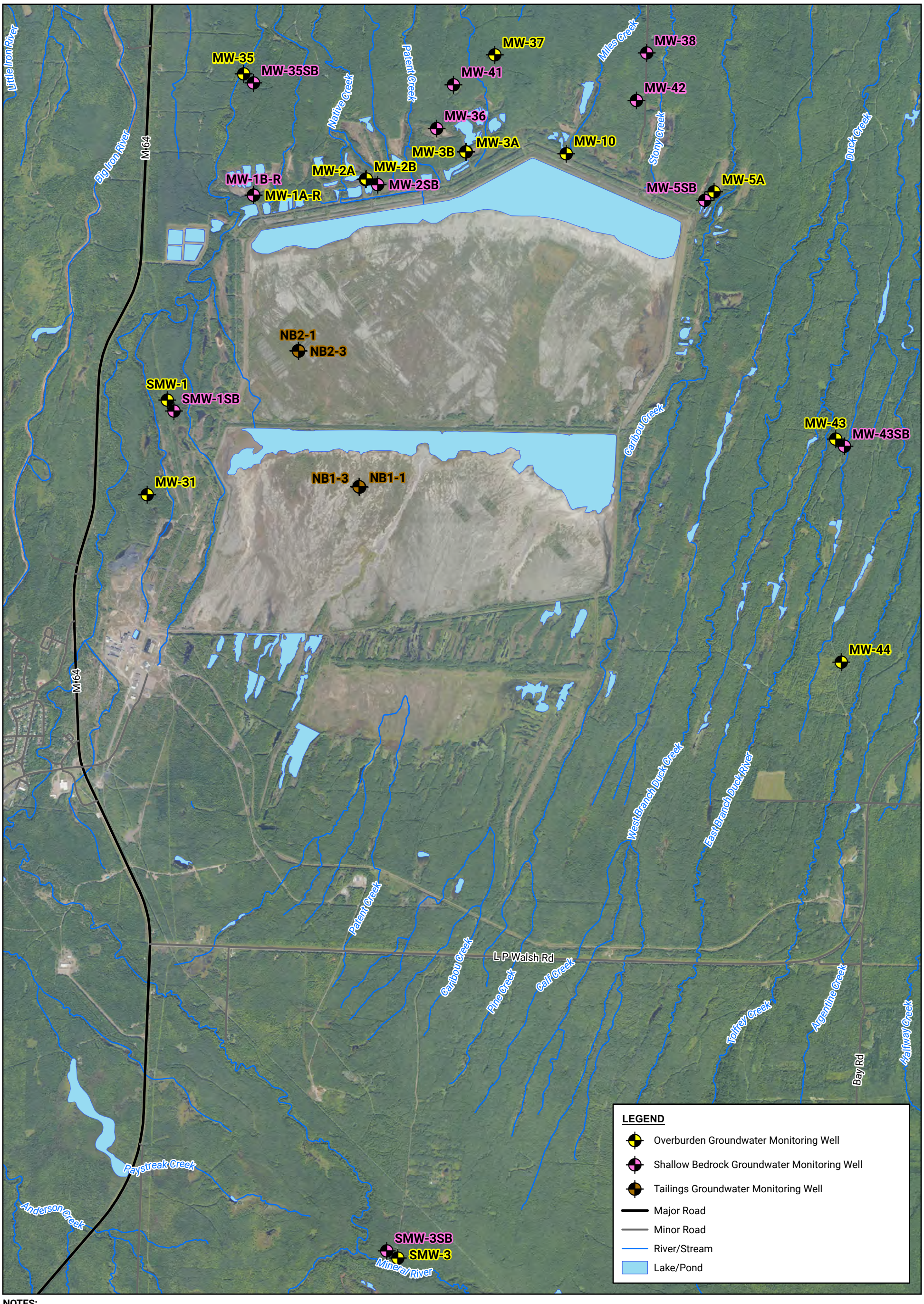
MSG collected a total of 23 surface water samples. One complete field blank and a duplicate from PRC-01 were also collected. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. At locations ARC-03, DKC-01, DKC-02, MLC-01, and PTC-01 the stream bed was observed to be dry with no water flow. Photographs of the stream gauging and sampling locations are provided in Appendix C.

MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,

Jed Chrestensen, P.E.
Project Manager

FIGURES



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 1,500 3,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 1

GROUNDWATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 24W005	

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Lake Superior
LKS-01
LKS-02
PTC-01
NTC-01
MLC-01
PNC-04
DKC-03
CBR-02
M 64
MLR-03
PRC-02
Native Creek
Patent Creek
Miles Creek
Stony Creek
Duck Creek
ARC-03
BNC-01
Little Iron River
Mineral River
Perch Creek
Ash Creek
PNC-03
DKC-02
PRC-01
BNW-01
TBN-01
Townline Rd
L P Walsh Rd
Floodwood River
MLR-02
Big Iron River
M 64
TBS-01
Caribou Creek
ARC-02
PNC-02
Little Cranberry River
SBD-01
SBW-01
West Branch Duck Creek
East Branch Duck River
Argentine Creek
Halfway Creek
Town Line Creek
Cranberry River
Potato Farm Rd
ARC-01
PNC-01
L P Walsh Rd
DKC-01
CBR-01
MLR-01
Patent Creek
Caribou Creek
Pine Creek
Calf Creek
Tolfrey Creek
Paystreak Creek
Federal Forest Road 630
Cranberry River
Old M 64
Anderson Creek
Mineral River
Sleepy Creek
Sandhill Creek
Bush Creek

LEGEND

- Water Quality Sampling Location
- Water Quality and Flow Monitoring Station
- Water Quality and Continuous Flow Monitoring Station
- Major Road
- Minor Road
- River/Stream
- Lake/Pond

NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 2,500 5,000 Feet

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WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:	
Drawn By: BJW1	Checked By: JMW3	Project: 23W200

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TABLES

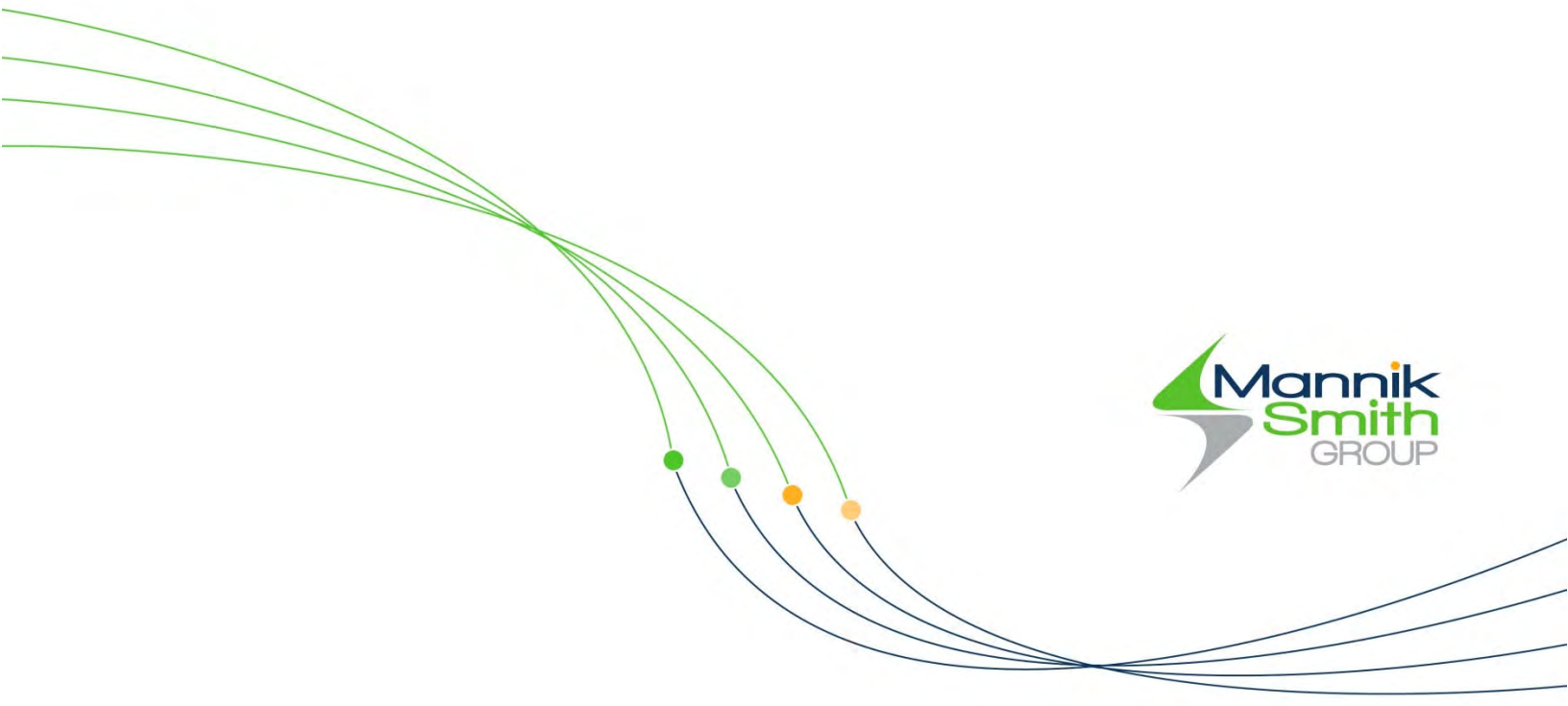


TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLING DATE	SAMPLE LOCATION	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
7/31/2024	MW-1A-R	9.51	16.98	8.05	136	0.659	1.7	0.42	100
7/31/2024	MW-1B-R	9.56	20.90	7.85	-124	0.707	23.7	0.00	100
8/1/2024	MW-2A	10.59	14.18	7.30	-189	1.230	72.8	0.24	200
8/1/2024	MW-2B	11.21	15.70	7.15	-3	0.937	6.8	0.33	200
7/30/2024	MW-3A	10.94	21.99	7.13	-46	1.580	103.0	0.20	200
7/30/2024	MW-3B	10.74	13.46	7.19	-216	0.903	0.0	0.19	200
7/30/2024	MW-5A	11.84	18.60	7.36	72	1.340	0.0	1.66	200
8/6/2024	MW-10	5.82	14.77	6.10	-24	2.330	0.4	0.00	150
7/30/2024	MW-31	50.71	12.47	8.10	51	0.359	>1000	0.00	200
7/28/2024	MW-35	16.63	--	--	--	--	--	--	--
7/28/2024	MW-36	6.83	19.53	7.17	-207	0.668	261.0	0.58	200
7/28/2024	MW-37	14.11	24.22	7.34	-69	0.438	89.8	0.85	200
7/28/2024	MW-38	12.31	11.70	7.66	115	0.525	0.0	0.94	200
7/24/2024	MW-41	7.90	14.99	7.40	164	0.539	78.1	9.10	200
7/28/2024	MW-42	5.62	16.37	8.50	51	0.354	0.0	3.45	200
7/31/2024	MW-43	13.61	18.32	8.02	-33	0.419	274.00	0.4	200
7/31/2024	MW-44	15.10	13.58	7.69	-194	0.614	50.6	0.06	200
7/24/2024	NB1-1	5.61	13.20	6.86	-128	1.290	0.0	0.16	200
7/24/2024	NB1-3	6.21	13.64	7.89	-273	1.000	54.2	0.31	200
7/24/2024	NB2-1	6.45	17.91	6.93	-166	2.260	62.4	0.32	200
7/24/2024	NB2-3	6.25	13.99	6.54	-42	1.110	0.0	0.00	200
7/25/2024	SMW-1	23.52	9.22	8.21	-84	0.403	73.0	14.06	200
8/6/2024	SMW-3	27.68	10.84	8.14	88	0.262	11.1	5.41	--

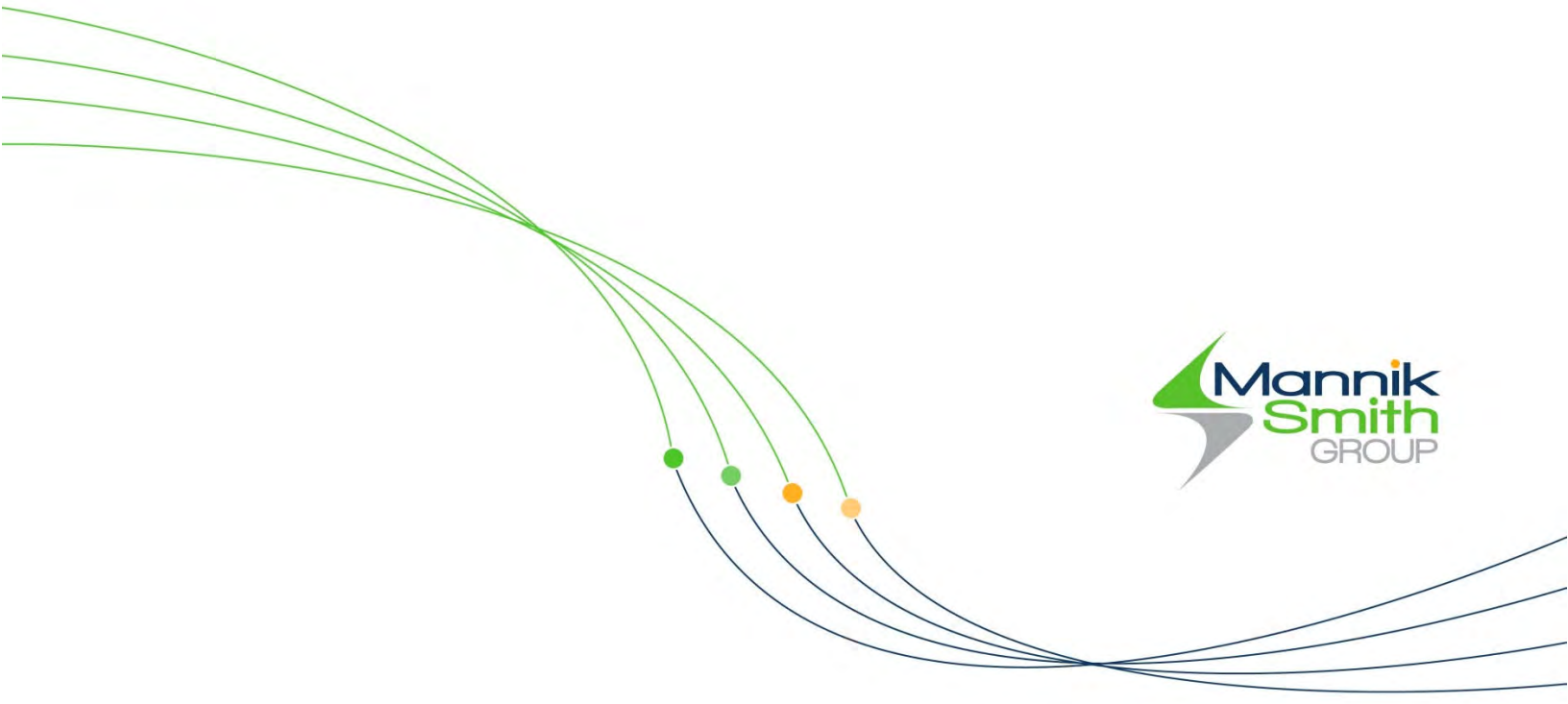
Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLING DATE	SAMPLE LOCATION	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)
7/31/2024	ARC-01	6.89	0.129	20.68	122	2.80	8.0	0.008	1.42
7/31/2024	ARC-02	7.72	0.153	19.32	120	1.93	25.8	0.125	11.50
8/6/2024	ARC-03	--	--	--	--	--	--	Dry	--
7/31/2024	BNW-01	7.12	0.184	28.77	111	7.80	2.1	No Stream Gauging	
8/6/2024	BNC-01	7.39	0.179	22.83	115	8.21	0.0	No Stream Gauging	
7/29/2024	CBR-01	8.16	0.242	24.54	177	8.90	0.0	No Stream Gauging	
8/6/2024	CBR-02	7.97	0.246	26.38	92	6.70	0.0	No Stream Gauging	
7/29/2024	DKC-01	--	--	--	--	--	--	Dry	--
8/7/2024	DKC-02	--	--	--	--	--	--	Dry	--
8/6/2024	DKC-03	7.52	0.213	25.28	151	5.21	0.0	No Stream Gauging	
7/28/2024	LKS-01	8.34	0.116	20.87	191	11.12	0.1	No Stream Gauging	
7/28/2024	LKS-02	7.69	0.112	21.91	172	11.11	0.0	No Stream Gauging	
8/6/2024	MLC-01	--	--	--	--	--	--	Dry	--
7/25/2024	MLR-01	7.72	0.148	15.35	150	7.52	0.1	0.311	16.33
7/25/2024	MLR-02	7.41	0.247	19.59	114	7.46	7.4	0.489	28.17
7/25/2024	MLR-03	7.79	0.245	15.87	186	9.27	0.0	0.468	28.17
7/22/2024	NTC-01	7.85	0.208	17.79	39	9.55	34.7	0.074	4.83
7/29/2024	PNC-01	6.53	0.119	21.62	171	2.13	1.2	0.008	2.17
7/29/2024	PNC-02	7.29	0.293	27.19	72	4.63	41.00	0.068	10.84
8/1/2024	PNC-03	7.79	0.453	20.11	105	4.62	0.0	0.023	4.00
8/7/2024	PNC-04	7.35	0.481	17.08	157	9.73	0.0	0.011	5.34
7/22/2024	PRC-01	8.22	0.972	24.40	110	9.33	47.9	1.011	6.17
7/22/2024	PRC-02	8.05	0.984	19.87	132	11.13	10.6	0.805	5.17
8/7/2024	PTC-01	--	--	--	--	--	--	Dry	--
7/29/2024	SBD-01	7.65	0.224	28.82	123	5.98	89.5	No Stream Gauging	
7/29/2024	SBW-01	8.17	0.152	26.48	138	5.96	0.0	No Stream Gauging	
7/31/2024	TBN-01	7.13	0.866	25.82	108	8.52	4.4	No Stream Gauging	
7/28/2024	TBS-01	7.55	0.754	28.43	120	10.25	0.0	No Stream Gauging	

Notes:
-- = Not Collected
mg/L = Milligrams per liter
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

APPENDIX A
FIELD SHEETS



LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1A-R

DATE: 7-31-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC, MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUNNY, ~ 85°F

DEPTH OF WELL: 22 FT

DEPTH TO WATER LEVEL: 9.51

PURGE START TIME: 15:15

SCREEN LENGTH: 10 FT

WELL DIAMETER: 2-INCH

TUBING TYPE: F&P

CASING TYPE: PVC

MONITORING EQUIPMENT: HORIBA, PERISTALTIC PUMP

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
15:17		22.47	8.54	130	0.597	1.5	0.88			
15:21		19.61	8.33	132	0.627	~~0.52~~ 1.3	0.52			
15:26	14.55	17.71	8.16	134	0.648	2.0	0.30			
15:30	15.04	16.98	8.05	136	0.659	1.7	0.42		~100	

SAMPLE ID: MW-1A-R_20240731 AND MW-1A-R_20240731_FBLL

SAMPLE DATE: 7-31-24

SAMPLE TIME: 15:45

Notes: STARTED SAMPLE COLLECTION AT 15:35 DUE TO DRAWDOWN. COMPLETE AT 16:30.

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1B-R

DATE: 7-31-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC, MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUNNY, ~85°F

DEPTH OF WELL: 30 FT

DEPTH TO WATER LEVEL: 9.56

PURGE START TIME: 16:35

SCREEN LENGTH: 5 FT

WELL DIAMETER: 2 INCH

TUBING TYPE: FEP

CASING TYPE: PVC

MONITORING EQUIPMENT: HORIBA, PERISTALTIC PUMP

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
16:37		24.25	8.22	-37	0.638	18.3	0.33			
16:41	10.53	23.61	8.05	-117	0.650	17.6	0.00			
16:44	10.66	21.91	7.92	-125	0.685	21.6	0.00			
16:48	10.73	20.90	7.85	-124	0.707	23.7	0.00		~100	

SAMPLE ID: MW-1B-R_20240731 AND MW-1B-R_20240731_FBL

SAMPLE DATE: 7-31-24

SAMPLE TIME: 17:00

Notes: STARTED SAMPLE COLLECTION AT 16:52 DUE TO DRAWDOWN.

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2A

DATE: 8-1-24

PROJECT #: 401.2400718.000

PERSONNEL: EC + JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Overcast, 75°F

DEPTH OF WELL: 32.06

DEPTH TO WATER LEVEL: 10.59

PURGE START TIME: 10:00

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED ~~(Gallons)~~ mL	PUMP RATE (ml/min)	NOTES
10:02	11.15	17.10	7.50	-151	1.16	73.1	2.25	0	200	
10:05	11.44	15.53	7.31	-180	1.20	32.9	0.81	600	↓	
10:08	11.71	15.16	7.31	-185	1.21	41.7	0.62	1200		
10:11	12.33	14.78	7.30	-189	1.22	64.1	0.43	1800		
10:14	12.70	14.57	7.30	-190	1.22	67.1	0.36	2100		
10:17	13.25	14.28	7.30	-189	1.23	70.5	0.29	2400		
10:21	13.78	14.22	7.30	-189	1.23	71.9	0.25	2700		
10:24	14.11	14.18	7.30	-189	1.23	72.8	0.24	300	↓	
				Sample collected at 10:30						

SAMPLE ID: MW2A_20240801 & MW-21_20240801_FBLK

SAMPLE DATE: 8-1-24

SAMPLE TIME: 10:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2B

DATE: 8-1-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Overcast, 75°F

DEPTH OF WELL: 18.43

DEPTH TO WATER LEVEL: 11.21

PURGE START TIME: 10:55

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED ~~(Gallons)~~ mL	PUMP RATE (ml/min)	NOTES
10:57	11.29	16.73	7.30	-51	1.09	59.4	2.23	0	200	
11:00	11.33	16.26	7.19	-39	1.01	24.7	1.31	600		
11:03	11.38	15.65	7.17	-27	0.966	21.5	0.87	1200		
11:06	11.42	15.49	7.16	-22	0.956	17.8	0.73	1800		
11:09	11.47	15.57	7.15	-18	0.939	19.5	0.55	2100		
11:12	11.51	15.63	7.15	-14	0.935	17.2	0.50	2400		
11:15	11.64	15.68	7.15	-10	0.934	17.7	0.43	2700		
11:18	11.68	15.71	7.15	-7	0.938	9.0	0.42	3000		
11:21	11.78	15.64	7.15	-5	0.938	7.0	0.36	3300		
11:24	11.86	15.76	7.15	-3	0.937	6.8	0.33	3600		

SAMPLE ID: MW-2B_20240801 & MW-2B_20240801_FBLL

SAMPLE DATE: 8-1-24

SAMPLE TIME: 11:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 07-30-24

PERSONNEL: EC & JD

OBSERVERS:

SAMPLE LOCATION: MW-3A

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

DEPTH OF WELL: 33.56

SCREEN LENGTH:

TUBING TYPE: Teflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 10.94

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 1630

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1633		30.17	7.20	-63	1.44	9.3	0.60		200	
1636	11.44	27.84	7.17	-50	1.45	99.7	0.25			
1639		26.67	7.15	-47	1.47	82.2	0.30			
1642	12.66	25.37	7.13	-46	1.50	106	0.27			
1645		24.37	7.12	-44	1.53	107	0.25			
1648		23.65	7.12	-45	1.54	104	0.24			
1652	12.99	23.11	7.12	-44	1.56	104	0.22			
1655		22.40	7.12	-46	1.57	106	0.22			
1658	13.25	21.99	7.13	-46	1.58	103	0.20			

SAMPLE ID: MW-3A_20240730 & MW-3A_20240730_FB-L

SAMPLE DATE: 07-30-24

SAMPLE TIME: 1910

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3B

DATE: 07-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JO+EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: cloudy, 83°F

DEPTH OF WELL: 15.75

DEPTH TO WATER LEVEL: 10.74

PURGE START TIME: 17:45

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
17:45	10.74	14.37	7.21	-208	0.894	2.2	4.39		200	
17:48	10.96	13.88	7.19	-212	0.907	0.0	0.71			
17:51	10.99	13.71	7.19	-214	0.906	0.0	0.31			
17:54	11.02	13.69	7.19	-215	0.906	0.0	0.29			
17:57	11.08	13.48	7.19	-216	0.903	0.0	0.23			
18:00	11.14	13.46	7.19	-216	0.903	0.0	0.19		↓	

SAMPLE ID: MW-3B-20240730 & MW-3B_20240730_FD

SAMPLE DATE: 07-30-24

SAMPLE TIME: 18:10

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-5A

DATE: 07-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: 31.42

DEPTH TO WATER LEVEL: 11.84

PURGE START TIME: 1212

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1215	11.51	19.23	7.55	52	1.34	0.0	4.79		200	
1218	11.73	20.04	7.38	68	1.31	0.0	1.81		↓	
1221	11.99	18.60	7.36	72	1.34	0.0	1.66		↓	

SAMPLE ID: MW-5A_20240730 & MW-5A_20240730_FBLL

SAMPLE DATE: 7-30-24

SAMPLE TIME: 12:30

Notes: MS/MSD collected

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8-6-24

PERSONNEL: JBC, MMS

OBSERVERS: —

SAMPLE LOCATION: MW-10

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY, ~60°F

DEPTH OF WELL: 20 FT

SCREEN LENGTH: 1/4 x 3/8 FEP LINED POLY

TUBING TYPE:

MONITORING EQUIPMENT: HORIBA U113199X AND U59486X

DEPTH TO WATER LEVEL: 5.82 FT

WELL DIAMETER: 2-INCH

CASING TYPE: PVC

PURGE START TIME: 09:14

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
09:19	6.46									
09:26	6.61	16.10	6.71	4	2.35	5.3	1.60			
09:30	6.64	15.97	6.18	-4	2.32	3.3	0.75			
09:33	6.72	15.47	6.10	-14	2.29	0.4	0.14			
09:38	6.73	14.96	6.08	-20	2.32	0.3	0.00			
09:41	6.73	14.77	6.10	-24	2.33	0.4	0.00		150	

SAMPLE ID: MW-10_20240806

SAMPLE DATE: 8-6-24

SAMPLE TIME: 09:30

Notes: COMPLETED SAMPLING AT 10:25

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-31

DATE: 07-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: 73.44

DEPTH TO WATER LEVEL: 50.71

PURGE START TIME: 0842

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0842		16.37	8.57	113	0.347	>1000	2.24		200	
0845		13.45	8.38	85	0.352	>1000	0.39			
0848		12.59	8.27	46	0.356	>1000	0.10			
0852	50.72	12.04	8.20	22	0.360	>1000	0.02			cleaned flow cell
0854		13.65	8.23	117	0.349	>1000	1.34			
0857		12.84	8.16	70	0.356	>1000	0.09			
0900		12.82	8.15	48	0.355	>1000	0.14			
0903		12.75	8.19	38	0.358	>1000	0.16			
0906	50.68	12.61	8.18	46	0.358	>1000	0.03			
0909		12.47	8.10	51	0.359	>1000	0.00			

SAMPLE ID: MW-31_20240730 & MW-31_20240730_FBLL

SAMPLE DATE: 07-30-24

SAMPLE TIME: 09:20

Notes: extremely Turbid water, needed many Flip filters

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-36

DATE: 07-28-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 89° F, Sunny

DEPTH OF WELL: 18.22

DEPTH TO WATER LEVEL: 6.83

PURGE START TIME: 17:20

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1725	7.67	21.70	7.20	-201	0.643	401	0.90		200	
1728	8.59	19.53	7.17	-207	0.668	261	0.58		200	

SAMPLE ID: MW-36_20240728 & MW-36_20240728_FBLL

SAMPLE DATE: 07-28-24

SAMPLE TIME: 17:30

Notes: Sampled easy based on drawdown in other wells

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-37

DATE: 07-28-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 85°F, Sunny

DEPTH OF WELL: 21.42

DEPTH TO WATER LEVEL: 14.11

PURGE START TIME: 15:50

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
15:55	22.31	24.27	7.50	4	0.438	104	1.88		200	
15:58	23.07	24.22	7.34	-69	0.438	89.8	0.85		200	

SAMPLE ID: MW-37_20240728 & MW-37_2024078_FBLL

SAMPLE DATE: ~~16:10~~ 7-28-24

SAMPLE TIME: 16:10

Notes: -Sampled early based on drawdown in other wells

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-38

DATE: 07-28-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 82°F, Sunny

DEPTH OF WELL: 30.70

DEPTH TO WATER LEVEL: 12.31

PURGE START TIME: 13:09

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1312	13.21	15.02	7.70	118	0.496	0.0	2.66		200	
1315	14.11	12.56	7.64	119	0.516	0.0	1.18			
1318	14.89	11.91	7.65	119	0.523	0.0	1.18			
1321	16.08	11.79	7.65	118	0.524	0.0	1.10			
1324	16.90	11.72	7.65	117	0.525	0.0	1.10			
1327		11.70	7.66	115	0.525	0.0	0.94			

SAMPLE ID: MW-38_20240728 & MW-38_20240728_FBLL

SAMPLE DATE: 07-28-24

SAMPLE TIME: 1330

Notes: Nearly drew well dry

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 07-24-24
PERSONNEL: JD & EC
OBSERVERS:

SAMPLE LOCATION: MW-41
PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: Sunny, 75°F

DEPTH OF WELL: 29.62
SCREEN LENGTH:
TUBING TYPE: Teflon
MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 7.90
WELL DIAMETER: 2"
CASING TYPE: PVC

PURGE START TIME: 1700

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1703	7.90	17.76	7.96	90	0.520	66.3	13.50		200	
1706	10.39	14.58	7.70	117	0.538	119	11.46			
1709	11.11	14.22	7.46	143	0.539	96.5	10.23			
1712	11.81	14.08	7.43	149	0.538	92.5	9.86			
1715	12.68	14.61	7.43	153	0.538	78.0	9.39			
1718	13.20	15.10	7.40	158	0.537	82.9	9.15			
1721	13.65	15.19	7.41	161	0.538	79.0	9.11			
1724	14.14	14.99	7.40	164	0.539	78.1	9.10			
			Sample collected at 17:30							

SAMPLE ID: MW-41_20240724 & DUP-01-GW_20240724
SAMPLE DATE: 07-24-24
SAMPLE TIME: 17:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ~~MW-38~~ MW-42

DATE: 07/28/24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 80°F, Sunny

DEPTH OF WELL: 29.90

DEPTH TO WATER LEVEL: 5.62

PURGE START TIME: 11:36

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
11:39		27.60	3.95	121	0.353	201	5.04		200	
1142		16.00	8.01	61	0.360	12.5	3.78		↓	
1145	8.46	16.15	8.24	56	0.355	7.1	3.62			
1148	9.94	16.14	8.42	51	0.354	0.0	3.53			
1151		16.19	8.48	51	0.354	0.0	3.51			
1154		16.37	8.50	51	0.354	0.0	3.45			

SAMPLE ID: ~~MW-38~~ MW-42_20240728 & ~~MW-38~~ MW-42_20240728_FBLL

SAMPLE DATE: 07-28-2024

SAMPLE TIME: 12:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-43

DATE: 7-31

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS: Amanda Zeidler

SITE CONDITIONS: Sunny, 80°F

DEPTH OF WELL: 28.13

DEPTH TO WATER LEVEL: 13.61

PURGE START TIME: 12:15

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (~~Gallons~~ mL)	PUMP RATE (ml/min)	NOTES
1220 ~~11:20~~	14.81	20.97	8.09	-19	0.415	684	0.88	0	200	
1225 ~~11:25~~	15.71	20.09	8.04	-23	0.411	403	0.22	600		
1230 ~~11:30~~	16.03	19.59	8.03	-26	0.415	404	0.15	1200		
1235 ~~11:35~~	17.18	18.91	8.02	-30	0.417	354	0.07	1500		
1240 11:40	17.60	18.40	8.02	-32	0.417	313	0.05	1800		
1245 11:45	18.15	18.32	8.02	-33	0.419	274	0.04	2100		
			Sample collected at 13:00							

SAMPLE ID: MW-43_20240731 & MW-43_20240731_FBLK

SAMPLE DATE: 7-31-24

SAMPLE TIME: 13:00

Notes: Amanda Zeidler of WPC & land owner present for sample

* Will not be accessible in wet/muddy conditions

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-44

DATE: 7-31-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD + EC

SITE ADDRESS: White Pine, MI

OBSERVERS: Amanda Zeidler

SITE CONDITIONS: Sunny, 70°F

DEPTH OF WELL: 39.35

DEPTH TO WATER LEVEL: 15.10

PURGE START TIME: 10:20

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED ~~(Gallons)~~ mL	PUMP RATE (ml/min)	NOTES
10:25	16.04	17.12	7.62	-222	0.681	703	1.41	0	200	
10:28	16.11	16.53	7.52	-226	0.673	375	0.78	600		
10:31	16.19	16.18	7.60	-229	0.665	304	0.63	1200		
10:34	16.21	15.85	7.67	-222	0.658	276	0.56	1800		
10:37	16.23	15.60	7.68	-217	0.639	193	0.82	2100		
10:41	16.25	15.35	7.69	-213	0.625	151	0.62	2400		
10:44	16.25	13.57	7.70	-211	0.661	187	0.19	2700		
10:47	16.25	13.48	7.70	-209	0.648	137	0.16	3000		
10:51	16.25	13.31	7.70	-205	0.643	116	0.13	3300		
10:54	16.25	13.35	7.69	-200	0.631	83.9	0.18	3600		
10:57	16.25	13.44	7.70	-197	0.622	74.1	0.08	3900		
11:00	16.25	13.51	7.70	-196	0.617	63.8	0.07	4200		
11:03	16.25	13.58	7.69	-194	0.614	50.6	0.06	4500		
				Sample	collected at		11:10			

SAMPLE ID: MW-44_20240731 & MW-44_20240731_FDLL

SAMPLE DATE: 7-31-24

SAMPLE TIME: 11:10

Notes: Amanda Zeidler of WPC present for sample

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: NB1-1

DATE: 07-24-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & SC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 63°F, Sunny

DEPTH OF WELL: ~~6.89~~ 6.69

DEPTH TO WATER LEVEL: 5.61

PURGE START TIME: 0904

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0908	6.04	13.20	6.86	-128	1.29	0.0	0.16		200	

SAMPLE ID: NB1-1_20240724 & NB1-1_20240724_FBL2

SAMPLE DATE: 07-24-24

SAMPLE TIME: 0910

Notes: well was running dry. Sampled before calibration. Bubbles in tube and low water level.

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: NB1-3

DATE: 07-24-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 70°F

DEPTH OF WELL: 34.56

DEPTH TO WATER LEVEL: 6.21

PURGE START TIME: 8:53

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon 1/4"

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
8:55	6.21	14.92	8.08	-186	0.998	46.4	4.12	0	200	
9:00	8.87	13.40	7.87	-260	0.997	36.8	0.61	0.25	200	
9:05	9.41	13.34	7.88	-270	1.01	51.0	0.39	0.5		
9:10	10.10	13.58	7.88	-273	1.01	57.3	0.34	0.75		
9:15	10.52	13.64	7.89	-273	1.00	54.2	0.31	1.0		
				Sample collected at			9:20			

SAMPLE ID: NB1-3_20240724

SAMPLE DATE: 7-24-24

SAMPLE TIME: 9:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NBR-1

DATE: 7.24.24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: ~~12.90~~ 12.20

DEPTH TO WATER LEVEL: 6.45

PURGE START TIME: 12:39

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1242	6.78	20.00	6.91	-150	2.18	23.1	1.92		200	
1245	7.11	19.29	6.89	-158	2.25	31.2	0.85			
1248	7.13	18.65	6.89	-161	2.29	43.5	0.57			
1251	7.15	18.21	6.91	-163	2.29	58.3	0.37			
1254	7.18	18.06	6.92	-165	2.28	60.2	0.31			
1257	7.21	17.91	6.93	-166	2.26	62.4	0.32			

SAMPLE ID: NB2-1_20240724 & NB2-1_20240724_FBLL

SAMPLE DATE: 07-24-24

SAMPLE TIME: 1300

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: NB2-3

DATE: 07-24-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: 32.60

DEPTH TO WATER LEVEL: 6.25

PURGE START TIME: 1345

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1350		18.12	7.54	-57	1.04	0.0	0.42		200	
1355	8.29	16.70	6.93	-57	1.03	0.0	0.0			
1400		15.29	6.79	-67	1.07	0.0	0.0			
1405	9.72	14.90	6.62	-50	1.09	0.0	0.0			
1410		14.16	6.57	-47	1.11	0.0	0.0			
1415	10.90	13.99	6.54	-42	1.11	0.0	0.0		↓	

SAMPLE ID: NB2-3_20240724 & NB2-3_20240724_FBLK

SAMPLE DATE: 07-24-24

SAMPLE TIME: 14:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-01

DATE: 07-23-2024

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 66°F, rainy

DEPTH OF WELL: 38.13 Ft

DEPTH TO WATER LEVEL: 23.52

PURGE START TIME: 12:28

SCREEN LENGTH: 10Ft

WELL DIAMETER: 3in

TUBING TYPE: 10FT

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U10932TX & Geo Control Pro Bladder Pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1233	23.68	11.71	7.88	-144	0.494	14.6	~~18.4~~	12.85	200	
1238	23.98	10.49	7.95	-132	0.425	46.3	13.56			
1243	24.51	10.45	7.99	-128	0.422	21.5	13.90			
1248	24.93	9.61	8.05	-119	0.419	51.6	13.58			
1253	25.29	9.52	8.17	-114	0.407	20.2	14.53			
1258	26.23	9.37	8.11	-98	0.395	51.3	14.38			
1303	27.11	9.18	8.20	-97	0.407	27.9	14.04			
1308	27.36	9.20	8.23	-91	0.404	41.3	13.48			
1313	27.82	9.22	8.21	-84	0.403	75.0	14.06			

SAMPLE ID: SMW-01_20240723 & SMW-01_20240723_FBLL

SAMPLE DATE: 07-23-2024

SAMPLE TIME: 13:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8-6-24

PERSONNEL: JBC, MMS

OBSERVERS: —

SAMPLE LOCATION: SMW-3

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY, ~70°F

DEPTH OF WELL: 55 FT

SCREEN LENGTH: 15 FT

TUBING TYPE:

DEPTH TO WATER LEVEL: 27.68 FT

WELL DIAMETER: 3-INCH

CASING TYPE: PVC

PURGE START TIME: 1300

MONITORING EQUIPMENT: HORIBA, BLADDER PUMP

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1305	27.99	15.21	8.46	72	0.260	133	11.28			
1308	28.18	12.12	8.24	91	0.266	32.3	8.46			
1311	28.26	11.42	8.22	89	0.265	5.5	6.73			
1314	28.37	11.13	8.20	88	0.263	3.8	5.87			
1317	28.44	11.03	8.14	89	0.262	5.9	5.49			
1320	28.49	10.84	8.14	88	0.262	11.1	5.41			

SAMPLE ID: SMW-3-20240806

SAMPLE DATE: 8-6-24

SAMPLE TIME: 13:00

Notes: FINISHED PUMPING AT 14:00

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

DATE: 07-31/24

PERSONNEL: EC & JD

OBSERVERS:

SAMPLE LOCATION: ARC-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH: 6.89

CONDUCTIVITY: 0.129 µs/cm MS/cm

TEMPERATURE: 20.68 °C

ORP: 122 mV

DO: 2.80 mg/l

TURBIDITY: 8.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0ft					
1 (at water edge)	1ft 2in	1/2 ft	0.016			
2	1ft 5in	0.55ft	0.016			
3	1ft 8in	0.6ft	0.006			
4	1ft 11in	0.6ft	0.016			
5	2ft 2in	0.6sft	0.005			
6	2ft 5in	0.5ft	0.010			waters edge
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.007967

TOTAL WIDTH (ft): 1.25

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

*Need Waders!

DATE: 07-31-24

PERSONNEL: EL & JD

OBSERVERS:

SAMPLE LOCATION: ARC-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 70°F, Sunny

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH: 7.72

CONDUCTIVITY: 0.153 mS/cm

TEMPERATURE: 19.32 °C

ORP: 120 mV

DO: 1.93 mg/l

TURBIDITY: 25.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0ft					
1 (at water edge)	8in	0.1				
2	1ft 6in	0.4	0.010			
3	2ft 2in	0.7	0.017			
4	2ft 10in	2.3ft		0.005	0.017	
5	3ft 6in	2.4ft		0.009	0.002	
6	4ft 2in	2.1ft		0.009	0.012	
7	4ft 10in	2.0ft		0.003	0.021	
8	5ft 6in	1.9ft		0.001	0.015	
9	6ft 2in	1.4ft	0.014			
10	6ft 10in	1.2ft	0.012			
11	7ft 6in	1.2ft	0.020			
12	8ft 2in	0.6ft	0.001			
13	8ft 10in	0.6ft	0.003			
14	9ft 6in	0.55ft	0.004			
15	10ft 2in	0.6ft	0.008			
16	10ft 10in	0.5ft	0.001			
17	11ft 6in	0.3ft	0.007			
18	12ft 2in	0.15ft	0.007			waters edge
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.062567

TOTAL WIDTH (ft): 11.50

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 7-31-24

PERSONNEL: JBC

OBSERVERS: -

SAMPLE LOCATION: BNW-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY, ~85°F

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT: HORIBA

pH: 7.12

CONDUCTIVITY: 0.184 ms/cm

TEMPERATURE: 28.77 °C

ORP: 111 mV

DO: 7.80 mg/l

TURBIDITY: 2.1 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	NO GAUGING					
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

DATE: 8/6/24

PERSONNEL: JBC, MMS

OBSERVERS: —

SAMPLE LOCATION: BNC-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY, ~70°F

GUAGE READING START: _____

GUAGE READING END: _____

AVERAGE GUAGE HEIGHT: _____

MONITORING EQUIPMENT: HoRiBA

pH: 7.39

CONDUCTIVITY: 0.179 ~~uS/cm~~ mS/cm

TEMPERATURE: 22.83 °C

ORP: 115 mV

DO: 8.21 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging Stream

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 07-29-24

PERSONNEL: EC & JD

OBSERVERS:

SAMPLE LOCATION: CBR-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 75°F

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.16

CONDUCTIVITY: 0.242 µs/cm mS/cm

TEMPERATURE: 24.54 °C

Horiba U-52

ORP: 177 mV

DO: 8.90 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7		NO GAUGING				
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

* cannot access location by ATV if wet/muddy

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8-6-24

PERSONNEL: JBC, MMS

OBSERVERS: —

SAMPLE LOCATION: CBR-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY, ~ 75°F

GUAGE READING START: _____

GUAGE READING END: _____

AVERAGE GUAGE HEIGHT: _____

MONITORING EQUIPMENT: _____

pH: 7.97

CONDUCTIVITY: 0.246 ~~µs/cm~~ mS/cm

TEMPERATURE: 26.38 °C

ORP: 92 mV

DO: 6.70 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Stream Gauging

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

DATE: 8/6/24

PERSONNEL: JBC, mms

OBSERVERS: —

SAMPLE LOCATION: DKC-03

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY, ~75°F

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT: HORIBA

pH	7.52		ORP	151	mV
CONDUCTIVITY	0.213 ~~ps/cm~~ mS/cm		DO	5.21	mg/l
TEMPERATURE	25.28 °C		TURBIDITY	0.0	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Stream Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 7/28/24

PERSONNEL: JBC MMS

OBSERVERS:

SAMPLE LOCATION: LKS-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY ~85°F

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT: HORIBA

pH	8.34		ORP	191	mV
CONDUCTIVITY	0.116 ~~mS/cm~~	mS/cm	DO	11.12	mg/l
TEMPERATURE	20.87	°C	TURBIDITY	0.1	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Stream Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 7/28/24

PERSONNEL: JBB MMS

OBSERVERS: —

SAMPLE LOCATION: LKS-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY ~85°F

GUAGE READING START: _____

GUAGE READING END: _____

AVERAGE GUAGE HEIGHT: _____

MONITORING EQUIPMENT: HORIBA

pH: 7.69

CONDUCTIVITY: 6.112 ~~µs/cm~~ mS/cm

TEMPERATURE: 21.91 °C

ORP: 172 mV

DO: 11.11 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Stream Gauging

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-01

DATE: 7-25-24

PROJECT #: 401.2400718.000

PERSONNEL: JD & EC

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 65°F

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.72

CONDUCTIVITY: 0.148 µs/cm ms/cm

TEMPERATURE: 15.35 °C

ORP: 150 mV

DO: 7.52 mg/l

TURBIDITY: 0.1 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0					
1 (at water edge)	1'	0.1	0.062			
2	2'	0.2	0.014			
3	3'	0.2	0.073			
4	4'	0.25	0.043			
5	5'	0.35	0.052			
6	6'	0.5	0.022			
7	7'	0.5	0.026			
8	8'	0.6	0.110			
9	9'	0.6	0.103			
10	10'	0.35	0.017			
11	11'	0.5	0.019			
12	12'	0.45	0.069			
13	13'	0.25	0.050			
14	14'	0.4	0.008			
15	15'	0.5	0.049			
16	16'	0.5	0.034			
17	17'	0.3	0.029			
18	17'2" water's edge					
19	Last stake 21'5"					
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.158375

TOTAL WIDTH (ft): 16.17

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-02

DATE: 7-25-24

PROJECT #: 401.2400718.000

PERSONNEL: JD & EC

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 55°F

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.41

CONDUCTIVITY: 0.247 ~~µs/cm~~ mS/cm

TEMPERATURE: 14.59 °C

ORP: 114 mV

DO: 7.46 mg/l

TURBIDITY: 7.37 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0					
1 (at water edge)	3'	0.1	0.010			
2	5'	0.1	0.010			
3	7	0.2	0.028			
4	9	0.15	0.081			
5	11	0.6	0.066			
6	13	0.2	0.010			
7	15	0.3	0.061			
8	17	0.25	0.056			
9	19	0.3	0.043			
10	21	0.4	0.018			
11	23	0.35	0.131			
12	25	0.3	0.126			
13	27	0.2	0.123			
14	29	0.25	0.087			
15	water edge 31	0.1	0.023			
16	33 Final stake					
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.24655

TOTAL WIDTH (ft): 28

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-03

DATE: 7.25-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 70°F

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH	7.79		ORP	186	mV
CONDUCTIVITY	0.245 ~~µs/cm~~ mS/cm		DO	9.27	mg/l
TEMPERATURE	15.87 °C		TURBIDITY	0.0	NTU

Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0					
1 (at water edge)	2'	0.1	0.015			
2	4'	0.15	0.023			
3	6'	0.2	0.048			
4	8'	0.25	0.050			
5	10'	0.3	0.081			
6	12'	0.55	0.124			
7	14'	0.3	0.132			
8	16'	0.4	0.068			
9	18'	0.1	0.089			
10	20'	0.2	0.110			
11	22'	0.3	0.021			
12	24'	0.3	0.005			
13	26'	0.35	0.021			
14	28'	0.3	0.007			water edge
15	30'	0.1	0.000			rebar
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.2345

TOTAL WIDTH (ft): 26

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: NTC-01

DATE: 07/22/2024
PERSONNEL: JD & EC
OBSERVERS:

PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: 66°F, Sunny

GUAGE READING START:
GUAGE READING END:
AVERAGE GUAGE HEIGHT:
MONITORING EQUIPMENT: OTT MF Pro, Horiba
GeoTech peristaltic pump

pH: 7.85
CONDUCTIVITY: 0.208 ~~µs/cm~~ mS/cm
TEMPERATURE: 17.79 °C
ORP: 39 mV
DO: 9.55 mg/l
TURBIDITY: 34.7 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ~~ft~~	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0	0	0	0	
1 (at water edge)	7in	0	0	0	0	
2	1ft	0.20	0.012			
3	~~1~~ 1ft 7in	0.35	0.024			
4	2ft 1in	0.40	0.017			
5	2ft 7in	0.45	0.050			
6	3ft 1in	0.30	0.123			
7	3ft 7in	0.35	0.154			
8	4ft 1in	0.25	0.022			
9	4ft 7in	0.42	0.026			
10	5ft 0in	0.01	0.009			
11	5ft 5in	0	0			
12	6ft 7in					Other rebar
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.037099

TOTAL WIDTH (ft): ~~4ft 10in~~ 4.83

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample Time: 10:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-01

DATE: 07-29-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 74°F, Sunny

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH: 6.53

CONDUCTIVITY: 0.119 ~~µs/cm~~ mS/cm

TEMPERATURE: 21.62 °C

Horiba U-52

ORP: 171 mV

DO: 2.13 mg/l

TURBIDITY: 1.2 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0					
1 (at water edge)	8"	0.1	0.007			
2	11"	0.2	0.006			
3	1'2"	0.3	0.006			
4	1'5"	0.3	0.012			
5	1'8"	0.3	0.020			
6	1'11"	0.35	0.033			
7	2'2"	0.35	0.013			
8	2'5"	0.3	0.003			
9	2'8" (Water's edge)	0.3	0.003			
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.004046

TOTAL WIDTH (ft): 2

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Waders required

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

SAMPLE LOCATION: PNC-02

DATE: 07-29-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD & EC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-50

pH: 7.29

CONDUCTIVITY: 0.293 ~~mS/cm~~ µS/cm

TEMPERATURE: 27.19 °C

ORP: 72 mV

DO: 4.63 mg/l

TURBIDITY: 41.4 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0					
1 (at water edge)	1ft 6in	0.1	0.003			
2	2ft 2in	0.5	0.010			
3	2ft 10in	0.9	0.002			
4	3ft 6in	1.1	0.012			
5	4ft 2in	1.25	0.008			
6	4ft 10in	1.2	0.004			
7	5ft 6in	1.5	0.008			
8	6ft 2in	1.1	0.010			
9	6ft 10in	1.0	0.010			
10	7ft 6in	1.0	0.001			
11	8ft 2in	0.9	0.005			
12	8ft 10in	0.8	0.025			
13	9ft 6in	0.7	0.002			
14	10ft 2in	0.6	0.008			
15	10ft 10in	0.3	0.006			
16	11ft 6in	0.2	0.001			
17	12.2in	0.1	0.006			edge of water
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.03426

TOTAL WIDTH (ft): 10.67

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-03

DATE: 08/01/24
PERSONNEL: EL & JD
OBSERVERS:

PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: 68°F, Cloudy

GUAGE READING START:
GUAGE READING END:
AVERAGE GUAGE HEIGHT:

pH: 7.79
CONDUCTIVITY: 0.453 ~~µs/cm~~ MS/cm
TEMPERATURE: 20.11 °C

ORP: 105 mV
DO: 4.62 mg/l
TURBIDITY: 0.0 NTU

MONITORING EQUIPMENT:

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	10in	0.1	0.00			
2	1ft 2in	0.15	0.001			
3	1ft 6in	0.2	0.052			
4	1ft 10in	0.3	0.025			
5	2ft 2in	0.4	0.030			
6	2ft 6in	0.4	0.033			
7	2ft 10in	0.3	0.040			
8	3ft 2in	0.25	0.032			
9	3ft 6in	0.25	0.005			
10	3ft 10in	0.2	0.010			
11	4ft 2in	0.1	0.004			
12	4ft 6in	0.1	0.007			~~edge~~
13	4ft 10in	0.1	0.00			edge of water
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.0112667

TOTAL WIDTH (ft): 4

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8-7-24

PERSONNEL: JBC, JD

OBSERVERS: —

SAMPLE LOCATION: PNC-04

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUN, ~70°F

GUAGE READING START: _____

GUAGE READING END: _____

AVERAGE GUAGE HEIGHT: _____

MONITORING EQUIPMENT: _____

pH: 7.35

CONDUCTIVITY: 0.481 ~~mS~~ µS/cm

TEMPERATURE: 17.08 °C

Horiba U-52

ORP: 157 mV

DO: 9.73 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0.1	0.00			
1 (at water edge)	4"	0.1	0.052			
2	8"	0.15	0.002			
3	1'	~~0.2~~				
4	1'4"	0.2	0.003			
5	1'8"	0.2	0.010			
6	2'	0.2	0.012			
7	2'4"	0.3	0.028			
8	2'8"	0.35	0.013			
9	3'	0.4	0.005			
10	3'4"	0.4	0.008			
11	3'8"	0.3	0.004			
12	4'	0.3	0.001			
13	4'4"	0.2	0.002			
14	4'8"	0.2	0.002			
15	5'	0.2	0.004			
16	5'4"	0.1	0.001			
17	5'8"	0.1	0.001			
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.0055365

TOTAL WIDTH (ft): 5.42

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.

SAMPLE LOCATION: PRC-01

DATE: 7-22-24

PROJECT #: 401.2400718.000

PERSONNEL: JD, EC

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: cloudy, 70°

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH ~~7.55~~ 8.22

CONDUCTIVITY 0.972 ~~µs/cm~~ mS/cm

TEMPERATURE 24.40 °C

Horiba U-52

ORP 110 mV

DO 9.33 ~~10.5 %~~ mg/l

TURBIDITY 47.9 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0					
1 (at water edge)	1'6"	0.1	0.162			
2	2'	0.2	0.516			
3	2'6"	0.7	0.653			
4	3'	0.7	1.034			
5	3'6"	0.6	0.746			
6	4'	0.6	0.285			
7	4'6"	0.55	0.058			
8	5"	0.4	0.090			
9	5'6"	0.4	0.050			
10	6'	0.25	0.034			
11	6'6"	0.2	0.028			
12	7'	0.1	0.054			
13	water edge 7'6"	0.1	0.014			
14	Rebar 8'1"					
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) ~~0.507~~ 0.515025

TOTAL WIDTH (ft) 6ft

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC ~~PRC~~-02

DATE: 07-22-24

PERSONNEL: JD & EC

OBSERVERS:

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 75°F

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.05

CONDUCTIVITY: ~~984~~ 0.984 ~~µs/cm~~ mS/cm

TEMPERATURE: 19.87 °C

Horiba U-50

ORP: 132 mV

DO: 11.13 mg/l

TURBIDITY: 10.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	~~Right~~ 0	~~0.1~~	~~0.02~~			
~~1 (at water edge)~~	~~10~~ ~~4'~~ ~~80~~					
2	Waters edge 8"	0.1	0.004			
3	1'	0.35	0.087			
4	1' 4"	0.4	0.351			
5	1' 8"	0.45	0.354			
6	2'	0.7	0.232			
7	2' 4"	0.75	0.372			
8	2' 8"	0.8	0.379			
9	3'	0.7	0.399			
10	3' 4"	0.8	0.437			
11	3' 8"	0.6	0.413			
12	4'	0.3	0.355			
13	4' 4"	0.3	0.361			
14	4' 8"	0.3	0.296			
15	5'	0.25	0.380			
16	5' 4"	0.2	0.316			
17	5' 8" Water edge	0.1	0.035			
18	~~50 6' water edge~~					
19	7' 2" Rebar					
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.402342

TOTAL WIDTH (ft): 5' 0"

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

DATE: 07-29-24

PERSONNEL: JD & EC

OBSERVERS:

SAMPLE LOCATION: SW30-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH	7.65		ORP	123	mV
CONDUCTIVITY	0.224 ~~µs/cm~~ mS/cm		DO	5.98	mg/l
TEMPERATURE	28.82 °C		TURBIDITY	89.5	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SBW

SAMPLE LOCATION: ~~SAMW~~-01

DATE: 07-29-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

GUAGE READING START:

GUAGE READING END:

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.17

CONDUCTIVITY: 0.152 ~~uS/cm~~ mS/cm

TEMPERATURE: 26.48 °C

ORP: 138 mV

DO: 5.96 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: TBN-01

DATE: 7-31-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Sunny, ~80°F

GUAGE READING START: _____

GUAGE READING END: _____

AVERAGE GUAGE HEIGHT: _____

MONITORING EQUIPMENT: _____

pH: 7.13

CONDUCTIVITY: 0.866 ms/cm

TEMPERATURE: 25.82 °C

ORP: 108 mV

DO: 8.52 mg/l

TURBIDITY: 4.4 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	NO GAUGING					
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
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DATE: 7/28/24

PERSONNEL: JBC MMS

OBSERVERS: —

SAMPLE LOCATION: TBS-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY ~ 85°F

GUAGE READING START: _____

GUAGE READING END: _____

AVERAGE GUAGE HEIGHT: _____

MONITORING EQUIPMENT: HORIBA

pH: 7.55

CONDUCTIVITY: 0.754 µs/cm

TEMPERATURE: 28.43 °C

ORP: 120 mV

DO: 10.25 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	NO GAUGING					
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample Location:	ARC-01	
Date:	7/31/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 74°F	
pH:	6.89	
Conductivity:	0.129	ms/cm
Temperature:	20.68	°C
ORP:	122	mV
DO:	2.8	mg/L
Turbidity:	8	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1	0	0				0.000
2	1.17	0.5	0.016				0.002
3	1.42	0.55	0.016				0.002
4	1.67	0.6	0.006				0.001
5	1.92	0.6	0.01				0.002
6	2.17	0.6	0.005				0.001
7	2.42	0.5	0.01			water edge	0.001

Stream Flow:	0.008	cfs
Total Width:	1.42	ft

Sample Location:	ARC-02
Date:	7/31/2024
Personnel:	EC and JD
Site Conditions:	Sunny, 70°F
pH:	7.72
Conductivity:	0.153 ms/cm
Temperature:	19.32 °C
ORP:	120 mV
DO:	1.93 mg/L
Turbidity:	25.8 NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)	
	ft	ft	ft/s	ft/s	ft/s			
0 (at stake)	0	0	0					
1 (at water edge)	0.67	0.1	0				0.000	
2	1.50	0.4	0.01				0.003	
3	2.17	0.7	0.017				0.008	
4	2.83	2.3	0.011	0.005	0.017		0.017	**took average of 0.2d and 0.8d and put into the 0.6d column
5	3.50	2.4	0.0055	0.009	0.002		0.009	**took average of 0.2d and 0.8d and put into the 0.6d column
6	4.17	2.1	0.0105	0.009	0.012		0.015	**took average of 0.2d and 0.8d and put into the 0.6d column
7	4.83	2	0.012	0.003	0.021		0.016	**took average of 0.2d and 0.8d and put into the 0.6d column
8	5.50	1.9	0.008	0.001	0.015		0.010	**took average of 0.2d and 0.8d and put into the 0.6d column
9	6.17	1.4	0.014				0.013	
10	6.83	1.2	0.012				0.010	
11	7.50	1.2	0.02				0.016	
12	8.17	0.6	0.001				0.000	
13	8.83	0.6	0.003				0.001	
14	9.50	0.55	0.004				0.001	
15	10.17	0.6	0.008				0.003	
16	10.83	0.5	0.001				0.000	
17	11.50	0.3	0.007				0.001	
18	12.17	0.15	0.007			water edge	0.000	

Stream Flow:	0.124	cfs
Total Width:	11.50	ft

Sample Location:	MLR-01	
Date:	7/25/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 65°F	
pH:	7.72	
Conductivity:	0.148	ms/cm
Temperature:	15.35	°C
ORP:	150	mV
DO:	7.52	mg/L
Turbidity:	0.1	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	0.83	0	0				0.000
2	1.00	0.1	0.062				0.004
3	2.00	0.2	0.014				0.003
4	3.00	0.2	0.073				0.015
5	4.00	0.25	0.043				0.011
6	5.00	0.35	0.052				0.018
7	6.00	0.5	0.022				0.011
8	7.00	0.5	0.026				0.013
9	8.00	0.6	0.11				0.066
10	9.00	0.6	0.103				0.062
11	10.00	0.35	0.017				0.006
12	11.00	0.5	0.019				0.010
13	12.00	0.45	0.069				0.031
14	13.00	0.25	0.05				0.013
15	14.00	0.4	0.008				0.003
16	15.00	0.5	0.049				0.025
17	16.00	0.5	0.034				0.017
18	17.00	0.3	0.029				0.005
19	17.17	0	0			water edge	0.000
20	21.42					rebar	

Stream Flow:	0.311	cfs
Total Width:	16.33	ft

Sample Location:	MLR-02	
Date:	7/25/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 55°F	
pH:	7.41	
Conductivity:	0.247	ms/cm
Temperature:	14.59	°C
ORP:	114	mV
DO:	7.46	mg/L
Turbidity:	7.37	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	2.83	0	0				0.000
2	3.00	0.1	0.01				0.001
3	5.00	0.1	0.01				0.002
4	7.00	0.2	0.028				0.011
5	9.00	0.15	0.081				0.024
6	11.00	0.6	0.066				0.079
7	13.00	0.2	0.01				0.004
8	15.00	0.3	0.061				0.037
9	17.00	0.25	0.056				0.028
10	19.00	0.3	0.043				0.026
11	21.00	0.4	0.018				0.014
12	23.00	0.35	0.131				0.092
13	25.00	0.3	0.126				0.076
14	27.00	0.2	0.123				0.049
15	29.00	0.25	0.087				0.044
16	31.00	0.1	0.023			water edge	0.002
17	33.00					rebar	

Stream Flow:	0.489	cfs
Total Width:	28.17	ft

Sample Location:	MLR-03	
Date:	7/25/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 70°F	
pH:	7.79	
Conductivity:	0.245	ms/cm
Temperature:	15.87	°C
ORP:	186	mV
DO:	9.27	mg/L
Turbidity:	0	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1.83	0	0				0.000
2	2.00	0.1	0.015				0.002
3	4.00	0.15	0.023				0.007
4	6.00	0.2	0.048				0.019
5	8.00	0.25	0.05				0.025
6	10.00	0.3	0.081				0.049
7	12.00	0.55	0.124				0.136
8	14.00	0.3	0.132				0.079
9	16.00	0.4	0.068				0.054
10	18.00	0.1	0.089				0.018
11	20.00	0.2	0.11				0.044
12	22.00	0.3	0.021				0.013
13	24.00	0.3	0.005				0.003
14	26.00	0.35	0.021				0.015
15	28.00	0.3	0.007				0.004
16	30.00	0.1	0			edge of water	0.000

Stream Flow:	0.468	cfs
Total Width:	28.17	ft

Sample Location:	NTC-01	
Date:	7/22/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 66°F	
pH:	7.85	
Conductivity:	0.208	ms/cm
Temperature:	17.79	°C
ORP:	39	mV
DO:	9.55	mg/L
Turbidity:	34.7	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	0.58	0	0				0.000
2	1.00	0.2	0.012				0.001
3	1.58	0.35	0.024				0.005
4	2.08	0.4	0.017				0.003
5	2.58	0.45	0.05				0.011
6	3.08	0.3	0.123				0.018
7	3.58	0.35	0.154				0.027
8	4.08	0.25	0.022				0.003
9	4.58	0.42	0.026				0.005
10	5.00	0.01	0.009				0.000
11	5.42	0	0			water edge	0.000
12	6.58					rebar	

Stream Flow:	0.074	cfs
Total Width:	4.83	ft

Sample Location:	PNC-01	
Date:	7/29/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 74°F	
pH:	6.53	
Conductivity:	0.119	ms/cm
Temperature:	21.62	°C
ORP:	171	mV
DO:	2.13	mg/L
Turbidity:	1.2	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	0.5	0	0				0.000
2	0.67	0.1	0.007				0.000
3	0.92	0.2	0.006				0.000
4	1.17	0.3	0.006				0.000
5	1.42	0.3	0.012				0.001
6	1.67	0.3	0.02				0.002
7	1.92	0.35	0.033				0.003
8	2.17	0.35	0.013				0.001
9	2.42	0.3	0.003				0.000
10	2.67	0.3	0.003			water edge	0.000

Stream Flow:	0.008	cfs
Total Width:	2.17	ft

Sample Location:	PNC-02	
Date:	7/29/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 75°F	
pH:	7.29	
Conductivity:	0.293	ms/cm
Temperature:	27.19	°C
ORP:	72	mV
DO:	4.63	mg/L
Turbidity:	41.4	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1.33	0	0				0.000
2	1.50	0.1	0.003				0.000
3	2.17	0.5	0.01				0.003
4	2.83	0.9	0.002				0.001
5	3.50	1.1	0.012				0.009
6	4.17	1.25	0.008				0.007
7	4.83	1.2	0.004				0.003
8	5.50	1.5	0.008				0.008
9	6.17	1.1	0.01				0.007
10	6.83	1	0.01				0.007
11	7.50	1	0.001				0.001
12	8.17	0.9	0.005				0.003
13	8.83	0.8	0.025				0.013
14	9.50	0.7	0.002				0.001
15	10.17	0.6	0.008				0.003
16	10.83	0.3	0.006				0.001
17	11.50	0.2	0.001				0.000
18	12.17	0.1	0.006			water edge	0.000

Stream Flow:	0.068	cfs
Total Width:	10.84	ft

Sample Location:	PNC-03	
Date:	8/1/2024	
Personnel:	EC and JD	
Site Conditions:	Cloudy, 68°F	
pH:	7.79	
Conductivity:	0.453	ms/cm
Temperature:	20.11	°C
ORP:	105	mV
DO:	4.62	mg/L
Turbidity:	0.0	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	0.83	0.1	0				0.000
2	1.17	0.15	0.001				0.000
3	1.50	0.2	0.052				0.003
4	1.83	0.3	0.025				0.003
5	2.17	0.4	0.03				0.004
6	2.50	0.4	0.033				0.004
7	2.83	0.3	0.04				0.004
8	3.17	0.25	0.032				0.003
9	3.50	0.25	0.005				0.000
10	3.83	0.2	0.01				0.001
11	4.17	0.1	0.004				0.000
12	4.50	0.1	0.007				0.000
13	4.83	0.1	0			edge of water	0.000

Stream Flow:	0.023	cfs
Total Width:	4.00	ft

Sample Location:	PNC-04	
Date:	8/7/2024	
Personnel:	JBC and JD	
Site Conditions:	Sunny, 70°F	
pH:	7.35	
Conductivity:	0.481	ms/cm
Temperature:	17.08	°C
ORP:	157	mV
DO:	9.73	mg/L
Turbidity:	0.0	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	0.33	0.1	0				0.000
2	0.67	0.1	0.052				0.002
3	1.00	0.15	0.002				0.000
4	1.33	0.2	0.003				0.000
5	1.67	0.2	0.01				0.001
6	2.00	0.2	0.012				0.001
7	2.33	0.3	0.028				0.003
8	2.67	0.35	0.013				0.002
9	3.00	0.4	0.005				0.001
10	3.33	0.4	0.008				0.001
11	3.67	0.3	0.004				0.000
12	4.00	0.3	0.001				0.000
13	4.33	0.2	0.002				0.000
14	4.67	0.2	0.002				0.000
15	5.00	0.2	0.004				0.000
16	5.33	0.1	0.001				0.000
17	5.67	0.1	0.001			edge of water	0.000

Stream Flow:	0.011	cfs
Total Width:	5.34	ft

Sample Location:	PRC-01	
Date:	7/22/2024	
Personnel:	EC and JD	
Site Conditions:	Cloudy, 70°F	
pH:	8.22	
Conductivity:	0.972	ms/cm
Temperature:	24.4	°C
ORP:	110	mV
DO:	9.33	mg/L
Turbidity:	47.9	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1.33	0	0				0.000
2	1.5	0.1	0.162				0.005
3	2	0.2	0.516				0.052
4	2.5	0.7	0.653				0.229
5	3	0.7	1.034				0.362
6	3.5	0.6	0.746				0.224
7	4	0.6	0.285				0.086
8	4.5	0.55	0.058				0.016
9	5	0.4	0.09				0.018
10	5.5	0.4	0.05				0.010
11	6	0.25	0.034				0.004
12	6.5	0.2	0.028				0.003
13	7	0.1	0.054				0.003
14	7.5	0.1	0.014			water edge	0.000
15	8.08					rebar	

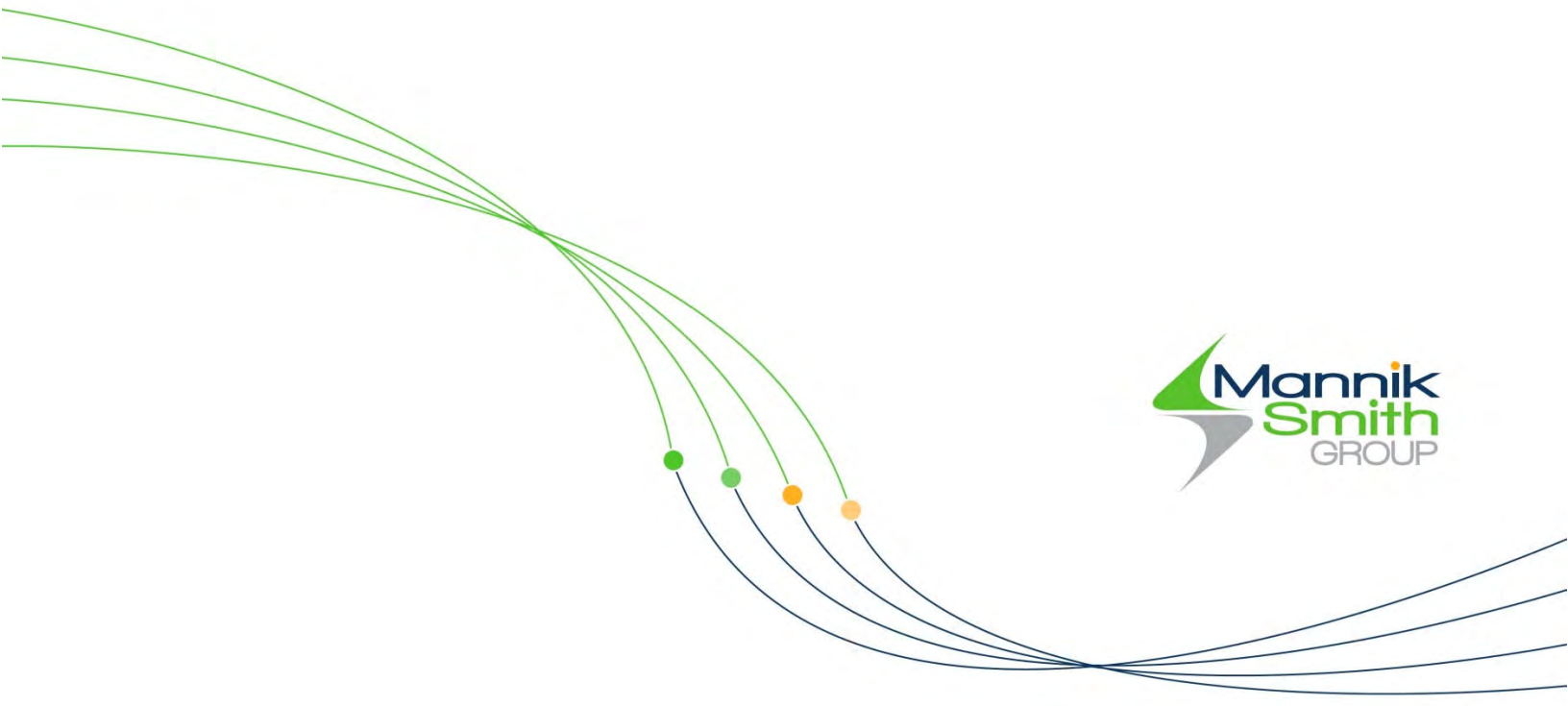
Stream Flow:	1.011	cfs
Total Width:	6.17	ft

Sample Location:	PRC-02	
Date:	7/22/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 75°F	
pH:	8.05	
Conductivity:	0.984	ms/cm
Temperature:	19.87	°C
ORP:	132	mV
DO:	11.13	mg/L
Turbidity:	10.6	NTU

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	0.5	0	0				0.000
2	0.67	0.1	0.004				0.000
3	1.00	0.35	0.087				0.010
4	1.33	0.4	0.351				0.047
5	1.67	0.45	0.354				0.053
6	2.00	0.7	0.232				0.054
7	2.33	0.75	0.372				0.093
8	2.67	0.8	0.379				0.101
9	3.00	0.7	0.399				0.093
10	3.33	0.8	0.437				0.117
11	3.67	0.6	0.413				0.083
12	4.00	0.3	0.355				0.035
13	4.33	0.3	0.361				0.036
14	4.67	0.3	0.296				0.030
15	5.00	0.25	0.38				0.032
16	5.33	0.2	0.316				0.021
17	5.67	0.1	0.035			water edge	0.001
18	7.17					rebar	

Stream Flow:	0.805	cfs
Total Width:	5.17	ft

APPENDIX B
LOW LEVEL MERCURY LABORATORY CONFIRMATION



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2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

July 10, 2024

Mr. Jed Chrestensen
Mannik & Smith Group
616 Sheldon Avenue, Suite 210
Houghton, MI 49931

RE: Trace Project 24G0193
Client Project White Pine Copper

Dear Mr. Chrestensen:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAP Accreditation, Trace certifies that these test results meet all requirements of the NELAP Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAP at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

Jon Mink
Senior Project Manager
Enclosures

PJLA Testing Accreditation# 1031

TNI EL V1:2016

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SAMPLE SUMMARY

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
24G0193-01	Teflon FEP Tubing 3/16"x1/4" 500'	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-02	Teflon FEP Tubing 3/16"x1/4" 100' #1	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-03	Teflon FEP Tubing 3/16"x1/4" 100' #2	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-04	Masterflex tubing size 15, 25' roll	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-05	Teflon Lined Poly Tubing 1/4"x3/8" 500' #1	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-06	Teflon Lined Poly Tubing 1/4"x3/8" 500' #2	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-07	FlipMate 50 Filtration System 5% Conf #1	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-08	FlipMate 50 Filtration System 5% Conf #2	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-09	FlipMate 50 Filtration System 5% Conf #3	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-10	FlipMate 50 Filtration System 5% Conf #4	Aqueous	Trace-JM	07/03/24	07/03/24 09:04
24G0193-11	FlipMate 50 Filtration System 5% Conf #5	Aqueous	Trace-JM	07/03/24	07/03/24 09:04

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-01 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: Teflon FEP Tubing 3/16"x1/4" 500' Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	acs	07/10/24	jma		

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-02 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: Teflon FEP Tubing 3/16"x1/4" 100' #1 Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	acs	07/10/24	jma		

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-03 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: Teflon FEP Tubing 3/16"x1/4" 100' #2 Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	acs	07/10/24	jma		

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-04 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: Masterflex tubing size 15, 25' roll Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	acs	07/10/24	jma		

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-05 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: Teflon Lined Poly Tubing 1/4"x3/8" 500' #1 Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	acs	07/10/24	jma		

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-06 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: Teflon Lined Poly Tubing 1/4"x3/8" 500' #2 Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	acs	07/10/24	jma		

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-07 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: FlipMate 50 Filtration System 5% Conf #1 Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, DISSOLVED										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	jma	07/10/24	jma	N	

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-08 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: FlipMate 50 Filtration System 5% Conf #2 Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, DISSOLVED										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	jma	07/10/24	jma	N	

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-09 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: FlipMate 50 Filtration System 5% Conf #3 Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, DISSOLVED										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	jma	07/10/24	jma	N	

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-10 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: FlipMate 50 Filtration System 5% Conf #4 Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, DISSOLVED										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	jma	07/10/24	jma	N	

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ANALYTICAL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

Trace ID: 24G0193-11 Matrix: Aqueous Date Collected: 07/03/24
Sample ID: FlipMate 50 Filtration System 5% Conf #5 Date Received: 07/03/24 09:04

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, DISSOLVED										
Analysis Method: EPA 1631E										
Batch: T153213										
Mercury	<0.20	ng/L	0.20	1	07/08/24	jma	07/10/24	jma	N	

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QUALITY CONTROL RESULTS

Trace Project ID: 24G0193
Client Project ID: White Pine Copper

QC Batch: T153213
QC Batch Method: EPA 1631E
Analysis Description: Mercury, Total, Low Level
Analysis Method: EPA 1631E

METHOD BLANK: T153213-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	ng/L	<0.20	0.20	
Mercury	ng/L	<0.20	0.20	

METHOD BLANK: T153213-BLK2

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	ng/L	<0.20	0.20	
Mercury	ng/L	<0.20	0.20	

METHOD BLANK: T153213-BLK3

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	ng/L	<0.20	0.20	
Mercury	ng/L	<0.20	0.20	

LABORATORY CONTROL SAMPLE: T153213-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	ng/L	5.00	5.48	110	77-122	
Mercury	ng/L	5.00	5.48	110	77-123	

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888-979-4469 Fax
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AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
RDL	Reporting Detection Limit
MCL	Maximum Contamination Limit
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the laboratory is not accredited by NELAP for this compound
NA	Indicates that the compound is not available.

NOTE: Samples for volatiles that have been extracted with a water miscible solvent were corrected for the total volume of the solvent/water mixture.
Solid matrices Method Blanks are at 100% solids as such results are the same wet or dry.

CERTIFICATE OF ANALYSIS

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE
ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

CHAIN-OF-CUSTODY RECORD

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

Phone 231.773.5998
Fax 888.979.4469
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Page 1 of 2

Trace ID No. 24G0193

Report Results To:

Company Name: The Mannik & Smith Group, Inc.	PO #:
Report To: Jed Chrestensen	Contact Name: Jed Chrestensen
Mailing Address: 616 Shelden Avenue, Suite 210	Billing Address (if different): Same
City, State, Zip Code: Houghton, MI 49931	City, State, Zip Code: Same
Office Phone: 906-487-7452 Cell Phone: 906-281-4726	Phone Number: Same
Email Address: jchrestensen@manniksmithgroup.com	Billing Email Address: Same

Bill To:

Trace Use:

Logged By: JM
Checked By:
Soil Volatiles Preserved (circle if applicable): MeOH Low Level Lab
Sampling Time:

Turnaround Requirements:

☒ Standard, 5-10 Days
☐ 3 Day*
☐ 1 Day*
*Results provided end of business day, requires prior approval.

Matrix Key:

S = Soil / Solid
W = Water
SL = Sludge
OI = Oil
WI = Wipes
LW = Liquid Waste
A = Air
D = Drinking Water

Project Name: White Pine Copper

Sampled By:

Trace No.	Date Collected	Time Collected	Client Sample ID	Metals Field Filtered (Y / N)	Matrix	Number of Containers	Preservation: Cool	HCl	HNO_3	H_2SO_4	NaOH	Other	Analysis Requested: Low Level Hg 1631E	Remarks	Possible Health Hazards?
	7/3/24		Teflon FEP Tubing 3/16"x1/4" 500'	N	W							X	X		
	7/3/24		Teflon FEP Tubing 3/16"x1/4" 100' #1	N	W							X	X		
	7/3/24		Teflon FEP Tubing 3/16"x1/4" 100' #2	N	W							X	X		
	7/3/24		Masterflex tubing size 15, 25' roll	N	W							X	X		
	7/3/24		Teflon lined Poly Tubing 1/4"x3/8" 500' #1	N	W							X	X		
	7/3/24		Teflon lined Poly Tubing 1/4"x3/8" 500' #2	N	W							X	X		
	7/3/24		FlipMate 50 Filtration System 5% Conf #1	Y	W							X	X		
	7/3/24		FlipMate 50 Filtration System 5% Conf #2	Y	W							X	X		
	7/3/24		FlipMate 50 Filtration System 5% Conf #3	Y	W							X	X		
	7/3/24		FlipMate 50 Filtration System 5% Conf #4	Y	W							X	X		

Please Sign	Released By	Received By	Date	Time	Released By	Received By	Date	Time
1)	Jane	Erica Mink	07-03	0910	2)			
3)					4)			

In executing this Chain of Custody, the client acknowledges the terms as set forth at www.trace-labs.com/terms-of-agreement.

☐ Check this box if you would not like your samples analyzed if received outside of the conditions outlined in the Trace Sample Acceptance Policy at www.trace-labs.com/downloads.

Form 70-Z.1

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TRACE
ANALYTICAL LABORATORIES, INC.

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CHAIN-OF-CUSTODY RECORD

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2241 Black Creek Road
Muskegon, MI 49444-2673

Phone 231.773.5998
Fax 888.979.4469
www.trace-labs.com

Trace ID No. 24G0193

Report Results To:

Company Name: The Mannik & Smith Group, Inc.	
Report To: Jed Chrestensen	
Mailing Address: 616 Shelden Avenue, Suite 210	
City, State, Zip Code: Houghton, MI 49931	
Office Phone: 906-487-7452	Cell Phone: 906-281-4726
Email Address: jchrestensen@manniksmithgroup.com	

Bill To:

PO #:	
Contact Name: Jed Chrestensen	
Billing Address (if different): Same	
City, State, Zip Code: Same	
Phone Number: Same	
Billing Email Address: Same	

Trace Use:

Logged By: JR	
Checked By:	
Soil Volatiles Preserved (circle if applicable):	
MeOH	Low Level / Lab
Sampling Time:	

Turnaround Requirements:

☒ Standard, 5-10 Days
☐ 3 Day*
☐ 1 Day*

**Results provided end of business day, requires prior approval.*

Matrix Key:

S = Soil / Solid
W = Water
SL = Sludge
Oil = Oil
WI = Wipes
LW = Liquid Waste
A = Air
D = Drinking Water

Project Name: White Pine Copper

Sampled By:

Trace No.	Date Collected	Time Collected	Client Sample ID	Metals Field Filtered (Y / N)	Matrix	Number of Containers	Preservation: Cool	HCl	HNO_3	H_2SO_4	NaOH	Other	Analysis Requested: Low Level Hg 1631E	Remarks	Possible Health Hazards?
	7/3/24		FlipMate 50 Filtration System 5% Conf #5	Y	W							X	X		

Please Sign	Released By	Received By	Date	Time	Released By	Received By	Date	Time
1)								
2)								
3)								
4)								

In executing this Chain of Custody, the client acknowledges the terms as set forth at www.trace-labs.com/terms-of-agreement.

☐ Check this box if you would not like your samples analyzed if received outside of the conditions outlined in the Trace Sample Acceptance Policy at www.trace-labs.com/downloads.

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APPENDIX C
PHOTOGRAPH LOG



Photo 1: ARC-01 facing north (08-27-2024)



Photo 2: ARC-02 facing west (07-31-2024)



Photo 3: ARC-03 facing south, no flow observed (08-06-2024)



Photo 4: BNC-01 facing east (08-06-2024)



Photo 5: BNW-01 facing north (07-31-2024)



Photo 6: CBR-01 facing north (07-28-2024)



Photo 7: CBR-02 facing north (08-06-2024)



Photo 8: DKC-01 facing north, no flow observed (07-28-2024)



Photo 9: DKC-02 facing south, no flow observed (08-07-2024)



Photo 10: DKC-03 facing southwest (08-06-2024)



Photo 11: LKS-01 facing northwest (07-28-2024)



Photo 12: LKS-02 facing northwest (07-28-2024)



Photo 13: MLC-01 facing southwest, no flow observed (08-06-2024)



Photo 14: MLR-01 facing east (07-25-2024)



Photo 15: MLR-02 facing southwest (07-25-2024)



Photo 16: MLR-03 facing southwest (07-25-2024)



Photo 17: NTC-01 facing southwest (07-22-2024)



Photo 18: PNC-01 facing north (07-28-2024)



Photo 19: PNC-02 facing north (07-28-2024)



Photo 20: PNC-03 facing east (08-01-2024)



Photo 21: PNC-04 facing north (08-07-2024)



Photo 22: PRC-01 facing northeast (07-22-2024)



Photo 23: PRC-02 facing south (07-22-2024)



Photo 24: PTC-01 facing west, no observed flow (08-07-2024)



Photo 25: SBD-01 facing southwest (07-28-2024)



Photo 26: SMW-01 facing west (07-28-2024)



Photo 27: TBN-01 facing southwest (07-31-2024)



Photo 28: TBS-01 facing west (07-28-2024)



Photo 29: Black particulate material encountered during MW-35 purging (07-28-2024)



Photo 30: Black particulate material encountered during MW-35 purging (07-28-2024)

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

September & October 2024

October 24, 2024

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Sampling Field Results for September/October 2024

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in September and October, 2024 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's June 21, 2024 *Proposal for Groundwater and Surface Water Sampling*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). Figure 1, *Groundwater Monitoring Locations* and Figure 2, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between September 25 and October 7, 2024, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (Figure 1) using low-flow sampling procedures with a peristaltic or bladder pump depending on the depth to groundwater. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in ***Table 1, Groundwater Field Parameter Summary***. Copies of the field sheets are provided in ***Appendix A, Field Sheets***.

616 Shelden Avenue, Suite 210, Houghton, Michigan 49931 Tel: 906.487.7452 www.MannikSmithGroup.com

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtering for dissolved low level and dissolved methyl mercury samples was conducted at a controlled location within WPC's White Pine office using FlipMate™ 50 and FlipMate™ 100 Filtration System 0.45 um filters. A field blank for low level mercury was also collected at the filtering location. The filters were manufacturer certified for background metals to be less than 0.0005 micrograms per liter (ug/L) mercury.

Trace Analytical Laboratories, Inc. (Trace) provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was used for sample collection. Teflon tubing used during sample collection was retained for reuse during subsequent sampling events and is stored at MSG's Houghton, Michigan office. Existing poly tubing encountered in most of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection.

MSG collected a total of 24 groundwater samples, plus one complete field blank, duplicate from SMW-3, matrix spike/matrix spike duplicate (MS/MSD) from MW-5A, and equipment blank from the bladder pump which was used to sample MW-31, SMW-1, and SMW-3. During this sampling event, MW-41 did not produce sufficient groundwater to collect a sample.

Please note that during the sampling event, MSG encountered a thick black particulate material in NB1-1, similar to what had been encountered in MW-35 during the prior sampling event. NB1-1 was purged to remove this material and was then sampled. A photograph of the encountered material in the tubing is included at the end of ***Appendix B,*** *Photograph Log.*

SURFACE WATER GAUGING AND SAMPLING

Between September 23 and October 8, 2024, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (Figure 2) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein. An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements. Copies of the stream gauging field sheets and stream flow calculation sheets are included in Appendix A. Calculated stream flows are summarized in *Table 2, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in Table 2. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw from the surface water body and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were processed at WPC's White Pine office using FlipMate™ 50 and FlipMate™ 100 Filtration System 0.45 um filters as described above.

MSG collected a total of 25 surface water samples. A duplicate sample from NTC-01 and a MS/MSD from SBD-01 were also collected. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. At locations DKC-01, MLC-01, and PTC-01 the stream bed was observed to be dry with no water flow. Photographs of the stream gauging and sampling locations are provided in Appendix B.

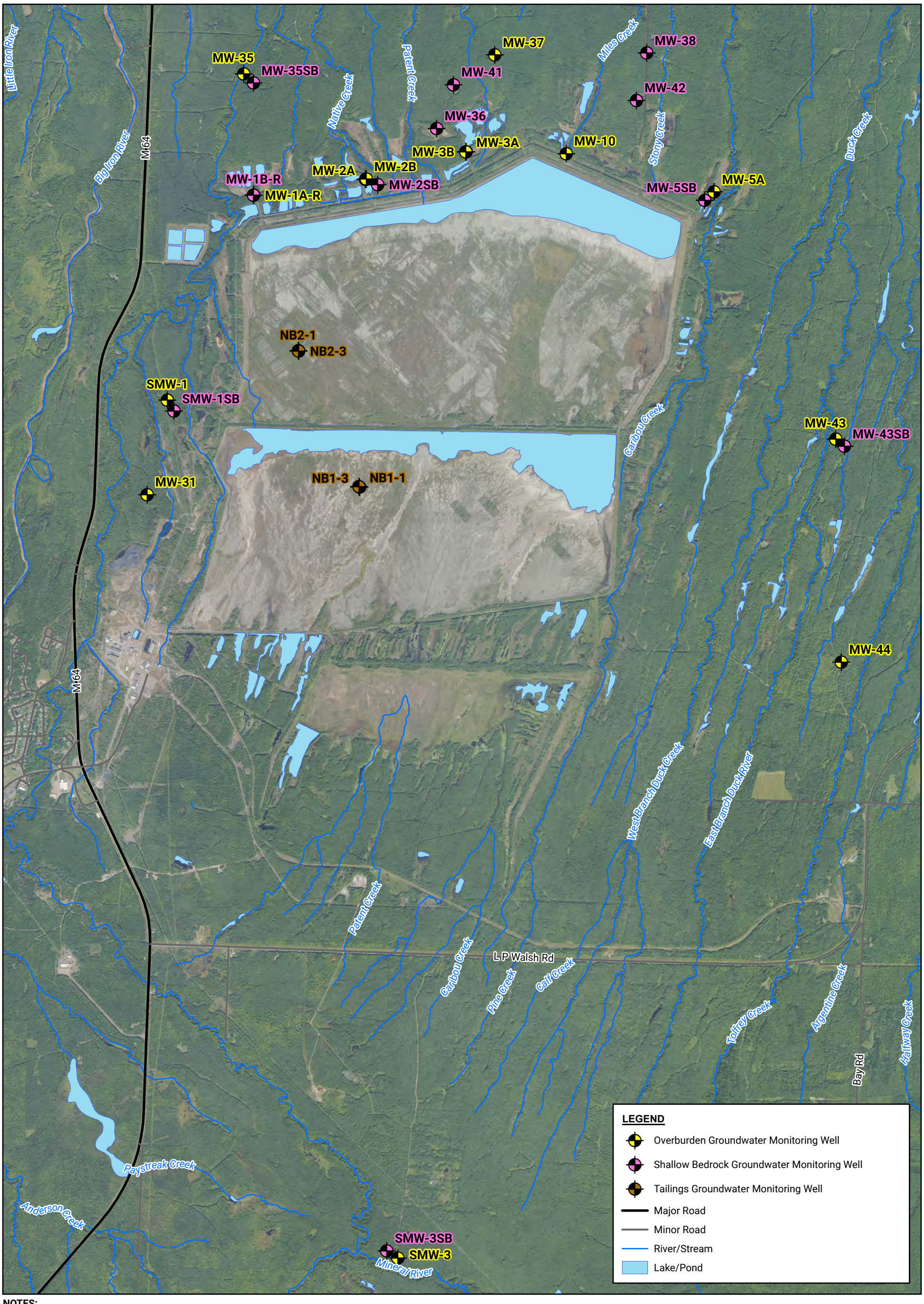
MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,



Jed Chrestensen, P.E.
Project Manager

FIGURES



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 1,500 3,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 1

GROUNDWATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 24W005	

Q:\White Pine Copper\23W200\GIS\aprx\Quarterly Sampling RFP\GW and SW Quarterly Sampling RFP.aprx 5/23/2024 10:48 AM

Lake Superior
LKS-01
LKS-02
PTC-01
NTC-01
MLC-01
PNC-04
DKC-03
CBR-02
M 64
MLR-03
PRC-02
Native Creek
Patent Creek
Miles Creek
Stony Creek
Duck Creek
ARC-03
BNC-01
Little Iron River
Mineral River
Perch Creek
Ash Creek
PNC-03
DKC-02
PRC-01
BNW-01
TBN-01
Townline Rd
L P Walsh Rd
Floodwood River
MLR-02
Big Iron River
M 64
TBS-01
Caribou Creek
ARC-02
PNC-02
Little Cranberry River
SBD-01
SBW-01
West Branch Duck Creek
East Branch Duck River
Argentine Creek
Halfway Creek
Town Line Creek
Cranberry River
Potato Farm Rd
ARC-01
PNC-01
L P Walsh Rd
DKC-01
CBR-01
MLR-01
Patent Creek
Caribou Creek
Pine Creek
Calf Creek
Tolfrey Creek
Paystreak Creek
Federal Forest Road 630
Cranberry River
Old M 64
Anderson Creek
Mineral River
Sleepy Creek
Sandhill Creek
Bush Creek

LEGEND

- Water Quality Sampling Location
- Water Quality and Flow Monitoring Station
- Water Quality and Continuous Flow Monitoring Station
- Major Road
- Minor Road
- River/Stream
- Lake/Pond

NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 2,500 5,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:	
Drawn By: BJW1	Checked By: JMW3	Project: 23W200

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TABLES

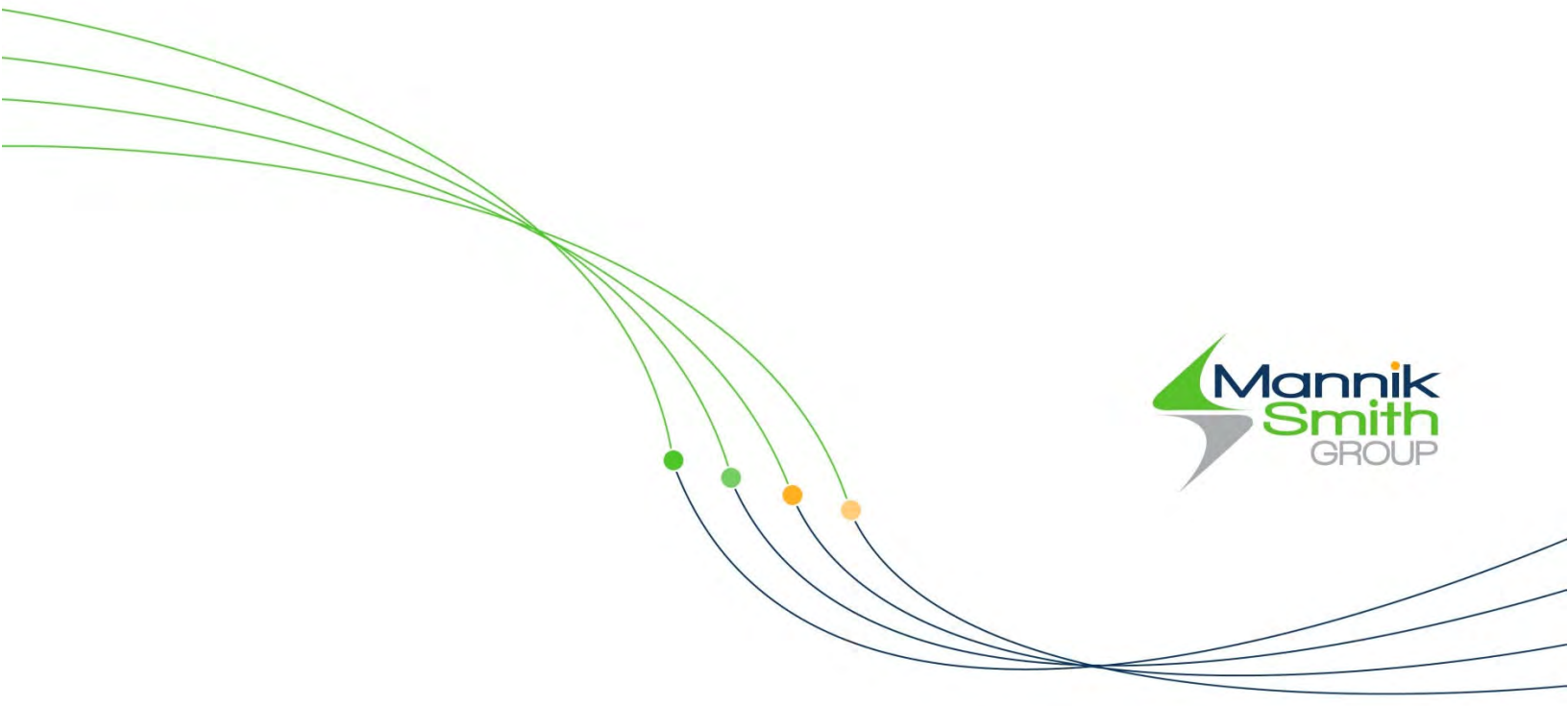


TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-1A-R	7/31/2024	9.51	16.98	8.05	136	0.659	1.7	0.42	100
	9/30/2024	10.92	12.99	7.24	157	0.729	6.3	0.00	200
MW-1B-R	7/31/2024	9.56	20.90	7.85	-124	0.707	23.7	0.00	100
	9/30/2024	10.78	12.94	7.71	-57	0.859	3.9	0.00	200
MW-2A	8/1/2024	10.59	14.18	7.30	-189	1.230	72.8	0.24	200
	10/1/2024	10.75	13.15	7.42	-162	1.350	0.0	0.00	200
MW-2B	8/1/2024	11.21	15.70	7.15	-3	0.937	6.8	0.33	200
	10/1/2024	10.73	15.34	7.24	22	1.170	16.2	4.39	200
MW-3A	7/30/2024	10.94	21.99	7.13	-46	1.580	103	0.20	200
	10/1/2024	12.69	15.82	7.14	-87	2.080	19.2	0.00	200
MW-3B	7/30/2024	10.74	13.46	7.19	-216	0.903	0.0	0.19	200
	10/1/2024	12.18	15.83	7.20	-60	1.580	0.0	0.55	200
MW-5A	7/30/2024	11.84	18.60	7.36	72	1.340	0.0	1.66	200
	10/2/2024	9.19	14.38	7.21	46	1.650	1.9	0.00	200
MW-5SB	9/30/2024	0.05	23.30	8.55	-35	2.060	190	2.10	200
MW-10	8/6/2024	5.82	14.77	6.10	-24	2.330	0.4	0.00	150
	9/30/2024	5.81	18.64	6.43	-54	2.490	3.6	0.00	200
MW-31	7/30/2024	50.71	12.47	8.10	51	0.359	>1000	0.00	200
	10/7/2024	49.50	10.26	8.97	-30	0.397	278	0.50	200
MW-35	7/28/2024	16.63	--	--	--	--	--	--	--
	9/30/2024	19.78	9.46	9.40	152	0.612	28.3	3.19	100
MW-36	7/28/2024	6.83	19.53	7.17	-207	0.668	261	0.58	200
	9/30/2024	5.94	20.43	8.10	-155	0.667	49.9	0.68	--
MW-37	7/28/2024	14.11	24.22	7.34	-69	0.438	89.8	0.85	200
	10/2/2024	16.81	11.55	8.03	-11	0.534	24.7	1.83	200
MW-38	7/28/2024	12.31	11.70	7.66	115	0.525	0.0	0.94	200
	10/7/2024	15.95	10.22	7.32	142	0.570	3.9	0.00	200
MW-41	7/24/2024	7.90	14.99	7.40	164	0.539	78.1	9.10	200
	9/30/2024	28.33	14.70	8.43	172	0.610	172	5.89	100
MW-42	7/28/2024	5.62	16.37	8.50	51	0.354	0.0	3.45	200
	10/7/2024	8.42	12.70	8.71	106	0.316	35.8	0.56	200
MW-43	7/31/2024	13.61	18.32	8.02	-33	0.419	274.00	0.40	200
	9/25/2024	17.31	11.93	7.98	167	0.501	17.7	0.00	200
MW-43SB	10/1/2024	3.65	12.23	8.51	17	4.520	1.7	1.51	150
MW-44	7/31/2024	15.10	13.58	7.69	-194	0.614	50.6	0.06	200
	9/25/2024	17.89	13.72	8.38	-141	0.809	89.4	0.00	200
NB1-1	7/24/2024	5.61	13.20	6.86	-128	1.290	0.0	0.16	200
	10/2/2024	5.78	16.04	7.74	-228	1.080	29.0	0.00	200
NB1-3	7/24/2024	6.21	13.64	7.89	-273	1.000	54.2	0.31	200
	10/2/2024	6.47	14.05	7.82	-175	1.000	22.3	0.37	200
NB2-1	7/24/2024	6.45	17.91	6.93	-166	2.260	62.4	0.32	200
	9/30/2024	6.21	25.97	7.21	-124	2.020	0.0	0.10	100
NB2-3	7/24/2024	6.25	13.99	6.54	-42	1.110	0.0	0.00	200
	9/30/2024	5.80	26.73	7.88	-189	0.889	0.0	0.01	--
SMW-1	7/25/2024	23.52	9.22	8.21	-84	0.403	73.0	14.06	200
	10/2/2024	23.90	10.08	8.12	-106	0.463	212	0.00	200
SMW-3	8/6/2024	27.68	10.84	8.14	88	0.262	11.1	5.41	--
	10/2/2024	27.66	12.52	8.58	-125	0.249	14.7	0.00	200

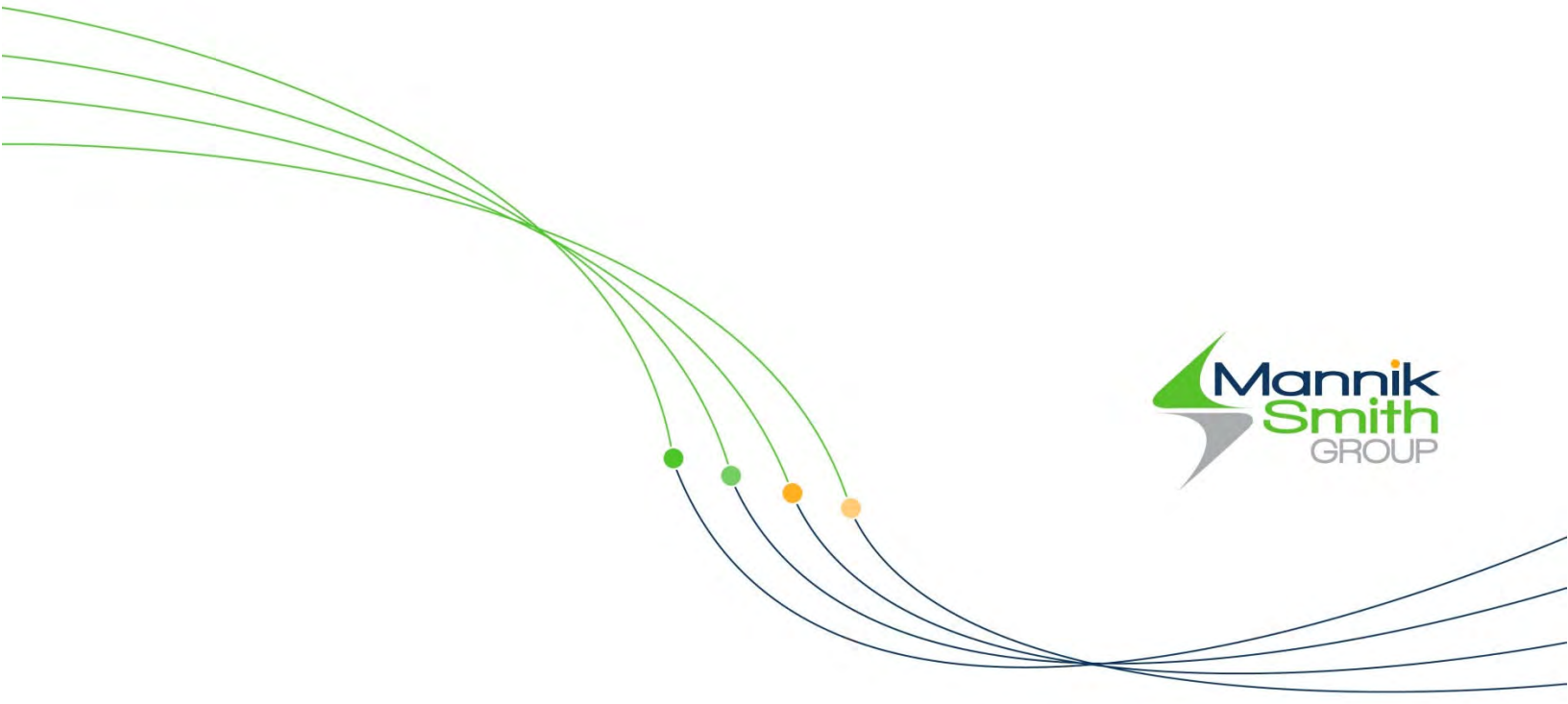
Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
ARC-01	7/31/2024	6.89	0.129	20.68	122	2.80	8.0	0.008	1.42	--
	9/25/2024	6.79	0.223	11.67	194	2.61	2.4	0.017	4.66	0.84
ARC-02	7/31/2024	7.72	0.153	19.32	120	1.93	25.8	0.125	11.50	--
	9/25/2024	7.40	0.129	14.76	159	5.05	12.6	0.229	20.00	--
ARC-03	8/6/2024	--	--	--	--	--	--	Dry		--
	9/26/2024	8.04	0.255	11.59	91	7.98	28.3	0.030	8.00	0.62
BNC-01	8/6/2024	7.39	0.179	22.83	115	8.21	0.0	No Stream Gauging		--
	10/8/2024	8.79	0.158	14.53	45	6.90	0.0	No Stream Gauging		--
BNW-01	7/31/2024	7.12	0.184	28.77	111	7.80	2.1	No Stream Gauging		--
	10/8/2024	8.15	0.223	13.65	41	8.37	211	No Stream Gauging		--
CBR-01	7/29/2024	8.16	0.242	24.54	177	8.90	0.0	No Stream Gauging		--
	9/25/2024	7.77	0.295	12.08	175	6.96	1.2	No Stream Gauging		--
CBR-02	8/6/2024	7.97	0.246	26.38	92	6.70	0.0	No Stream Gauging		--
	10/3/2024	8.10	0.261	13.84	106	7.32	12.2	No Stream Gauging		3.55
DKC-01	7/29/2024	--	--	--	--	--	--	Dry		--
	9/23/2024	--	--	--	--	--	--	Dry		--
DKC-02	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	7.65	0.152	18.34	168	9.39	2.5	0.081	16.00	--
DKC-03	8/6/2024	7.52	0.213	25.28	151	5.21	0.0	No Stream Gauging		--
	9/26/2024	7.83	0.163	14.36	151	6.67	8.7	No Stream Gauging		--
LKS-01	7/28/2024	8.34	0.116	20.87	191	11.12	0.1	No Stream Gauging		--
	10/7/2024	8.91	0.111	13.68	112	9.56	12.4	No Stream Gauging		--
LKS-02	7/28/2024	7.69	0.112	21.91	172	11.11	0.0	No Stream Gauging		--
	10/7/2024	9.23	0.108	13.49	42	10.06	1.2	No Stream Gauging		--
MLC-01	8/6/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
MLR-01	7/25/2024	7.72	0.148	15.35	150	7.52	0.1	0.311	16.33	--
	9/23/2024	7.95	0.177	16.42	141	9.50	7.7	No Stream Gauging		1.29
MLR-02	7/25/2024	7.41	0.247	19.59	114	7.46	7.4	0.489	28.17	--
	9/24/2024	8.15	0.265	15.97	116	13.09	1.5	0.086	21.00	0.08
MLR-03	7/25/2024	7.79	0.245	15.87	186	9.27	0.0	0.468	28.17	--
	9/23/2024	8.64	0.283	14.30	31	10.02	1.6	No Stream Gauging		0.71
NTC-01	7/22/2024	7.85	0.208	17.79	39	9.55	34.7	0.074	4.83	--
	9/23/2024	7.56	0.225	15.34	-19	2.17	171	0.021	4.00	--
PNC-01	7/29/2024	6.53	0.119	21.62	171	2.13	1.2	0.008	2.17	--
	9/23/2024	7.33	0.285	16.70	175	1.51	21.6	0.015	2.25	0.83
PNC-02	7/29/2024	7.29	0.293	27.19	72	4.63	41.0	0.068	10.84	--
	9/24/2024	7.73	0.343	17.27	136	12.59	7.9	0.213	53.30	1.22
PNC-03	8/1/2024	7.79	0.453	20.11	105	4.62	0.0	0.023	4.00	--
	9/24/2024	7.84	0.395	15.97	138	10.22	6.4	0.053	6.33	0.43
PNC-04	8/7/2024	7.35	0.481	17.08	157	9.73	0.0	0.011	5.34	--
	9/26/2024	7.82	0.412	13.69	138	7.89	2.6	0.082	7.00	0.58
PRC-01	7/22/2024	8.22	0.972	24.40	110	9.33	47.9	1.011	6.17	--
	9/24/2024	7.37	0.481	18.86	114	7.68	3.3	0.072	7.00	0.2
PRC-02	7/22/2024	8.05	0.984	19.87	132	11.13	10.6	0.805	5.17	--
	9/23/2024	7.91	1.030	13.89	112	7.33	0.3	0.050	5.00	--
PTC-01	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
SBD-01	7/29/2024	7.65	0.224	28.82	123	5.98	89.5	No Stream Gauging		--
	9/24/2024	7.71	0.246	16.34	33	3.86	132	No Stream Gauging		--
SBW-01	7/29/2024	8.17	0.152	26.48	138	5.96	0.0	No Stream Gauging		--
	9/24/2024	7.92	0.191	13.78	121	7.36	10.3	No Stream Gauging		--
TBN-01	7/31/2024	7.13	0.866	25.82	108	8.52	4.4	No Stream Gauging		--
	10/7/2024	7.85	1.030	13.31	143	10.92	29.9	No Stream Gauging		--
TBS-01	7/28/2024	7.55	0.754	28.43	120	10.25	0.0	No Stream Gauging		--
	10/8/2024	8.47	1.040	8.60	116	12.87	7.8	No Stream Gauging		--

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

APPENDIX A
FIELD SHEETS



LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ~~MW-5AR~~ MW-1A-R

DATE: 9-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 60°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 10.92

PURGE START TIME: 10:16

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Tefla

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
10:20	11.81	12.95	7.92	136	0.700	13.1	0.59	0	200	
10:25	12.54	13.61	7.36	147	0.712	9.0	0.00	0.25	↓	
1030	13.34	13.18	7.22	150	0.722	7.5	0.0	0.5	↓	
1035	14.31	12.96	7.19	147	0.726	6.0	0.0	0.75	↓	
1040	14.72	12.89	7.21	152	0.730	5.8	0.0	1.0	↓	
1045	15.29	12.99	7.24	157	0.729	6.3	0.0	1.25	↓	
				Sample collected at 10:50						

SAMPLE ID: ~~MW-5AR~~ MW-1A-R_20240930 & MW-1A-R_20240930_FBLL

SAMPLE DATE: 9-30-24

SAMPLE TIME: 10:50

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

MW-1B-R

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ~~MW-5BR~~ EC ~~MW-5B-R~~ EC

DATE: 9-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 70°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 10.78

PURGE START TIME: 1147

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1150	11.56	21.52	7.69	106	0.660	5.0	0.10	0	200	
1155	11.82	13.54	7.43	50	0.802	1.2	0.0	0.25		
1200	11.96	13.15	7.56	-5	0.837	1.2	0.0	0.5		
1205	11.98	13.11	7.64	-43	0.863	2.0	0.0	0.75		
12:10	12.00	13.24	7.70	-56	0.874	2.8	0.0	1.0		
12:15	12.00	12.98	7.70	-57	0.866	3.1	0.0	1.25		
12:20	12.00	12.94	7.71	-57	0.859	3.9	0.0	1.5		
				Sample collected at 12:20				~~1.75~~	↓	

SAMPLE ID: MW-5BR

SAMPLE DATE: 9-30-24

SAMPLE TIME: 12:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2A

DATE: 10-01-2024

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 60°F, Cloudy

DEPTH OF WELL: 32.79

DEPTH TO WATER LEVEL: 10.75

PURGE START TIME: 10:45

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: ~~Poly-tubing~~ & Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: HORIBA U 52
GEOPUMP

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1048	11.33	13°C	8.15	-145	1.37	1.7	0.55	0.25	200	
1051	11.90	12.97	7.74	-153	1.37	0.8	0.11	0.25	200	
1054	12.52	13.02	7.55	-158	1.36	0.4	0.00	0.25	200	
1057	13.14	13.05	7.50	-159	1.35	0.2	0.00	0.25	200	
1100	~~13.41~~	13.08	7.44	-161	1.35	0.2	0.00	0.25	200	
1103	13.69	13.15	7.42	-162	1.35	0.0	0.00	0.25	200	

SAMPLE ID: MW-2A_20241001 & MW-2A_20241001_FBLL

SAMPLE DATE: 10-1-24

SAMPLE TIME: 1115

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2B

DATE: 10-01-2024

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 60°F, Cloudy

DEPTH OF WELL: 18.35

DEPTH TO WATER LEVEL: 10.73

PURGE START TIME: 1139

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: ~~Poly-Tubing~~ Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba-U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1142	11.48	14.28	7.48	-69	1.22	257	2.10	0.25	200	
1145	12.23	14.32	7.38	-47	1.19	111	6.79	0.25	200	
1148	12.60	14.37	7.31	-15	1.19	18.2	5.60	0.25	200	
1151	12.98	14.45	7.29	-5	1.19	7.9	5.47	0.25	200	
1154	13.36	14.59	7.27	7	1.19	5.0	5.09	0.25	200	
1157	13.75	14.77	7.26	16	1.19	5.7	4.85	0.25	200	
1200	14.11	14.93	7.25	22	1.18	8.5	4.84	0.25	200	
1203	14.48	15.12	7.24	25	1.18	12.0	4.63	0.25	200	
1206	14.79	15.34	7.24	22	1.17	16.2	4.39	0.25	200	

SAMPLE ID: MW-2B_20241001 + MW-2B_20241001_FBLL

SAMPLE DATE: 10-01-24

SAMPLE TIME: 1215

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3A

DATE: 10-01-2024

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 63°F Sunny

DEPTH OF WELL: 33.50

DEPTH TO WATER LEVEL: 12.69

PURGE START TIME: 1250

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: ~~Poly tubing~~ Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: HORIBA-U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1253	13.16	18.50	7.41	-118	2.04	32.9	0.98	0.25	200	
1256	13.62	17.43	7.35	-107	2.03	30.8	0.29	0.25	200	
1259	14.08	16.88	7.31	-97	2.04	28.6	0.00	0.25	200	
1303	14.53	16.45	7.25	-92	2.05	30.8	0.00	0.25	200	
1306	14.86	16.30	7.22	-90	2.06	30.3	0.00	0.25	200	
1309	15.18	16.18	7.18	-89	2.06	29.4	0.00	0.25	200	
1312	15.37	16.08	7.17	-88	2.06	29.6	0.00	0.25	200	
1315	15.56	15.97	7.15	-88	2.07	25.7	0.00	0.25	200	
1318	~~15.86~~ 15.12	15.86	7.14	-87	2.07	20.8	0.00	0.25	200	
1321	15.86	15.82	7.14	-87	2.08	19.2	0.00	0.25	200	

SAMPLE ID: MW-3A_20241001 & MW-3A_20241001_FBLL

SAMPLE DATE: 10-01-24

SAMPLE TIME: 1330

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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DATE: 10-01-24

PERSONNEL: EC + MS

OBSERVERS:

SAMPLE LOCATION: MW-3B-MS

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 63° sunny

DEPTH OF WELL: 15.80

SCREEN LENGTH:

TUBING TYPE: ~~Poly Tubing~~ Teflon

MONITORING EQUIPMENT: HORIBA-U-52

DEPTH TO WATER LEVEL: 12.18

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: ~~1139~~ 1345 MS

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
~~1142~~ MS						EC				
1348	12.59	16.62	7.36	-73	1.75	6.8	0.93	0.25	200	
1351	13.01	16.29	7.27	-76	1.72	4.0	0.17	0.25	200	
1354	13.23	16.15	7.24	-75	1.69	3.6	0.15	0.25	200	
1357	13.47	16.10	7.22	-71	1.65	0.0 MS	0.27	0.25	200	
1400	13.51	15.92	7.21	-64	1.61	0.0	0.49	0.25	200	
1403	13.65	15.83	7.20	-60	1.58	0.0	0.55	0.25	200	

SAMPLE ID: MW-3B-20241001 MS + MW-3B-20241001_FBLL

SAMPLE DATE: 10-01-24 MS

SAMPLE TIME: 1415

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-5A

DATE: 10-2-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: cloudy, windy, 65°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 9.19

PURGE START TIME: 13:43

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: ¼ Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1345	9.57	14.52	7.39	145	1.60	2.3	0.34	0	200	
1350	9.99	14.92	7.18	60	1.63	1.7	0.0	0.25		
1355	10.33	14.93	7.20	46	1.63	1.8	0.0	0.5		
1400	10.69	15.01	7.22	42	1.63	1.9	0.0	0.75		
1405	10.99	14.95	7.24	43	1.63	2.2	0.0	1.0		
1410	11.10	14.97	7.25	46	1.63	2.1	0.0	1.25		
1415	11.10	14.89	7.25	50	1.64	2.0	0.0	1.5		
1420	11.22	14.72	7.25	46	1.63	2.1	0.0	1.75		
1425	11.35	14.84	7.24	51	1.63	1.9	0.0	2.0		
1430	10.43	14.69	7.23	51	1.64	2.0	0.0	2.25		
1435	10.58	14.36	7.22	49	1.64	1.9	0.0	2.5		
1440	10.81	14.28	7.21	48	1.65	1.9	0.0	2.75		
1445	11.71	14.38	7.21	46	1.65	1.9	0.0	3.0		
				Sample collected at			15:00			

SAMPLE ID: MW-5A_20241002

SAMPLE DATE: 10-2-24

SAMPLE TIME: 15:00

Notes: MS/MSD collected

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-55B

DATE: 9-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: >101.00

DEPTH TO WATER LEVEL: 0.05

PURGE START TIME: 16:42

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 3/8 Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1700	0.0	25.49	8.46	24	1.35	4.5	5.79	0	200	
1705	0.0	25.47	8.59	17	1.33	4.0	5.10	0.25		
1710	0.0	24.75	8.64	12	1.32	4.4	3.21	0.5		
1715	0.0	24.17	8.68	5	1.47	203	1.76	0.75		
1720	0.0	23.84	8.61	-7	1.89	349	2.57	1.0		
1725	0.0	23.61	8.59	-14	1.99 ~~2.69~~	373	2.67	1.25		
1730	0.0	23.43	8.58	-20	2.02	365	2.75	1.5		
1735	0.0	23.41	8.57	-25	2.05	300	2.38	1.75		
1740	0.0	23.31	8.55	-30	2.06	258	2.19	2.0		
1745	0.0	23.21	8.55	-34	2.06	220	1.96	2.25		
1750	0.0	23.35	8.57	-31	2.05	198	2.21	2.5		
1755	0.0	23.30	8.55	-35	2.06	190	2.10	2.75		
				Sample collected at 18:00						

SAMPLE ID: MW-55B_20240930

SAMPLE DATE: 9-30-24

SAMPLE TIME: 18:00

Notes: Water level stayed at top of casing during sampling
Pump set 2'4" off bottom of well

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-10

DATE: 9-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 75°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.81

PURGE START TIME: 14:16

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1420	6.34	21.34	6.56	-22	2.26	37.7	0.0	0	200	
1425	6.43	20.60	6.41	-37	2.37	13.9	0.0	0.25		
1430	6.61	19.56	6.40	-38	2.43	7.1	0.0	0.5		
1435	6.80	18.88	6.41	-43	2.46	6.2	0.0	0.75		
1440	7.10	18.69	6.41	-47	2.47	5.1	0.0	1.0		
1445	7.40	18.67	6.43	-51	2.49	3.9	0.0	1.25		
1450	7.61	18.64	6.43	-54	2.49	3.6	0.0	1.5		
				Sample	collected at		1500			

SAMPLE ID: MW-10_20240930

SAMPLE DATE: 9-30-24

SAMPLE TIME: 1500

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-31

DATE: 10-2-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 63°F Cloudy

DEPTH OF WELL: 79.81'

DEPTH TO WATER LEVEL: 45.0'

PURGE START TIME: 1804

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ~~Poly-tubing~~ & Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba - U-54
Bladder pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1807	47.26	19.01	8.84	62	0.385	0.0	7.38	0.25	200	
1810	49.32	18.77	8.88	60	0.386	0.0	7.23	0.25	200	
1813		18.68	8.86	60	0.389	0.0	7.14	0.25	200	
1816								0.25	200	
1819								0.25	200	
1822								0.25	200	

SAMPLE ID: MW-31_20241002 + MW-31_20241002_FBLL

SAMPLE DATE: 10-2-24

SAMPLE TIME: ~~1830~~ EC *Did not Sample

Notes: Bladder Pump broke halfway through sampling, have to return

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-31

DATE: 10-7-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 51°F Partly Cloudy

DEPTH OF WELL: 74.64 Ft

DEPTH TO WATER LEVEL: 49.50 Ft

PURGE START TIME: 10:33

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ~~Poly~~ Fluorinated Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba-U-52
Bladder pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:36	49.70	11.87	9.11	24	0.402	288	3.54	0.25	200	
10:39	49.81	11.16	9.12	20	0.404	289	3.73	0.25	200	
10:42	49.90	11.06	9.08	17	0.398	294	2.41	0.25	200	
10:45	49.94	10.90	9.00	6	0.392	296	1.02	0.25	200	
10:48	49.98	10.70	8.94	-7	0.390	293	0.70	0.25	200	
10:51	50.00	10.52	8.89	-26	0.390	292	0.59	0.25	200	
10:54	50.01	10.37	8.91	-32	0.395	288	0.41	0.25	200	
10:57	50.03	10.29	8.96	-31	0.397	283	0.44	0.25	200	
11:00	50.05	10.26	8.97	-30	0.397	278	0.56	0.25	200	

SAMPLE ID: MW-31_20241007 & MW-31_20241007_FBLL

SAMPLE DATE: 10-7-24

SAMPLE TIME: 11:05

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-35

DATE: 9-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUNNY, 55° F

DEPTH OF WELL: 21.96

DEPTH TO WATER LEVEL: 19.78'

PURGE START TIME: 09:25

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ~~poly tubing~~ tefion

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52
Geopump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
09:32	20.77	9.12	9.87	102	0.677	22.2	5.05		100	NO PURTICULATE
09:36	20.83	9.33	9.56	143	0.638	27.9	3.62		100	
09:40	20.90	9.46	9.40	152	0.612	28.3	3.19		100	

SAMPLE ID: MW-35_20240930 AND MW-35_20240930_FBLK

SAMPLE DATE: 9-30-24

SAMPLE TIME: 09:45

Notes: WELL RAN DRY DURING SAMPLING
BLACK PARTICULATE ON SWL PROBE
DONE AT 11:00

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-36

DATE: 9-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUNNY, 75°F, WINDY

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.94

PURGE START TIME: 13:12

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ~~poly tubing~~ & Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52
geo pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
13:15	7.10	20.38	8.29	-105	0.677	55.4	1.60			
13:18	7.49	20.43	8.10	~~-89~~ -155	0.667	49.9	0.68			

SAMPLE ID: MW-36_20240930

SAMPLE DATE: 9-30-24

SAMPLE TIME: 13:30

Notes: 14:00 Complete

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-37

DATE: 10-2-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC + MS, JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 58 °F Cloudy

DEPTH OF WELL: 21.18

DEPTH TO WATER LEVEL: 16.81

PURGE START TIME: ~~EC~~ MS 10:09

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ~~Poly tubing~~ & Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba - U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1012	17.44	11.79	8.26	-37	0.551	56.1	1.62	0.25	200	
1015	18.99	11.55	8.03	-11	0.534	24.7	1.83	0.25	200	Air bubbles

SAMPLE ID: MW-37_20241002 + MW-37_20241002_FBLL

SAMPLE DATE: 10-2-24

SAMPLE TIME: 10:30

Notes: ~~Well ran dry~~ EC Air bubbles in tubing and quick drawdown before Stabilization. Team was able to collect a few bottles of GW. Team will return later to collect additional water. JD returns to collect additional bottles on 10-03-24 @ 08:00. DTW was 18.85'.

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10-7-24

PERSONNEL: JD

OBSERVERS:

SAMPLE LOCATION: MW-38

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 43°F Sunny

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: Teflon 1/4" PE

DEPTH TO WATER LEVEL: 15.95

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 9:36

MONITORING EQUIPMENT: Hor. ba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
9:40	16.71	9.68	7.96	127	0.566	3.1	4.53	0	200	
9:45	17.27	9.96	7.35	142	0.568	3.0	0.0	0.25		
9:50	17.68	10.02	7.31	144	0.570	3.8	0.0	0.5		
9:55	18.07	10.15	7.31	143	0.569	3.8	0.0	0.75		
1000	18.39	10.17	7.30	142	0.570	3.8	0.0	1.0		
1005	18.72	10.22	7.32	142	0.570	3.9	0.0	1.25		
			Sample collected at 10:20							

SAMPLE ID: MW-38_20241007

SAMPLE DATE: 10.7.24

SAMPLE TIME: 10:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 9-30-24

PERSONNEL: SBC, EC & MS

OBSERVERS: —

SAMPLE LOCATION: MW-41

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUNNY, 75°F

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: ~~poly tubing~~ EC Teflon

MONITORING EQUIPMENT: Horiba U-52
Geo pump

DEPTH TO WATER LEVEL: 28.33

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 12:32

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
12:37	29.21	14.61	9.01	163 ~~0.653~~ .c	0.653	206	6.35			
12:40	29.49	14.41	8.63	170	0.613	179	5.82			
12:43	29.71	14.70	8.43	172	0.610	172	5.89		~100	RW DRY

SAMPLE ID: Did not Sample

SAMPLE DATE: _____

SAMPLE TIME: _____

Notes: STILL DRY TO THE BOTTOM AT 14:15, team returned (EC & MS) on 10-01-24. Well still dry

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-42

DATE: 10-7-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 55°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 8.42

PURGE START TIME: 13:04

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
13:10	10.23	13.51	8.64	104	0.348	62.5	3.66	0	200	
13:15	10.89	13.37	8.59	107	0.348	62.3	1.53	0.25		
1320	11.39	13.26	8.64	107	0.345	61.0	0.83	0.5		
1325	12.19	13.10	8.65	106	0.340	56.9	0.56	0.75		
1330	12.76	12.98	8.68	106	0.334	47.9	0.44	1.0		
1335	13.46	12.86	8.70	106	0.331	47.3	0.65	1.25		
1340	14.29	12.71	8.68	108	0.322	37.1	0.55	1.5		
1345	14.83	12.73	8.70	106	0.318	36.0	0.60	1.75		
1350	15.14	12.70	8.71	106	0.316	35.8	0.56	2.0		
				Sample collected at 14:00						

SAMPLE ID: MW-42_20241007

SAMPLE DATE: 10-7-24

SAMPLE TIME: 14:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-43

DATE: 09-25-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F, Sunny

DEPTH OF WELL: 28.0

DEPTH TO WATER LEVEL: 17.31'

PURGE START TIME: 13:30

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1333	18.31	10.67	7.75	180	0.526	20.6	0.00	0.25	200	
1336	19.23	10.71	7.81	178	0.520	10.7	0.21			
1339	20.05	11.76	7.88	174	0.504	10.3	2.36			
1342	20.73	11.85	7.88	174	0.502	13.1	1.48			
1345	21.41	11.70	7.89	173	0.503	16.5	0.42			
1348	22.35	11.68	7.91	172	0.504	17.7	0.84			
1351	22.01	11.67	7.98	167	0.507	25.6	0.00			
1364	21.83	11.83	7.98	168	0.502	19	0.00			
1357	20.97	11.93	7.98	167	0.501	17.7	0.00			

SAMPLE ID: MW-43_20240925 & MW-43_20240925_FBLL

SAMPLE DATE: 09-25-24

SAMPLE TIME: 1400

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-435B

DATE: 10-1-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: –

SITE CONDITIONS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 3.65'

PURGE START TIME: 08:00

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ~~poly tubing~~ & teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
8:08	5.60	12.65	8.50	11	4.52	3.2	3.91		~100	
8:11	6.47	12.57	8.60	24	4.50	2.5	1.88			
8:14	7.51	12.41	8.54	19	4.51	1.9	1.60			
8:17	8.49	12.23	8.51	17	4.52	1.7	1.51		~150	

SAMPLE ID: MW-435B_20241001 and MW-435B_20241001_FB

SAMPLE DATE: 10-1-24

SAMPLE TIME: 08:30

Notes: Complete at 08:55

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 09-25-24

PERSONNEL: EC & JD

OBSERVERS:

SAMPLE LOCATION: MW-44

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 65°F, Sunny

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: Teflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 17.89'

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 15:03

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1503	17.99	15.36	8.15	-55	0.829	812	2.85	0.25	200	
1506	18.16	13.79	8.46	-126	0.837	188	0.00			
1509	19.99	13.96	8.46	-128	0.845	83.2	0.00			
1512	19.72	14.11	8.46	-130	0.819	80.1	0.00			
1515	19.49	13.72	8.38	-141	0.809	89.4	0.00			
1518										
1520										
								↓	↓	

SAMPLE ID: MW-44_20240925 & MW-44_20240925_FBLK

SAMPLE DATE: 09-25-24

SAMPLE TIME: 1520

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. GREATER SPIRIT. — www.MannikSmithGroup.com

DATE: 10-2-24

PERSONNEL: EC + MS

OBSERVERS:

SAMPLE LOCATION: NB1-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 63°F Cloudy

DEPTH OF WELL: 25.44 ft

SCREEN LENGTH:

TUBING TYPE: ~~Poly~~-tubing & Teflon

MONITORING EQUIPMENT: Horiba-U-52

DEPTH TO WATER LEVEL: 5.78 ft

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 1300

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1303	6.23	13.28	7.81	-161	1.18	62.0	0.0	0.25	200	
1306	6.50	13.71	7.78	-183	1.17	47.2	0.0	0.25	200	
1309	6.54	14.69	7.76	-199	1.12	50.5	0.0	0.25	200	
1312	6.58	14.48	7.76	-204	1.14	75.8	0.23	0.25	200	
1315	6.60	15.40	7.76	-209	1.11	38.4	0.58	0.25	200	
1318	6.62	15.73	7.75	-215	1.10	33.6	0.22	0.25	200	
1321	6.62	15.89	7.75	-221	1.09	35.7	0.04	0.25	200 MS 25	
1324	6.63	16.01	7.75	-225	1.08	29.7	0.0	0.25	200	
1327	6.64	16.04	7.74	-228	1.08	29.0	0.0	0.25	200	

SAMPLE ID: NB1-1_20241002 + NB1-1_20241002_FBLL

SAMPLE DATE: 10-2-24

SAMPLE TIME: 1330

Notes: Black sludge in well, odor

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NB1-3

DATE: 10-2-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC + MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 63°F Cloudy

DEPTH OF WELL: 35.00Ft

DEPTH TO WATER LEVEL: 6.47ft

PURGE START TIME: 1149

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ~~Poly-tubing~~ & Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: HoriBa-U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1152	7.73	12.89	7.92	-148	1.05	40.1	9.01	0.25	200	
1155	8.99	12.50	7.90	-162	1.05	30.7	6.66	0.25	200	
1158	9.48	12.92	7.87	-169	1.04	30.4	5.40	0.25	200	
1201	9.82	13.15	7.86	-171	1.04	28.1	5.04	0.25	200	
1204	10.14	13.33	7.85	-172	1.04	28.4	1.63	0.25	200	
1207	10.56	13.33	7.84	-174	1.03	13.3	1.54	0.25	200	
1210	10.88	13.58	7.83	-175	1.02	19.7	1.46	0.25	200	
1213	11.15	14.05	7.82	-175	1.00	22.3	0.37	0.25	200	

SAMPLE ID: MS/MSD NB1-3_20241002 + NB1-3_20241002_FBLK

SAMPLE DATE: 10-2-24

SAMPLE TIME: 1215

Notes: Odor (~~gasoline~~) present coming from well

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: NB2-1

DATE: 9-30-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUN, 75°F, WIND

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: 6.21

PURGE START TIME: 14:50

SCREEN LENGTH: _____

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:57	7.62	27.01	7.80	-118	2.11	0.0	0.38			
15:00	7.60	26.62	7.44	-122	2.08	12.6	0.05		~100	
15:03	7.60	25.92	7.23	-127	2.04	0.0	0.00			
15:06	7.62	25.97	7.24	-124	2.02	0.0	0.10			

SAMPLE ID: NB2-1-20240930 AND NB2-1-20240930_FBLK

SAMPLE DATE: 9-30-24

SAMPLE TIME: 15:00

Notes: _____

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 9-30-24

SAMPLE LOCATION: MB2-3

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

PERSONNEL: JBC

OBSERVERS: -

SITE CONDITIONS: SW, 75°F, windy

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.80

PURGE START TIME: 16:17

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
16:20	7.12	30.01	8.10	-172	0.882	2.5	0.22			
16:24	8.42	28.52	8.02	-187	0.886	1.1	0.00			
16:28	10.01	27.50	7.95	-190	0.885	0.0	0.00			
16:31	11.31	26.73	7.88	-189	0.889	0.0	0.01			

SAMPLE ID: MB2-3_20241030 AND MB2-3_20241030_FBL

SAMPLE DATE: 9-30-24

SAMPLE TIME: 16:45

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: ~~EC SMW-01~~ SMW-1

DATE: 10-2-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC + MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 63°F Cloudy

DEPTH OF WELL: 39.84'

DEPTH TO WATER LEVEL: 23.90'

PURGE START TIME: 1605

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: ~~Poly-tubing~~ EC Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba-U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1608	24.59	10.21	8.20	-107	0.486	320	0.0	0.25	200	
1611	25.64	10.14	8.21	-108.	0.482	279	0.0	0.25	200	
1614	26.04	10.07	8.12	-107	0.472	235	0.0	0.25	200	
1617	26.65	9.97	8.14	-108	0.460	222	0.0	0.25	200	
1620	27.22	10.08	8.12	-106	0.463	212	0.0	0.25	200	

SAMPLE ID: SMW-1_20241002 + SMW-1_20241002_FBLL

SAMPLE DATE: 10-2-24

SAMPLE TIME: 1630

Notes: Bladder Pump Used

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-3

DATE: 10-2-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Windy, Cloudy, 55°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 27.66

PURGE START TIME: 9:43

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Teflon 3/8"

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:55	27.81	16.24	8.73	10	0.248	8.3	2.62	0	200	
1100	28.01	15.21	8.40	-24	0.235	6.6	0.0	0.25		
1105	28.39	14.25	8.42	-87	0.235	6.5	0.0	0.5		
1110	28.79	13.70	8.45	-99	0.238	6.6	0.0	0.75		
1115	28.79	13.31	8.43	-106	0.242	11.4	0.0	1.0		
1120	28.79	13.10	8.49	-111	0.244	14.9	0.0	1.25		
1125	28.79	12.88	8.51	-117	0.246	18.8	0.0	1.5		
1130	28.79	12.69	8.51	-123	0.248	13.5	0.0	1.75		
1135	28.79	12.57	8.56	-123	0.248	14.2	0.0	2.0		
1140	28.79	12.52	8.58	-125	0.249	14.7	0.0	2.25		
			Sample collected at				11:50			

SAMPLE ID: SMW-3_20241002 + DUP-01-GW_20241002

SAMPLE DATE: 10-2-24

SAMPLE TIME: 11:50

Notes: Bladder pump used

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-01

DATE: 04-25-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 55°F, Sunny

GAUGE READING START: 0.84'

pH 6.79

ORP 194 mV

GAUGE READING END:

CONDUCTIVITY 0.223 ms/cm

DO 2.61 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE 11.67 °c

TURBIDITY 2.4 NTU

MONITORING EQUIPMENT: Horiba - U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0in	0.00	0.00			
1 (at water edge)	8in	0.00	0.00			
2	1ft	0.1	0.00			
3	1ft 4in	0.3	0.016			
4	1ft 8in	0.35	0.010			
5	2ft	0.55	0.009			
6	2ft 4in	0.55	0.005			
7	2Pt 8in	0.6	0.010			
8	3ft	0.55	0.009			
9	3ft 4in	0.5	0.009			
10	3ft 8in	0.55	0.008			
11	4ft	0.5	0.008			
12	4ft 4in	0.5	0.008			
13	4ft 8in	0.45	0.007			
14	5ft	0.3	0.009			
15	5ft 4in	0.0	0.00			waters edge
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.011

TOTAL WIDTH (ft): 4.66

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 1000

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-02

DATE: 09-25-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F Sunny

GAUGE READING START: NO Staff gauge

pH: 7.40

ORP: 159 mV

GAUGE READING END:

CONDUCTIVITY: 0.129 ms/cm

DO: 5.05 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 14.76 °C

TURBIDITY: 12.6 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0ft	0.0	0.0			insert row
1 (at water edge)	1ft	0.1	0.005			
2	2ft	0.55	0.014			
3	3ft	0.65	0.014			
4	4ft	1	0.015			
5	5ft	1.5	0.024			
6	6ft	1.75		0.001	0.008	
7	7ft	2.3		0.008	0.004	
8	8ft	2.3		0.001	0.022	
9	9ft	2.3		0.029	0.005	
10	10ft	2		0.008	0.013	
11	11ft	1.6		0.009	0.001	
12	12ft	1	0.006			
13	13ft	0.5	0.013			
14	14ft	0.5	0.005			
15	15ft	0.5	0.012			
16	16ft	0.6	0.007			
17	17ft	1	0.007			
18	18ft	0.9	0.003			
19	19ft	0.3	0.013			
20	20ft	0	0			
21						
22						
23						
24						
25						

1 = 0ft 0.00 0.00

STREAM FLOW (cfs): 0.226

TOTAL WIDTH (ft): 20

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 11:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-03

DATE: 09-26-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 55°F, Cloudy

GAUGE READING START: ~~0.62~~ 0.62' staff height

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.04

CONDUCTIVITY: 0.255 ms/cm

TEMPERATURE: 11.59 °c

ORP: 91 mV

DO: 7.98 mg/l

TURBIDITY: 28.3 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0ft	0.0	0.0			
1 (at water edge)	1ft	0.0	0.0			
2	1.5ft	0.2	0.014			
3	2ft	0.3	0.023			
4	2.5ft	0.4	0.027			
5	3ft	0.5	0.015			
6	3.5ft	0.5	0.020			
7	4ft	0.55	0.012			
8	4.5ft	0.5	0.006			
9	5ft	0.5	0.002			
10	5.5ft	0.4	0.004			
11	6ft	0.4	0.016			
12	6.5ft	0.35	0.003			
13	7ft	0.3	0.004			
14	7.5ft	0.2	0.005			
15	8ft	0.1	0.003			
16	8.5ft	0.1	0.001			
17	9ft	0	0			edge of water
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.031

TOTAL WIDTH (ft): 8

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 0815

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNC-01

DATE: 10-08-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F, Sunny

GAUGE READING START: NA

pH: 8.79

ORP: 45 mV

GAUGE READING END:

CONDUCTIVITY: 0.158 ms/cm

DO: 6.90 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 14.53 °c

TURBIDITY: 0.0 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STAGE 0

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 15:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: BNW-01

DATE: 10-8-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 42°F, Snny

GAUGE READING START: N/A

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	8.15		ORP	41	mV
CONDUCTIVITY	0.223	ms/cm	DO	8.37	mg/l
TEMPERATURE	13.65	°c	TURBIDITY	211	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 12:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-01

DATE: 09-25-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 50°F, Cloudy

GAUGE READING START: could not locate

pH: 7.77

ORP: 175 mV

GAUGE READING END:

CONDUCTIVITY: 0.295 ms/cm

DO: 6.96 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 12.08 °C

TURBIDITY: 1.2 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.6d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO GAUGING

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 0900

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-02

DATE: 10-3-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 60°F

GAUGE READING START: Staff Gauge - 3.55'

pH 8.10

ORP 106 mV

GAUGE READING END:

CONDUCTIVITY 0.261 ms/cm

DO 7.32 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE 13.84 °C

TURBIDITY 12.2 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 9:45

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-01

DATE: 04-23-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? 0 N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F, Sunny

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH

CONDUCTIVITY ms/cm

TEMPERATURE °c

ORP mV

DO mg/l

TURBIDITY NTU

MONITORING EQUIPMENT:

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Flow

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

On-site @ 1820

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-02

DATE: 09-25-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

PERSONNEL: EC & JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 60°F, Sunny

GAUGE READING START: NO gauge

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.65

CONDUCTIVITY: 0.152 ms/cm

TEMPERATURE: 18.34 °c

ORP: 168 mV

DO: 9.34 mg/l

TURBIDITY: 2.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0ft	0.0	0.0			
1 (at water edge)	2ft	0.0	0.0			
2	3ft	0.1	0.044			
3	4ft	0.3	0.092			
4	5ft	0.3	0.011			
5	6ft	0.3	0.015			
6	7ft	0.25	0.035			
7	8ft	0.2	0.006			
8	9ft	0.2	0.021			
9	10ft	0.2	0.012			
10	11ft	0.2	0.031			
11	12ft	0.2	0.016			
12	13ft	0.3	0.021			
13	14ft	0.3	0.015			
14	15ft	0.4	0.009			
15	16ft	0.4	0.002			
16	17ft	0.1	0.002			
17	18ft	0.0	0.0			Waters edge
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.083

TOTAL WIDTH (ft): 16

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 1745

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKG-03

DATE: 09-26-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 60°F, Sunny

GAUGE READING START: Could not locate

pH 7.83

ORP 151 mV

GAUGE READING END:

CONDUCTIVITY 0.163 ms/cm

DO 6.67 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE 14.36 °C

TURBIDITY 8.7 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 0945

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-01

DATE: 10-07-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 60° F, Sunny

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.91

CONDUCTIVITY: 0.111 ms/cm

TEMPERATURE: 13.68 °C

Horiba - U-52

ORP: 112 mV

DO: 9.56 mg/l

TURBIDITY: 12.4 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 1500

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10-07-24

PERSONNEL: EC & MS

OBSERVERS:

SAMPLE LOCATION: LLS-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 60°F, Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	9.23		ORP	42 mV
CONDUCTIVITY	0.108 ms/cm		DO	10.06 mg/l
TEMPERATURE	13.49 °C		TURBIDITY	1.2 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 13:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLC-01

DATE: 9-25-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS:

GUAGE READING START: DRY —

GUAGE READING END: NO FLOW

AVERAGE GUAGE HEIGHT:

MONITORING EQUIPMENT:

pH

CONDUCTIVITY µs/cm

TEMPERATURE °c

ORP mV

DO mg/l

TURBIDITY NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	DRY - NO	FLOW				
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-01

DATE: 09/23/24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 60°F Sunny

GAUGE READING START: Staff gauging 1.29'

pH: 7.95

ORP: 141 mV

GAUGE READING END:

CONDUCTIVITY: 0.177 ms/cm

DO: 9.50 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 16.42 °c

TURBIDITY: 7.7 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 1700

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-02

DATE: 09-24-24 | PROJECT #: 401.2400718.000 | PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD | SITE ADDRESS: White Pine, MI

OBSERVERS: | SITE CONDITIONS: 65°F, Sunny

GAUGE READING START: Staff gauge 0.08' | pH 8.15 | ORP 116 mV

GAUGE READING END: | CONDUCTIVITY 0.265 ms/cm | DO 13.09 mg/l

AVERAGE GAUGE HEIGHT: | TEMPERATURE 15.97 °C | TURBIDITY 1.5 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs) | TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 14:50

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

SAMPLE LOCATION: MLR-02

DATE: 10-01-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC + MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 59°F Cloudy

GAUGE READING START: 1737

GAUGE READING END: 1755

AVERAGE GAUGE HEIGHT:

pH got on 09/24/24

CONDUCTIVITY ms/cm

TEMPERATURE °C

ORP mV

DO mg/l

TURBIDITY NTU

MONITORING EQUIPMENT:

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	13.66	0				
2	14.66	0.10	0.004			
3	15.66	0.10	0.003			
4	16.66	0.10	0.003			
5	17.66	0.20	0.015			
6	18.66	0.35	0.019			
7	19.66	0.40	0.015			
8	20.66	0.38	0.018			
9	21.66	0.55	0.025			
10	22.66	0.50	0.010			
11	23.66	0.65	0.005			
12	24.66	0.45	0.013			
13	25.66	0.45	0.006			
14	26.66	0.50	0.029			
15	27.66	0.45	0.008			
16	28.66	0.25	0.023			
17	29.66	0.20	0.001			
18	30.66	0.15	0.001			
19	31.66	0.20	0.020			
20	32.66	0.20	0.007			
21	33.66	0.25	0.009			
22	34.66	0	0			edge of water
23						
24						
25						

STREAM FLOW (cfs): 0.043

TOTAL WIDTH (ft): EC ~~34.0~~ 21

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 09-23-24

PERSONNEL: EC & JD

OBSERVERS:

SAMPLE LOCATION: MLR-03

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 60°F Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START: Staff Gauge 0.71'

GAUGE READING END: X

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.64

CONDUCTIVITY: 0.283 ms/cm

TEMPERATURE: 14.30 °c

Horiba U-52

ORP: 31 mV

DO: 10.02 mg/l

TURBIDITY: 1.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Staff Gauge

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample @ 12:50

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: NTC-01

DATE: 09/23/24
PROJECT #: 401.2400718.000
PHOTO TAKEN? (Y) N
SITE NAME: White Pine Copper
PERSONNEL: EC & JD
SITE ADDRESS: White Pine, MI
OBSERVERS:
SITE CONDITIONS: 60°F, Sunny

GAUGE READING START: No staff gauge
GAUGE READING END:
AVERAGE GAUGE HEIGHT:
MONITORING EQUIPMENT: Horiba U-52

pH: 7.56
CONDUCTIVITY: 0.225 ms/cm
TEMPERATURE: 15.34 °c
ORP: -19 mV
DO: 2.17 mg/l
TURBIDITY: 171 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0 ft	0.00	0.00			
1 (at water edge)	2ft	0.00	0.00			
2	2ft 4in	~~0.28~~ 0.25	0.028			
3	2ft 8in	0.2	0.012			
4	3ft	0.4	0.019			
5	3ft 4in	0.4	0.029			
6	3ft 8in	0.4	0.035			
7	4ft	0.4	0.014			
8	4ft 4in	0.45	0.014			
9	4ft 8in	0.5	0.013			
10	5ft	0.25	0.003			
11	5ft 4in	0.25	0.001			
12	5ft 8in	0.2	0.005			
13	6ft	0.0	0.00			edge
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.011
TOTAL WIDTH (ft): 4

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

DUP-01-SW_20240923

Sample @ 1510

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-01

DATE: 09-23-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65° F, Sunny

GAUGE READING START: Staff Gauge 0.83'

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH: 7.33

CONDUCTIVITY: EC 73 ms/cm 0.285

TEMPERATURE: 16.70 °C

ORP: 175 mV

DO: 1.51 mg/l

TURBIDITY: 21.6 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0.0	0.0	0.0			
1 (at water edge)	1ft	0.0	0.0			
2	1ft 3in	0.6	0.019			
3	1ft 6in	0.6	0.023			
4	1ft 9in	0.75	0.010			
5	2ft	0.85	0.014			
6	2ft 3in	0.8	0.003			
7	2ft 6in	0.9	0.006			
8	2ft 9in	0.85	0.001			
9	3ft	0.65	Gauging	→ 0.009		
10	3ft 3in	0.0	0.0			
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.007

TOTAL WIDTH (ft): 2.25

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 1750 09/23

with SWMS gauge @ 1045 09/25

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-02

DATE: 09-24-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F, Sunny

GAUGE READING START: Staff height 1.22'

pH ~~7.2~~ 7.73

ORP 136 mV

GAUGE READING END:

CONDUCTIVITY ~~7.7~~ ms/cm 0.343

DO 12.59 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE 17.27 °C

TURBIDITY 7.9 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 12:50

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: ~~MW-2A~~ PNC-02

DATE: 10-01-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 58° Sunny

GAUGE READING START: 1620

GAUGE READING END: 1640

AVERAGE GAUGE HEIGHT:

pH

CONDUCTIVITY ms/cm

TEMPERATURE °c

ORP mV

DO mg/l

TURBIDITY NTU

MONITORING EQUIPMENT:

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1.0	0				
2	4.5	0.83	~~0.014~~			grass present
3	8	0.65	—			grass present
4	11.5	0.30	—			grass present
5	15	0.15	—			grass present
6	18.5	0.45	—			grass present
7	22	0.30	—			grass present
8	25.5	0.45	—			grass present
9	29	0.95	—			grass present
10	32.5	1.15	0.018			
11	36	0.90	0.011			
12	39.5	0.35	0.~~00~~7			
13	43	0.35	0.005			
14	46.5	1.05	—			grass present
15	50	1.55		0.008	0.013	
16	53.5	0.80	0.020			
17	54.3					waters edge
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.096

TOTAL WIDTH (ft): ~~54.30~~ EC 53.30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

EC

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-03

DATE: 09-24-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F, Sunny

GAUGE READING START: Staff gauge @ 4.3'

pH: 7.84

ORP: 138 mV

GAUGE READING END:

CONDUCTIVITY: 0.395 ms/cm

DO: 10.22 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 15.97 °C

TURBIDITY: 6.4 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample @ 16:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CLIENT FOCUS. PROJECT SUCCESS.

DATE: ~~10-30-24~~ 10-1-24

SAMPLE LOCATION: ~~MW-18~~ PNC-03

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 60°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Gauge only

pH

CONDUCTIVITY ms/cm

TEMPERATURE °c

ORP mV

DO mg/l

TURBIDITY NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	1'4"	0	0			
2	1'8"	0.1	0.002			
3	2'	0.1	0.007			
4	2'4"	0.2	0.011			
5	2'8"	0.35	0.159			
6	3'	0.4	0.006			
7	3'4"	0.55	0.035			
8	3'8"	0.55	0.013			
9	4'	0.5	0.026			
10	4'4"	0.5	0.013			
11	4'8"	0.4	0.029			
12	5'	0.4	0.023			
13	5'4"	0.3	0.012			
14	5'8"	0.3	0.037			
15	6'	0.2	0.013			
16	6'4"	0.1	0.024			
17	6'8"	0.1	0.026			
18	7'	0.1	0.041			
19	7'4"	0.1	0.035			
20	7'8"	0	0			
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.026

TOTAL WIDTH (ft): 6.33

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-04

DATE: 09-26-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS: ~~0.58~~ EC

SITE CONDITIONS: 60°F, cloudy

GAUGE READING START: 0.58 staff gauge

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.82		ORP	138	mV
CONDUCTIVITY	0.412	ms/cm	DO	7.89	mg/l
TEMPERATURE	13.69	°c	TURBIDITY	2.6	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0	0			
1 (at water edge)	5.5 ft	0	0			
2	6ft	0.25	0.013			
3	6.5ft	0.4	0.011			
4	7ft	0.55	0.009			
5	EC ~~8~~ 7.5ft	0.55	0.051			
6	8ft	0.6	0.069			
7	8.5ft	0.5	0.060			
8	9ft	0.6	0.044			
9	9.5ft	0.55	0.020			
10	10ft	0.5	0.013			
11	10.5ft	0.3	0.022			
12	11ft	0.25	0.002			
13	11.5ft	0.15	0.006			
14	12ft	0.1	0.008			
15	12.5ft	0	0			edge of water
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.041

TOTAL WIDTH (ft): 7

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 10:45

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

SAMPLE LOCATION: PRC-01

DATE: 09-24-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F, Sunny

GAUGE READING START: Staff gauge 0.2'

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.37		ORP	114	mV
CONDUCTIVITY	0.481	ms/cm	DO	7.68	mg/l
TEMPERATURE	18.86	°C	TURBIDITY	3.3	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 15:40

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-01

DATE: 9-30-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 75°F

GAUGE READING START:

pH

ORP mV

GAUGE READING END:

CONDUCTIVITY ms/cm

DO mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE °C

TURBIDITY NTU

MONITORING EQUIPMENT: Gauge only

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	4	0	0			
2	4'6"	0.1	0.011			
3	5'	0.1	0.008			
4	5'6"	0.1	0.029			
5	6'	0.1	0.017			
6	6'6"	0.2	0.052			
7	7'	0.2	0.034			
8	7'6"	0.2	0.066			
9	8'	0.2	0.208			
10	8'6"	0.2	0.286			
11	9'	0.2	0.003			
12	9'6"	0.1	0.006			
13	10'	0.1	0.063			
14	10'6"	0.1	0.002			
15	11'	0	0			
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.036

TOTAL WIDTH (ft): 7

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 09-23-24

PERSONNEL: EC & JD

OBSERVERS:

SAMPLE LOCATION: PRC-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 60°F, Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START: No staff gauge

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.91

CONDUCTIVITY: 1.03 ms/cm

TEMPERATURE: 13.89 °C

ORP: 112 mV

DO: 7.33 mg/l

TURBIDITY: 0.3 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0.00	0.00				
1 (at water edge)	1.0	0.00	0.00			
2	1ft 4in	0.1	0.00			
3	1ft 8in	0.1	0.020			
4	2ft 0in	0.1	0.037			
5	2ft 4in	0.15	0.018			
6	2ft 8in	0.25	0.054			
7	3ft	0.3	0.065			
8	3ft 4in	0.35	0.060			
9	3ft 8in	0.5	0.053			
10	4ft	0.5	0.045			
11	4ft 4in	0.3	0.045			
12	4ft 8in	0.25	0.046			
13	5ft	0.2	0.050			
14	5ft 4in	0.15	0.014			
15	5ft 8in	0.1	0.009			
16	6ft	0.0	0.00			
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.025

TOTAL WIDTH (ft): 5

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample @ 13:55

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. UNLEASHED SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PTC-01

DATE: 9-25-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS:

GUAGE READING START: DRY -

GUAGE READING END: NO FLOW

AVERAGE GUAGE HEIGHT:

pH

CONDUCTIVITY µs/cm

TEMPERATURE °C

ORP mV

DO mg/l

TURBIDITY NTU

MONITORING EQUIPMENT:

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	DRY- NO FLOW					
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SBD-01

DATE: 09-24-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 55°F, Sunny

GAUGE READING START: NA

pH: 7.71

ORP: 33 mV

GAUGE READING END:

CONDUCTIVITY: 0.246 ms/cm

DO: 3.86 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 16.34 °C

TURBIDITY: 132 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO FLOW

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 11:00

- MS/MSD collected
- Only 2 VOAs each collected for TOC, bottles missing

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: SBW-01

DATE: 09-24-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EC & JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 52°F, Sunny

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.92		ORP	121	mV
CONDUCTIVITY	0.191	ms/cm	DO	7.36	mg/l
TEMPERATURE	13.78	°C	TURBIDITY	10.3	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sampled @ 0930

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: TBN-01

DATE: 10.7.24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 60°F

GAUGE READING START: N/A

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.85		ORP	143	mV
CONDUCTIVITY	1.03	ms/cm	DO	10.92	mg/l
TEMPERATURE	13.31	°C	TURBIDITY	29.9	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample Collected at 15:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE MINDS. — www.MannikSmithGroup.com

SAMPLE LOCATION: TBS-01

DATE: 10-8-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 39°F, Sunny

GAUGE READING START: N/A

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.47

CONDUCTIVITY: 1.04 ms/cm

TEMPERATURE: 8.60 °c

Horiba U-52

ORP: 116 mV

DO: 12.87 mg/l

TURBIDITY: 7.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 10:00

Sample Location:	ARC-01	
Date:	9/25/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 55°F	
pH:	6.79	
Conductivity:	0.223	ms/cm
Temperature:	11.67	°C
ORP:	194	mV
DO:	2.61	mg/L
Turbidity:	2.4	NTU
Staff Gauge:	0.84	feet
Sampled at:	10:00	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0.00	0	0				
1 (at water edge)	0.67	0	0				0.0000
2	1.00	0.1	0				0.0000
3	1.33	0.3	0.016				0.0016
4	1.67	0.35	0.01				0.0012
5	2.00	0.55	0.009				0.0016
6	2.33	0.55	0.005				0.0009
7	2.67	0.6	0.01				0.0020
8	3.00	0.55	0.009				0.0016
9	3.33	0.5	0.009				0.0015
10	3.67	0.55	0.008				0.0015
11	4.00	0.5	0.008				0.0013
12	4.33	0.5	0.008				0.0013
13	4.67	0.45	0.007				0.0011
14	5.00	0.3	0.009				0.0009
15	5.33	0	0			water edge	0.0000

Stream Flow:	0.017	cfs
Total Width:	4.66	ft

Sample Location:	ARC-02
Date:	9/25/2024
Personnel:	EC and JD
Site Conditions:	Sunny, 65°F
pH:	7.40
Conductivity:	0.129 ms/cm
Temperature:	14.76 °C
ORP:	159 mV
DO:	5.05 mg/L
Turbidity:	12.6 NTU
Staff Gauge:	NA feet
Sampled at:	11:30

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)	
	ft	ft	ft/s	ft/s	ft/s			
0 (at stake)	0	0	0					
1 (at water edge)	0	0	0				0.000	
2	1.00	0.1	0.005				0.001	
3	2.00	0.55	0.014				0.008	
4	3.00	0.65	0.014				0.009	
5	4.00	1	0.015				0.015	
6	5.00	1.5	0.024				0.036	
7	6.00	1.75	0.0045	0.001	0.008		0.008	**took average of 0.2d and 0.8d and put into the 0.6d column
8	7.00	2.3	0.0085	0.008	0.009		0.020	**took average of 0.2d and 0.8d and put into the 0.6d column
9	8.00	2.3	0.0115	0.001	0.022		0.026	**took average of 0.2d and 0.8d and put into the 0.6d column
10	9.00	2.3	0.017	0.029	0.005		0.039	**took average of 0.2d and 0.8d and put into the 0.6d column
11	10.00	2	0.0105	0.008	0.013		0.021	**took average of 0.2d and 0.8d and put into the 0.6d column
12	11.00	1.6	0.005	0.009	0.001		0.008	**took average of 0.2d and 0.8d and put into the 0.6d column
13	12.00	1	0.006				0.006	
14	13.00	0.5	0.013				0.007	
15	14.00	0.5	0.005				0.003	
16	15.00	0.5	0.012				0.006	
17	16.00	0.6	0.007				0.004	
18	17.00	1	0.007				0.007	
19	18.00	0.9	0.003				0.003	
20	19.00	0.3	0.013				0.004	
21	20.00	0	0			water edge	0.000	

Stream Flow:	0.229	cfs
Total Width:	20.00	ft

Sample Location:	ARC-03	
Date:	9/26/2024	
Personnel:	EC and JD	
Site Conditions:	Cloudy, 55°F	
pH:	8.04	
Conductivity:	0.255	ms/cm
Temperature:	11.59	°C
ORP:	91	mV
DO:	7.98	mg/L
Turbidity:	28.3	NTU
Staff Gauge:	0.62	feet
Sampled at:	8:15	

Station Number	**Station Distance (from Stake 0)**	**Station Depth**	**0.6d velocity**	**0.2d velocity**	**0.8d velocity**	**Notes**	**Increment Flow (cfs)**
	ft	**ft**	**ft/s**	**ft/s**	**ft/s**		
0 (at stake)	0	0	0				
1 (at water edge)	1	0	0				0.0000
2	1.50	0.2	0.014				0.0014
3	2.00	0.3	0.023				0.0035
4	2.50	0.4	0.027				0.0054
5	3.00	0.5	0.015				0.0038
6	3.50	0.5	0.02				0.0050
7	4.00	0.55	0.012				0.0033
8	4.50	0.5	0.006				0.0015
9	5.00	0.5	0.002				0.0005
10	5.50	0.4	0.004				0.0008
11	6.00	0.4	0.016				0.0032
12	6.50	0.35	0.003				0.0005
13	7.00	0.3	0.004				0.0006
14	7.50	0.2	0.005				0.0005
15	8.00	0.1	0.003				0.0002
16	8.50	0.1	0.001				0.0001
17	9.00	0	0			water edge	0.0000

Stream Flow:	0.030	cfs
Total Width:	8.00	ft

Sample Location:	DKC-01	****NO FLOW - Stream was dry**
Date:	9/23/2024	
Personnel:	EC, JD	
Site Conditions:	Sunny, 65°F	
pH:	--	
Conductivity:	--	ms/cm
Temperature:	--	°C
ORP:	--	mV
DO:	--	mg/L
Turbidity:	--	NTU
Staff Gauge:	--	feet
Sampled at:	--	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	NO FLOW					
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

Stream Flow:	0.000	cfs
Total Width:	#VALUE!	ft

Sample Location:	DKC-02	
Date:	9/25/2024	
Personnel:	EC, JD	
Site Conditions:	Sunny, 60°F	
pH:	7.65	
Conductivity:	0.152	ms/cm
Temperature:	18.34	°C
ORP:	168	mV
DO:	9.39	mg/L
Turbidity:	2.5	NTU
Staff Gauge:	NA	feet
Sampled at:	17:45	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	2	0	0				0.0000
2	3.00	0.1	0.044				0.0044
3	4.00	0.3	0.092				0.0276
4	5.00	0.3	0.011				0.0033
5	6.00	0.3	0.015				0.0045
6	7.00	0.25	0.035				0.0088
7	8.00	0.2	0.006				0.0012
8	9.00	0.2	0.021				0.0042
9	10.00	0.2	0.012				0.0024
10	11.00	0.2	0.031				0.0062
11	12.00	0.2	0.016				0.0032
12	13.00	0.3	0.021				0.0063
13	14.00	0.3	0.015				0.0045
14	15.00	0.4	0.009				0.0036
15	16.00	0.4	0.002				0.0008
16	17.00	0.1	0.002				0.0002
17	18.00	0	0			water edge	0.0000

Stream Flow:	0.081	cfs
Total Width:	16.00	ft

Sample Location:	MLR-02	
Date:	9/24/2024	*Horiba U-52 reading and sampling
Personnel:	EC and JD	
Site Conditions:	Sunny, 65°F	
pH:	8.15	
Conductivity:	0.265	ms/cm
Temperature:	15.97	°C
ORP:	116	mV
DO:	13.09	mg/L
Turbidity:	1.5	NTU
Staff Gauge:	0.08	feet
Sampled at:	14:50	

Date:	10/1/2024	*Stream Gauge
Team:	EC and MS	
Site Conditions:	Cloudy, 59°F	
Gauged at:	17:45	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	13.66	0	0				0.0000
2	14.66	0.1	0.004				0.0004
3	15.66	0.1	0.003				0.0003
4	16.66	0.1	0.003				0.0003
5	17.66	0.2	0.015				0.0030
6	18.66	0.35	0.019				0.0067
7	19.66	0.4	0.015				0.0060
8	20.66	0.38	0.018				0.0068
9	21.66	0.55	0.025				0.0138
10	22.66	0.5	0.01				0.0050
11	23.66	0.65	0.005				0.0033
12	24.66	0.45	0.013				0.0059
13	25.66	0.45	0.006				0.0027
14	26.66	0.5	0.029				0.0145
15	27.66	0.45	0.008				0.0036
16	28.66	0.25	0.023				0.0058
17	29.66	0.2	0.001				0.0001
18	30.66	0.15	0.001				0.0001
19	31.66	0.2	0.02				0.0040
20	32.66	0.2	0.007				0.0014
21	33.66	0.25	0.009				0.0023
22	34.66	0	0			water edge	0.0000

Stream Flow:	0.086	cfs
Total Width:	21.00	ft

Sample Location:	NTC-01	
Date:	9/23/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 60°F	
pH:	7.56	
Conductivity:	0.225	ms/cm
Temperature:	15.34	°C
ORP:	-19	mV
DO:	2.17	mg/L
Turbidity:	171	NTU
Staff Gauge:	NA	feet
Sampled at:	15:10	

Station Number	**Station Distance (from Stake 0)**	**Station Depth**	**0.6d velocity**	**0.2d velocity**	**0.8d velocity**	**Notes**	**Increment Flow (cfs)**
	ft	**ft**	**ft/s**	**ft/s**	**ft/s**		
0 (at stake)	0	0	0				
1 (at water edge)	2.00	0	0				0.00000
2	2.33	0.25	0.028				0.00233
3	2.67	0.2	0.012				0.00080
4	3.00	0.4	0.019				0.00253
5	3.33	0.4	0.029				0.00387
6	3.67	0.4	0.035				0.00467
7	4.00	0.4	0.014				0.00187
8	4.33	0.45	0.014				0.00210
9	4.67	0.5	0.013				0.00217
10	5.00	0.25	0.003				0.00025
11	5.33	0.25	0.001				0.00008
12	5.67	0.2	0.005				0.00033
13	6.00	0	0			water edge	0.00000

Stream Flow:	0.021	cfs
Total Width:	4.00	ft

Sample Location:	PNC-01	
Date:	9/23/2024	*Horiba U-52 reading and sampling
Personnel:	EC and JD	
Site Conditions:	Sunny, 65°F	
pH:	7.33	
Conductivity:	0.285	ms/cm
Temperature:	16.7	°C
ORP:	175	mV
DO:	1.51	mg/L
Turbidity:	21.6	NTU
Staff Gauge:	0.83	feet
Sampled at:	17:50	

Date:	9/25/2024	*Stream Gauge
Team:	EC and MS	
Site Conditions:	Cloudy, 55°F	
Gauged at:	10:45	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1	0	0				0.0000
2	1.25	0.6	0.019				0.0029
3	1.50	0.6	0.023				0.0035
4	1.75	0.75	0.01				0.0019
5	2.00	0.85	0.014				0.0030
6	2.25	0.8	0.003				0.0006
7	2.50	0.9	0.006				0.0014
8	2.75	0.85	0.001				0.0002
9	3.00	0.65	0.009				0.0015
10	3.25	0	0			water edge	0.0000

Stream Flow:	0.015	cfs
Total Width:	2.25	ft

Sample Location:	PNC-02	
Date:	9/24/2024	*Horiba U-52 reading and sampling
Personnel:	EC and JD	
Site Conditions:	Sunny, 65°F	
pH:	7.73	
Conductivity:	0.343	ms/cm
Temperature:	17.27	°C
ORP:	136	mV
DO:	12.59	mg/L
Turbidity:	7.9	NTU
Staff Gauge:	1.22	feet
Sampled at:	12:50	

Date:	10/1/2024	*Stream Gauge
Team:	EC and MS	
Site Conditions:	Sunny, 58°F	
Gauged at:	16:00	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1	0	0			Grass Present	0.0000
2	4.50	0.83	0			Grass Present	0.0000
3	8.00	0.65	0			Grass Present	0.0000
4	11.50	0.3	0			Grass Present	0.0000
5	15.00	0.15	0			Grass Present	0.0000
6	18.50	0.45	0			Grass Present	0.0000
7	22.00	0.3	0			Grass Present	0.0000
8	25.50	0.45	0			Grass Present	0.0000
9	29.00	0.95	0			Grass Present	0.0000
10	32.50	1.15	0.018				0.0725
11	36.00	0.9	0.011				0.0347
12	39.50	0.35	0.007				0.0086
13	43.00	0.35	0.005				0.0061
14	46.50	1.05	0			Grass Present	0.0000
15	50.00	1.55	0.0105	0.008	0.013		0.0570
16	53.50	0.8	0.02				0.0344
17	54.30	0	0			water edge	0.0000

Stream Flow:	0.213	cfs
Total Width:	53.30	ft

Sample Location:	PNC-03	
Date:	9/24/2024	*Horiba U-52 reading and sampling
Personnel:	EC and JD	
Site Conditions:	Sunny, 65°F	
pH:	7.84	
Conductivity:	0.395	ms/cm
Temperature:	15.97	°C
ORP:	138	mV
DO:	10.22	mg/L
Turbidity:	6.4	NTU
Staff Gauge:	0.43	feet
Sampled at:	16:30	

Date:	10/1/2024	*Stream Gauge
Team:	JD	
Site Conditions:	Sunny, 60°F	
Gauged at:	11:15	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1.33	0	0				0.00000
2	1.67	0.1	0.002				0.00007
3	2.00	0.1	0.007				0.00023
4	2.33	0.2	0.011				0.00073
5	2.67	0.35	0.159				0.01855
6	3.00	0.4	0.006				0.00080
7	3.33	0.55	0.035				0.00642
8	3.67	0.55	0.013				0.00238
9	4.00	0.5	0.026				0.00433
10	4.33	0.5	0.013				0.00217
11	4.67	0.4	0.029				0.00387
12	5.00	0.4	0.023				0.00307
13	5.33	0.3	0.012				0.00120
14	5.67	0.3	0.037				0.00370
15	6.00	0.2	0.013				0.00087
16	6.33	0.1	0.024				0.00080
17	6.67	0.1	0.026				0.00087
18	7.00	0.1	0.041				0.00137
19	7.33	0.1	0.035				0.00117
20	7.67	0	0			water edge	0.00000

Stream Flow:	0.053	cfs
Total Width:	6.33	ft

Sample Location:	PNC-04	
Date:	9/26/2024	
Personnel:	EC and JD	
Site Conditions:	Cloudy, 60°F	
pH:	7.82	
Conductivity:	0.412	ms/cm
Temperature:	13.69	°C
ORP:	138	mV
DO:	7.89	mg/L
Turbidity:	2.6	NTU
Staff Gauge:	0.58	feet
Sampled at:	10:45	

Station Number	**Station Distance (from Stake 0)**	**Station Depth**	**0.6d velocity**	**0.2d velocity**	**0.8d velocity**	**Notes**	**Increment Flow (cfs)**
	ft	**ft**	**ft/s**	**ft/s**	**ft/s**		
0 (at stake)	0	0	0				
1 (at water edge)	5.50	0	0				0.0000
2	6.00	0.25	0.013				0.0016
3	6.50	0.4	0.011				0.0022
4	7.00	0.55	0.009				0.0025
5	7.50	0.55	0.051				0.0140
6	8.00	0.6	0.069				0.0207
7	8.50	0.5	0.06				0.0150
8	9.00	0.6	0.044				0.0132
9	9.50	0.55	0.02				0.0055
10	10.00	0.5	0.013				0.0033
11	10.50	0.3	0.022				0.0033
12	11.00	0.25	0.002				0.0003
13	11.50	0.15	0.006				0.0005
14	12.00	0.1	0.008				0.0004
15	12.50	0	0				0.0000

Stream Flow:	0.082	cfs
Total Width:	7.00	ft

Sample Location:	PRC-01	
Date:	9/24/2024	*Horiba U-52 reading and sampling
Personnel:	EC and JD	
Site Conditions:	Sunny, 65°F	
pH:	7.37	
Conductivity:	0.481	ms/cm
Temperature:	18.86	°C
ORP:	114	mV
DO:	7.68	mg/L
Turbidity:	3.3	NTU
Staff Gauge:	0.2	feet
Sampled at:	15:40	

Date:	9/30/2024	*Stream Gauge
Team:	JD	
Site Conditions:	Sunny, 75°F	
Gauged at:	13:30	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	4.00	0	0				0.0000
2	4.50	0.1	0.011				0.0006
3	5.00	0.1	0.008				0.0004
4	5.50	0.1	0.029				0.0015
5	6.00	0.1	0.017				0.0009
6	6.50	0.2	0.052				0.0052
7	7.00	0.2	0.034				0.0034
8	7.50	0.2	0.066				0.0066
9	8.00	0.2	0.208				0.0208
10	8.50	0.2	0.286				0.0286
11	9.00	0.2	0.003				0.0003
12	9.50	0.1	0.006				0.0003
13	10.00	0.1	0.063				0.0032
14	10.50	0.1	0.002				0.0001
15	11.00	0	0			water edge	0.0000
Stream Flow:	0.072	cfs					
Total Width:	7.00	ft					

Sample Location:	PRC-02	
Date:	9/23/2024	
Personnel:	EC and JD	
Site Conditions:	Sunny, 60°F	
pH:	7.91	
Conductivity:	1.03	ms/cm
Temperature:	13.89	°C
ORP:	112	mV
DO:	7.33	mg/L
Turbidity:	0.3	NTU
Staff Gauge:	NA	feet
Sampled at:	13:55	

Station Number	**Station Distance (from Stake 0)**	**Station Depth**	**0.6d velocity**	**0.2d velocity**	**0.8d velocity**	**Notes**	**Increment Flow (cfs)**
	ft	**ft**	**ft/s**	**ft/s**	**ft/s**		
0 (at stake)	0	0	0				
1 (at water edge)	1	0	0				0.0000
2	1.33	0.1	0				0.0000
3	1.67	0.1	0.02				0.0007
4	2.00	0.1	0.037				0.0012
5	2.33	0.15	0.018				0.0009
6	2.67	0.25	0.054				0.0045
7	3.00	0.3	0.065				0.0065
8	3.33	0.35	0.06				0.0070
9	3.67	0.5	0.053				0.0088
10	4.00	0.5	0.045				0.0075
11	4.33	0.3	0.045				0.0045
12	4.67	0.25	0.046				0.0038
13	5.00	0.2	0.05				0.0033
14	5.33	0.15	0.014				0.0007
15	5.67	0.1	0.009				0.0003
16	6.00	0	0			water edge	0.0000

Stream Flow:	0.050	cfs
Total Width:	5.00	ft

APPENDIX B
PHOTOGRAPH LOG



Photo 1: ARC-01 facing southeast (09-25-2024)



Photo 2: ARC-02 facing west (09-25-2024)



Photo 3: ARC-03 facing north (09-26-2024)



Photo 4: BNC-01 facing northeast (10-08-2024)



Photo 5: BNW-01 facing north (10-08-2024)



Photo 6: CBR-01 facing southeast (09-25-2024)



Photo 7: CBR-02 facing northeast (10-03-2024)



Photo 8: DKC-01 facing northeast, no flow observed (09-23-2024)



Photo 9: DKC-02 facing south (09-25-2024)



Photo 10: DKC-03 facing west (09-26-2024)



Photo 11: LKS-01 facing northwest (10-07-2024)



Photo 12: LKS-02 facing north (10-07-2024)



Photo 13: MLC-01 facing southwest, no flow observed (09-25-2024)

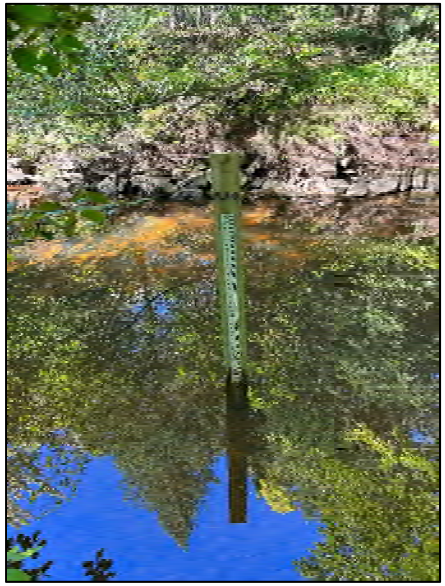


Photo 14: MLR-01 facing west (09-23-2024)



Photo 15: MLR-02 facing northeast (10-01-2024)



Photo 16: MLR-03 facing southwest (09-23-2024)



Photo 17: NTC-01 facing south (09-23-2024)



Photo 18: PNC-01 facing north (09-25-2024)



Photo 19: PNC-02 facing west (10-01-2024)



Photo 20: PNC-03 facing southeast (10-03-2024)



Photo 21: PNC-04 facing east (09-26-2024)



Photo 22: PRC-01 facing southeast (10-03-2024)



Photo 23: PRC-02 facing southeast (09-23-2024)



Photo 24: PTC-01 facing south, no observed flow (09-25-2024)



Photo 25: SBD-01 facing southwest (09-24-2024)



Photo 26: SMW-01 facing west (09-24-2024)



Photo 27: TBN-01 facing southeast (10-08-2024)



Photo 28: TBS-01 facing west (10-08-2024)



Photo 29: Black particulate material encountered during NB1-1 purging (10-02-2024)

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

December 2024

January 14, 2025

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Sampling Field Results for December 2024

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in December, 2024 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's June 21, 2024 *Proposal for Groundwater and Surface Water Sampling*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). Figure 1, *Groundwater Monitoring Locations* and Figure 2, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between December 2 and December 17, 2024, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (Figure 1) using low-flow sampling procedures with a peristaltic, bladder, or down-hole centrifugal pump depending on the depth to groundwater and location. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in *Table 1, Groundwater Field Parameter Summary*. Copies of the field sheets are provided in *Appendix A, Field Sheets*.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtering for dissolved low level and dissolved methyl mercury samples was conducted at a controlled location within WPC's White Pine office using FlipMate™ 50 and FlipMate™ 100 Filtration System 0.45 um filters. A field blank for low level mercury was also collected at the filtering location. The filters were manufacturer certified for background metals to be less than 0.0005 micrograms per liter (ug/L) mercury.

Trace Analytical Laboratories, Inc. (Trace) previously provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was re-used between sampling events for sample collection. The teflon tubing used during sample collection was retained for reuse during subsequent sampling events and is was stored at MSG's Houghton, Michigan office between sampling events. Existing poly tubing encountered in many of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection.

MSG collected a total of 24 groundwater samples, plus one complete field blank, duplicate from MW-2A (DUP-01-GW_20241210), matrix spike/matrix spike duplicate (MS/MSD) from MW-5A, and equipment blank from the bladder pump which was used to sample MW-31, SMW-1, and SMW-1SB. During this sampling event, MW-2SB and MW-41 did not produce sufficient groundwater to collect a sample, the MW-43SB well casing was frozen and could not be sampled, and NB1-1 and NB1-3 were not accessible due to extensive standing water atop the basin.

SURFACE WATER GAUGING AND SAMPLING

Between December 2 and December 17, 2024, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (Figure 2) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein. An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements after chopping and removing ice to gain access to most of the stream locations. Copies of the stream gauging field sheets and stream flow calculation sheets are included in Appendix A. Calculated stream flows are summarized in *Table 2, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in Table 2. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw from the surface water body and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were processed at WPC's White Pine office using FlipMate™ 50 and FlipMate™ 100 Filtration System 0.45 um filters as described above.

MSG collected a total of 26 surface water samples. A duplicate sample from NTC-01 (DUP-01-SW_20241202), a MS/MSD from DKC-03, and a field blank were also collected. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. At location PNC-02 access was determined to not be safe since the valley was observed to be completely flooded at the sampling location and the snow covered embankment down into the valley was too slick to climb back up. For future sampling events MSG will plan to bring a ladder that can be used to more readily traverse the embankment and WPC may want to consider downstream beaver dam control to manage water levels. Location CBR-01 was not accessible due to snow cover and significantly muddy trail conditions. Photographs of the stream gauging and sampling locations are provided in *Appendix B, Photograph Log.*

ADDITIONAL SUPPORT ACTIVITIES

In agreement with WPC and as-directed by Foth Infrastructure & Environment, LLC (Foth), MSG provided assistance with certain well development and protection activities related to the new shallow bedrock monitoring wells including:

- MW-2SB: Additional monitoring well development;
- MW-5SB: Packer installation to prevent potential well casing damage from artesian flow conditions and ice formation within the monitoring well casing;
- MW-35SB: Additional monitoring well development; and,
- MW-43SB: Packer installation to prevent potential well casing damage from artesian conditions and ice formation within the monitoring well casing.

On December 17, 2024, MSG gauged the depth to groundwater using an electronic water level probe at MW-2SB, which was 85.72 feet below the top of casing (ft btoc). MSG then poured approximately 25 gallons of distilled water into the well casing, which raised the water level to approximately 25 ft btoc based on soundings. The distilled water addition inhibited accurate water level recording using the electronic water level probe since the distilled water was not conductive. MSG then used a down-hole centrifugal pump to alternately surge and purge the water column to remove fine sediments from the sand pack and well casing. The surging and purging continued until the water level was pumped down to a minimum, which was approximately 90 ft btoc. Refer to Photo 33 in Appendix B.

At MW-5SB, MSG removed the ice accumulation from inside the protective well casing. Due to favorable weather conditions and the hydrostatic pressure in this monitoring well, we were also able to remove the ice core from within the well casing. Upon completion of groundwater sampling at MW-5SB on December 9, 2024, MSG pumped the water level in the monitoring well down to approximately 20 ft btoc and then installed a packer assembly consisting of a 1.25" x 2" k-packer with a galvanized steel threaded plug in one end, 10 feet of 1.25-inch diameter galvanized steel drop pipe, and a bolt installed cross-wise through the top of the drop pipe that rests on the PVC well casing. The existing plastic compression cap was left inside the protective casing for future use as needed. A packer removal tool was also fabricated from pipe components to form a tee handle that can be threaded on to the top of the drop pipe to lift the assembly out of the well. Refer to Photo 29 through Photo 31 in Appendix B and our prior electronic mail message from December 10, 2024 for additional information.

To aid in development of MW-35SB, MSG used a down-hole centrifugal pump to alternately surge and purge the water column to remove fine sediments from the sand pack and well casing on December 3, 4, 5, and 9, 2024. During each purging event approximately 45 gallons of turbid water were removed. The turbidity remained greater than 1,000 nephelometric turbidity units (NTU) at the time of sampling on December 17, 2024.

On December 16, 2024 MSG returned to MW-43SB in an effort to remove accumulated ice from within the monitoring well casing and install a packer assembly similar to the work completed at MW-5SB. Upon opening the well MSG noted that the monitoring well casing was filled with ice to the bottom of the compression cap. Through a combination of chipping/picking and melting we were able to remove the ice core down to approximately 2.4 ft btoc but could not get through all of the ice to reach groundwater. There was not enough hydrostatic pressure to push the ice core up the well casing and the ice still felt fairly solid inside the well. Therefore, MSG was not able to sample or install a packer assembly in this monitoring well. There was no visible damage to the PVC well casing from the ice. Refer to Photo 32 in Appendix B. The k-packer assembly for this monitoring well was left at WPC's White Pine office along with the removal tee handle.

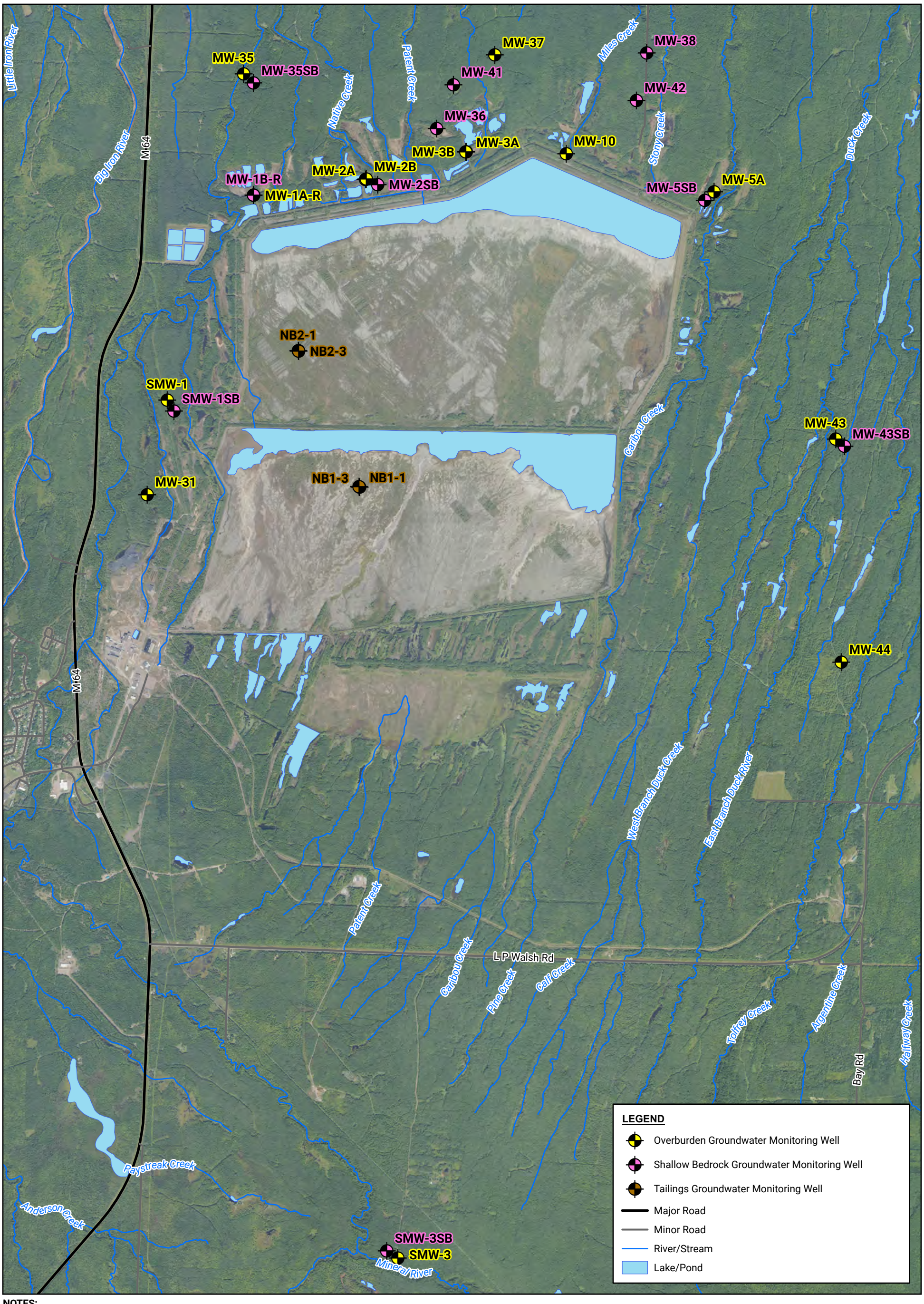
MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,



Jed Chrestensen, P.E.
Project Manager

FIGURES



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 1,500 3,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 1

GROUNDWATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 24W005	

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Lake Superior
LKS-01
LKS-02
PTC-01
NTC-01
MLC-01
PNC-04
DKC-03
CBR-02
M 64
MLR-03
PRC-02
Native Creek
Patent Creek
Miles Creek
Stony Creek
Duck Creek
ARC-03
BNC-01
Little Iron River
Mineral River
Perch Creek
Ash Creek
PNC-03
DKC-02
PRC-01
BNW-01
TBN-01
Townline Rd
L P Walsh Rd
Floodwood River
MLR-02
Big Iron River
M 64
TBS-01
Caribou Creek
ARC-02
PNC-02
Little Cranberry River
SBD-01
SBW-01
West Branch Duck Creek
East Branch Duck River
Argentine Creek
Halfway Creek
Town Line Creek
Cranberry River
Potato Farm Rd
ARC-01
PNC-01
L P Walsh Rd
DKC-01
CBR-01
MLR-01
Patent Creek
Caribou Creek
Pine Creek
Calf Creek
Tolfrey Creek
Paystreak Creek
Federal Forest Road 630
Cranberry River
Old M 64
Anderson Creek
Mineral River
Sleepy Creek
Sandhill Creek
Bush Creek

LEGEND

- Water Quality Sampling Location
- Water Quality and Flow Monitoring Station
- Water Quality and Continuous Flow Monitoring Station
- Major Road
- Minor Road
- River/Stream
- Lake/Pond

NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 2,500 5,000 Feet

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WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:	
Drawn By: BJW1	Checked By: JMW3	Project: 23W200

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TABLES

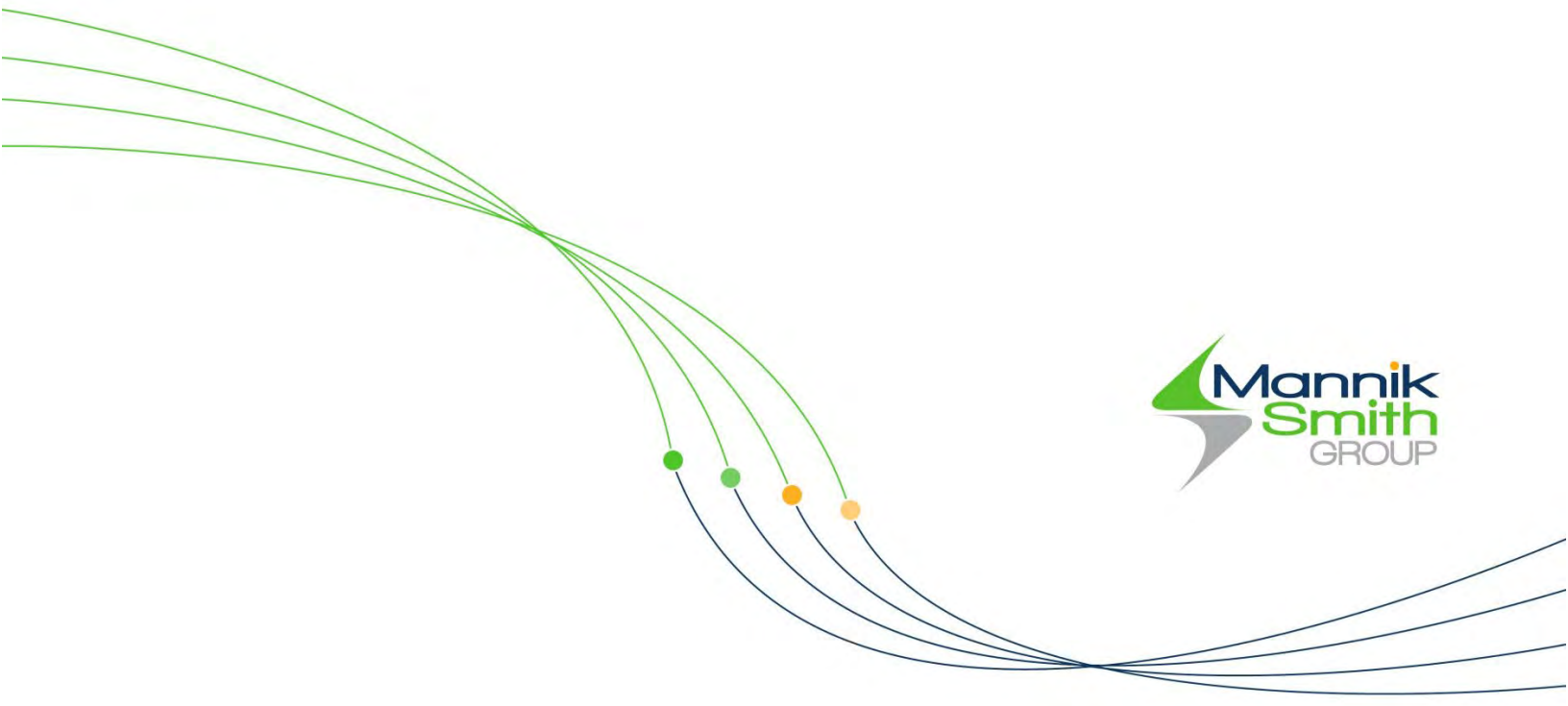


TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-1A-R	7/31/2024	9.51	16.98	8.05	136	0.659	1.7	0.42	100
	9/30/2024	10.92	12.99	7.24	157	0.729	6.3	0.00	200
	12/5/2024	11.73	8.07	8.26	175	0.706	8.6	12.19	200
MW-1B-R	7/31/2024	9.56	20.90	7.85	-124	0.707	23.7	0.00	100
	9/30/2024	10.78	12.94	7.71	-57	0.859	3.9	0.00	200
	12/5/2024	11.94	6.20	8.06	32	0.796	0.0	11.78	200
MW-2A	8/1/2024	10.59	14.18	7.30	-189	1.230	72.8	0.24	200
	10/1/2024	10.75	13.15	7.42	-162	1.350	0.0	0.00	200
	12/10/2024	6.24	6.88	7.76	-68	1.36	9.5	0.00	200
MW-2B	8/1/2024	11.21	15.70	7.15	-3	0.937	6.8	0.33	200
	10/1/2024	10.73	15.34	7.24	22	1.170	16.2	4.39	200
	12/10/2024	6.40	8.59	7.86	118	1.09	9.3	0.66	200
MW-2SB	12/17/2024	85.72	--	--	--	--	--	--	--
MW-3A	7/30/2024	10.94	21.99	7.13	-46	1.580	103	0.20	200
	10/1/2024	12.69	15.82	7.14	-87	2.080	19.2	0.00	200
	12/10/2024	8.54	8.01	7.65	-42	2.49	1.8	0.00	200
MW-3B	7/30/2024	10.74	13.46	7.19	-216	0.903	0.0	0.19	200
	10/1/2024	12.18	15.83	7.20	-60	1.580	0.0	0.55	200
	12/10/2024	7.99	5.43	8.00	102	0.969	0.0	5.68	200
MW-5A	7/30/2024	11.84	18.60	7.36	72	1.340	0.0	1.66	200
	10/2/2024	9.19	14.38	7.21	46	1.650	1.9	0.00	200
	12/9/2024	3.55	10.57	7.98	27	1.48	0.0	10.45	200
MW-5SB	9/30/2024	0.05	23.30	8.55	-35	2.060	190.0	2.10	200
	12/9/2024	0.00	8.27	9.33	-87	1.27	9.0	0.00	200
MW-10	8/6/2024	5.82	14.77	6.10	-24	2.330	0.4	0.00	150
	9/30/2024	5.81	18.64	6.43	-54	2.490	3.6	0.00	200
	12/3/2024	4.90	7.71	7.02	-78	2.59	7.9	0.00	200
MW-31	7/30/2024	50.71	12.47	8.10	51	0.359	>1000	0.00	200
	10/7/2024	49.50	10.26	8.97	-30	0.397	278	0.50	200
	12/9/2024	48.67	6.1	8.10	37	0.347	>1000	1.23	200
MW-35	7/28/2024	16.63	--	--	--	--	--	--	--
	9/30/2024	19.78	9.46	9.40	152	0.612	28.3	3.19	100
	12/3/2024	20.13	5.41	8.09	154	0.462	180	9.96	100
MW-35SB	12/17/2024	26.59	5.58	8.84	168	0.554	>1000	9.58	100
MW-36	7/28/2024	6.83	19.53	7.17	-207	0.668	261	0.58	200
	9/30/2024	5.94	20.43	8.10	-155	0.667	49.9	0.68	200
	12/3/2024	2.93	6.78	8.11	126	0.587	12.5	0.25	200
MW-37	7/28/2024	14.11	24.22	7.34	-69	0.438	89.8	0.85	200
	10/2/2024	16.81	11.55	8.03	-11	0.534	24.7	1.83	200
	12/3/2024	16.94	8.88	8.53	145	0.413	13.6	10.54	200
MW-38	7/28/2024	12.31	11.70	7.66	115	0.525	0.0	0.94	200
	10/7/2024	15.95	10.22	7.32	142	0.570	3.9	0.00	200
	12/3/2024	16.11	7.01	8.65	192	0.597	4.3	2.47	200
MW-41	7/24/2024	7.90	14.99	7.40	164	0.539	78.1	9.10	200
	9/30/2024	28.33	14.70	8.43	172	0.610	172	5.89	100
	12/3/2024	28.64	--	--	--	--	--	--	--
MW-42	7/28/2024	5.62	16.37	8.50	51	0.354	0.0	3.45	200
	10/7/2024	8.42	12.70	8.71	106	0.316	35.8	0.56	200
	12/3/2024	6.95	5.74	8.91	174	0.315	11.9	2.16	200
MW-43	7/31/2024	13.61	18.32	8.02	-33	0.419	274	0.40	200
	9/25/2024	17.31	11.93	7.98	167	0.501	17.7	0.00	200
	12/4/2024	15.54	7.43	8.21	134	0.452	38.1	0.00	200
MW-43SB	10/1/2024	3.65	12.23	8.51	17	4.520	1.7	1.51	150
	12/16/2024	frozen	--	--	--	--	--	--	--
MW-44	7/31/2024	15.10	13.58	7.69	-194	0.614	50.6	0.06	200
	9/25/2024	17.89	13.72	8.38	-141	0.809	89.4	0.00	200
	12/4/2024	17.21	8.74	8.33	-61	0.633	15.0	0.00	200
NB1-1	7/24/2024	5.61	13.20	6.86	-128	1.290	0.0	0.16	200
	10/2/2024	5.78	16.04	7.74	-228	1.080	29.0	0.00	200
	12/17/2024	inaccessible	--	--	--	--	--	--	--
NB1-3	7/24/2024	6.21	13.64	7.89	-273	1.000	54.2	0.31	200
	10/2/2024	6.47	14.05	7.82	-175	1.000	22.3	0.37	200
	12/17/2024	inaccessible	--	--	--	--	--	--	--
NB2-1	7/24/2024	6.45	17.91	6.93	-166	2.260	62.4	0.32	200
	9/30/2024	6.21	25.97	7.21	-124	2.020	0.0	0.10	100
	12/2/2024	2.66	7.19	8.10	-177	1.10	13.7	0.00	200
NB2-3	7/24/2024	6.25	13.99	6.54	-42	1.110	0.0	0.00	200
	9/30/2024	5.80	26.73	7.88	-189	0.889	0.0	0.01	200
	12/2/2024	2.96	8.18	8.40	-78	1.03	14.9	13.01	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
SMW-1	7/25/2024	23.52	9.22	8.21	-84	0.403	73.0	14.06	200
	10/2/2024	23.90	10.08	8.12	-106	0.463	212.0	0.00	200
	12/9/2024	24.79	8.17	8.32	107	0.337	71.9	0.00	200
SMW-1SB	12/9/2024	25.15	5.58	8.99	134	0.362	73.2	15.83	200
SMW-3	8/6/2024	27.68	10.84	8.14	88	0.262	11.1	5.41	200
	10/2/2024	27.66	12.52	8.58	-125	0.249	14.7	0.00	200
	12/4/2024	27.18	7.36	8.39	-60	0.272	8.7	10.74	200
SMW-3SB	12/4/2024	22.98	--	--	--	--	--	--	--

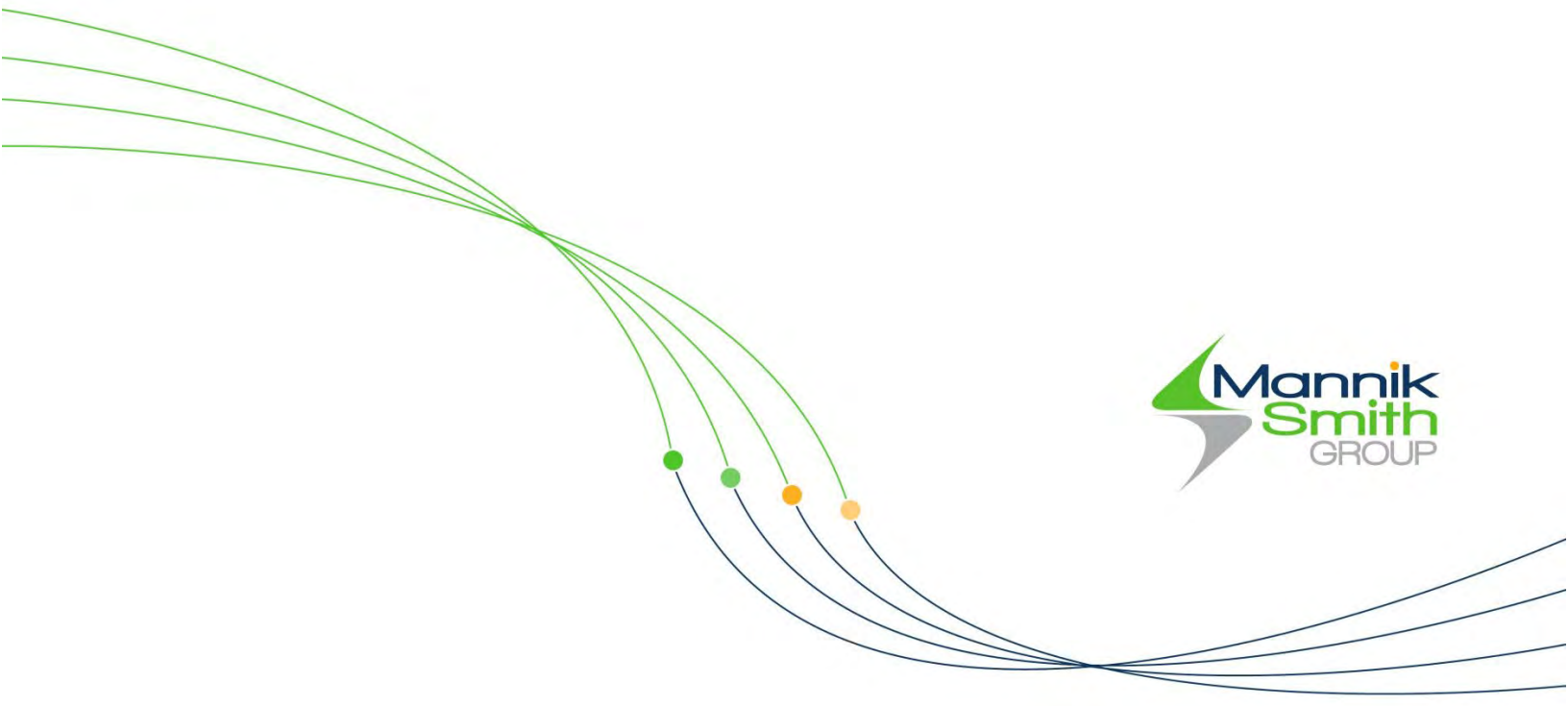
Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
ARC-01	7/31/2024	6.89	0.129	20.68	122	2.80	8.0	0.008	1.42	--
	9/25/2024	6.79	0.223	11.67	194	2.61	2.4	0.017	4.66	0.84
	12/5/2024	8.22	0.098	1.26	178	11.75	0.0	0.058	3.5	1.00
ARC-02	7/31/2024	7.72	0.153	19.32	120	1.93	25.8	0.125	11.5	--
	9/25/2024	7.40	0.129	14.76	159	5.05	12.6	0.229	20.0	--
	12/4/2024	8.52	0.158	0.32	158	6.56	733	0.427	34.0	--
ARC-03	8/6/2024	--	--	--	--	--	--	Dry		--
	9/26/2024	8.04	0.255	11.59	91	7.98	28.3	0.030	8.00	0.62
	12/11/2024	8.15	0.093	0.07	199	16.25	32.6	2.162	14.17	1.50
BNC-01	8/6/2024	7.39	0.179	22.83	115	8.21	0.0	No Stream Gauging		--
	10/8/2024	8.79	0.158	14.53	45	6.90	0.0	No Stream Gauging		--
	12/11/2024	8.12	0.143	0.00	161	4.2	700	No Stream Gauging		--
BNW-01	7/31/2024	7.12	0.184	28.77	111	7.80	2.1	No Stream Gauging		--
	10/8/2024	8.15	0.223	13.65	41	8.37	211	No Stream Gauging		--
	12/11/2024	8.42	0.152	1.49	211	15.75	25.6	No Stream Gauging		--
CBR-01	7/29/2024	8.16	0.242	24.54	177	8.90	0.0	No Stream Gauging		--
	9/25/2024	7.77	0.295	12.08	175	6.96	1.2	No Stream Gauging		--
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
CBR-02	8/6/2024	7.97	0.246	26.38	92	6.70	0.0	No Stream Gauging		--
	10/3/2024	8.10	0.261	13.84	106	7.32	12.2	No Stream Gauging		3.55
	12/17/2024	8.30	0.118	0.75	229	10.09	39.2	No Stream Gauging		3.20
DKC-01	7/29/2024	--	--	--	--	--	--	Dry		--
	9/23/2024	--	--	--	--	--	--	Dry		--
	12/5/2024	7.83	0.159	0.59	250	14.81	0.0	0.131	6.75	--
DKC-02	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	7.65	0.152	18.34	168	9.39	2.5	0.081	16.00	--
	12/17/2024	7.30	0.081	0.06	189	16.12	24.7	11.557	22.5	--
DKC-03	8/6/2024	7.52	0.213	25.28	151	5.21	0.0	No Stream Gauging		--
	9/26/2024	7.83	0.163	14.36	151	6.67	8.7	No Stream Gauging		--
	12/16/2024	7.50	0.087	1.63	237	13.76	47.7	No Stream Gauging		--
LKS-01	7/28/2024	8.34	0.116	20.87	191	11.12	0.1	No Stream Gauging		--
	10/7/2024	8.91	0.111	13.68	112	9.56	12.4	No Stream Gauging		--
	12/16/2024	7.56	0.212	0.30	236	13.74	37.8	No Stream Gauging		--
LKS-02	7/28/2024	7.69	0.112	21.91	172	11.11	0.0	No Stream Gauging		--
	10/7/2024	9.23	0.108	13.49	42	10.06	1.2	No Stream Gauging		--
	12/16/2024	8.11	0.115	0.70	62	10.79	17.6	No Stream Gauging		--
MLC-01	8/6/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/2/2024	12.12	0.275	3.76	-43	14.59	16.3	0.027	2.5	--
MLR-01	7/25/2024	7.72	0.148	15.35	150	7.52	0.1	0.311	16.33	--
	9/23/2024	7.95	0.177	16.42	141	9.50	7.7	No Stream Gauging		1.29
	12/16/2024	7.58	0.088	0.36	199	15.08	32.2	No Stream Gauging		2.05
MLR-02	7/25/2024	7.41	0.247	19.59	114	7.46	7.4	0.489	28.17	--
	9/24/2024	8.15	0.265	15.97	116	13.09	1.5	0.086	21.00	0.08
	12/16/2024	7.82	0.140	0.31	234	14.4	57.1	2.504	37.5	1.15
MLR-03	7/25/2024	7.79	0.245	15.87	186	9.27	0.0	0.468	28.17	--
	9/23/2024	8.64	0.283	14.30	31	10.02	1.6	No Stream Gauging		0.71
	12/2/2024	9.17	0.168	0.05	192	21.09	17.5	No Stream Gauging		1.30
NTC-01	7/22/2024	7.85	0.208	17.79	39	9.55	34.7	0.074	4.83	--
	9/23/2024	7.56	0.225	15.34	-19	2.17	171	0.021	4.00	--
	12/2/2024	9.87	0.252	1.76	56	14.1	12.7	0.016	5.33	--
PNC-01	7/29/2024	6.53	0.119	21.62	171	2.13	1.2	0.008	2.17	--
	9/23/2024	7.33	0.285	16.70	175	1.51	21.6	0.015	2.25	0.83
	12/5/2024	7.22	0.085	0.93	131	10.99	55.1	0.015	1.33	1.00
PNC-02	7/29/2024	7.29	0.293	27.19	72	4.63	41.0	0.068	10.84	--
	9/24/2024	7.73	0.343	17.27	136	12.59	7.9	0.213	53.30	1.22
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
PNC-03	8/1/2024	7.79	0.453	20.11	105	4.62	0.0	0.023	4.00	--
	9/24/2024	7.84	0.395	15.97	138	10.22	6.4	0.053	6.33	0.43
	12/9/2024	8.92	0.274	1.72	168	10.26	10.0	3.440	18.92	1.31
PNC-04	8/7/2024	7.35	0.481	17.08	157	9.73	0.0	0.011	5.34	--
	9/26/2024	7.82	0.412	13.69	138	7.89	2.6	0.082	7.00	0.58
	12/17/2024	8.27	0.241	0.06	276	15.12	19.9	10.975	15.5	1.70
PRC-01	7/22/2024	8.22	0.972	24.40	110	9.33	47.9	1.011	6.17	--
	9/24/2024	7.37	0.481	18.86	114	7.68	3.3	0.072	7.0	0.20
	12/11/2024	8.11	0.938	0.56	192	13.84	21.1	11.443	16.0	0.75
PRC-02	7/22/2024	8.05	0.984	19.87	132	11.13	10.6	0.805	5.17	--
	9/23/2024	7.91	1.030	13.89	112	7.33	0.3	0.050	5.00	--
	12/2/2024	8.95	0.821	0.13	-109	19.4	25.6	5.142	6.66	--
PTC-01	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/11/2024	8.03	0.215	-0.07	231	14.47	2.7	0.271	9.0	--
SBD-01	7/29/2024	7.65	0.224	28.82	123	5.98	89.5	No Stream Gauging		--
	9/24/2024	7.71	0.246	16.34	33	3.86	132.0	No Stream Gauging		--
	12/10/2024	7.67	0.235	3.89	199	6.18	57.7	No Stream Gauging		--
SBW-01	7/29/2024	8.17	0.152	26.48	138	5.96	0.0	No Stream Gauging		--
	9/24/2024	7.92	0.191	13.78	121	7.36	10.3	No Stream Gauging		--
	12/10/2024	7.55	0.181	0.46	206	6.64	63.0	No Stream Gauging		--
TBN-01	7/31/2024	7.13	0.866	25.82	108	8.52	4.4	No Stream Gauging		--
	10/7/2024	7.85	1.030	13.31	143	10.92	29.9	No Stream Gauging		--
	12/11/2024	8.02	0.618	0.19	198	13.83	52.1	No Stream Gauging		--
TBS-01	7/28/2024	7.55	0.754	28.43	120	10.25	0.0	No Stream Gauging		--
	10/8/2024	8.47	1.040	8.60	116	12.87	7.8	No Stream Gauging		--
	12/11/2024	8.30	0.396	4.94	178	11.19	170	No Stream Gauging		--

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

APPENDIX A
FIELD SHEETS



LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1AR

DATE: 12.5.24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Windy, 28°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 11.73

PURGE START TIME: 9:01

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
9:05	12.60	10.49	8.54	158	0.684	32.1	14.24	0	200	
9:10	15.31	10.18	8.34	169	0.674	10.4	12.46	0.25	↓	
9:15	14.18	9.50	8.28	173	0.676	8.7	12.30	0.5		
9:20	15.02	8.79	8.27	174	0.680	6.7	12.24	0.75		
9:25	15.76	8.43	8.27	174	0.695	8.0	12.24	1.0		
9:30	16.41	8.18	8.26	175	0.707	8.3	12.22	1.25		
9:35	16.90	8.07	8.26	175	0.706	8.6	12.19	1.5		
				Sample collected at 9:45						

SAMPLE ID: MW-1AR_20241205 & MW-1AR-20241205-FBLL

SAMPLE DATE: 12.5.24

SAMPLE TIME: 9:45

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith TECHNICAL SKILL

SAMPLE LOCATION: MW-1BR

DATE: 12-5-24

PROJECT #: 401.2400718.000

PERSONNEL: TD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 28°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 11.94

PURGE START TIME: 10:42

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1045	12.70	5.27	8.24	-50	0.787	34.6	13.73	0	200	
1050	12.75	5.36	8.20	+48	0.785	19.0	13.86	0.25		
1055	12.75	5.29	8.16	198	0.790	14.1	13.51	0.5		
1100	12.78	5.52	8.12	170	0.793	0.0	13.18	0.75		
1105	12.82	6.17	8.08	98	0.788	0.0	12.31	1.0		
1110	12.85	6.23	8.07	42	0.786	0.0	12.02	1.25		
1115	12.88	6.29	8.07	38	0.791	0.0	11.91	1.5		
1120	12.91	6.20	8.06	32	0.796	0.0	11.8	1.75		
				Sample collected at				11:30		

SAMPLE ID: MW-1BR_20241205 & MW-1BR-20241205-FBLL

SAMPLE DATE: 12-5-24

SAMPLE TIME: 11:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2A

DATE: 12-10-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Snowy, 25°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 6.24

PURGE START TIME: 8:48

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
9:00	6.79	6.48	8.20	-45	1.29	21.5	1.94	0	200	
9:05	7.19	6.93	8.11	-62	1.30	10.8	0.0	0.25		
9:10	7.68	6.99	8.02	-68	1.33	8.2	0.0	0.5		
9:15	8.28	6.87	7.95	-63	1.35	15.3	0.0	0.75		
9:20	8.61	6.83	7.90	-68	1.35	12.1	0.0	1.0		
9:25	9.08	6.58	7.86	-67	1.35	10.6	0.0	1.25		
9:30	9.31	6.72	7.79	-68	1.36	9.7	0.0	1.5		
9:35	9.69	6.88	7.76	-68	1.36	9.5	0.0	1.75		
				Sample collected at				9:50		

SAMPLE ID: MW-2A_20241210 & DUP-01-GW_20241210 & MW-2A_20241210-FBCL

SAMPLE DATE: 12-10-24

SAMPLE TIME: 9:50

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL, CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2B

DATE: 12-10-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Snowy, 25°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 6.40

PURGE START TIME: 11:31

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1135	7.18	8.64	8.10	79	1.09	41.7	10.42	0	200	
1140	7.80	8.60	7.99	81	1.08	44.1	1.50	0.25		
1145	8.13	8.56	7.95	95	1.08	4.1	1.07	0.5		
1150	8.44	8.53	7.93	107	1.08	5.2	0.93	0.75		
1155	8.80	8.52	7.90	115	1.08	9.1	0.86	1.0		
1200	9.31	8.41	7.88	121	1.08	9.4	0.77	1.25		
1205	9.52	8.53	7.87	115	1.09	9.1	0.72	1.5		
1210	9.86	8.59	7.86	118	1.09	9.3	0.66	1.75		
			Sample collected at 12:20							

SAMPLE ID: MW-2B_20241210 & MW-2B_20241210-FBLK

SAMPLE DATE: 12-10-24

SAMPLE TIME: 12:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2SB

DATE: _____

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: _____

SITE ADDRESS: White Pine, MI

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

PURGE START TIME: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: _____

CASING TYPE: _____

MONITORING EQUIPMENT: _____

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			

SAMPLE ID: _____

SAMPLE DATE: _____

SAMPLE TIME: _____

Notes: NOT Sampled due to dry well

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3A

DATE: 12-10-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Heavy snow, 25°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 8.54

PURGE START TIME: 14:58

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1500	9.11	7.69	8.13	-23	2.38	2.3	2.74	0	200	
1505	9.63	8.05	7.86	-34	2.45	1.0	0.0	0.25	↓	
1510	9.89	8.05	7.77	-39	2.49	0.7	0.0	0.5	↓	
1515	10.31	8.03	7.75	-39	2.49	1.8	0.0	0.75	↓	
1520	10.52	8.08	7.70	-41	2.49	1.4	0.0	1.0	↓	
1525	10.74	8.07	7.67	-42	2.49	2.3	0.0	1.25	↓	
1530	10.91	8.01	7.65	-42	2.49	1.8	0.0	1.5	↓	
				Sample collected at 15:40						

SAMPLE ID: MW-3A_20241210 & MW-3A_20241210_FBLL

SAMPLE DATE: 12-10-24

SAMPLE TIME: 15:40

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3B

DATE: 12-10-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Heavy Snow, 25°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 7.99

PURGE START TIME: 4:17

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1620	8.53	5.72	8.19	-7	0.947	0.4	7.79	0	200	
1625	8.69	6.28	8.12	44	0.973	0.0	6.79	0.25		
1630	8.80	5.97	8.08	60	0.962	0.0	6.13	0.5		
1635	8.89	5.71	8.04	74	0.969	0.4	6.02	0.75		
1640	9.01	5.63	8.02	86	0.968	0.7	6.01	1.0		
1645	9.15	5.47	8.01	98	0.969	0.0	5.73	1.25		
1650	9.24	5.43	8.00	102	0.969	0.0	5.68	1.5		
			Sample collected at 17:00							

SAMPLE ID: MW-3B_20241210 & MW-3B_20241210-FBLK

SAMPLE DATE: 12-10-24

SAMPLE TIME: 17:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-5A

DATE: 12-9-24

PROJECT #: 401.2400718.000

PERSONNEL: JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 32°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 3.55

PURGE START TIME: 1043

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: ¼" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1045	4.09	11.72	8.29	30	1.52	0.7	12.58	0	200	
1050	4.17	11.65	8.13	23	1.52	0.8	11.73	0.25	↑	
1055	4.22	11.38	8.09	25	1.52	0.0	11.26	0.5	|	
1100	4.29	11.09	8.04	28	1.52	0.0	10.81	0.75	|	
1105	4.29	10.80	8.00	26	1.49	0.0	10.55	1.0	|	
1110	4.30	10.57	7.98	27	1.48	0.0	10.45	1.25	↓	
			Sample collected at 11:20							

SAMPLE ID: MW-5A_20241209 & MW-5A_20241209-FBLL

SAMPLE DATE: 12-9-24

SAMPLE TIME: 11:20

Notes: MS/MSD collected

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-55B

DATE: 12-9-24

PROJECT #: 401.2400718.000

PERSONNEL: JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 32°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 0.0

PURGE START TIME: 13:48

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/2" PE

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1350	0.50	10.38	8.94	131	0.990	6.9	2.94	0	200	
1355	0.70	9.68	9.09	60	1.19	6.5	0.0	0.25		
1400	0.85	9.48	9.16	14	1.25	8.1	0.0	0.5		
1405	0.91	9.11	9.22	-29	1.24	6.4	0.0	0.75		
1410	0.91	8.95	9.25	-48	1.25	5.9	0.0	1.0		
1415	0.91	8.79	9.26	-57	1.28	4.5	0.0	1.25		
1420	0.91	8.70	9.29	-66	1.28	7.5	0.0	1.5		
1425	0.91	8.53	9.31	-75	1.27	5.3	0.0	1.75		
1430	0.91	8.38	9.33	-82	1.27	8.1	0.0	2.0		
1435	0.91	8.27	9.33	-87	1.27	9.0	0.0	2.25		
			Sample collected at				14:40			

SAMPLE ID: MW-55B_20241209 & MW-55B_20241209_FBLL

SAMPLE DATE: 12-9-24

SAMPLE TIME: 14:40

Notes: Sampled thru LDPE tubing & hurricane pump

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-10

DATE: 12-3-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 24°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 4.90

PURGE START TIME: 16:56

SCREEN LENGTH:

WELL DIAMETER: 1.5"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
17:00	5.39	4.89	8.46	95	2.34	>1000	5.05	0	200	
1705	5.52	6.87	7.63	-56	2.55	346	0.02	0.25	↓	
1710	5.69	7.50	7.27	-70	2.55	42.4	0.0	0.5	↓	
1715	5.74	7.76	7.13	-71	2.55	21.9	0.0	0.75	↓	
1720	5.85	7.71	7.08	-74	2.57	15.7	0.0	1.0	↓	
1725	5.93	7.77	7.05	-77	2.57	8.4	0.0	1.25	↓	
1730	6.05	7.71	7.02	-78	2.59	7.9	0.0	1.5	↓	
				Sample collected at 17:40						

SAMPLE ID: MW-10-20241203 & MW-10-20241203-FBLK

SAMPLE DATE: 12-3-24

SAMPLE TIME: 17:40

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-31

DATE: 12-9-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 34°F Cloudy

DEPTH OF WELL: 70ft

DEPTH TO WATER LEVEL: ~~49.67 ft~~ 48.67ft

PURGE START TIME: ~~1100~~ EC 1115

SCREEN LENGTH: 60 ft

WELL DIAMETER: 2 inch

TUBING TYPE: Poly-Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1118	48.81	9.06	8.26	107	0.330	>1000	2.82		200	
1121	49.12	8.96	7.98	96	0.327	>1000	1.78		↓	
1124	49.22	8.66	7.83	86	0.322	>1000	8.20			
1127	49.46	8.53	7.86	79	0.321	>1000	7.10			
1130	49.61	6.10	8.00	56	0.350	>1000	5.59			
1133	49.77	6.12	8.03	50	0.349	>1000	2.35			
1136	49.91	6.12	8.05	46	0.348	>1000	1.62			
1139	50.02	6.12	8.06	44	0.347	>1000	1.32			
1142	50.15	6.10	8.10	37	0.347	>1000	1.23			

SAMPLE ID: MW-31_20241209 & MW-31_20241209_FBLL

SAMPLE DATE: 12-9-24

SAMPLE TIME: 11:45

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-35

DATE: 12-3-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 25°F SNOWING

DEPTH OF WELL: 21.98 feet

DEPTH TO WATER LEVEL: 20.13ft

PURGE START TIME: ~~1620~~ 1625

SCREEN LENGTH:

WELL DIAMETER: 2 inch

TUBING TYPE: Poly-Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1628		5.41	8.09	154	0.462	180	9.96		200	
~~1631~~										

SAMPLE ID: MW-35_20241203 & MW-35-20241203_FBLL

SAMPLE DATE: 12-3-24

SAMPLE TIME: 1630

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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DATE: 12-17-24

PERSONNEL: JBC

OBSERVERS: —

SAMPLE LOCATION: MW-355B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 28°F, CLOUDY, LIGHT SNOW

DEPTH OF WELL: —

SCREEN LENGTH: —

TUBING TYPE: LDPE

MONITORING EQUIPMENT: HORIBA U52

DEPTH TO WATER LEVEL: 26.59

WELL DIAMETER: 2-INCH

CASING TYPE: PVC

PURGE START TIME: 15:23

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
15:30		6.39	8.57	174	0.555	1000+	12.16		200	
15:35		6.30	8.72	173	0.557	1000+	11.11			
15:40		5.55	8.82	170	0.555	1000+	10.07			
15:45		5.58	8.84	168	0.554	1000+	9.58		↓	

SAMPLE ID: MW-355B-20241217 AND MW-355B-20241217-FBL

SAMPLE DATE: 12-17-24

SAMPLE TIME: 16:00

Notes: SAMPLED W/ HURRICANE PUMP + LDPE TUBING

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-36

DATE: 12-3-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 17°F Cloudy

DEPTH OF WELL: 15 feet

DEPTH TO WATER LEVEL: 2.93

PURGE START TIME: 1500

SCREEN LENGTH: 5 feet

WELL DIAMETER: 2 inch

TUBING TYPE: Poly-Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1503	4.58	6.58	8.16	157	0.586	19.2	1.76		200	
1506	4.99	6.88	8.11	157	0.585	14.9	1.74		↓	
1509	5.64	6.98	8.12	152	0.586	11.3	1.47			
1512	6.12	6.78	8.15	148	0.587	10.9	1.14			
1515	6.58	6.89	8.13	141	0.587	12.7	0.57			
1518	7.02	6.78	8.11	126	0.587	12.5	0.25		↓	

SAMPLE ID: MW-36_20241203 & MW-36_20241203_FBLL

SAMPLE DATE: 12-3-24

SAMPLE TIME: 1526

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-37

DATE: 12-3-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 26°F CLOUDY

DEPTH OF WELL: 19 feet

DEPTH TO WATER LEVEL: 16.94 Ft

PURGE START TIME: 13:20

SCREEN LENGTH: 9 feet

WELL DIAMETER: 2 inch

TUBING TYPE: Poly-teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1323		9.00	8.72	147	0.424	11.6	9.97		200	
		8.88	8.53	145	0.413	13.6	10.54		200	

SAMPLE ID: MW-37_20241203 & MW-37_20241203_FBLK

SAMPLE DATE: 12-3-24

SAMPLE TIME: 1340

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL

SAMPLE LOCATION: MW-38

DATE: 12-3-24

PROJECT #: 401.2400718.000

PERSONNEL: JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: cloudy, 19°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 16.11

PURGE START TIME: 12:21

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" PE

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1225	16.90	7.49	10.92	+155	0.605	3.6	2.68	0	200	
1230	17.42	7.37	9.80	+175	0.603	3.0	0.17	0.25		
1235	18.20	7.11	9.48	179	0.594	1.6	0.75	0.5		
1240	18.85	7.00	9.15	185	0.597	0.0	1.30	0.75		
1245	19.51	7.00	8.99	187	0.604	0.0	2.15	1.0		
1250	19.89	7.33	8.79	188	0.597	2.1	2.70	1.25		
1255	20.29	7.11	8.70	189	0.597	3.6	2.55	1.5		
1300	20.71	7.01	8.55	192	0.597	4.3	2.47	1.75		
				Sample collected at				13:10		

SAMPLE ID: MW-38_20241203 & MW-38_20241203_FIELD

SAMPLE DATE: 12-3-24

SAMPLE TIME: 13:10

Notes: Well ran dry during sampling, returned to sample twice

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

29.40ft

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SAMPLE LOCATION: MW-41

DATE: 12-3-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: ———

SITE CONDITIONS: 26°F Cloudy

DEPTH OF WELL: 27 Ft

DEPTH TO WATER LEVEL: ~~28.64~~ 28.64 Ft

PURGE START TIME: NA

SCREEN LENGTH: 17 Ft

WELL DIAMETER: 2 inch

TUBING TYPE: Poly-teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			

SAMPLE ID: MW-41_20241203 & MW-41_20241203.FBLL

SAMPLE DATE: 12-3-24

SAMPLE TIME: DRY

Notes: No sample taken due to dry well

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 12-3-24

PERSONNEL: JD

OBSERVERS:

SAMPLE LOCATION: MW-42

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 20°F

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: 1/4" Tefla

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 6.95

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 13:51

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
13:55	8.88	5.44	8.92	169	0.334	38.1	2.64	0	200	
1400	9.61	5.49	8.93	168	0.333	37.4	1.16	0.25	↓	
1405	10.71	5.51	8.92	168	0.332	34.9	0.19	0.5	↓	
1410	11.89	5.60	8.93	169	0.325	24.8	2.51	0.75	↓	
1415	12.95	6.01	8.91	171	0.312	18.7	2.81	1.0	↓	
1420	14.73	5.80	8.92	172	0.316	12.3	2.31	1.25	↓	
14:25	15.68	5.74	8.91	174	0.315	11.9	2.16	1.5	↓	
				Sample collected at 14:35						

SAMPLE ID: MW-42_20241203 & MW-42_20241203_FBLL

SAMPLE DATE: 12-3-24

SAMPLE TIME: 14:35

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-43

DATE: 12-4-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 31°F SNOWING

DEPTH OF WELL: 25 ft

DEPTH TO WATER LEVEL: 15.54 ft

PURGE START TIME: 1120

SCREEN LENGTH: 15 ft

WELL DIAMETER: 2 inch

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1123	16.85	7.15	8.43	126	0.455	21.9	1.33		200	
1126	18.08	7.30	8.32	131	0.459	22.8	0.00		↓	
1129	18.31	7.35	8.26	133	0.456	25.9	0.00			
1132	18.61	7.35	8.23	133	0.454	30.1	0.00			
1135	19.01	7.43	8.21	134	0.452	38.1	0.00			

SAMPLE ID: MW-43_20241204 + MW-43-20241204_FBLL

SAMPLE DATE: 12-4-31

SAMPLE TIME: 11:40

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-43SB

DATE: _____

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: _____

SITE ADDRESS: White Pine, MI

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

PURGE START TIME: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: _____

CASING TYPE: _____

MONITORING EQUIPMENT: _____

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			

SAMPLE ID: _____

SAMPLE DATE: _____

SAMPLE TIME: _____

Notes: NOT Sample due to frozen well

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-44

DATE: 12-4-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EEC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SNOWING

DEPTH OF WELL: 30 ft

DEPTH TO WATER LEVEL: 19.21 Feet

PURGE START TIME: 1005

SCREEN LENGTH: 20 ft

WELL DIAMETER: 2 inch

TUBING TYPE: Poly teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1008		9.00	8.57	17	0.687	15.8	5.36		200	
1011		8.32	8.54	-18	0.688	15.0	2.02		↓	
1014		8.79	8.41	-56	0.642	16.5	0.00			
1017		8.75	8.37	-59	0.637	15.4	0.00			
1020		8.74	8.33	-61	0.633	15.0	0.00			

SAMPLE ID: ~~MW-44~~ EC MW-44_20241204 & MW-44_20241204_FBLC

SAMPLE DATE: 12-04-2024

SAMPLE TIME: 10:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: N61-1

DATE: _____

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: _____

SITE ADDRESS: White Pine, MI

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

PURGE START TIME: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: _____

CASING TYPE: _____

MONITORING EQUIPMENT: _____

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			

SAMPLE ID: _____

SAMPLE DATE: _____

SAMPLE TIME: _____

Notes: could not sample due to site conditions

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MB1-3

DATE: _____

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: _____

SITE ADDRESS: White Pine, MI

OBSERVERS: _____

SITE CONDITIONS: _____

DEPTH OF WELL: _____

DEPTH TO WATER LEVEL: _____

PURGE START TIME: _____

SCREEN LENGTH: _____

WELL DIAMETER: _____

TUBING TYPE: _____

CASING TYPE: _____

MONITORING EQUIPMENT: _____

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			

SAMPLE ID: _____

SAMPLE DATE: _____

SAMPLE TIME: _____

Notes: Could not sample due to site conditions

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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DATE: 12-2-2024

PERSONNEL: JBL MMS

OBSERVERS: —

SAMPLE LOCATION: NB2-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 17 °F SNOW

DEPTH OF WELL: 10 feet

SCREEN LENGTH: 5 feet

TUBING TYPE: Poly-teflon

MONITORING EQUIPMENT: Horiba

DEPTH TO WATER LEVEL: 2.66

WELL DIAMETER: 2 inch

CASING TYPE: PVC

PURGE START TIME: 15:53

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1556	3.30	0.39	8.78	-123	1.31	24.1	8.27		200	
1559	3.31	0.58	8.63	-149	1.30	28.8	3.78		200	
1602	3.31	0.90	8.57	-160	1.28	20.2	2.67		200	
1605	3.31	1.12	8.52	-163	1.27	15.8	2.36		200	
1608	3.32	1.46	8.46	-169	1.27	15.6	0.52		200	
1611	3.33	6.73	8.23	-171	1.09	14.9	0.00		200	
1614	3.35	6.97	8.16	-175	1.10	13.8	0.00		200	
1617	3.35	7.19	8.10	-177	1.10	13.7	0.00		200	

SAMPLE ID: NB2-1_20241202 & NB2-1_20241202-FBLL

SAMPLE DATE: 12-2-24

SAMPLE TIME: 16:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: NB2-3_20241202

DATE: 12-2-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JBC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 27°F & SNOW

DEPTH OF WELL: 28 ft

DEPTH TO WATER LEVEL: 2.96 ft

PURGE START TIME: 16:55

SCREEN LENGTH: 18 ft

WELL DIAMETER: 2 inches

TUBING TYPE: Poly - teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
16:58	4.89	1.79	8.05	-72	0.224	11.4	19.56		200	
17:01	5.41	7.40	8.30	-67	1.04	34.1	14.57		200	
17:04	5.90	7.87	8.38	-78	1.04	25.3	14.20		200	
17:07	6.36	8.18	8.40	-78	1.03	14.9	13.01		200	

SAMPLE ID: NB2-3 20241202 & NB2-3-20241202-FBLK

SAMPLE DATE: 12-2-24

SAMPLE TIME: 17 15

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-1

DATE: 12-9-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 31°F Cloudy

DEPTH OF WELL: 35.5 ft

DEPTH TO WATER LEVEL: 24.79 ft

PURGE START TIME: 14:55

SCREEN LENGTH:

WELL DIAMETER: 3 inch

TUBING TYPE: Poly-teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1458	25.41	8.38	8.57	99	0.337	157	0.24		200	
1501	26.04	8.30	8.51	101	0.337	83.2	0.00		↓	
1504	26.55	8.20	8.45	103	0.338	76.7	0.00			
1507	27.01	8.18	8.38	105	0.338	78.6	0.00			
1510	27.49	8.17	8.32	107	0.337	71.9	0.00			
[redacted]										

SAMPLE ID: SMW-1_20241209 + SMW-1_20241209_FBLL

SAMPLE DATE: 12-9-14

SAMPLE TIME: 1520

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-15B

DATE: 12-09-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 31°F. Cloudy

DEPTH OF WELL: >100ft

DEPTH TO WATER LEVEL: 25.15

PURGE START TIME: 1615

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: poly

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba.

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1618	25.21	5.37	8.40	156	0.00	311	17.11		200	
1621	25.28	5.69	8.88	134	0.348	65.2	16.48			
1624	25.39	5.91	8.94	133	0.358	70.5	16.21			
1627	25.47	5.69	8.97	134	0.361	71.9	16.10			
1630	25.58	5.63	8.98	133	0.361	75.3	15.95			
1633	25.66	5.58	8.99	134	0.362	75.2	15.83		↓	

SAMPLE ID: SMW-15B_20241209 & SMW-1515_20241209 FD

SAMPLE DATE: 12-09-2024

SAMPLE TIME: 1635

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-3

DATE: 12.4.24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Snowy, 28°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 27.18

PURGE START TIME: 10:07

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 3/8 Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1020	27.52	8.51	8.24	37	0.294	80.6	6.40	0	200	
1025	27.66	8.34	8.37	-20	0.276	39.4	1.09	0.25		
1030	27.73	8.15	8.43	-36	0.267	27.2	0.95	0.5		
1035	27.75	7.82	8.40	-44	0.264	10.3	0.62	0.75		
1040	27.78	7.61	8.39	-59	0.266	2.9	0.0	1.0		
1045	27.80	7.48	8.37	-58	0.268	6.1	0.0	1.25		
1050	27.83	7.36	8.39	-60	0.272	8.7	0.0	1.5		
			sample collected at				11:00			

SAMPLE ID: SMW-3 20241204 & SMW-3_20241204_FBLL

SAMPLE DATE: 12.4.24

SAMPLE TIME: 11:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-35B

DATE: 12.4.24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Heavy Snow, 28°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 22.98

PURGE START TIME: 12:34

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 3/8" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			

SAMPLE ID: SMW-35B_20241204 & SMW-35B_20241204-FBLL

SAMPLE DATE: 12.4.2024

SAMPLE TIME: 17:00

Notes: NO Sample - Stopped pumping at 15:10. Unable to produce water, took grab sample with peristaltic pump instead of bladder, no readings

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

Sampled @ 09:10

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-01

DATE: 12-05-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

PERSONNEL: EC & MS

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 22°F, cloudy

GAUGE READING START: 1.00

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH: 8.22

CONDUCTIVITY: 0.098 mS/cm

TEMPERATURE: 1.26 °C

ORP: 178 mV

DO: 11.75 mg/l

TURBIDITY: 0.0 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	~~0.9~~ 1ft	0				
2	1ft 3in	0.15	0.009			
3	1ft 6in	0.2	0.024			
4	1ft 9in	0.6	0.048			
5	2ft	0.75	0.012			
6	2ft 3in	0.85	0.042			
7	2ft 6in	0.8	0.028			
8	2ft 9in	0.7	0.058			
9	3ft	0.7	0.058			
10	3ft 3in	0.65	0.037			
11	3ft 6in	0.6	0.016			
12	3ft 9in	0.45	0.009			
13	4ft	0.4	0.029			
14	4ft 3in	0.3	0.002			
15	4ft 6in					edge
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.058

TOTAL WIDTH (ft): 3.5

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 09:40 MS 15:30

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 12-04-24

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: ARL-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 31°F SNOWING

PHOTO TAKEN? Y N

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.59

CONDUCTIVITY: 156 mS/cm

TEMPERATURE: 0.32 °C

ORP: 158 mV

DO: 6.56 mg/l

TURBIDITY: 733 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	0.1	0				
2	2.1	0.7	0.000			
3	4.1	0.7	0.058			
4	6.1	0.4	-0.002			
5	8.1	0.3	0.000			
6	10.1	0.0	0.00			Ground
7	12.1	0.0	0.00			Ground
8	14.1	0.4	-0.016			
9	16.1	0.9	0.037			
10	18.1	1	0.020			
11	20.1	0.8	0.004			
12	22.1	0.8	0.003			
13	24.1	0.7	0.01			
14	26.1	0.65	0.047			
15	28.1	0.9	0.007			
16	30.1	1.2	0.058			
17	32.1	1.95	0.824	0.024	0.020	
18	34.1	2.05		-0.011	-.009	
19						Ice edge
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.427

TOTAL WIDTH (ft): 34.00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-03

DATE: 12-11-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: -

SITE CONDITIONS: SNOW, 22°F

GAUGE READING ~~START~~: 1.50

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.15

CONDUCTIVITY: 0.093 mS/cm

TEMPERATURE: 0.07 °C

ORP: 199 mV

DO: 16.25 mg/l

TURBIDITY: 32.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	1'0"	0				
2	1'2"	0.35	0.00			
3	2'2"	0.7	0.001			
4	3'2"	0.9	0.165			
5	4'2"	1.0	0.241			
6	5'2"	1.1	0.128			
7	6'2"	1.05	0.045			
8	7'2"	1.0	0.141			
9	8'2"	0.95	0.054			
10	9'2"	1.0	0.044			
11	10'2"	1.0	0.296			
12	11'2"	0.9	0.437			
13	12'2"	1.05	0.513			
14	13'2"	1.1	0.102			
15	14'2"	1.0	0.007			
16	15'2"	1.0	0.000			WATER EDGE
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 2.162

TOTAL WIDTH (ft): 14.17

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 10:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 1235

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 12-11-24

PERSONNEL: ERL & MMS

OBSERVERS: —

SAMPLE LOCATION: BNC-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 23°F Cloudy & Snowing

PHOTO TAKEN? Y N

GAUGE READING START: _____

GAUGE READING END: _____

AVERAGE GAUGE HEIGHT: _____

MONITORING EQUIPMENT: Horiba

pH: 8.12

CONDUCTIVITY: 0.143 mS/cm

TEMPERATURE: 0.00 °C

ORP: 161 mV

DO: 4.20 mg/l

TURBIDITY: 700 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sample @ 1545

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNW-01

DATE: 12-11-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 19°F Cloudy SNOWING

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH	8.42		ORP	0.211	mV
CONDUCTIVITY	0.152	mS/cm	DO	15.75	mg/l
TEMPERATURE	1.49	°C	TURBIDITY	25.6	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-01

DATE: _____ PROJECT #: 401.2400718.000 PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: _____ SITE ADDRESS: White Pine, MI

OBSERVERS: _____ SITE CONDITIONS: _____

GAUGE READING START: _____ pH _____ ORP _____ mV

GAUGE READING END: _____ CONDUCTIVITY _____ mS/cm DO _____ mg/l

AVERAGE GAUGE HEIGHT: _____ TEMPERATURE _____ °C TURBIDITY _____ NTU

MONITORING EQUIPMENT: _____

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Could NOT Sample Due to Site conditions

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-02a

DATE: 12.17.24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JB

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy 25°F, BREEZY

GAUGE READING ~~START~~: 3.2 FT

pH: 8.30

ORP: 229 mV

GAUGE READING END:

CONDUCTIVITY: 0.118 mS/cm

DO: 10.09 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 0.75 °C

TURBIDITY: 39.2 NTU

MONITORING EQUIPMENT: Hol, Ba V.52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 13:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-01 — Sampled @ 10:40

DATE: 12-03-24

PERSONNEL: EG, MS

OBSERVERS:

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 23 F, Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NO GAUGE

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 7.83

CONDUCTIVITY: 0.159 mS/cm

TEMPERATURE: 0.59 °C

ORP: 250 mV

DO: 14.81 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1ft 3in	0.8	0.021			
2	1ft 9in	0.8	0.027			
3	2ft 3in	0.9	0.018			
4	2ft 9in	0.85	0.015			
5	3ft 3in	0.8	0.230			
6	3ft 9in	0.6	-0.009			
7	4ft 3in	0.6	0.027			
8	4ft 9in	0.5	0.008			
9	5ft 3in	0.45	-0.005			
10	5ft 9in	0.25	0.001			
11	6ft 3in	0.3	0.004			
12	6ft 9in	0.3	0.003			
13	7ft 3in	0.2	0.019			
14	7ft 9in	0.1	0.009			
15	8ft	0	0			edge
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.131

TOTAL WIDTH (ft): 6.75

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 1310

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-02

DATE: 12-17-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 27°F Cloudy

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba

pH	7.30		ORP	189	mV
CONDUCTIVITY	0.081	mS/cm	DO	16.12	mg/l
TEMPERATURE	0.06	°C	TURBIDITY	24.7	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0	0			
1 (at water edge)	0.5	0	0			
2	1.5	0.50	0.020			
3	2.5	0.40	-0.134			
4	3.5	0.40	0.170			
5	4.5	0.45	0.184			
6	5.5	0.40	0.741			
7	6.5	0.60	0.979			
8	7.5	0.50	0.921			
9	8.5	0.60	2.143			
10	9.5	0.60	3.100			
11	10.5	0.60	3.242			
12	11.5	0.55	2.234			
13	12.5	0.30	1.423			
14	13.5	0.60	1.582			
15	14.5	0.65	1.355			
16	15.5	0.50	0.663			
17	16.5	0.25	0.994			
18	17.5	0.60	0.541			
19	18.5	0.50	0.554			
20	19.5	0.35	0.754			
21	20.5	0.20	0.303			
22	21.5	0.20	0.151			
23	22.5	0.20	-0.046			
24	23	0	0			
25						

STREAM FLOW (cfs): 11.557

TOTAL WIDTH (ft): 22.50

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 10:30

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www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-03

DATE: 12-16-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 36°F Cloudy

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba

pH 7.50

CONDUCTIVITY 0.087 mS/cm

TEMPERATURE 1.63 °C

ORP 237 mV

DO 13.76 mg/l

TURBIDITY 47.7 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 1130

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SAMPLE LOCATION: LKS-01

DATE: 12-16-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: EEC & MNS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 36°F Cloudy

GAUGE READING START: _____

GAUGE READING END: _____

AVERAGE GAUGE HEIGHT: _____

MONITORING EQUIPMENT: Horiba

pH	7.56		ORP	236	mV
CONDUCTIVITY	0.212	mS/cm	DO	13.74	mg/l
TEMPERATURE	0.30	°c	TURBIDITY	37.8	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: LKS-02

DATE: 12-16-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 37°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.11

CONDUCTIVITY: 0.115 mS/cm

TEMPERATURE: 0.70 °C

Horiba U-52

ORP: 62 mV

DO: 10.79 mg/l

TURBIDITY: 7.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 14:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: MLC-01

DATE: 12-2-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

PERSONNEL: JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Snowy, 30°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 12.12

CONDUCTIVITY: 0.275 mS/cm

TEMPERATURE: 3.76 °C

ORP: -43 mV

DO: 14.59 mg/l

TURBIDITY: 16.3 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0					
1 (at water edge)	1'3"	0.1	0.0			
2	1'6"	0.1	0.0			
3	1'9"	0.1	0.036			
4	2'	0.2	0.063			
5	2'3"	0.2	0.075			
6	2'6"	0.25	0.115			
7	2'9"	0.3	0.088			
8	3'	0.3	0.020			
9	3'3"	0.25	0.041			
10	3'6"	0.2	0.022			
11	3'9"	0.1	0.005			
12	~~4'~~					
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.027

TOTAL WIDTH (ft): 2.50

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 15:10

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 0910

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-01

DATE: 12-16-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 37°F cloudy

GAUGE READING START: 2.05 ft

pH: 7.58

ORP: 199 mV

GAUGE READING END:

CONDUCTIVITY: 0.088 mS/cm

DO: 15.08 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 0.36 °c

TURBIDITY: 32.2 NTU

MONITORING EQUIPMENT: Horiba

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 1400

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

SAMPLE LOCATION: MLR-02

DATE: 12-16-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 39°F Cloudy

GAUGE READING START: 1.15 ft

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba

pH: 7.82

CONDUCTIVITY: 0.140 mS/cm

TEMPERATURE: 0.31 °C

ORP: 234 mV

DO: 14.40 mg/l

TURBIDITY: 57.1 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	2.5	0.25	0			
2	5.0	0.85	0.273			
3	7.5	0.90	-0.029			
4	10.0	1.0	-0.020			
5	12.5	0.80	0.006			
6	15.0	1.10	0.314			
7	17.5	1.30	0.272			
8	20.0	0.70	0.031			
9	22.5	0.80	0.024			
10	25.0	0.60	0.022			
11	27.5	0.50	0.030			
12	30.0	0.60	0.076			
13	32.5	0.50	-0.026			
14	35.0	0.50	-0.020			
15	37.5	0.70	0.029			
16	40.0	edge of water 0				
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 2.504

TOTAL WIDTH (ft): 37.50

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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Sampled @ 1400

DATE: 12-2-24

PERSONNEL: JBC MMS

OBSERVERS: —

SAMPLE LOCATION: MLR-03

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SNOW 27°F

PHOTO TAKEN? (Y) N

GAUGE READING START: 1.30

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 9.19

CONDUCTIVITY: 0.168 mS/cm

TEMPERATURE: 0.05 °C

ORP: 192 mV

DO: 21.09 mg/l

TURBIDITY: 17.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 10:40

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DATE: 12-2-24

PERSONNEL: JC + MS

OBSERVERS:

SAMPLE LOCATION: NTC-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 29°F SNOWING

PHOTO TAKEN? (Y) N

GAUGE READING START: NO STAFF GAUGE

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: HORIBA -

pH	9.87		ORP	56	mV
CONDUCTIVITY	0.252	mS/cm	DO	14.1	mg/l
TEMPERATURE	1.76	°C	TURBIDITY	12.7	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0 ft					
1 (at water edge)	1'8"	0				edge
2	2'0"	0.25	0.017			
3	2'4"	0.35	0.033			
4	2'8"	0.35	0.049			
5	3'0"	0.30	-0.003			
6	3'4"	0.50	-0.003			
7	3'8"	0.45	0.004			
8	4'0"	0.40	0.010			
9	4'4"	0.45	0.014			
10	4'8"	0.45	0.002			
11	5'0"	0.45	-0.003			
12	5'4"	0.30	0.012			
13	5'8"	0.30	0.003			
14	6'0"	0.30	-0.003			
15	6'4"	0.20	0.008			
16	6'8"	0.20	0.014			
17	7'0"	0	—			EDGE
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.016

TOTAL WIDTH (ft): 5.33

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 12:40

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SAMPLE LOCATION: PNC-01

DATE: 12-05-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EBC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 73° Cloudy

GAUGE READING START: 1.00 ft

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba

pH	7.22		ORP	131	mV
CONDUCTIVITY	0.085	mS/cm	DO	10.99	mg/l
TEMPERATURE	0.93	°C	TURBIDITY	55.1	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	1ft	0	0			
2	1.2ft	1.25	0.020			
3	1ft 4in	1.45	0.021			
4	1ft 6in	1.6		0.006	-0.008	
5	1ft 8in	1.6		0.014	0.008	
6	1ft 10in	1.5		-0.003	0.004	
7	2ft 2in	1.5		-0.004	0.001	
8	2ft 2in	1.4	0.013			
9	2ft 4in	0	0			edge
10	[illegible]					
11	[illegible]					
12	[illegible]	0	0			[illegible]
13	[illegible]					
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.015

TOTAL WIDTH (ft): 1.33

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: PNC-02

DATE: _____ PROJECT #: 401.2400718.000 PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: _____ SITE ADDRESS: White Pine, MI

OBSERVERS: _____ SITE CONDITIONS: _____

GAUGE READING START: _____ pH _____ ORP _____ mV

GAUGE READING END: _____ CONDUCTIVITY _____ mS/cm DO _____ mg/l

AVERAGE GAUGE HEIGHT: _____ TEMPERATURE _____ °C TURBIDITY _____ NTU

MONITORING EQUIPMENT: _____

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Could not Sample Due to Site Conditions

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

~~STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER~~

~~Total Flow~~

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SAMPLE LOCATION: ~~MW-103~~ PNC-03

DATE: 12-9-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Rainy / Snowy, 35°F

STAFF GAUGE READING ~~START~~: 1.31 FT

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: HORIBA U52

pH: 8.92

CONDUCTIVITY: 0.274 mS/cm

TEMPERATURE: 1.72 °C

ORP: 168 mV

DO: 10.26 mg/l

TURBIDITY: 10 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	0"	0				
2	1.0'	0.4	0.013			
3	2.0'	1.0	0.029			
4	3.0'	1.1	0.109			
5	4.0'	1.05	0.093			
6	5.0'	1.2	0.022			
7	6.0'	1.4	0.010			
8	7.0'	1.4	0.050			
9	8.0'	1.35	0.169			
10	9.0'	1.2	0.297			
11	10.0'	1.0'	0.343			
12	11.0'	0.8	0.317			
13	12.0'	0.8	0.246			
14	13.0'	0.85	0.275			
15	14.0'	0.9	0.267			
16	15.0'	1.0	0.425			
17	16.0'	1.1	0.382			
18	17.0'	1.25	0.229			
19	18.0'	1.3	0.074			
20	19.0'	0.35	0.001			
21	19 3/8"					WATER EDGE
22						
23						
24						
25						

STREAM FLOW (cfs): 3.442

TOTAL WIDTH (ft): 19.10

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 16:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: PNC-04

DATE: 12-17-24

PROJECT #: 401.2400716.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: NW WIND, 28°F

GAUGE READING ~~START~~: 1.70

pH: 8.27

ORP: 276 mV

GAUGE READING END:

CONDUCTIVITY: 0.241 mS/cm

DO: 15.12 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 0.06 °C

TURBIDITY: 19.9 NTU

MONITORING EQUIPMENT:

~4 INCHES OF ICE

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	1.0	0	0			
2	2.0	0.6	0.010			
3	3.0	1.15	0.249			
4	4.0	1.15	0.009			
5	5.0	1.15	0.153			
6	6.0	1.1	0.178			
7	7.0	1.3	1.683			
8	8.0	1.3	1.350			
9	9.0	1.4	1.289			
10	10.0	1.3	0.897			
11	11.0	1.3	0.123			
12	12.0	1.1	0.583			
13	13.0	1.1	0.808			
14	14.0	1.2	0.984			
15	15.0	0.7	0.736			
16	16.0	0.7	0.002			
17	16'6"	0	0			WATER EDGE
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 10.975

TOTAL WIDTH (ft): 15.60

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 10:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-01

DATE: 12-11-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: JO, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SNOW, 12°F, BREEZY

GAUGE READING ~~START~~: 0.75

pH: 8.11

ORP: 192 mV

GAUGE READING END: \

CONDUCTIVITY: 0.938 mS/cm

DO: 13.84 mg/l

AVERAGE GAUGE HEIGHT: —

TEMPERATURE: 0.56 °C

TURBIDITY: 21.1 NTU

MONITORING EQUIPMENT: —

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	10"	0	0			
2	1'	0.2	0.721			
3	2'	0.3	1.146			
4	3'	0.4	1.558			
5	4'	0.4	1.358			
6	5'	0.45	0.954			
7	6'	0.5	1.707			
8	7'	0.5	1.525			
9	8'	0.4	1.260			
10	9'	0.5	1.956			
11	10'	0.55	1.132			
12	11'	0.65	2.309			
13	12'	0.75	2.595			
14	13'	0.5	2.258			
15	14'	0.5	1.506			
16	15'	0.4	0.900			
17	16'	0.25	0.041			
18	16'10"	0	0			WATER EDGE
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 11.439

TOTAL WIDTH (ft): 15.27

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 12:20

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 12-2-24

PERSONNEL: JBC, MMS

OBSERVERS: —

SAMPLE LOCATION: PRC-02

PROJECT #: 401.2400716.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SNOW, 27°F

PHOTO TAKEN? 0 N

GAUGE READING START: _____

GAUGE READING END: _____

AVERAGE GAUGE HEIGHT: _____

MONITORING EQUIPMENT: _____

pH: 8.95

CONDUCTIVITY: 0.821 mS/cm

TEMPERATURE: 0.13 °C

ORP: -109 mV

DO: 19.48 mg/l

TURBIDITY: 25.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0					
1 (at water edge)	2'8"	0				EDGE
2	3'0"	0.20	0.274			
3	3'4"	0.40	1.066			
4	3'8"	0.45	1.172			
5	4'0"	0.45	1.222			
6	4'4"	0.45	1.463			
7	4'8"	0.75	1.423			
8	5'0"	0.80	1.336			
9	5'4"	0.95	1.310			
10	5'8"	1.00	1.480			
11	6'0"	0.85	1.730			
12	6'4"	0.90	1.274			
13	6'8"	0.75	1.412			
14	7'0"	0.75	1.474			
15	7'4"	0.80	1.429			
16	7'8"	0.85	1.274			
17	8'0"	0.75	1.180			
18	8'4"	0.40	0.796			
19	8'8"	0.35	0.266			
20	9'4"	0	0			EDGE
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 5.142

TOTAL WIDTH (ft): 6.66

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PTC-01

DATE: 12-11-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 8.03

CONDUCTIVITY: 0.215 mS/cm

TEMPERATURE: -0.07 °C

ORP: 231 mV

DO: 14.47 mg/l

TURBIDITY: 2.7 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	2	0.2	0.000			
2	2.5	0.3	0.030			
3	3	0.3	0.030			
4	3.5	0.4	0.030			
5	4	0.4	0.030			
6	4.5	0.3	0.030			
7	5	0.3	0.030			
8	5.5	0.3	0.039			
9	6	0.4	0.027			
10	6.5	0.35	0.228			
11	7	0.4	0.369			
12	7.5	0.2	0.456			
13	8	0.3	0.397			
14	8.5	0.25	0.043			
15	9	0.15	0.042			
16	9.5	0.1	0.010			
17	10	0.2	0.022			
18	10.5	0.15	0.000			
19	11					WATER EDGE
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.271

TOTAL WIDTH (ft): 9.00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample collected at 12:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sample taken @ 1300

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 12-10-24

PERSONNEL: ERC + MMS

OBSERVERS: —

SAMPLE LOCATION: SBD-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 26° Cloudy + Snowing

PHOTO TAKEN? Y N

GAUGE READING START: _____

GAUGE READING END: _____

AVERAGE GAUGE HEIGHT: _____

MONITORING EQUIPMENT: Horiba

pH: 7.67

CONDUCTIVITY: 0.235 mS/cm

TEMPERATURE: 3.89 °C

ORP: 199 mV

DO: 6.18 mg/l

TURBIDITY: 57.3 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sample @ 1430

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SBW-01

DATE: 12-10-24

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 29°F CLOUDY, SNOWING

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba

pH	7.55		ORP	206	mV
CONDUCTIVITY	0.181	mS/cm	DO	6.64	mg/l
TEMPERATURE	0.46	°C	TURBIDITY	63.0	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 1105

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 12-11-24

SAMPLE LOCATION: TBN-01

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERL + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 23°F Cloudy, Snowing

GAUGE READING START: _____

GAUGE READING END: _____

AVERAGE GAUGE HEIGHT: _____

MONITORING EQUIPMENT: Horiba

pH 8.02

CONDUCTIVITY 0.618 mS/cm

TEMPERATURE 0.19 °C

ORP 198 mV

DO 13.83 mg/l

TURBIDITY 52.1 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) _____ TOTAL WIDTH (ft) _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 1020

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 12-11-24

SAMPLE LOCATION: TBS-01

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERL + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 23°F Cloudy + SNOWING

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba

pH	8.30		ORP	178	mV
CONDUCTIVITY	0.396	mS/cm	DO	11.19	mg/l
TEMPERATURE	4.94	°c	TURBIDITY	170	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Sample Location:	ARC-01	
Date:	12/5/2024	
Personnel:	ERC & MMS	
Site Conditions:	Cloudy, 22°F	
pH:	8.22	
Conductivity:	0.098	ms/cm
Temperature:	1.26	°C
ORP:	178	mV
DO:	11.75	mg/L
Turbidity:	0	NTU
Staff Gauge:	1.00	feet
Sampled at:	9:10	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0.00	0	0				
1 (at water edge)	1.00	0	0				0.0000
2	1.25	0.15	0.009				0.0003
3	1.50	0.2	0.024				0.0012
4	1.75	0.6	0.048				0.0072
5	2.00	0.75	0.012				0.0023
6	2.25	0.85	0.042				0.0089
7	2.50	0.8	0.028				0.0056
8	2.75	0.7	0.058				0.0102
9	3.00	0.7	0.058				0.0102
10	3.25	0.65	0.033				0.0054
11	3.50	0.6	0.016				0.0024
12	3.75	0.45	0.009				0.0010
13	4.00	0.4	0.029				0.0029
14	4.25	0.3	0.002				0.0002
15	4.50	0	0			water edge	0.0000

Stream Flow:	0.058	cfs
Total Width:	3.50	ft

Sample Location:	ARC-02
Date:	12/4/2024
Personnel:	ERC & MMS
Site Conditions:	Snowing, 31°F
pH:	8.52
Conductivity:	158 ms/cm
Temperature:	0.32 °C
ORP:	158 mV
DO:	6.56 mg/L
Turbidity:	733 NTU
Staff Gauge:	NA feet
Sampled at:	15:30

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)	
	ft	ft	ft/s	ft/s	ft/s			
0 (at stake)	0	0	0					
1 (at water edge)	0.1	0	0				0.000	
2	2.1	0.7	0				0.000	
3	4.1	0.7	0.058				0.081	
4	6.1	0.4	-0.002				-0.002	
5	8.1	0.3	0				0.000	
6	10.1	0	0				0.000	
7	12.1	0	0				0.000	
8	14.1	0.4	-0.016				-0.013	
9	16.1	0.9	0.037				0.067	
10	18.1	1	0.02				0.040	
11	20.1	0.8	0.004				0.006	
12	22.1	0.8	0.002				0.003	
13	24.1	0.7	0.01				0.014	
14	26.1	0.65	0.047				0.061	
15	28.1	0.9	0.007				0.013	
16	30.1	1.2	0.038				0.091	
17	32.1	1.95	0.022	0.024	0.020		0.086	**took average of 0.2d and 0.8d and put into the 0.6d column
18	34.1	2.05	-0.01	-0.011	-0.009	water edge	-0.021	**took average of 0.2d and 0.8d and put into the 0.6d column

Stream Flow:	0.427	cfs
Total Width:	34.00	ft

Sample Location:	ARC-03	
Date:	12/11/2024	
Personnel:	JD & JBC	
Site Conditions:	Snow, 22°F	
pH:	8.15	
Conductivity:	0.093	ms/cm
Temperature:	0.07	°C
ORP:	199	mV
DO:	16.25	mg/L
Turbidity:	32.6	NTU
Staff Gauge:	1.50	feet
Sampled at:	10:00	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1	0	0				0.0000
2	1.17	0.35	0				0.0000
3	2.17	0.7	0.001				0.0007
4	3.17	0.9	0.165				0.1485
5	4.17	1	0.241				0.2410
6	5.17	1.1	0.128				0.1408
7	6.17	1.05	0.045				0.0473
8	7.17	1	0.141				0.1410
9	8.17	0.95	0.054				0.0513
10	9.17	1	0.044				0.0440
11	10.17	1	0.296				0.2960
12	11.17	0.9	0.437				0.3933
13	12.17	1.05	0.513				0.5387
14	13.17	1.1	0.102				0.1122
15	14.17	1	0.007				0.0070
16	15.17	1	0			water edge	0.0000

Stream Flow:	2.162	cfs
Total Width:	14.17	ft

Sample Location:	DKC-01	
Date:	12/5/2024	
Personnel:	ERC & MMS	
Site Conditions:	Cloudy, 23°F	
pH:	7.83	
Conductivity:	0.159	ms/cm
Temperature:	0.59	°C
ORP:	250	mV
DO:	14.81	mg/L
Turbidity:	0.0	NTU
Staff Gauge:	NA	feet
Sampled at:	10:40	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1.25	0.8	0.021				0.0042
2	1.75	0.8	0.027				0.0108
3	2.25	0.9	0.018				0.0081
4	2.75	0.85	0.015				0.0064
5	3.25	0.8	0.23				0.0920
6	3.75	0.6	-0.009				-0.0027
7	4.25	0.6	0.027				0.0081
8	4.75	0.5	0.008				0.0020
9	5.25	0.45	-0.005				-0.0011
10	5.75	0.25	0.001				0.0001
11	6.25	0.3	0.004				0.0006
12	6.75	0.3	0.003				0.0005
13	7.25	0.2	0.019				0.0019
14	7.75	0.1	0.009				0.0003
15	8.00	0	0			Waters Edge	0.0000

Stream Flow:	0.131	cfs
Total Width:	6.75	ft

Sample Location:	DKC-02	
Date:	12/17/2024	
Personnel:	ERC & MMS	
Site Conditions:	Cloudy, 27°F	
pH:	7.3	
Conductivity:	0.081	ms/cm
Temperature:	0.06	°C
ORP:	189	mV
DO:	16.12	mg/L
Turbidity:	24.7	NTU
Staff Gauge:	NA	feet
Sampled at:	13:10	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	0.5	0	0				0.0000
2	1.50	0.5	0.02				0.0100
3	2.50	0.4	-0.134				-0.0536
4	3.50	0.4	0.17				0.0680
5	4.50	0.45	0.184				0.0828
6	5.50	0.4	0.741				0.2964
7	6.50	0.6	0.979				0.5874
8	7.50	0.5	0.921				0.4605
9	8.50	0.6	2.143				1.2858
10	9.50	0.6	3.1				1.8600
11	10.50	0.6	3.242				1.9452
12	11.50	0.55	2.234				1.2287
13	12.50	0.3	1.423				0.4269
14	13.50	0.6	1.582				0.9492
15	14.50	0.65	1.355				0.8808
16	15.50	0.5	0.663				0.3315
17	16.50	0.25	0.994				0.2485
18	17.50	0.6	0.541				0.3246
19	18.50	0.5	0.554				0.2770
20	19.50	0.35	0.754				0.2639
21	20.50	0.2	0.303				0.0606
22	21.50	0.2	0.151				0.0302
23	22.50	0.2	-0.046				-0.0069
24	23.00	0	0			water edge	0.0000

Stream Flow:	11.557	cfs
Total Width:	22.50	ft

Sample Location:	MLC-01	
Date:	12/2/2024	
Personnel:	JD	
Site Conditions:	Snowy, 30°F	
pH:	12.12	
Conductivity:	0.275	ms/cm
Temperature:	3.76	°C
ORP:	-43	mV
DO:	14.59	mg/L
Turbidity:	16.3	NTU
Staff Gauge:	NA	feet
Sampled at:	15:10	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1.25	0.1	0				0.0000
2	1.50	0.1	0				0.0000
3	1.75	0.1	0.036				0.0009
4	2.00	0.2	0.063				0.0032
5	2.25	0.2	0.075				0.0038
6	2.50	0.25	0.115				0.0072
7	2.75	0.3	0.088				0.0066
8	3.00	0.3	0.02				0.0015
9	3.25	0.25	0.041				0.0026
10	3.50	0.2	0.022				0.0011
11	3.75	0.1	0.005			water edge	0.0001

Stream Flow:	0.027	cfs
Total Width:	2.50	ft

Sample Location:	MLR-02	
Date:	12/16/2024	
Personnel:	ERC & MMS	
Site Conditions:	Cloudy, 39°F	
pH:	7.82	
Conductivity:	0.14	ms/cm
Temperature:	0.31	°C
ORP:	234	mV
DO:	14.4	mg/L
Turbidity:	57.1	NTU
Staff Gauge:	1.15	feet
Sampled at:	14:00	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	2.50	0.25	0				0.0000
2	5.00	0.85	0.273				0.5801
3	7.50	0.9	-0.029				-0.0653
4	10.00	1	-0.02				-0.0500
5	12.50	0.8	0.006				0.0120
6	15.00	1.1	0.314				0.8635
7	17.50	1.3	0.272				0.8840
8	20.00	0.7	0.031				0.0543
9	22.50	0.8	0.024				0.0480
10	25.00	0.6	0.022				0.0330
11	27.50	0.5	0.03				0.0375
12	30.00	0.6	0.076				0.1140
13	32.50	0.5	-0.026				-0.0325
14	35.00	0.5	-0.02				-0.0250
15	37.50	0.7	0.029				0.0508
16	40.00	0	0			water edge	0.0000

Stream Flow:	2.504	cfs
Total Width:	37.50	ft

Sample Location:	NTC-01	
Date:	12/2/2024	
Personnel:	JBC & MMS	
Site Conditions:	Snowing. 29°F	
pH:	9.87	
Conductivity:	0.252	ms/cm
Temperature:	1.76	°C
ORP:	56	mV
DO:	14.1	mg/L
Turbidity:	12.7	NTU
Staff Gauge:	NA	feet
Sampled at:	10:40	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1.67	0	0				0.00000
2	2.00	0.25	0.017				0.00140
3	2.33	0.35	0.033				0.00387
4	2.67	0.35	0.049				0.00575
5	3.00	0.3	-0.003				-0.00030
6	3.33	0.5	-0.008				-0.00134
7	3.67	0.45	0.004				0.00060
8	4.00	0.4	0.01				0.00132
9	4.33	0.45	0.014				0.00211
10	4.67	0.45	0.002				0.00030
11	5.00	0.45	-0.008				-0.00119
12	5.33	0.3	0.012				0.00121
13	5.67	0.3	0.008				0.00080
14	6.00	0.3	-0.003				-0.00030
15	6.33	0.2	0.018				0.00121
16	6.67	0.2	0.009				0.00061
17	7.00	0	0			water edge	0.00000

Stream Flow:	0.016	cfs
Total Width:	5.33	ft

Sample Location:	PNC-01	
Date:	12/5/2024	
Personnel:	ERC & MMS	
Site Conditions:	Cloudy, 23°F	
pH:	7.22	
Conductivity:	0.085	ms/cm
Temperature:	0.93	°C
ORP:	131	mV
DO:	10.99	mg/L
Turbidity:	55.1	NTU
Staff Gauge:	1	feet
Sampled at:	11:40	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1	0	0				0.0000
2	1.17	1.25	0.02				0.0041
3	1.33	1.45	0.021				0.0050
4	1.50	1.6	-0.001	0.006	-0.008		-0.0003
5	1.67	1.6	0.011	0.014	0.008		0.0029
6	1.83	1.5	0.0005	-0.003	0.004		0.0001
7	2.00	1.5	-0.0015	-0.004	0.001		-0.0004
8	2.17	1.4	0.013				0.0030
9	2.33	0	0			water edge	0.0000

Stream Flow:	0.015	cfs
Total Width:	1.33	ft

Sample Location:	PNC-03	
Date:	12/9/2024	
Personnel:	JD & JBC	
Site Conditions:	Rain/Snow, 35°F	
pH:	8.92	
Conductivity:	0.274	ms/cm
Temperature:	1.72	°C
ORP:	168	mV
DO:	10.26	mg/L
Turbidity:	10.0	NTU
Staff Gauge:	1.31	feet
Sampled at:	16:00	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	0.83	0	0				0.00000
2	1.00	0.4	0.013				0.00303
3	2.00	1	0.029				0.02900
4	3.00	1.1	0.109				0.11990
5	4.00	1.05	0.093				0.09765
6	5.00	1.2	0.022				0.02640
7	6.00	1.4	0.01				0.01400
8	7.00	1.4	0.05				0.07000
9	8.00	1.35	0.169				0.22815
10	9.00	1.2	0.297				0.35640
11	10.00	1	0.343				0.34300
12	11.00	0.8	0.317				0.25360
13	12.00	0.8	0.246				0.19680
14	13.00	0.85	0.275				0.23375
15	14.00	0.9	0.267				0.24030
16	15.00	1	0.425				0.42500
17	16.00	1.1	0.382				0.42020
18	17.00	1.25	0.229				0.28625
19	18.00	1.3	0.074				0.09620
20	19.00	0.35	0.001				0.00031
21	19.75	0	0			water edge	0.00000

Stream Flow:	3.440	cfs
Total Width:	18.92	ft

Sample Location:	PNC-04	
Date:	12/17/2024	
Personnel:	JD & JBC	
Site Conditions:	NW Wind, 28°F	
pH:	8.27	
Conductivity:	0.241	ms/cm
Temperature:	0.06	°C
ORP:	276	mV
DO:	15.12	mg/L
Turbidity:	19.9	NTU
Staff Gauge:	1.7	feet
Sampled at:	10:00	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	1.00	0	0				0.0000
2	2.00	0.6	0.01				0.0060
3	3.00	1.15	0.249				0.2864
4	4.00	1.15	0.009				0.0104
5	5.00	1.15	0.153				0.1760
6	6.00	1.1	0.178				0.1958
7	7.00	1.3	1.683				2.1879
8	8.00	1.3	1.35				1.7550
9	9.00	1.4	1.289				1.8046
10	10.00	1.3	0.897				1.1661
11	11.00	1.3	0.123				0.1599
12	12.00	1.1	0.583				0.6413
13	13.00	1.1	0.808				0.8888
14	14.00	1.2	0.984				1.1808
15	15.00	0.7	0.736				0.5152
16	16.00	0.7	0.002				0.0011
17	16.50	0	0			Waters Edge	0.0000

Stream Flow:	10.975	cfs
Total Width:	15.50	ft

Sample Location:	PRC-01	
Date:	12/11/2024	
Personnel:	JD & JBC	
Site Conditions:	Snow, 12°F	
pH:	8.11	
Conductivity:	0.938	ms/cm
Temperature:	0.56	°C
ORP:	192	mV
DO:	13.84	mg/L
Turbidity:	21.1	NTU
Staff Gauge:	0.75	feet
Sampled at:	16:00	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	0.83	0	0				0.0000
2	1.00	0.2	0.721				0.0844
3	2.00	0.3	1.146				0.3438
4	3.00	0.4	1.558				0.6232
5	4.00	0.4	1.358				0.5432
6	5.00	0.45	0.954				0.4293
7	6.00	0.5	1.707				0.8535
8	7.00	0.5	1.525				0.7625
9	8.00	0.4	1.26				0.5040
10	9.00	0.5	1.956				0.9780
11	10.00	0.55	1.132				0.6226
12	11.00	0.65	2.309				1.5009
13	12.00	0.75	2.595				1.9463
14	13.00	0.5	2.258				1.1290
15	14.00	0.5	1.506				0.7530
16	15.00	0.4	0.9				0.3600
17	16.00	0.25	0.041				0.0094
18	16.83	0	0			water edge	0.0000

Stream Flow:	11.443	cfs
Total Width:	16.00	ft

Sample Location:	PRC-02	
Date:	12/2/2024	
Personnel:	JBC & MMS	
Site Conditions:	Snow, 27°F	
pH:	8.95	
Conductivity:	0.821	ms/cm
Temperature:	0.13	°C
ORP:	-109	mV
DO:	19.4	mg/L
Turbidity:	25.6	NTU
Staff Gauge:	NA	feet
Sampled at:	12:20	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	2.67	0	0				0.0000
2	3.00	0.2	0.274				0.0182
3	3.33	0.4	1.066				0.1421
4	3.67	0.45	1.172				0.1758
5	4.00	0.45	1.222				0.1833
6	4.33	0.45	1.463				0.2195
7	4.67	0.75	1.423				0.3558
8	5.00	0.8	1.336				0.3563
9	5.33	0.95	1.31				0.4148
10	5.67	1	1.48				0.4933
11	6.00	0.85	1.73				0.4902
12	6.33	0.9	1.274				0.3822
13	6.67	0.75	1.412				0.3530
14	7.00	0.75	1.474				0.3685
15	7.33	0.8	1.429				0.3811
16	7.67	0.85	1.274				0.3610
17	8.00	0.75	1.18				0.2950
18	8.33	0.4	0.796				0.1061
19	8.67	0.35	0.266				0.0464
20	9.33	0	0			water edge	0.0000

Stream Flow:	5.142	cfs
Total Width:	6.66	ft

Sample Location:	PTC-01	
Date:	12/11/2024	
Personnel:	JD	
Site Conditions:	--	
pH:	8.03	
Conductivity:	0.215	ms/cm
Temperature:	-0.07	°C
ORP:	231	mV
DO:	14.47	mg/L
Turbidity:	2.7	NTU
Staff Gauge:	NA	feet
Sampled at:	12:00	

Station Number	Station Distance (from Stake 0)	Station Depth	0.6d velocity	0.2d velocity	0.8d velocity	Notes	Increment Flow (cfs)
	ft	ft	ft/s	ft/s	ft/s		
0 (at stake)	0	0	0				
1 (at water edge)	2	0.2	0				0.0000
2	2.50	0.3	0.03				0.0045
3	3.00	0.3	0.03				0.0045
4	3.50	0.4	0.03				0.0060
5	4.00	0.4	0.03				0.0060
6	4.50	0.3	0.03				0.0045
7	5.00	0.3	0.03				0.0045
8	5.50	0.3	0.039				0.0059
9	6.00	0.4	0.027				0.0054
10	6.50	0.35	0.228				0.0399
11	7.00	0.4	0.369				0.0738
12	7.50	0.2	0.456				0.0456
13	8.00	0.3	0.397				0.0596
14	8.50	0.25	0.043				0.0054
15	9.00	0.15	0.042				0.0032
16	9.50	0.1	0.01				0.0005
17	10.00	0.2	0.022				0.0022
18	10.50	0.15	0				0.0000
19	11.00	0	0			water edge	0.0000

Stream Flow:	0.271	cfs
Total Width:	9.00	ft

APPENDIX B
PHOTOGRAPH LOG

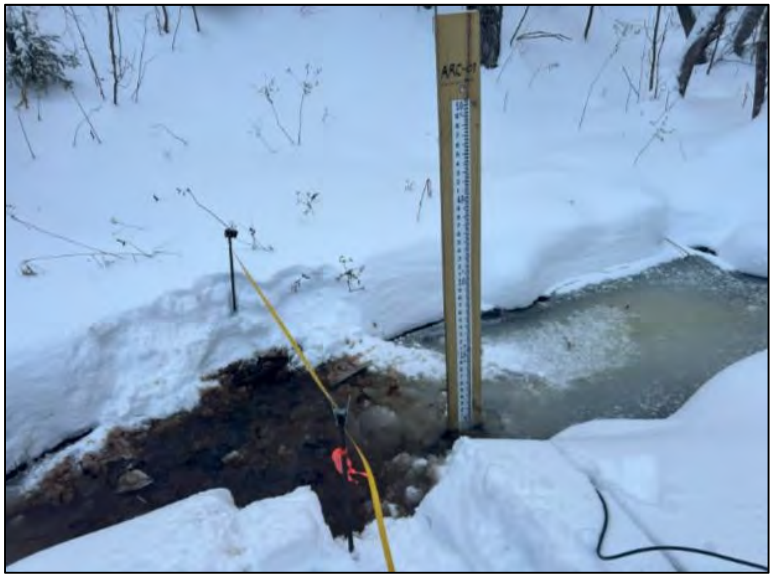


Photo 1: ARC-01 facing east (12-05-2024)



Photo 2: ARC-02 facing west (12-04-2024)



Photo 3: ARC-03 facing southwest (12-11-2024)



Photo 4: BNC-01 facing northeast (12-11-2024)



Photo 5: BNW-01 facing north (12-11-2024)



Photo 6: CBR-01 was inaccessible due to muddy trail conditions with snow, facing east (12-10-2024)



Photo 7: CBR-02 facing northeast (12-17-2024)



Photo 8: DKC-01 facing south (12-05-2024)



Photo 9: DKC-02 facing west (12-17-2024)



Photo 10: DKC-03 facing south (12-16-2024)



Photo 11: LKS-01 facing north (12-16-2024)



Photo 12: LKS-02 facing north, sampled from a hole through the ice (12-16-2024)



Photo 13: MLC-01 facing east (12-02-2024)



Photo 14: MLR-01 facing north (12-16-2024)



Photo 15: MLR-02 facing east (12-16-2024)



Photo 16: MLR-03 facing west (12-02-2024)



Photo 17: NTC-01 facing southwest (12-02-2024)



Photo 18: PNC-01 facing north (12-05-2024)



Photo 19: PNC-02 inaccessible due to steep, slippery embankment and flooded valley, facing east (12-10-2024). Also refer to photo 36.



Photo 20: PNC-03 facing east (12-09-2024)



Photo 21: PNC-04 facing northeast (12-17-2024)



Photo 22: PRC-01 facing southeast (12-11-2024)



Photo 23: PRC-02 facing southeast (12-02-2024)



Photo 24: PTC-01 facing south (12-11-2024)



Photo 25: SBD-01 facing southwest (12-10-2024)



Photo 26: SBW-01 facing southwest (12-10-2024)



Photo 27: TBN-01 facing southwest (12-11-2024)



Photo 28: TBS-01 facing west (12-11-2024)



Photo 29: K-packer assembly at MW-5SB prior to installation (12-09-2024)



Photo 30: Removal of ice from well casing at MW-5SB prior to k-packer installation (12-09-2024)



Photo 31: Final installation of K-Packer at MW-5SB (12-09-2024)



Photo 32: Ice remaining in well casing at MW-43SB after removal attempt in order to install k-packer (12-16-2024)



Photo 33: Surging and purging MW-2SB after adding distilled water to the well casing, facing northwest (12-17-2024)



Photo 34: Monitoring wells NB1-1 and NB1-3 were inaccessible by ATV due to standing water and mud, facing northwest (12-10-2024)



Photo 35: Monitoring wells NB1-1 and NB1-3 inaccessible by snowmobile due to extensive standing water in the basin, facing north (12-17-2024)



Photo 36: PNC-02 facing southeast, inaccessible due to steep/slippery embankment down into the flooded valley (12-10-2024)

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

February & March 2025

April 11, 2025

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Sampling Field Results for February/March 2025

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in February and March, 2025 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's February 4, 2025 *Proposal for Groundwater and Surface Water Sampling*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). Figure 1, *Groundwater Monitoring Locations* and Figure 2, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between February 24 and March 11, 2025, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (Figure 1) using low-flow sampling procedures with a peristaltic, bladder, or down-hole centrifugal pump depending on the depth to groundwater and location. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in ***Table 1, Groundwater Field Parameter Summary***. Copies of the field sheets are provided in ***Appendix A, Field Sheets***.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtering for dissolved low level and dissolved methyl mercury samples was conducted at a controlled location within WPC's White Pine office using FlipMate™ 50 Filtration System 0.45 um filters. A field blank for low level mercury (FB-02_20250304_FBLL) was also collected at the filtering location. The filters were manufacturer certified for background metals to be less than 0.0005 micrograms per liter (ug/L) mercury.

Trace Analytical Laboratories, Inc. (Trace) previously provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was re-used between sampling events for sample collection. The teflon tubing used during sample collection was retained for reuse during subsequent sampling events and is was stored at MSG's Houghton, Michigan office between sampling events. Existing poly tubing encountered in many of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection.

MSG collected a total of 26 groundwater samples, plus one complete field blank, duplicate from MW-2A (DUP-01-GW_20250225), matrix spike/matrix spike duplicate (MS/MSD) from MW-5A, and equipment blank EB-01-GW_20250303 from the bladder pump which was used to sample MW-31, SMW-1, and SMW-1SB. During this sampling event, MW-41 did not produce sufficient groundwater to collect a full sample, MW-2SB was gauged but not sampled, and the groundwater in MW-36 and NB2-1 was frozen and could not be sampled.

SURFACE WATER GAUGING AND SAMPLING

Between February 24 and March 11, 2025, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (Figure 2) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure (SOP) 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein.

An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements after chopping/augering and removing ice to gain access to most of the stream locations. Ice conditions were widely variable between locations and in some cases across the width of a given stream. Estimated corrections were made to the effective flowing water depth when calculating flow rates to account for the ice thickness. A correction coefficient of 0.92 was also applied to the recorded velocities measured at the six-tenths depth in accordance with the SOP to account for ice roughness. Location MLR-02 was not gauged due to the river being nearly frozen to the bottom with approximately 2 to 2.5 feet of ice and water running over the ice. Copies of the stream gauging field sheets and stream flow calculation sheets are included in Appendix A. Calculated stream flows are summarized in *Table 2, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in Table 2. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw directly from the surface water body, or from a spare unpreserved bottle filled from the surface water body, and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were processed at WPC's White Pine office using FlipMate™ 50 Filtration System 0.45 um filters as described above.

MSG collected a total of 28 surface water samples. A duplicate sample from NTC-01 (DUP-01-SW_20250225), a MS/MSD from DKC-03, and a field blank were also collected. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. Photographs of the stream gauging and sampling locations are provided in *Appendix B, Photograph Log.*

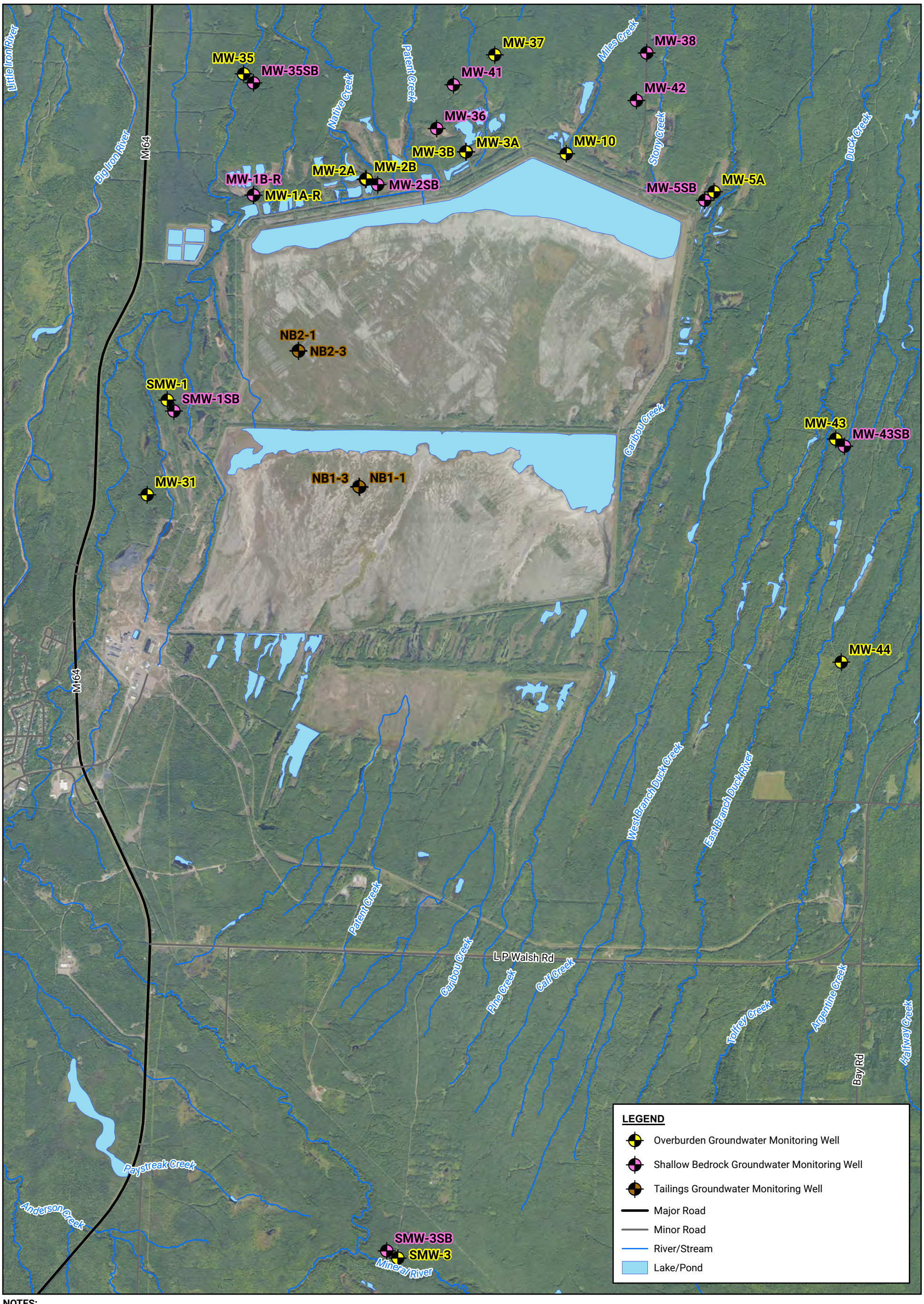
MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,



Jed Chrestensen, P.E.
Project Manager

FIGURES



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 1,500 3,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 1

GROUNDWATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 24W005	

Q:\White Pine Copper\23W200\GIS\aprx\Quarterly Sampling RFP\GW and SW Quarterly Sampling RFP.aprx 5/23/2024 10:48 AM

Lake Superior
LKS-01
LKS-02
PTC-01
NTC-01
MLC-01
PNC-04
DKC-03
CBR-02
M 64
MLR-03
PRC-02
Native Creek
Patent Creek
Miles Creek
Stony Creek
Duck Creek
ARC-03
BNC-01
Little Iron River
Mineral River
Perch Creek
Ash Creek
PNC-03
DKC-02
PRC-01
BNW-01
TBN-01
Townline Rd
L P Walsh Rd
Floodwood River
MLR-02
Big Iron River
M 64
TBS-01
Caribou Creek
ARC-02
PNC-02
Little Cranberry River
SBD-01
SBW-01
West Branch Duck Creek
East Branch Duck River
Argentine Creek
Halfway Creek
Town Line Creek
Cranberry River
Potato Farm Rd
ARC-01
PNC-01
L P Walsh Rd
DKC-01
CBR-01
MLR-01
Patent Creek
Caribou Creek
Pine Creek
Calf Creek
Tolfrey Creek
Paystreak Creek
Federal Forest Road 630
Cranberry River
Old M 64
Anderson Creek
Mineral River
Sleepy Creek
Sandhill Creek
Bush Creek

LEGEND

- Water Quality Sampling Location
- Water Quality and Flow Monitoring Station
- Water Quality and Continuous Flow Monitoring Station
- Major Road
- Minor Road
- River/Stream
- Lake/Pond

NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 2,500 5,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:	
Drawn By: BJW1	Checked By: JMW3	Project: 23W200

Q:\White Pine Copper\23W200\GIS\aprx\Quarterly Sampling RFP\GW and SW Quarterly Sampling RFP.aprx 5/23/2024 10:56 AM

TABLES

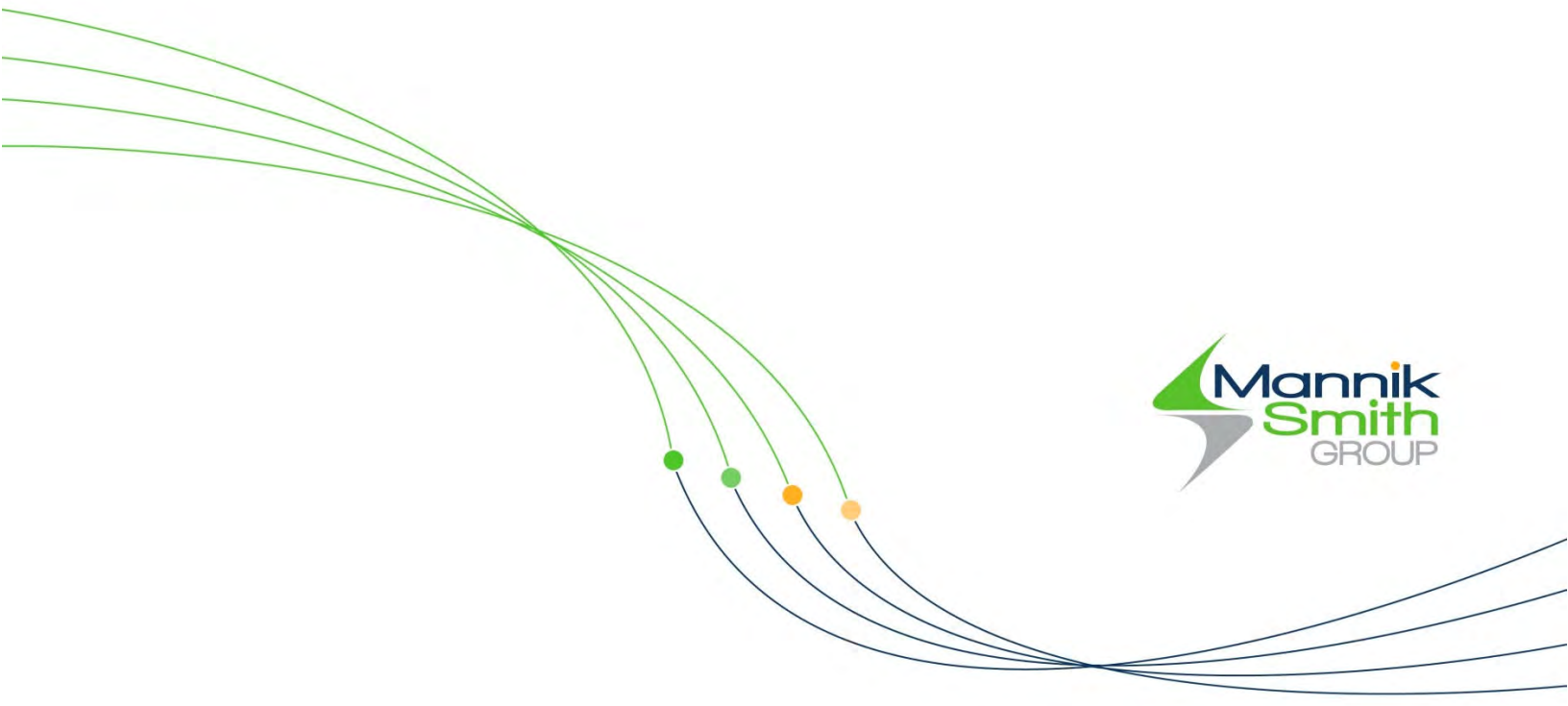


TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-1AR	7/31/2024	9.51	16.98	8.05	136	0.659	1.7	0.42	100
	9/30/2024	10.92	12.99	7.24	157	0.729	6.3	0.00	200
	12/5/2024	11.73	8.07	8.26	175	0.706	8.6	12.19	200
	2/24/2025	10.97	7.61	7.91	136	0.777	29.1	4.87	200
MW-1BR	7/31/2024	9.56	20.90	7.85	-124	0.707	23.7	0.00	100
	9/30/2024	10.78	12.94	7.71	-57	0.859	3.9	0.00	200
	12/5/2024	11.94	6.20	8.06	32	0.796	0.0	11.78	200
	2/24/2025	11.11	8.01	7.77	94	0.888	1.5	0.92	200
MW-2A	8/1/2024	10.59	14.18	7.30	-189	1.230	72.8	0.24	200
	10/1/2024	10.75	13.15	7.42	-162	1.350	0.0	0.00	200
	12/10/2024	6.24	6.88	7.76	-68	1.36	9.5	0.00	200
	2/25/2025	5.81	6.56	7.27	66	1.44	5.7	0.83	200
MW-2B	8/1/2024	11.21	15.70	7.15	-3	0.937	6.8	0.33	200
	10/1/2024	10.73	15.34	7.24	22	1.170	16.2	4.39	200
	12/10/2024	6.40	8.59	7.86	118	1.09	9.3	0.66	200
	2/25/2025	6.32	6.27	7.25	131	1.09	11.8	1.87	200
MW-2SB	12/17/2024	85.72	--	--	--	--	--	--	--
	2/25/2025	84.18	--	--	--	--	--	--	--
MW-3A	7/30/2024	10.94	21.99	7.13	-46	1.580	103	0.20	200
	10/1/2024	12.69	15.82	7.14	-87	2.080	19.2	0.00	200
	12/10/2024	8.54	8.01	7.65	-42	2.49	1.8	0.00	200
	2/26/2025	5.58	6.68	7.14	-58	2.51	3.1	1.16	200
MW-3B	7/30/2024	10.74	13.46	7.19	-216	0.903	0.0	0.19	200
	10/1/2024	12.18	15.83	7.20	-60	1.580	0.0	0.55	200
	12/10/2024	7.99	5.43	8.00	102	0.969	0.0	5.68	200
	2/26/2025	5.03	5.87	7.30	162	1.02	2.9	3.01	200
MW-5A	7/30/2024	11.84	18.60	7.36	72	1.340	0.0	1.66	200
	10/2/2024	9.19	14.38	7.21	46	1.650	1.9	0.00	200
	12/9/2024	3.55	10.57	7.98	27	1.48	0.0	10.45	200
	2/26/2025	3.39	5.11	7.29	168	1.66	4.3	2.86	200
MW-5SB	9/30/2024	0.05	23.30	8.55	-35	2.060	190.0	2.10	200
	12/9/2024	0.00	8.27	9.33	-87	1.27	9.0	0.00	200
	3/10/2025	0.00	12.24	8.96	-106	1.42	96	0.86	200
MW-10	8/6/2024	5.82	14.77	6.10	-24	2.330	0.4	0.00	150
	9/30/2024	5.81	18.64	6.43	-54	2.490	3.6	0.00	200
	12/3/2024	4.90	7.71	7.02	-78	2.59	7.9	0.00	200
	2/25/2025	4.76	7.57	6.62	-35	2.63	7.1	0.82	200
MW-31	7/30/2024	50.71	12.47	8.10	51	0.359	>1000	0.00	200
	10/7/2024	49.50	10.26	8.97	-30	0.397	278	0.50	200
	12/9/2024	48.67	6.10	8.10	37	0.347	>1000	1.23	200
	3/11/2025	51.37	4.30	8.36	83	0.450	102	2.89	200
MW-35	7/28/2024	16.63	--	--	--	--	--	--	--
	9/30/2024	19.78	9.46	9.40	152	0.612	28.3	3.19	100
	12/3/2024	20.13	5.41	8.09	154	0.462	180	9.96	100
	3/10/2025	17.25	7.85	10.19	321	0.413	163	5.66	100
MW-35SB	12/17/2024	26.59	5.58	8.84	168	0.554	>1000	9.58	100
	3/10/2025	21.09	7.65	8.67	-215	0.617	>1000	0.89	500
MW-36	7/28/2024	6.83	19.53	7.17	-207	0.668	261	0.58	200
	9/30/2024	5.94	20.43	8.10	-155	0.667	49.9	0.68	200
	12/3/2024	2.93	6.78	8.11	126	0.587	12.5	0.25	200
	3/4/2025	Frozen	--	--	--	--	--	--	--
MW-37	7/28/2024	14.11	24.22	7.34	-69	0.438	89.8	0.85	200
	10/2/2024	16.81	11.55	8.03	-11	0.534	24.7	1.83	200
	12/3/2024	16.94	8.88	8.53	145	0.413	13.6	10.54	200
	3/4/2025	11.62	3.58	11.59	356	0.473	27.0	9.81	200
MW-38	7/28/2024	12.31	11.70	7.66	115	0.525	0.0	0.94	200
	10/7/2024	15.95	10.22	7.32	142	0.570	3.9	0.00	200
	12/3/2024	16.11	7.01	8.65	192	0.597	4.3	2.47	200
	3/4/2025	9.97	6.40	8.65	269	0.614	15.1	4.03	200
MW-41	7/24/2024	7.90	14.99	7.40	164	0.539	78.1	9.10	200
	9/30/2024	28.33	14.70	8.43	172	0.610	172	5.89	100
	12/3/2024	28.64	--	--	--	--	--	--	--
	3/4/2025	25.94	2.33	10.42	329	0.582	35.8	8.51	100
MW-42	7/28/2024	5.62	16.37	8.50	51	0.354	0.0	3.45	200
	10/7/2024	8.42	12.70	8.71	106	0.316	35.8	0.56	200
	12/3/2024	6.95	5.74	8.91	174	0.315	11.9	2.16	200
	3/4/2025	3.94	5.66	9.76	255	0.332	148	4.91	200
MW-43	7/31/2024	13.61	18.32	8.02	-33	0.419	274	0.40	200
	9/25/2024	17.31	11.93	7.98	167	0.501	17.7	0.00	200
	12/4/2024	15.54	7.43	8.21	134	0.452	38.1	0.00	200
	2/26/2025	10.47	6.69	8.87	323	0.511	50.3	0.00	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-43SB	10/1/2024	3.65	12.23	8.51	17	4.520	1.7	1.51	150
	12/16/2024	Frozen	--	--	--	--	--	--	--
	2/27/2025	8.38	6.53	7.24	73	4.74	33.5	1.26	200
MW-44	7/31/2024	15.10	13.58	7.69	-194	0.614	50.6	0.06	200
	9/25/2024	17.89	13.72	8.38	-141	0.809	89.4	0.00	200
	12/4/2024	17.21	8.74	8.33	-61	0.633	15.0	0.00	200
	2/26/2025	14.63	6.00	8.76	285	0.800	18.4	0.00	200
NB1-1	7/24/2024	5.61	13.20	6.86	-128	1.290	0.0	0.16	200
	10/2/2024	5.78	16.04	7.74	-228	1.080	29.0	0.00	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.59	6.01	8.08	-85	1.19	25.1	0.00	200
NB1-3	7/24/2024	6.21	13.64	7.89	-273	1.000	54.2	0.31	200
	10/2/2024	6.47	14.05	7.82	-175	1.000	22.3	0.37	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.93	7.07	7.97	86	1.03	46.3	0.00	200
NB2-1	7/24/2024	6.45	17.91	6.93	-166	2.260	62.4	0.32	200
	9/30/2024	6.21	25.97	7.21	-124	2.020	0.0	0.10	100
	12/2/2024	2.66	7.19	8.10	-177	1.10	13.7	0.00	200
	3/3/2025	Frozen	--	--	--	--	--	--	--
NB2-3	7/24/2024	6.25	13.99	6.54	-42	1.110	0.0	0.00	200
	9/30/2024	5.80	26.73	7.88	-189	0.889	0.0	0.01	200
	12/2/2024	2.96	8.18	8.40	-78	1.03	14.9	13.01	200
	3/3/2025	2.57	7.87	8.45	14	1.12	20.3	0.00	200
SMW-1	7/25/2024	23.52	9.22	8.21	-84	0.403	73.0	14.06	200
	10/2/2024	23.90	10.08	8.12	-106	0.463	212.0	0.00	200
	12/9/2024	24.79	8.17	8.32	107	0.337	71.9	0.00	200
	3/3/2025	24.25	8.32	8.85	82	0.388	119	1.94	200
SMW-1SB	12/9/2024	25.15	5.58	8.99	134	0.362	73.2	15.83	200
	3/3/2025	25.35	9.08	9.60	158	0.399	108	7.95	200
SMW-3	8/6/2024	27.68	10.84	8.14	88	0.262	11.1	5.41	200
	10/2/2024	27.66	12.52	8.58	-125	0.249	14.7	0.00	200
	12/4/2024	27.18	7.36	8.39	-60	0.272	8.7	10.74	200
	3/6/2025	26.85	8.65	8.38	69	0.265	21.6	0.00	200
SMW-3SB	12/4/2024	22.98	--	--	--	--	--	--	--
	3/6/2025	22.69	7.27	9.05	255	0.556	36.9	0.00	200

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

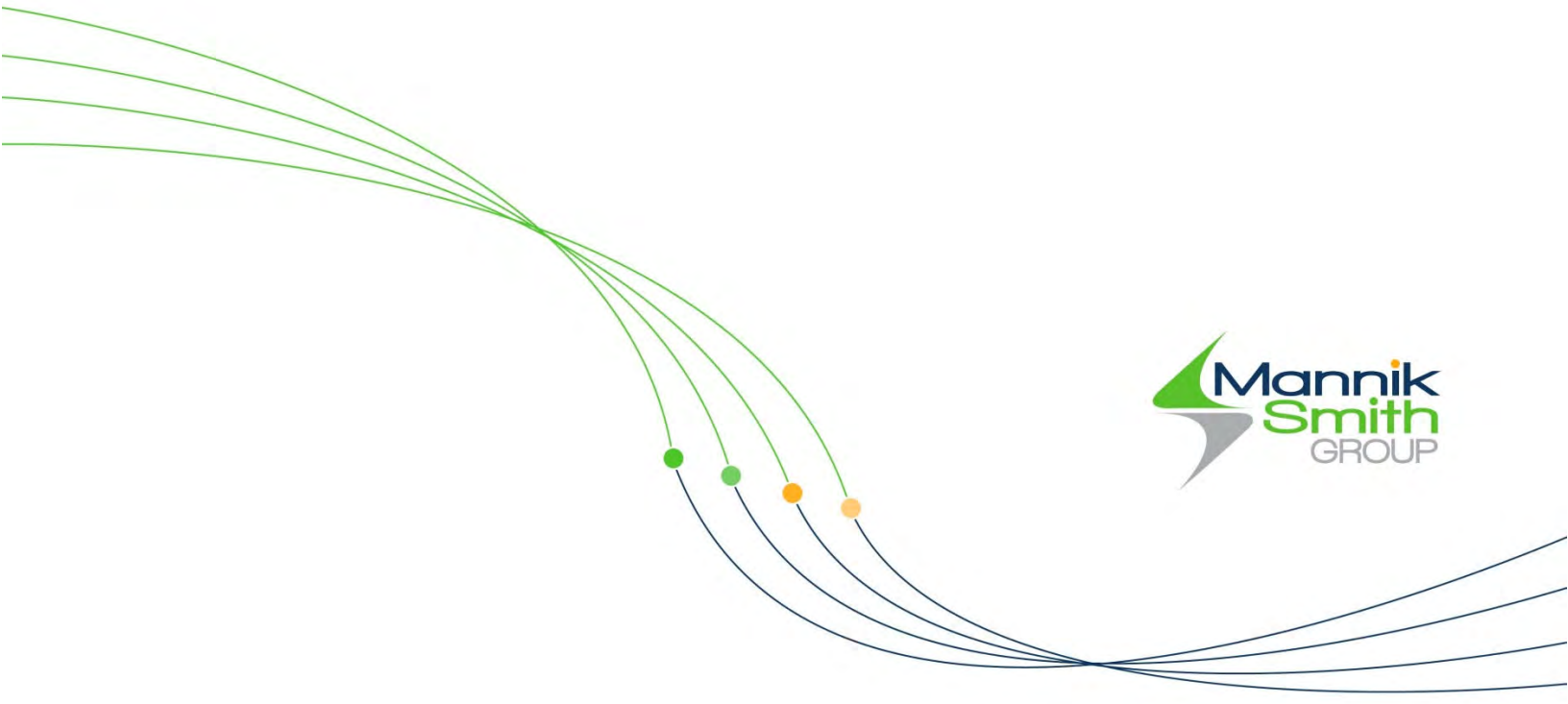
SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
ARC-01	7/31/2024	6.89	0.129	20.68	122	2.80	8.0	0.008	1.42	--
	9/25/2024	6.79	0.223	11.67	194	2.61	2.4	0.017	4.66	0.84
	12/5/2024	8.22	0.098	1.26	178	11.75	0.0	0.058	3.5	1.00
	3/11/2025	9.26	0.116	0.38	237	10.30	4.4	4.11	19.75	2.98
ARC-02	7/31/2024	7.72	0.153	19.32	120	1.93	25.8	0.125	11.5	--
	9/25/2024	7.40	0.129	14.76	159	5.05	12.6	0.229	20	--
	12/4/2024	8.52	0.158	0.32	158	6.56	733	0.427	34	--
	2/27/2005	8.77	0.064	1.19	280	7.56	40.8	2.31	61	--
ARC-03	8/6/2024	--	--	--	--	--	--	Dry		--
	9/26/2024	8.04	0.255	11.59	91	7.98	28.3	0.030	8.00	0.62
	12/11/2024	8.15	0.093	0.07	199	16.25	32.6	2.162	14.17	1.50
	3/6/2025	7.55	0.082	1.87	150	10.42	11.7	14.18	13	2.78
BNC-01	8/6/2024	7.39	0.179	22.83	115	8.21	0.0	No Stream Gauging		--
	10/8/2024	8.79	0.158	14.53	45	6.90	0.0	No Stream Gauging		--
	12/11/2024	8.12	0.143	0.00	161	4.2	700	No Stream Gauging		--
	3/11/2025	7.14	0.143	1.56	-5	4.04	0.0	No Stream Gauging		--
BNW-01	7/31/2024	7.12	0.184	28.77	111	7.80	2.1	No Stream Gauging		--
	10/8/2024	8.15	0.223	13.65	41	8.37	211	No Stream Gauging		--
	12/11/2024	8.42	0.152	1.49	211	15.75	25.6	No Stream Gauging		--
	2/25/2025	7.49	0.219	2.53	156	9.11	0.0	No Stream Gauging		--
CBR-01	7/29/2024	8.16	0.242	24.54	177	8.90	0.0	No Stream Gauging		--
	9/25/2024	7.77	0.295	12.08	175	6.96	1.2	No Stream Gauging		--
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	2/27/2025	8.74	0.092	0.07	348	11.27	32.8	No Stream Gauging		--
CBR-02	8/6/2024	7.97	0.246	26.38	92	6.70	0.0	No Stream Gauging		--
	10/3/2024	8.10	0.261	13.84	106	7.32	12.2	No Stream Gauging		3.55
	12/17/2024	8.30	0.118	0.75	229	10.09	39.2	No Stream Gauging		3.20
	3/4/2025	7.42	0.119	1.04	130	11.02	43.9	No Stream Gauging		3.7
DKC-01	7/29/2024	--	--	--	--	--	--	Dry		--
	9/23/2024	--	--	--	--	--	--	Dry		--
	12/5/2024	7.83	0.159	0.59	250	14.81	0.0	0.131	6.75	--
	3/11/2025	7.99	0.160	-0.02	325	12.12	0.9	9.99	12	--
DKC-02	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	7.65	0.152	18.34	168	9.39	2.5	0.081	16.00	--
	12/17/2024	7.30	0.081	0.06	189	16.12	24.7	11.557	22.5	--
	2/26/2025	8.26	0.075	0.03	298	11.02	16.5	7.04	24.8	--
DKC-03	8/6/2024	7.52	0.213	25.28	151	5.21	0.0	No Stream Gauging		--
	9/26/2024	7.83	0.163	14.36	151	6.67	8.7	No Stream Gauging		--
	12/16/2024	7.50	0.087	1.63	237	13.76	47.7	No Stream Gauging		--
	3/3/2025	7.46	0.077	1.31	136	12.06	6.5	No Stream Gauging		--
LKS-01	7/28/2024	8.34	0.116	20.87	191	11.12	0.1	No Stream Gauging		--
	10/7/2024	8.91	0.111	13.68	112	9.56	12.4	No Stream Gauging		--
	12/16/2024	7.56	0.212	0.30	236	13.74	37.8	No Stream Gauging		--
	3/4/2025	7.17	0.389	1.22	193	54.3	10.6	No Stream Gauging		--
LKS-02	7/28/2024	7.69	0.112	21.91	172	11.11	0.0	No Stream Gauging		--
	10/7/2024	9.23	0.108	13.49	42	10.06	1.2	No Stream Gauging		--
	12/16/2024	8.11	0.115	0.70	62	10.79	17.6	No Stream Gauging		--
	3/3/2025	7.50	0.171	0.93	91	11.58	3.1	No Stream Gauging		--
MLC-01	8/6/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/2/2024	12.12	0.275	3.76	-43	14.59	16.3	0.027	2.5	--
	3/3/2025	7.27	0.218	0.49	173	12.23	9.8	0.17	4.25	--
MLR-01	7/25/2024	7.72	0.148	15.35	150	7.52	0.1	0.311	16.33	--
	9/23/2024	7.95	0.177	16.42	141	9.50	7.7	No Stream Gauging		1.29
	12/16/2024	7.58	0.088	0.36	199	15.08	32.2	No Stream Gauging		2.05
	3/10/2025	8.64	0.071	0.32	361	11.51	43.4	No Stream Gauging		3.71
MLR-02	7/25/2024	7.41	0.247	19.59	114	7.46	7.4	0.489	28.17	--
	9/24/2024	8.15	0.265	15.97	116	13.09	1.5	0.086	21.00	0.08
	12/16/2024	7.82	0.140	0.31	234	14.4	57.1	2.504	37.5	1.15
	3/11/2025	7.73	0.180	0.00	145	13.67	18	No Stream Gauging		2.65
MLR-03	7/25/2024	7.79	0.245	15.87	186	9.27	0.0	0.468	28.17	--
	9/23/2024	8.64	0.283	14.30	31	10.02	1.6	No Stream Gauging		0.71
	12/2/2024	9.17	0.168	0.05	192	21.09	17.5	No Stream Gauging		1.30
	2/25/2025	7.88	0.241	-0.10	299	2.29	23.6	No Stream Gauging		1.26

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
NTC-01	7/22/2024	7.85	0.208	17.79	39	9.55	34.7	0.074	4.83	--
	9/23/2024	7.56	0.225	15.34	-19	2.17	171	0.021	4.00	--
	12/2/2024	9.87	0.252	1.76	56	14.1	12.7	0.016	5.33	--
	2/25/2025	7.93	0.233	0.53	254	8.92	15.6	0.63	7.5	--
PNC-01	7/29/2024	6.53	0.119	21.62	171	2.13	1.2	0.008	2.17	--
	9/23/2024	7.33	0.285	16.70	175	1.51	21.6	0.015	2.25	0.83
	12/5/2024	7.22	0.085	0.93	131	10.99	55.1	0.015	1.33	1.00
	3/11/2025	8.91	0.041	0.02	293	12.69	51.7	5.73	4	1.9
PNC-02	7/29/2024	7.29	0.293	27.19	72	4.63	41.0	0.068	10.84	--
	9/24/2024	7.73	0.343	17.27	136	12.59	7.9	0.213	53.30	1.22
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	3/10/2025	9.29	0.129	-0.05	289	9.63	230	7.12	55	2.09
PNC-03	8/1/2024	7.79	0.453	20.11	105	4.62	0.0	0.023	4.00	--
	9/24/2024	7.84	0.395	15.97	138	10.22	6.4	0.053	6.33	0.43
	12/9/2024	8.92	0.274	1.72	168	10.26	10.0	3.440	18.92	1.31
	3/10/2025	7.60	0.173	0.42	143	12.94	8.0	17.77	21	2.3
PNC-04	8/7/2024	7.35	0.481	17.08	157	9.73	0.0	0.011	5.34	--
	9/26/2024	7.82	0.412	13.69	138	7.89	2.6	0.082	7.00	0.58
	12/17/2024	8.27	0.241	0.06	276	15.12	19.9	10.975	15.5	1.70
	3/4/2025	7.47	0.179	0.00	136	13.72	11.6	3.33	15.67	--
PRC-01	7/22/2024	8.22	0.972	24.40	110	9.33	47.9	1.011	6.17	--
	9/24/2024	7.37	0.481	18.86	114	7.68	3.3	0.072	7.0	0.20
	12/11/2024	8.11	0.938	0.56	192	13.84	21.1	11.443	16.0	0.75
	3/4/2025	7.54	0.914	0.28	195	13.14	6.8	5.50	15.5	--
PRC-02	7/22/2024	8.05	0.984	19.87	132	11.13	10.6	0.805	5.17	--
	9/23/2024	7.91	1.030	13.89	112	7.33	0.3	0.050	5.00	--
	12/2/2024	8.95	0.821	0.13	-109	19.4	25.6	5.142	6.66	--
	2/25/2025	7.99	0.745	0.13	420	12.63	7.6	1.93	8	--
PTC-01	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/11/2024	8.03	0.215	-0.07	231	14.47	2.7	0.271	9.0	--
	3/6/2025	7.45	0.224	0.83	114	12.02	7.3	0.92	7.25	--
SBD-01	7/29/2024	7.65	0.224	28.82	123	5.98	89.5	No Stream Gauging		--
	9/24/2024	7.71	0.246	16.34	33	3.86	132.0	No Stream Gauging		--
	12/10/2024	7.67	0.235	3.89	199	6.18	57.7	No Stream Gauging		--
	2/24/2025	7.31	0.260	1.08	101	0.46	147	No Stream Gauging		--
SBW-01	7/29/2024	8.17	0.152	26.48	138	5.96	0.0	No Stream Gauging		--
	9/24/2024	7.92	0.191	13.78	121	7.36	10.3	No Stream Gauging		--
	12/10/2024	7.55	0.181	0.46	206	6.64	63.0	No Stream Gauging		--
	2/24/2025	7.32	0.428	0.35	164	7.69	40.5	No Stream Gauging		--
TBN-01	7/31/2024	7.13	0.866	25.82	108	8.52	4.4	No Stream Gauging		--
	10/7/2024	7.85	1.030	13.31	143	10.92	29.9	No Stream Gauging		--
	12/11/2024	8.02	0.618	0.19	198	13.83	52.1	No Stream Gauging		--
	2/24/2025	7.46	0.601	0.80	321	4.70	2.8	No Stream Gauging		--
TBS-01	7/28/2024	7.55	0.754	28.43	120	10.25	0.0	No Stream Gauging		--
	10/8/2024	8.47	1.040	8.60	116	12.87	7.8	No Stream Gauging		--
	12/11/2024	8.30	0.396	4.94	178	11.19	170	No Stream Gauging		--
	2/24/2025	7.46	0.484	0.61	426	6.02	11.1	No Stream Gauging		--

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

APPENDIX A
FIELD SHEETS



LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 2-24-25

PERSONNEL: JD

OBSERVERS:

SAMPLE LOCATION: MW-1AR

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 45°F, windy

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: ¼" Teflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 10.97

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 13:52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1355	11.94	9.53	6.96	183	0.749	80.8	6.95	0	200	
1400	13.10	8.54	7.60	146	0.767	52.2	5.49	0.25	↓	
1405	13.78	8.27	7.74	143	0.771	43.0	5.20	0.5	↓	
1410	14.90	8.10	7.79	142	0.774	38.0	5.08	0.75	↓	
1415	15.62	7.86	7.81	142	0.777	34.2	5.01	1.0	↓	
1420	16.23	7.72	7.86	139	0.780	28.0	4.99	1.25	↓	
1425	16.91	7.67	7.89	137	0.782	30.4	4.93	1.5	↓	
1430	17.56	7.61	7.91	136	0.777	29.1	4.87	1.75	↓	
			Sample collected at 15:00							

SAMPLE ID: MW-1AR-20250224

SAMPLE DATE: 2-24-2025

SAMPLE TIME: 15:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1BR

DATE: 2-24-25

PROJECT #: 401.2400718.000

PERSONNEL: JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 11.11

PURGE START TIME: 15:17

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1520	11.51	7.54	7.76	153	0.848	5.0	3.60	0	200	
1525	11.88	7.79	7.79	140	0.847	1.7	2.42	0.25		
1530	12.00	7.78	7.77	129	0.849	1.4	2.09	0.5		
1535	12.08	7.88	7.78	124	0.903	2.0	1.54	0.75		
1540	12.22	8.02	7.77	111	0.907	1.7	1.17	1.0		
1545	12.30	8.00	7.77	100	0.898	1.8	0.99	1.25		
1550	12.38	8.04	7.77	98	0.894	1.7	0.94	1.5		
1555	12.45	8.01	7.77	94	0.888	1.5	0.92	1.75	↓	
				Sample collected at			16:30			

SAMPLE ID: MW-1BR_20250224

SAMPLE DATE: 2-24-25

SAMPLE TIME: 1630

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2A

DATE: 2-25-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.81

PURGE START TIME: 10:00

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1005	6.20	4.67	7.51	216	1.57	7.8	2.42	0	200	
1010	6.88	5.97	7.31	203	1.53	7.9	1.61	0.25		
1015	7.21	6.27	7.29	166	1.52	12.8	1.27	0.5		
1020	7.68	6.37	7.28	146	1.52	8.7	1.15	0.75		
1025	8.15	6.49	7.28	119	1.52	9.6	1.04	1.0		
1030	8.71	6.55	7.27	89	1.52	6.9	0.95	1.25		
1035	9.32	6.64	7.27	74	1.45	6.8	0.94	1.5		
1040	9.69	6.60	7.27	70	1.45	6.0	0.87	1.75		
1045	10.31	6.56	7.27	66	1.44	5.7	0.83	2.0	↓	
			Sample collected at 11:00							

SAMPLE ID: MW-2A_20250225 & DUP-01-GW_20250225

SAMPLE DATE: 2-25-25

SAMPLE TIME: 11:00

Notes:

MW-2SB-DTW-84.18

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2B

DATE: 2-25-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 6.32

PURGE START TIME: 1200

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1205	6.85	6.15	7.39	164	1.09	>1000	4.30	0	200	
1210	7.42	6.17	7.28	159	1.09	388	2.75	0.25	↓	
1215	7.91	6.21	7.25	148	1.09	26.5	2.24	0.5	↓	
1220	8.49	6.14	7.25	139	1.09	10.2	2.01	0.75	↓	
1225	8.67	6.20	7.25	135	1.09	12.1	1.92	1.0	↓	
1230	8.94	6.27	7.25	131	1.09	11.8	1.87	1.25	↓	
		Sample	collected	at	13:15		1.81	1.5		

SAMPLE ID: MW-2B-20250225

SAMPLE DATE: 2-25-25

SAMPLE TIME: 13:15

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 2-26-25
PERSONNEL: JD
OBSERVERS:

SAMPLE LOCATION: MW-3A
PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: Cloudy, 40°F

DEPTH OF WELL:
SCREEN LENGTH:
TUBING TYPE: 1/4" Teflon
MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 5.58
WELL DIAMETER: 3"
CASING TYPE: PVC

PURGE START TIME: 15:48

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1550	5.92	4.44	7.19	-34	2.61	25.2	3.59	0	200	
1555	6.31	6.67	7.06	-59	2.61	5.1	1.78	0.25	↓	
1600	6.58	6.75	7.07	-67	2.57	3.3	1.44	0.5	↓	
1605	6.78	6.76	7.12	-67	2.52	3.1	1.31	0.75	↓	
1610	7.01	6.75	7.13	-65	2.52	3.2	1.25	1.0	↓	
1615	7.19	6.72	7.14	-62	2.51	3.3	1.20	1.25	↓	
1620	7.35	6.68	7.14	-58	2.51	3.1	1.16	1.5	↓	
		Sample collected at			17:00					

SAMPLE ID: MW-3A_20250226
SAMPLE DATE: 2-26-25
SAMPLE TIME: 1700

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 2-26-25

PERSONNEL: JD

OBSERVERS:

SAMPLE LOCATION: MW-3B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 40°F

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: ¼" Teflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 5.03

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 14:22

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1425	5.42	6.78	7.55	188	1.02	6.2	4.74	0	200	
1430	5.62	6.65	7.40	189	1.02	4.0	4.02	0.25		
1435	5.99	6.51	7.34	185	1.01	2.8	3.57	0.5		
1440	6.37	6.33	7.32	180	1.02	2.7	3.35	0.75		
1445	6.67	6.16	7.31	174	1.02	2.8	3.23	1.0		
1450	6.81	6.00	7.30	171	1.02	3.3	3.16	1.25		
1455	6.94	5.92	7.30	166	1.02	3.1	3.07	1.5		
1500	7.12	5.87	7.30	162	1.02	2.9	3.01	1.75	↓	
		Sample collected at 15:20								

SAMPLE ID: MW-3B_20250226

SAMPLE DATE: 2-26-25

SAMPLE TIME: 15:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-5A

DATE: 2-26-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 32°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 3.39

PURGE START TIME: 9:12

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
9:15	3.71	6.03	7.43	163	1.58	2.7	4.80	0	200	
9:20	4.02	4.73	7.33	172	1.65	4.1	3.37	0.25	↓	
9:25	4.14	4.75	7.31	172	1.66	4.9	3.13	0.5	↓	
9:30	4.29	4.81	7.29	171	1.66	4.7	3.05	0.75	↓	
9:35	4.42	5.06	7.30	169	1.66	3.8	2.93	1.0	↓	
9:40	4.57	5.11	7.29	168	1.66	4.3	2.86	1.25	↓	
			Sample collected at 10:30							

SAMPLE ID: MW-5A_20250226

SAMPLE DATE: 2-26-25

SAMPLE TIME: 10:30

Notes: MS/MSD collected

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-5SB

DATE: 3-10-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SW, ~50°F, NO BREEZE

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 0.0

PURGE START TIME: 14:48

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Teflon 1/4"

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1450	0.0	12.35	8.56	106	2.30	371	7.49	0	200	
1455	0.0	12.84	8.65	71	2.17	348	2.13	0.25		
1500	0.0	12.58	8.68	48	2.06	294	1.41	0.5		
1505	0.0	12.33	8.76	29	1.82	224	1.03	0.75		
1510	0.0	12.30	8.79	19	1.65	126	0.93	1.0		
1515	0.0	12.18	8.84	-1	1.51	95	0.86	1.25		
15:20	0.0	12.27	8.93	-41	1.45	92	0.86	1.5		
15:25	0.0	12.27	8.95	-82	1.43	95	0.89	1.75		
15:30	0.0	12.24	8.96	-106	1.42	96	0.86	2.0		

SAMPLE ID: MW-5SB_20250310

SAMPLE DATE: 3-10-25

SAMPLE TIME: 15:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 2-25-25

PERSONNEL: SD

OBSERVERS:

SAMPLE LOCATION: MW-10

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 46°F

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: 1/4" Teflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 4.76

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 16:14

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1620	5.29	6.29	6.84	128	2.68	68.8	11.16	0	200	
1625	5.46	6.81	6.90	9	2.71	17.9	1.67	0.25	↓	
1630	5.49	7.04	6.58	-8	2.67	14.9	1.34	0.5	↓	
1635	5.55	7.24	6.58	-19	2.64	10.7	1.11	0.75	↓	
1640	5.58	7.37	6.58	-26	2.63	10.2	0.96	1.0	↓	
1645	5.62	7.47	6.59	-31	2.62	8.0	0.85	1.25	↓	
1650	5.65	7.52	6.61	-33	2.63	7.20	0.85	1.5	↓	
1655	5.68	7.57	6.62	-35	2.63	7.1	0.82	1.75	↓	
				Sample collected at 1715						

SAMPLE ID: MW-10_20250225

SAMPLE DATE: 2-25-25

SAMPLE TIME: 1715

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 3-11-25

PERSONNEL: JD, JBC

OBSERVERS: —

SAMPLE LOCATION: MW-31

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: P. Sunny, 28°F, Breeze

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: 3/8" Teflon Lined PE

DEPTH TO WATER LEVEL: 51.37

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 12:37

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1255	49.48	4.13	8.22	109	0.437	116	13.70	0	200	
1300	49.53	4.56	8.33	95	0.443	107	4.46	0.25	↓	
1305	49.52	4.54	8.35	89	0.448	104	3.79	0.5		
1310	49.	4.30	8.36	83	0.450	102	2.89	0.75		
			Sample collected at			14:00			↓	

SAMPLE ID: MW-3L 20250311

SAMPLE DATE: 3-11-25

SAMPLE TIME: 14:00

Notes: _____

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-35

DATE: 3/10/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ELC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 33°F SNOWING

DEPTH OF WELL: 22.25

DEPTH TO WATER LEVEL: 17.25 ft

PURGE START TIME: 0950

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0953	17.99	7.85	10.19	321	0.413	163	5.66		100	
	- Took Sample due to quick draw down -									

SAMPLE ID: MW-35_20250304 & MW-35_20250304_FBLL

SAMPLE DATE: 3/10/25

SAMPLE TIME: MS [redacted] 10:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 3-10-25

PERSONNEL: JBC JD

OBSERVERS: —

SAMPLE LOCATION: MW-355B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: P. Sunny, 28°F, S. 8mph SE

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: 3/8" OD LDPE

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 21.09

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 10:30

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:50	38.15	8.26	8.61	-95	0.614	>1000	3.53	0	500	
10:55	37.59	7.97	8.61	-138	0.614	>1000	1.71	0.625	|	
1100	36.00	7.84	8.65	-173	0.612	>1000	1.28	1.25	|	
1105	35.51	7.68	8.65	-189	0.615	>1000	1.14	1.875	|	
1110	35.62	7.83	8.66	-201	0.616	>1000	1.02	2.5	|	
1115	35.70	7.75	8.66	-209	0.617	>1000	0.95	3.125	|	
1120	35.80	7.65	8.67	-215	0.617	>1000	0.89	3.75	↓	
	Sample collected at 11:30							~~4.375~~	~~↓~~	

SAMPLE ID: MW-355B-20250310

SAMPLE DATE: 3-10-25

SAMPLE TIME: 11:30

Notes: 42.68' DTW AT 10:40, WATER REASONABLY CLEAR SO SLOWED PUMP FLOW

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-36

DATE: 8/4/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL:

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL:

PURGE START TIME:

SCREEN LENGTH:

WELL DIAMETER:

TUBING TYPE:

CASING TYPE:

MONITORING EQUIPMENT:

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
		Frozen								

SAMPLE ID:

SAMPLE DATE:

SAMPLE TIME:

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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DATE: 3/4/25

SAMPLE LOCATION: MW-37

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

PERSONNEL: EAC + MMS

OBSERVERS: —

SITE CONDITIONS: 36°F Cloudy

DEPTH OF WELL: 21.5 ft

DEPTH TO WATER LEVEL: 11.62

PURGE START TIME: 1307

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1310	12.32	3.58	11.59	356	0.473	27.0	9.81		200	
~~1313~~		Sampled due to fast drop in water level							↓	
~~1316~~									↓	
~~1319~~										

SAMPLE ID: MW-37_20250304 & MW-37_20250304_FBLL

SAMPLE DATE: 3/4/25

SAMPLE TIME: 1325

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 3/4/25

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: MW-38

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 36°F Raining

DEPTH OF WELL: 31 Ft

SCREEN LENGTH:

TUBING TYPE: Polytefion

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 9.97Ft

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 0915

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0918	11.22	7.13	9.06	208	0.606	13.9	8.72		200	
0921	12.36	6.88	8.94	242	0.609	13.2	6.44		↓	
0924	12.98	6.54	8.75	255	0.612	14.2	5.50			
0927	13.55	6.45	8.70	262	0.613	12.2	5.13			
0930	13.85	6.44	8.67	266	0.613	12.0	4.81			
0933	14.30	6.40	8.65	269	0.614	15.1	4.03			
~~0936~~									↓	
~~0939~~										

SAMPLE ID: MW-38_20250304 + MW-38_20250304_FBLK

SAMPLE DATE: 3/4/25

SAMPLE TIME: 0940

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW - 41

DATE: 3/4/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 33° SNOWING

DEPTH OF WELL: 29.5ft

DEPTH TO WATER LEVEL: 25.94 ft

PURGE START TIME: 1500

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyethon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1503	26.46	2.33	10.42	329	0.582	35.8	8.51		100	
	- took sample due to fast draw down -									

SAMPLE ID: MW-41_20250304 + MW-41_20250304_FBLL

SAMPLE DATE: 3/4/25

SAMPLE TIME: ~~1515~~ 1515

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 3/4/25

SAMPLE LOCATION: MW-42

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 36°F Raining

DEPTH OF WELL: 29.93 ft

DEPTH TO WATER LEVEL: 3.94 ft

PURGE START TIME: 1027

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1030	4.64	5.09	11.32	244	0.334	514	6.01		200	
1033	5.22	5.40	10.64	250	0.334	388	5.45		↓	
1036	6.01	5.59	10.16	253	0.334	191	5.25		↓	
1039	6.78	5.62	9.96	254	0.333	148	5.12		↓	
1042	7.55	5.64	9.88	255	0.332	143	5.03		↓	
1045	8.36	5.66	9.76	255	0.332	148	4.91		↓	

SAMPLE ID: MW-42_20250304 + MW-42_20250304_FBLL

SAMPLE DATE: 3/4/25

SAMPLE TIME: 1100

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-43

DATE: 2/26/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 42°F cloudy

DEPTH OF WELL: 28 ft

DEPTH TO WATER LEVEL: 10.47 ft

PURGE START TIME: 1620

SCREEN LENGTH: 5 MS

WELL DIAMETER: 2"

TUBING TYPE: Poly teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1623	11.21	7.14	9.36	317	0.510	39.9	0.84		200	
1626	12.08	6.92	9.05	323	0.511	52.9	0.00		↓	
1629	12.90	6.78	9.12	323	0.511	63.0	0.00			
1632	13.28	6.75	8.96	323	0.511	61.1	0.00			
1635	13.84	6.69	8.87	323	0.511	50.3	0.00			
									↓	

SAMPLE ID: MW-43-20250226 MW-43-20250226_FBLL

SAMPLE DATE: 2/26/25

SAMPLE TIME: 1645

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-435B

DATE: 2-27-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 8.38

PURGE START TIME: 9:51

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 3/8" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1055		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
~~9:55~~	5.85	7.44	7.59	152	4.65	11.9	3.36	0	200	
1000	6.71	6.87	7.54	125	4.75	132	2.09	0.25		
1005	7.36	6.82	7.54	111	4.74	758	1.74	0.5		
1010	8.34	6.54	7.42	92	4.80	271	1.58	0.75		
1015	9.03	6.58	7.33	81	4.75	79.1	1.42	1.0		
1020	10.12	6.58	7.28	75	4.70	38.4	1.36	1.25		
1025	11.21	6.53	7.24	73	4.74	33.5	1.26	1.5		
			Sample collected at 12:00							

SAMPLE ID: MW-435B_20250227

SAMPLE DATE: 2-27-25

SAMPLE TIME: 1200

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-44

DATE: 2/26/25
PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
PERSONNEL: ERL & MMS
SITE ADDRESS: White Pine, MI
OBSERVERS:
SITE CONDITIONS: 36°F Cloudy

DEPTH OF WELL: 39 ft
DEPTH TO WATER LEVEL: 14.63 ft
PURGE START TIME: 1735
SCREEN LENGTH:
WELL DIAMETER: 2"
TUBING TYPE: Polythene
CASING TYPE: PVC
MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1735	14.75	5.57	9.28	365	0.865	28.7	2.54		200	
1738	14.88	5.69	9.07	346	0.867	21.5	0.53			
1741	14.92	5.82	8.97	329	0.846	25.5	0.00			
1744	14.93	5.88	8.89	316	0.830	20.3	0.00			
1747	14.94	5.95	8.82	299	0.812	21.0	0.00			
1750	14.96	6.00	8.76	285	0.800	18.4	0.00			

SAMPLE ID: MW-44-20250226 + MW-44-20250226-FBLL
SAMPLE DATE: 2/26/25
SAMPLE TIME: 1800

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: NBI-1

DATE: 3-3-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EKC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 18° F Sunny

DEPTH OF WELL: 25.30 ft

DEPTH TO WATER LEVEL: 2.59 ft

PURGE START TIME: 0930

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0933	3.06	8.07	8.40	-50	1.15	58.2	0.00		200	
0936	3.11	6.50	8.16	-73	1.17	50.9	0.00		"	
0939	3.15	5.94	8.11	-80	1.19	43.4	0.00		"	
0942	3.17	5.94	8.07	-86	1.19	35.0	0.00		"	
0945	3.20	6.01	8.08	-85	1.19	25.1	0.00		↓	
~~0948~~										

SAMPLE ID: NBI-1_20250303 + NBI-1_20250303_FBLL

SAMPLE DATE: 3-3-25

SAMPLE TIME: 0945

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NBI-3

DATE: 3-3-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: ——

SITE CONDITIONS: 28°F Sunny

DEPTH OF WELL: 34.85 ft

DEPTH TO WATER LEVEL: 2.93 ft

PURGE START TIME: 1020

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1023	3.70	6.94	9.37	59	1.03	58.4	7.06		200	
1026	4.61	7.17	8.43	69	1.03	49.0	0.00		↑	
1029	5.56	7.20	8.13	79	1.03	46.6	0.00			
1032	6.03	7.12	8.02	85	1.03	47.0	0.00			
1035	6.65	7.07	7.97	86	1.03	46.3	0.00		↓	

SAMPLE ID: NBI-3_20250303 & NBI-3_20250303_FBLL

SAMPLE DATE: 3-3-25

SAMPLE TIME: 1035

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: NB2-1

DATE: 3/3/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 47°F Sunny

DEPTH OF WELL:

DEPTH TO WATER LEVEL: [redacted] ft

PURGE START TIME:

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polytetron

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
		FROZEN								
				WELL						

SAMPLE ID: ~~NB2-1_20250303~~ + ~~NB2-1~~_20250303_FIELD EC

SAMPLE DATE: 3/3/25

SAMPLE TIME: [redacted] EC

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: NB2-3

DATE: 3/3/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 42°F Sunny

DEPTH OF WELL: —

DEPTH TO WATER LEVEL: 2.57 Ft

PURGE START TIME: 1210

SCREEN LENGTH: —

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1213	2.99	7.41	8.46	16	1.16	9.9	2.32		200	
1216	3.12	7.45	8.46	4	1.15	11.4	0.00		↓	
1219	3.38	7.45	8.45	6	1.15	11.3	0.00			
1222	3.56	7.53	8.44	6	1.15	12.4	0.00			
1225	3.82	7.64	8.45	8	1.14	13.1	0.00			
1228	4.01	7.73	8.46	12	1.13	16.8	0.00			
1231	4.22	7.87	8.45	14	1.12	20.3	0.00			

SAMPLE ID: NB2-3_20250303 & NB2-3_20250303_FBLL

SAMPLE DATE: 3/3/25

SAMPLE TIME: 1235

Notes: —

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 3/3/25

SAMPLE LOCATION: SMW-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

PERSONNEL: ELC + MMS

OBSERVERS: —

SITE CONDITIONS: 46°F Sunny

DEPTH OF WELL: 38.30 Ft

DEPTH TO WATER LEVEL: 24.25 Ft

PURGE START TIME: 1425

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba-U52 & Bladder pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1428	25.17	8.57	9.50	-6	0.393	582	2.88		200	
1431	26.09	8.45	9.29	21	0.388	213	1.41			
1434	27.22	8.40	9.11	40	0.387	156	1.94			
1437	28.37	8.38	8.95	60	0.387	148	2.48			
1440	28.99	8.37	8.89	76	0.387	146	2.21			
1443	29.42	8.32	8.85	82	0.388	119	1.94			

SAMPLE ID: SMW-1_20250303 & SMW-1_20250303_FBLL

SAMPLE DATE: 3/3/25

SAMPLE TIME: 1445

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-15B

DATE: 3/3/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 46°F Sunny

DEPTH OF WELL: >101 ft

DEPTH TO WATER LEVEL: 25.35 ft

PURGE START TIME: 1550

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52 & Bladder pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1553	25.51	9.46	8.89	177	0.419	117	11.96		200	
1556	25.62	9.31	9.23	171	0.402	113	10.60		↓	
1559	26.23	9.20	9.38	166	0.398	109	10.50			
1602	27.38	9.15	9.56	163	0.398	109	9.73			
1605	28.10	9.08	9.59	160	0.397	109	9.73			
1608	29.19	9.08	9.60	158	0.399	108	7.95		↓	

SAMPLE ID: SMW-15B_20250303 + SMW-15B_20250303_FBLL

SAMPLE DATE: 3/3/25

SAMPLE TIME: 1610

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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DATE: 3/6/25
PERSONNEL: ERC & MMS
OBSERVERS:

SAMPLE LOCATION: SMW-3
PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: 240FSUNNY

DEPTH OF WELL: 56.50
SCREEN LENGTH:
TUBING TYPE: Teflon
MONITORING EQUIPMENT: Horiba U-52 & Bladder pump

DEPTH TO WATER LEVEL: 26.85
WELL DIAMETER: 2"
CASING TYPE: PVC

PURGE START TIME: 1120

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1123	27.45	8.37	8.44	112	0.260	14.1	1.08		200	
1126	28.08	8.49	8.41	86	0.261	17.9	0.12		↓	
1129	28.56	8.57	8.38	79	0.262	19.8	0.00			
1132	29.20	8.60	8.38	75	0.263	21.0	0.00			
1135	29.49	8.65	8.38	69	0.265	21.6	0.00			

SAMPLE ID: SMW-3_20250306 + SMW-3_20250306_FB LL
SAMPLE DATE: 3/6/25
SAMPLE TIME: 1145

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-35B

DATE: 3/6/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: ——

SITE CONDITIONS: 24°F Sunny

DEPTH OF WELL: > 101

DEPTH TO WATER LEVEL: 22.69

PURGE START TIME: 10:09

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1012	23.92	6.81	9.14	252	0.560	57.1	1.01		200	
1015	24.56	7.10	9.11	253	0.556	47.6	0.00		↓	
1018	24.61	7.23	9.09	254	0.556	40.4	0.00			
1021	24.97	7.24	9.05	254	0.556	40.9	0.00			
1024	25.01	7.27	9.05	255	0.556	36.9	0.00			

SAMPLE ID: SMW-35B_20250306 + SMW-35B_20250306

SAMPLE DATE: 3/6/25

SAMPLE TIME: 1030

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 3/11/25

SAMPLE LOCATION: ARC-01

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 27°F Cloudy

GAUGE READING START: 2.98 ft

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	9.26		ORP	237	mV
CONDUCTIVITY	0.116	mS/cm	DO	10.30	mg/l
TEMPERATURE	0.38	°C	TURBIDITY	4.4	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	3 in	0				
2	0.5	0.2	-0.03			
3	2	0.5	-0.05			
4	3.5	1	-0.03			
5	5	1.1	0.11			
6	6.5	0.95	0.04			
7	8	1	0.04			
8	9.5	1.35	0.02			
9	11	2.7	[illegible]	-0.03	0.29	in auger hole
10	12.5	2.85		0.62	1.29	
11	14	2.5		-0.04	-0.11	
12	15.5	1.95		0.09	0.01	
13	17	1.4	0.28			
14	18.5	0.5	-0.03			
15	20	edge	of water *			
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

SAMPLE ID:

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

sampled @ 1000

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-02

DATE: 2/27/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EEC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 35°F Cloudy

GAUGE READING START: _____

GAUGE READING END: _____

AVERAGE GAUGE HEIGHT: _____

MONITORING EQUIPMENT: Horiba U-52

pH: 8.77

CONDUCTIVITY: 0.064 mS/cm

TEMPERATURE: 1.19 °C

ORP: 280 mV

DO: 7.56 mg/l

TURBIDITY: 40.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1	0				
2	6	1.4	0.03			
3	11	2.4	~~0.01~~ MS	-0.01	-0.04	
4	16	> 4		0.17	0.19	
5	21	2.7		0.06	-0.04	
6	26	1.9		-0.02	-0.04	
7	31	0.9	-0.03			
8	36	1.6		-0.03	-0.04	
9	41	0.9	-0.05			
10	46	1.1	-0.03			
11	51	1.7		-0.02	-0.04	
12	56	0.35	-0.02			
13	61	0.1	-0.01			
14	62	* edge of water *				
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): _____

TOTAL WIDTH (ft): _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-03

DATE: 3-6-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: -

SITE CONDITIONS: P, SUNNY, 32°F

GAUGE READING START: _____

GAUGE READING END: _____

AVERAGE GAUGE HEIGHT: _____

MONITORING EQUIPMENT: HORIBA U-52

pH: 7.55

CONDUCTIVITY: 0.082 mS/cm

TEMPERATURE: 1.87 °C

ORP: 150 mV

DO: 10.42 mg/l

TURBIDITY: 11.7 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): _____

TOTAL WIDTH (ft): _____

SAMPLE ID: ARC-03_20250306, ARC-03 20250306_FBL

SAMPLE TIME: 12:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-03

DATE: 3/12/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EBC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 24°F Cloudy

GAUGE READING START: 2.78 ft

pH ____ ORP ____ mV

GAUGE READING END: ____

CONDUCTIVITY ____ mS/cm DO ____ mg/l

AVERAGE GAUGE HEIGHT: ____

TEMPERATURE ____ °c TURBIDITY ____ NTU

MONITORING EQUIPMENT: ____

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	0.5	0				
2	1	0.5	0.11			
3	2	0.6	0.01			
4	3	0.8	0.04			
5	4	1.45	1.08			
6	5	2.25		1.45	1.53	
7	6	2.25		1.03	1.58	
8	7	2.35		1.34	1.81	
9	8	2.45		1.56	2.19	
10	9	2.55		1.78	2.25	
11	10	2.7		0.95	1.13	
12	11	2.5		-0.05	0.43	
13	12	1.8		0.61	-0.23	
14	13	0.4	-0.03			
15	13.5	edge of water *				
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) ____

TOTAL WIDTH (ft) ____

SAMPLE ID: ____

SAMPLE TIME: ____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNC-01

DATE: 3-11-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 25°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH: 7.14

CONDUCTIVITY: 0.143 mS/cm

TEMPERATURE: 1.56 °C

ORP: -5 mV

DO: 4.04 mg/l

TURBIDITY: 0.0 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

BNC-01_20250311
10:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: BNW-01

DATE:

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 46°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: ~~10 7.87~~ 7.49

CONDUCTIVITY: 0.219 mS/cm

TEMPERATURE: 2.53 °c

Horiba U-52

ORP: 156 ~~10~~ mV

DO: 9.11 ~~10.10~~ mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: BNW-01_20250225

SAMPLE TIME: 15:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT — www.MannikSmithGroup.com

DATE: 2/27/25

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: CBR-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 35°F Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	8.74		ORP	348	mV
CONDUCTIVITY	0.092	mS/cm	DO	11.27	mg/l
TEMPERATURE	0.07	°C	TURBIDITY	32.8	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: CBR-01_20250227

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT — www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-02

DATE: 3-4-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 35°F CLOUDY, BREEZY

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: ~3.7FT

MONITORING EQUIPMENT: HACH U-52

pH: 7.42

CONDUCTIVITY: 0.119 mS/cm

TEMPERATURE: 1.04 °C

ORP: 130 mV

DO: 11.02 mg/l

TURBIDITY: 43.9 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: CBR-02-20250304 - CBR-02-20250304_FBLL

SAMPLE TIME: 13:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: DLC-01

DATE: 3/11/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 27°F Cloudy

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.99		ORP	325	mV
CONDUCTIVITY	0.160	mS/cm	DO	12.12	mg/l
TEMPERATURE	-0.02	°C	TURBIDITY	0.9	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	0.5	0	0.00			
2	1	0.55	0.06			
3	2	1.9		-0.11	0.59	
4	3	1.9		0.31	0.66	
5	4	1.9		0.81	1.22	
6	5	1.85		1.18	1.44	
7	6	1.7		1.33	1.48	
8	7	1.7		1.53	1.51	
9	8	1.7		0.85	0.68	
10	9	1.3	0.36			
11	10	1.55		-0.07	-0.08	
12	11	1.1	-0.02			
13	12	0.7	-0.05			
14	12.5	edge of water *				
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

SAMPLE ID:

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 0900

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DATE: 2/26/25

PERSONNEL: EEC + MMS

OBSERVERS: —

SAMPLE LOCATION: DKC-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 34°F Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: Horiba U-52

pH: 8.26

CONDUCTIVITY: 0.075 mS/cm

TEMPERATURE: 0.03 °C

ORP: 298 mV

DO: 11.02 mg/l

TURBIDITY: 16.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	0.2	0				
2	2.2	1	0.09			
3	4.2	1.6		-0.02	0.04	
4	6.2	1.7		0.12	0.16	
5	8.2	1.6		0.70	0.54	
6	10.2	1.8		0.46	0.65	
7	12.2	1.85		0.32	0.68	
8	14.2	1.55		0.58	0.20	
9	16.2	1.45	0.03			
10	18.2	1.5		0.25	-0.04	
11	20.2	1.15	-0.04			
12	22.2	1.1	-0.01			
13	24.2	0.1	-0.02			
14	25	edge of water*				
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-03

DATE: 3-3-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Sunny, 46°F

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: Horiba U-52

pH	7.46	ORP	136 mV
CONDUCTIVITY	0.077 mS/cm	DO	12.06 mg/l
TEMPERATURE	1.31 °C	TURBIDITY	61.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: DKC-03_20250303

SAMPLE TIME: 15:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-01

DATE: 3-4-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

PERSONNEL: JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Snowing, 30°F

GAUGE READING START: X

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH 7.17

CONDUCTIVITY 0.389 mS/cm

TEMPERATURE 1.22 °C

Horiba U-52

ORP 193 mV

DO 54.3 mg/l

TURBIDITY 10.64 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

SAMPLE ID: LKS-01-20250304

SAMPLE TIME: 15:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-02

DATE: 5-3-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD & JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Sunny, 35°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.50

CONDUCTIVITY: 0.171 mS/cm

TEMPERATURE: 0.93 °C

ORP: 91 mV

DO: 11.58 mg/l

TURBIDITY: 3.1 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: LKS-02-20250303

SAMPLE TIME: 10:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLC-01

DATE: 3-3-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Sunny, 45°F

GAUGE READING START: ~~X~~

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.27		ORP	173	mV
CONDUCTIVITY	0.218	mS/cm	DO	12.23	mg/l
TEMPERATURE	0.49	°C	TURBIDITY	9.8	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	1'4"	0	0			
2	1'8"	0.25	0.30			
3	2'0"	0.7	0.14			
4	2'4"	0.8	0.11			
5	2'8"	0.8	0.04			
6	3'0"	0.8	0.06			
7	3'4"	0.8	0.03			
8	3'8"	0.8	0.03			
9	4'0"	0.8	0.02			
10	4'4"	0.75	0.11			
11	4'8"	0.5	0.04			
12	5'0"	0.35	0.01			
13	5'4"	0.25	0.00			
14	5'7"	0	0			EDGE WATER
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: MLC-01_20250303

SAMPLE TIME: 13:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group

DATE: 3/10/2025

PERSONNEL OBSERVERS: CR-C & MMS

SAMPLE LOCATION: MLR-01

PROJECT #: 401.2402718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 50's & Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START: 3.71

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 8.64

CONDUCTIVITY: 0.071 mS/cm

TEMPERATURE: 0.32 °C

ORP: -361 mV

DO: 11.51 mg/l

TURBIDITY: 43.4 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID:

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-02

DATE: 3-11-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JO, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUN, 30°F, BREEZE

GAUGE READING START: ~2.65

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

pH: 7.73

CONDUCTIVITY: 0.180 mS/cm

TEMPERATURE: 0.00 °C

ORP: 145 mV

DO: 13.67 mg/l

TURBIDITY: 18 NTU

MONITORING EQUIPMENT: HORIBA U-52

SAMPLE MLR-02_20250311 + MLR-02_20250311_FBLK AT 16:30

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

MLR-02_20250311

16:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

DATE: 2/25/25

PERSONNEL: ER-C & MMS

OBSERVERS:

SAMPLE LOCATION: MLR-03

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 36° Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START: 1.26 ft

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.88

CONDUCTIVITY: 0.241 mS/cm

TEMPERATURE: -0.10 °C

ORP: 299 mV

DO: 2.29 mg/l

TURBIDITY: 23.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: MLR-03_20250225

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 1600

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 9/25/25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: MS ~~[illegible]~~ NTC-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 36°F Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START: —

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.93

CONDUCTIVITY: 0.233 mS/cm

TEMPERATURE: 0.53 °C

ORP: 254 mV

DO: 8.92 mg/l

TURBIDITY: 15.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	1	0				
2	1.5	0.1	-0.01			
3	2	0.15	-0.03			
4	2.5	0.15	0.00			
5	3	0.15	-0.01			
6	3.5	0.2	-0.02			
7	4	0.35	0.21			
8	4.5	0.4	0.23			
9	5	0.5	0.54			
10	5.5	0.45	0.67			
11	6	0.4	0.72			
12	6.5	0.45	0.37			
13	7	0.3	0.30			
14	7.5	0.4	-0.03			
15	8	0.3	-0.02			
16	8.5	edge of water				
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

* sulfur smell (slight)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

Sampled @ 1200

DATE: 3/11/25

SAMPLE LOCATION: PNC-01

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EEL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 27° Cloudy

GAUGE READING START: 1.9 ft

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 8.91

CONDUCTIVITY: 0.041 mS/cm

TEMPERATURE: 0.02 °C

ORP: 293 mV

DO: 12.69 mg/l

TURBIDITY: 51.7 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1.5	0				
2	2	0.4	-0.39			
3	2.5	1.9		0.52	1.49	
4	3	2		0.48	1.38	
5	3.5	1.9		1.11	1.36	
6	4	1.9		1.30	0.84	
7	4.5	1.7		1.48	1.04	
8	5	1.5		1.04	0.73	
9	5.5	edge of water				
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID:

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Sampled @ 1200

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 3/10/25

PERSONNEL: ERC & MMS

OBSERVERS: —

SAMPLE LOCATION: PNC-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 50° F Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START: 2.09 ft

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 9.29

CONDUCTIVITY: 0.129 mS/cm

TEMPERATURE: -0.05 °C

ORP: 289 mV

DO: 9.63 mg/l

TURBIDITY: 230 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s .	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	3ft	0.75	0.00			
2	8ft	1.6		-0.02	0.03	
3	13ft	1.3	-0.02			
4	18ft	0.7	0.01			
5	23ft	1.4	-0.04			
6	28ft	1.4	0.03			
7	33ft	2.25		-0.02	0.01	
8	38ft	2.3		0.39	0.76	
9	43ft	1.4	0.23			
10	48ft	1.7		0.06	0.10	
11	53ft	2.2		0.04	0.11	
12	58ft	0.3	0.00			
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID:

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 3-10-25

PERSONNEL: JD, JBC

OBSERVERS: —

SAMPLE LOCATION: PNC-03

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: P. SUNNY, ~45°F

PHOTO TAKEN? (Y) N

GAUGE READING START: 2.3FT

GAUGE READING END: X

AVERAGE GAUGE HEIGHT: X

MONITORING EQUIPMENT: HORIBA U-52, OTT MF PRO

pH: 7.60

CONDUCTIVITY: 0.173 mS/cm

TEMPERATURE: 0.42 °C

ORP: 143 mV

DO: 12.94 mg/l

TURBIDITY: 8.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	1'	0	0			
2	2'	1.2	0.13			
3	3'	1.9		0.08	0.19	
4	4'	2.0		0.17	0.27	
5	5'	2.2		0.14	0.30	
6	6'	1.0	0.03			ICE BLOCKAGE
7	7'	1.1	0.0			" "
8	8'	2.2 ~~1.2~~		0.21	0.25	
9	9'	2.3		0.40	0.50	
10	10'	2.3		0.41	0.57	
11	11'	2.2		0.69	0.72	
12	12'	2.1		0.99	1.36	
13	13'	2.0		1.05	1.24	
14	14'	2.0		1.02	1.80	
15	15'	1.8		0.23	1.36	
16	16'	2.0		0.23	0.80	
17	17'	2.1		0.62	1.26	
18	18'	2.1		0.90	1.40	
19	19'	2.3		0.90	1.17	
20	20'	~~2.0~~ 1.8		0.47	0.68	
21	21'	0.8	0.08			
22	22'	0	0			WATER EDGE
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-04

DATE: 3-4-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SA, SBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: CLOUDY, 40°F, LIGHT RAIN

GAUGE READING START: X

GAUGE READING END: X

AVERAGE GAUGE HEIGHT: X

MONITORING EQUIPMENT: HORIBA U-52, OTT MF PRO

MULTIPLE LAYERS OF ICE

pH	7.47	ORP	136	mV
CONDUCTIVITY	0.179 mS/cm	DO	13.72	mg/l
TEMPERATURE	0 °C	TURBIDITY	11.6	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	0.5'	0	0			
2	1'	0.5	0.0			
3	2'	1.1	0.28			
4	3'	1.1	0.02			
5	4'	1.1	0.70			
6	5'	1.1	0.73			
7	6'	1.1	0.60			
8	7'	1.1	0.30			
9	8'	1.1	0.01			ICE IN FRONT OF PROBE
10	9'	1.1	0.19			
11	10'	1.0	0.29			
12	11'	1.0	0.71			
13	12'	1.0	0.72			
14	13'	0.9	0.51			
15	14'	0.7	0.00			
16	15'	0.6	0.00			
17	16'	0.2	0.00			
18	16'2"	0	0			EDGE WATER
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: PNC-04_20250304 + PNC-04.20250304_FBLL

SAMPLE TIME: 11:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 3-4-25

PERSONNEL: JD, JBC

OBSERVERS: —

SAMPLE LOCATION: PRC-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: LIGHT SNOW, 30°F

PHOTO TAKEN? (Y) N

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: 0.6

MONITORING EQUIPMENT: HORIBA U-52, OTT MF PRO

pH: 7.54

CONDUCTIVITY: 0.914 mS/cm

TEMPERATURE: 0.28 °C

ORP: 195 mV

DO: 13.14 mg/l

TURBIDITY: 6.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	6"	0	0			
2	1'	0.3	0.40			
3	2'	0.1	0.51			
4	3'	0.2	0.62			
5	4'	0.3	1.33			
6	5'	0.5	0.70			
7	6'	0.5	1.89			
8	7'	0.3	0.36			
9	8'	0.25	0.03			ROCK IN STREAM
10	9'	0.4	0.93			
11	10'	0.4	1.84			
12	11'	0.5	2.22			
13	12'	0.4	0.57			
14	13'	0.4	1.78			
15	14'	0.4	0.42			
16	15'	0.2	0.51			
17	16'	0	0			WATER EDGE
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: PRC-01 20250304

SAMPLE TIME: 17:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

SAMPLE LOCATION: PRC-02 — Sampled @ 0945

DATE: 2/25/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 32°F Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.99		ORP	420	mV
CONDUCTIVITY	0.745	mS/cm	DO	12.63	mg/l
TEMPERATURE	0.13	°c	TURBIDITY	7.6	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	2	0				
2	MS ~~3.6~~ 3.5	0.1	0.1			
3	4	0.15	0.5			
4	MS ~~4.6~~ 4.5	0.4	1.20			
5	5	0.45	1.35			
6	MS ~~5.6~~ 5.5	0.65	1.39			
7	6	0.85	1.28			
8	MS ~~6.6~~ 6.5	0.95	1.45			
9	7	1.0	1.45			✓
10	7.5	0.8	1.36			
11	8	0.6	0.86			
12	8.5	0.1	0.06			
13	10 ft edge of water					
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PTC-01

DATE: 3-6-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUNNY, 30°F

GAUGE READING START: X

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: HORIBA U-52, OTT MF PRO

pH: 7.45

CONDUCTIVITY: 0.224 mS/cm

TEMPERATURE: 0.83 °C

ORP: 114 mV

DO: 12.02 mg/l

TURBIDITY: 7.3 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	1'	0	0			
2	1'6"	0.2	0.05			
3	2'	0.5	0.18			
4	2'6"	0.55	0.005			
5	3'	0.6	0.49			
6	3'6"	0.6	0.59			
7	4'	0.55	0.20			
8	4'6"	0.6	0.18			
9	5'	0.6	0.18			
10	5'6"	0.6	0.35			
11	6'	0.5	0.41			
12	6'6"	0.45	0.42			
13	7'	0.40	0.27			
14	7'6"	0.4	0.11			
15	8'	0.4	0.02			
16	8'3"	0	0			WATER EDGE
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: PTC-01-20250306 & PTC-01_20250306-FBCL

SAMPLE TIME: 10:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

DATE: 2/24/25

PERSONNEL: EEC & MMS

OBSERVERS:

SAMPLE LOCATION: SBD-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 45°F Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.31

CONDUCTIVITY: 0.260 mS/cm

TEMPERATURE: 1.08 °C

ORP: 101 mV

DO: 0.46 mg/l

TURBIDITY: 147 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: SBD-01-20250224

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE MINDS.

DATE: 2/24/25

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: SBW-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny 45°F

PHOTO TAKEN? (Y) N

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.32	ORP	164 mV
CONDUCTIVITY	0.428 mS/cm	DO	7.69 mg/l
TEMPERATURE	0.35 °C	TURBIDITY	40.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: SBW-01_20250224

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL

DATE: ~~EGC & MMS~~ 2/24/25 MS

PERSONNEL: ERC & MMS

OBSERVERS: _____

SAMPLE LOCATION: TBN-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny 45°F

PHOTO TAKEN? (Y) N

GAUGE READING START: _____

GAUGE READING END: _____

AVERAGE GAUGE HEIGHT: _____

MONITORING EQUIPMENT: Horiba U-52

pH: 7.46

CONDUCTIVITY: 0.601 mS/cm

TEMPERATURE: 0.80 °C

ORP: 321 mV

DO: 4.70 mg/l

TURBIDITY: 2.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): _____

TOTAL WIDTH (ft): _____

SAMPLE ID: TBN-01_20250224

SAMPLE TIME: _____

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE LOGIC. — www.MannikSmithGroup.com

SAMPLE LOCATION: TBS-01

DATE: 2/24/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? 0 N

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: ~~20~~ 46°F Sunny

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.46

CONDUCTIVITY: 0.484 mS/cm

TEMPERATURE: 0.61 °C

ORP: 426 mV

DO: 6.02 mg/l

TURBIDITY: 11.1 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: TBS-01_20250225

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

APPENDIX B
PHOTOGRAPH LOG



Photo 1: ARC-01 facing south (3-11-2025)



Photo 2: ARC-02 facing northwest (2-27-2025)



Photo 3: ARC-03 facing south (3-5-2025)



Photo 4: BNC-01 facing northeast (3-11-2025)



Photo 5: BNW-01 facing northwest (2-25-2025)



Photo 6: CBR-01 facing east (2-27-2025)



Photo 7: CBR-02 facing southeast (3-4-2025)



Photo 8: DKC-01 facing east (3-11-2025)



Photo 9: DKC-02 facing west (2-26-2025)



Photo 10: DKC-03 facing south (3-3-2025)



Photo 11: LKS-01 facing north (3-4-2025)



Photo 12: LKS-02 facing north (3-3-2025)



Photo 13: MLC-01 facing east (3-3-2025)



Photo 14: MLR-01 facing north (3-10-2025)



Photo 15: MLR-02 facing west (3-11-2025)



Photo 16: MLR-03 facing northwest (2-25-2025)



Photo 17: NTC-01 facing southwest (2-25-2025)



Photo 18: PNC-01 facing northwest (3-11-2025)



Photo 19: PNC-02 facing east (3-10-2025)



Photo 20: PNC-03 facing northeast (3-10-2025)



Photo 21: PNC-04 facing north (3-4-2025)



Photo 22: PRC-01 facing southeast (3-4-2025)



Photo 23: PRC-02 facing southeast (2-25-2025)



Photo 24: PTC-01 facing south (3-6-2025)



Photo 25: SBD-01 facing southwest (2-24-2025)



Photo 26: SBW-01 facing southwest (2-24-2025)



Photo 27: TBN-01 facing southwest (2-24-2025)



Photo 28: TBS-01 facing northwest (2-24-2025)

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

April & May 2025

Part 1 of 2

June 9, 2025

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Baseline Sampling Field Results for April/May 2025

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in April and May, 2025 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's February 4, 2025 *Proposal for Groundwater and Surface Water Sampling*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). **Figure 1**, *Groundwater Monitoring Locations* and **Figure 2**, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between April 28th and May 8th, 2025, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (**Figure 1**) using low-flow sampling procedures with a peristaltic, bladder, or down-hole centrifugal pump depending on the depth to groundwater and location. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells and prior experience at certain locations. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in ***Table 1****, Groundwater Field Parameter Summary*. Copies of the field sheets are provided in ***Appendix A****, Field Sheets*.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtering for dissolved low level and dissolved methyl mercury samples was conducted at a controlled location within WPC's White Pine office using FlipMate™ 50 Filtration System

0.45 um filters. A field blank for low level mercury (FB-02_20250507_FBLL) was also collected at the filtering location. The filters were manufacturer certified for background metals to be less than 0.0005 micrograms per liter (ug/L) mercury.

Trace Analytical Laboratories, Inc. (Trace) previously provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was re-used between sampling events for sample collection. The teflon tubing used during sample collection was retained for reuse during subsequent sampling events and is was stored at MSG's Houghton, Michigan office between sampling events. Existing poly tubing encountered in many of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection.

MSG collected a total of 28 groundwater samples, plus one complete field blank, duplicate from MW-2A (DUP-01-GW_20250505), and a matrix spike/matrix spike duplicate (MS/MSD) from MW-5A. During this sampling event, MW-2SB was once again gauged but not sampled.

SURFACE WATER GAUGING AND SAMPLING

Between April 28th and May 8th, 2025, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (**Figure 2**) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure (SOP) 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein.

An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements at most of the stream locations. Locations ARC-02 and PRC-02 were sampled but deemed unsafe for wading to collect depth and velocity readings due to the high water levels and/or fast current. Copies of the stream gauging field sheets and stream flow calculation sheets are included in **Appendix A**. Calculated stream flows are summarized in ***Table 2****, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in **Table 2**. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw directly from the surface water body, or from a spare unpreserved bottle filled from the surface water body, and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were processed at WPC's White Pine office using FlipMate™ 50 Filtration System 0.45 um filters as described above.

MSG collected a total of 28 surface water samples. A duplicate sample from NTC-01 (DUP-01-SW_20250430), a MS/MSD from DKC-03, and a field blank were also collected. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. Photographs of the stream gauging and sampling locations are provided in ***Appendix B****, Photograph Log.*

RECOMMENDATIONS

MSG recommends considering alternative sampling locations for ARC-02 and PNC-02. These sampling conditions have significantly changed since the first sampling event in the summer of 2024 due to beaver activity damming the streams. The stream blockages have resulted in the water depths increasing (flooding the valleys) and water flow to become nearly stagnant. MSG proposes moving the sampling and gauging locations downstream of the dams for a

better representation of stream conditions and for safer wading to collect gauging data. Photos of current conditions are provided in ***Appendix B****, Photograph Log.*

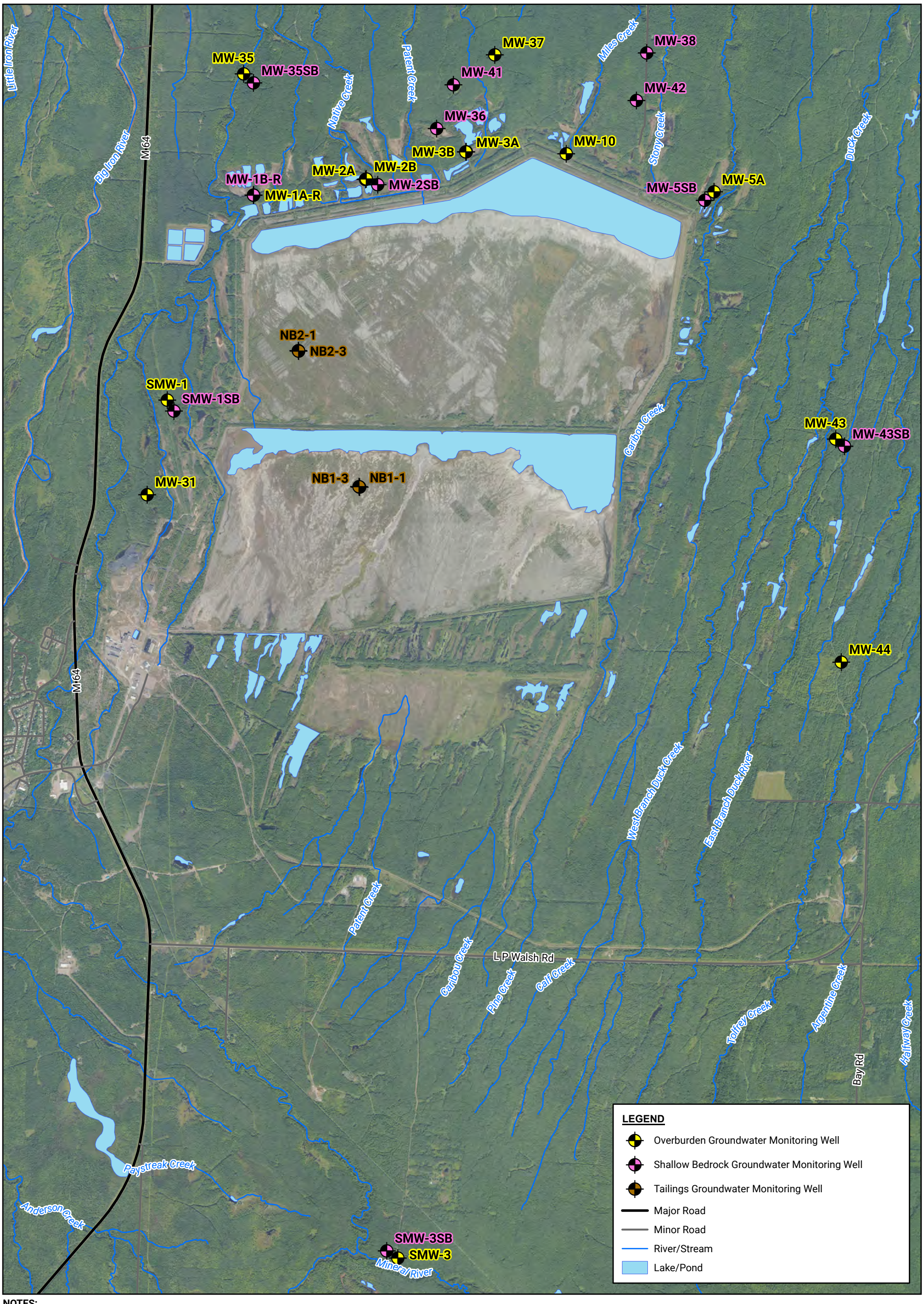
MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,



Jed Chrestensen, P.E.
Project Manager

FIGURES



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 1,500 3,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 1

GROUNDWATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 24W005	

Q:\White Pine Copper\23W200\GIS\aprx\Quarterly Sampling RFP\GW and SW Quarterly Sampling RFP.aprx 5/23/2024 10:48 AM

Lake Superior
LKS-01
LKS-02
PTC-01
NTC-01
MLC-01
PNC-04
DKC-03
CBR-02
M 64
MLR-03
PRC-02
Native Creek
Patent Creek
Miles Creek
Stony Creek
Duck Creek
ARC-03
BNC-01
Little Iron River
Mineral River
Perch Creek
Ash Creek
PNC-03
DKC-02
PRC-01
BNW-01
TBN-01
Townline Rd
L P Walsh Rd
Floodwood River
MLR-02
Big Iron River
M 64
TBS-01
Caribou Creek
ARC-02
PNC-02
Little Cranberry River
SBD-01
SBW-01
West Branch Duck Creek
East Branch Duck River
Argentine Creek
Halfway Creek
Town Line Creek
Cranberry River
Potato Farm Rd
ARC-01
PNC-01
L P Walsh Rd
DKC-01
CBR-01
MLR-01
Patent Creek
Caribou Creek
Pine Creek
Calf Creek
Tolfrey Creek
Paystreak Creek
Federal Forest Road 630
Cranberry River
Old M 64
Anderson Creek
Mineral River
Sleepy Creek
Sandhill Creek
Bush Creek

LEGEND

- Water Quality Sampling Location
- Water Quality and Flow Monitoring Station
- Water Quality and Continuous Flow Monitoring Station
- Major Road
- Minor Road
- River/Stream
- Lake/Pond

NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 2,500 5,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:	
Drawn By: BJW1	Checked By: JMW3	Project: 23W200

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TABLES

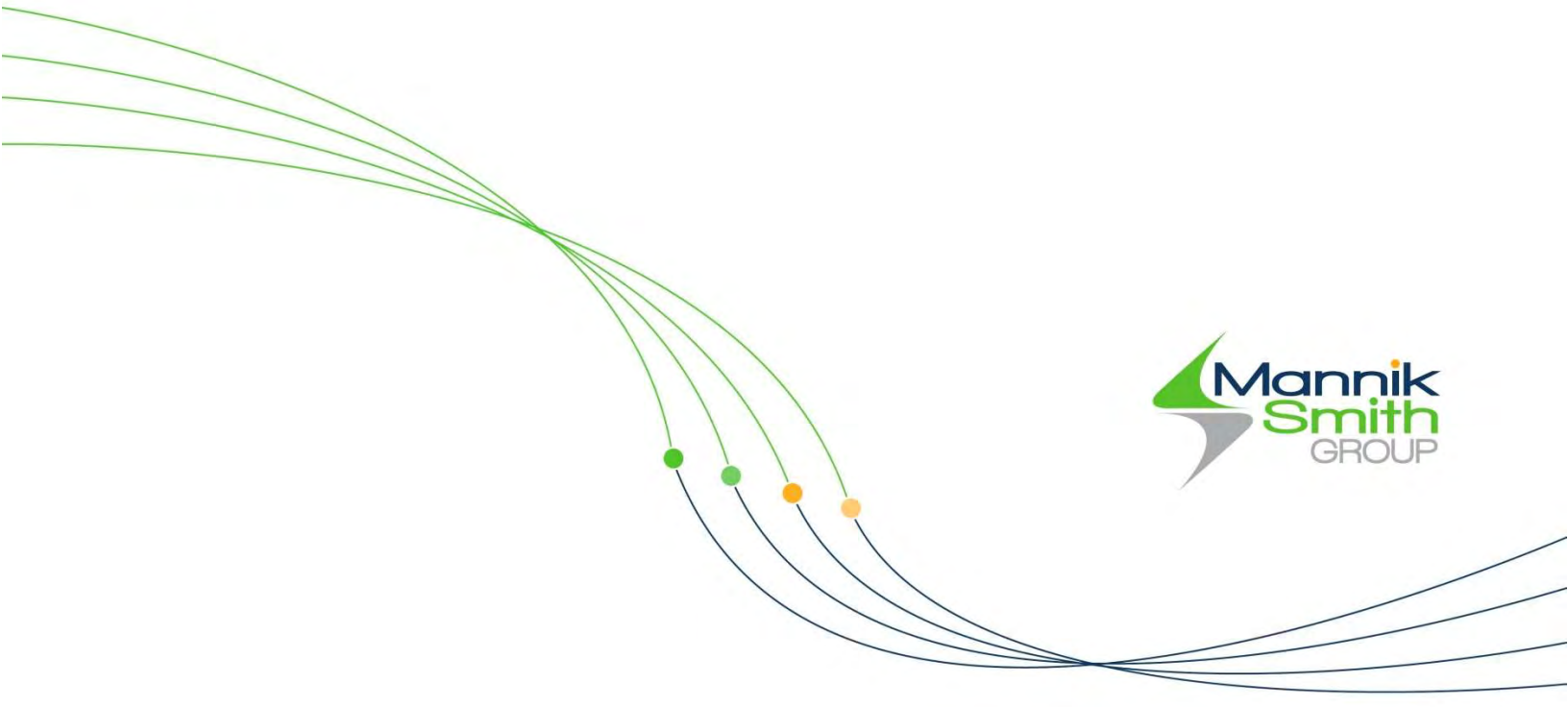


TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-1AR	7/31/2024	9.51	16.98	8.05	136	0.659	1.7	0.42	100
	9/30/2024	10.92	12.99	7.24	157	0.729	6.3	0.00	200
	12/5/2024	11.73	8.07	8.26	175	0.706	8.6	12.19	200
	2/24/2025	10.97	7.61	7.91	136	0.777	29.1	4.87	200
	5/6/2025	9.97	10.06	7.76	176	0.685	31.1	3.27	200
MW-1BR	7/31/2024	9.56	20.90	7.85	-124	0.707	23.7	0.00	100
	9/30/2024	10.78	12.94	7.71	-57	0.859	3.9	0.00	200
	12/5/2024	11.94	6.20	8.06	32	0.796	0.0	11.78	200
	2/24/2025	11.11	8.01	7.77	94	0.888	1.5	0.92	200
	5/6/2025	10.56	11.31	7.89	149	0.704	20.9	8.95	200
MW-2A	8/1/2024	10.59	14.18	7.30	-189	1.230	72.8	0.24	200
	10/1/2024	10.75	13.15	7.42	-162	1.350	0.0	0.00	200
	12/10/2024	6.24	6.88	7.76	-68	1.36	9.5	0.00	200
	2/25/2025	5.81	6.56	7.27	66	1.44	5.7	0.83	200
	5/5/2025	5.62	16.72	6.76	-78	1.14	1.0	0.81	100
MW-2B	8/1/2024	11.21	15.70	7.15	-3	0.937	6.8	0.33	200
	10/1/2024	10.73	15.34	7.24	22	1.170	16.2	4.39	200
	12/10/2024	6.40	8.59	7.86	118	1.09	9.3	0.66	200
	2/25/2025	6.32	6.27	7.25	131	1.09	11.8	1.87	200
	5/5/2025	6.08	15.99	6.90	103	0.82	4.0	0.50	200
MW-2SB	12/17/2024	85.72	--	--	--	--	--	--	--
	2/25/2025	84.18	--	--	--	--	--	--	--
	5/5/2025	83.89	--	--	--	--	--	--	--
MW-3A	7/30/2024	10.94	21.99	7.13	-46	1.580	103	0.20	200
	10/1/2024	12.69	15.82	7.14	-87	2.080	19.2	0.00	200
	12/10/2024	8.54	8.01	7.65	-42	2.49	1.8	0.00	200
	2/26/2025	5.58	6.68	7.14	-58	2.51	3.1	1.16	200
	4/28/2025	5.12	10.21	7.05	4	2.36	14.8	0.67	200
MW-3B	7/30/2024	10.74	13.46	7.19	-216	0.903	0.0	0.19	200
	10/1/2024	12.18	15.83	7.20	-60	1.580	0.0	0.55	200
	12/10/2024	7.99	5.43	8.00	102	0.969	0.0	5.68	200
	2/26/2025	5.03	5.87	7.30	162	1.02	2.9	3.01	200
	5/5/2025	4.64	9.20	7.28	176	0.818	3.0	0.69	200
MW-5A	7/30/2024	11.84	18.60	7.36	72	1.340	0.0	1.66	200
	10/2/2024	9.19	14.38	7.21	46	1.650	1.9	0.00	200
	12/9/2024	3.55	10.57	7.98	27	1.48	0.0	10.45	200
	2/26/2025	3.39	5.11	7.29	168	1.66	4.3	2.86	200
	5/7/2025	3.84	9.52	7.30	200	1.36	6.1	0.38	200
MW-5SB	9/30/2024	0.05	23.30	8.55	-35	2.060	190.0	2.10	200
	12/9/2024	0.00	8.27	9.33	-87	1.27	9.0	0.00	200
	3/10/2025	0.00	12.24	8.96	-106	1.42	96	0.86	200
	5/7/2025	0.00	10.51	8.73	-82	2.14	128	7.57	200
MW-10	8/6/2024	5.82	14.77	6.10	-24	2.330	0.4	0.00	150
	9/30/2024	5.81	18.64	6.43	-54	2.490	3.6	0.00	200
	12/3/2024	4.90	7.71	7.02	-78	2.59	7.9	0.00	200
	2/25/2025	4.76	7.57	6.62	-35	2.63	7.1	0.82	200
	5/7/2025	4.45	11.17	6.71	-93	2.32	38.4	0.52	200
MW-31	7/30/2024	50.71	12.47	8.10	51	0.359	>1000	0.00	200
	10/7/2024	49.50	10.26	8.97	-30	0.397	278	0.50	200
	12/9/2024	48.67	6.10	8.10	37	0.347	>1000	1.23	200
	3/11/2025	51.37	4.30	8.36	83	0.450	102	2.89	200
	4/29/2025	50.12	7.00	8.31	206	0.384	>1000	6.99	200
MW-35	7/28/2024	16.63	--	--	--	--	--	--	--
	9/30/2024	19.78	9.46	9.40	152	0.612	28.3	3.19	100
	12/3/2024	20.13	5.41	8.09	154	0.462	180	9.96	100
	3/10/2025	17.25	7.85	10.19	321	0.413	163	5.66	100
	4/30/2025	16.14	19.46	7.45	77	0.341	123	0.72	100
MW-35SB	12/17/2024	26.59	5.58	8.84	168	0.554	>1000	9.58	100
	3/10/2025	21.09	7.65	8.67	-215	0.617	>1000	0.89	500
	5/7/2025	18.18	9.53	7.63	143	0.503	>1000	7.82	200
MW-36	7/28/2024	6.83	19.53	7.17	-207	0.668	261	0.58	200
	9/30/2024	5.94	20.43	8.10	-155	0.667	49.9	0.68	200
	12/3/2024	2.93	6.78	8.11	126	0.587	12.5	0.25	200
	3/4/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.15	17.67	7.00	-105	0.592	4.8	0.23	200
MW-37	7/28/2024	14.11	24.22	7.34	-69	0.438	89.8	0.85	200
	10/2/2024	16.81	11.55	8.03	-11	0.534	24.7	1.83	200
	12/3/2024	16.94	8.88	8.53	145	0.413	13.6	10.54	200
	3/4/2025	11.62	3.58	11.59	356	0.473	27.0	9.81	200
	5/1/2025	8.78	10.50	7.31	179	0.402	3.4	5.42	200
MW-38	7/28/2024	12.31	11.70	7.66	115	0.525	0.0	0.94	200
	10/7/2024	15.95	10.22	7.32	142	0.570	3.9	0.00	200
	12/3/2024	16.11	7.01	8.65	192	0.597	4.3	2.47	200
	3/4/2025	9.97	6.40	8.65	269	0.614	15.1	4.03	200
	5/7/2025	6.42	8.80	7.69	147	0.446	4.9	4.81	200
MW-41	7/24/2024	7.90	14.99	7.40	164	0.539	78.1	9.10	200
	9/30/2024	28.33	14.70	8.43	172	0.610	172	5.89	100
	12/3/2024	28.64	--	--	--	--	--	--	--
	3/4/2025	25.94	2.33	10.42	329	0.582	35.8	8.51	100
	5/1/2025	24.38	13.87	7.84	110	0.406	92.2	7.00	100

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-42	7/28/2024	5.62	16.37	8.50	51	0.354	0.0	3.45	200
	10/7/2024	8.42	12.70	8.71	106	0.316	35.8	0.56	200
	12/3/2024	6.95	5.74	8.91	174	0.315	11.9	2.16	200
	3/4/2025	3.94	5.66	9.76	255	0.332	148	4.91	200
	5/7/2025	3.59	11.70	9.11	113	0.276	18.7	3.20	200
MW-43	7/31/2024	13.61	18.32	8.02	-33	0.419	274	0.40	200
	9/25/2024	17.31	11.93	7.98	167	0.501	17.7	0.00	200
	12/4/2024	15.54	7.43	8.21	134	0.452	38.1	0.00	200
	2/26/2025	10.47	6.69	8.87	323	0.511	50.3	0.00	200
	5/6/2025	8.78	11.00	7.96	112	0.447	61.0	0.76	200
MW-43SB	10/1/2024	3.65	12.23	8.51	17	4.520	1.7	1.51	150
	12/16/2024	Frozen	--	--	--	--	--	--	--
	2/27/2025	8.38	6.53	7.24	73	4.74	33.5	1.26	200
	5/6/2025	17.74	15.02	7.18	60	4.17	14.3	5.8	200
MW-44	7/31/2024	15.10	13.58	7.69	-194	0.614	50.6	0.06	200
	9/25/2024	17.89	13.72	8.38	-141	0.809	89.4	0.00	200
	12/4/2024	17.21	8.74	8.33	-61	0.633	15.0	0.00	200
	2/26/2025	14.63	6.00	8.76	285	0.800	18.4	0.00	200
	5/6/2025	13.44	13.06	8.20	140	0.690	48.1	1.74	200
NB1-1	7/24/2024	5.61	13.20	6.86	-128	1.290	0.0	0.16	200
	10/2/2024	5.78	16.04	7.74	-228	1.080	29.0	0.00	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.59	6.01	8.08	-85	1.19	25.1	0.00	200
	5/5/2025	2.70	13.64	8.23	-262	1.05	18.1	0.37	200
NB1-3	7/24/2024	6.21	13.64	7.89	-273	1.000	54.2	0.31	200
	10/2/2024	6.47	14.05	7.82	-175	1.000	22.3	0.37	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.93	7.07	7.97	86	1.03	46.3	0.00	200
	5/5/2025	2.94	16.79	7.50	-125	0.846	17.6	0.22	200
NB2-1	7/24/2024	6.45	17.91	6.93	-166	2.260	62.4	0.32	200
	9/30/2024	6.21	25.97	7.21	-124	2.020	0.0	0.10	100
	12/2/2024	2.66	7.19	8.10	-177	1.10	13.7	0.00	200
	3/3/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.56	10.23	7.41	-255	0.974	4.9	0.49	200
NB2-3	7/24/2024	6.25	13.99	6.54	-42	1.110	0.0	0.00	200
	9/30/2024	5.80	26.73	7.88	-189	0.889	0.0	0.01	200
	12/2/2024	2.96	8.18	8.40	-78	1.03	14.9	13.01	200
	3/3/2025	2.57	7.87	8.45	14	1.12	20.3	0.00	200
	4/30/2025	2.69	13.72	7.54	-119	1.03	9.1	1.20	200
SMW-1	7/25/2024	23.52	9.22	8.21	-84	0.403	73.0	14.06	200
	10/2/2024	23.90	10.08	8.12	-106	0.463	212.0	0.00	200
	12/9/2024	24.79	8.17	8.32	107	0.337	71.9	0.00	200
	3/3/2025	24.25	8.32	8.85	82	0.388	119	1.94	200
	4/29/2025	23.70	6.64	8.20	178	0.371	794	9.18	200
SMW-1SB	12/9/2024	25.15	5.58	8.99	134	0.362	73.2	15.83	200
	3/3/2025	25.35	9.08	9.60	158	0.399	108	7.95	200
	4/30/2025	21.37	8.01	8.39	37	0.195	16.9	8.59	200
SMW-3	8/6/2024	27.68	10.84	8.14	88	0.262	11.1	5.41	200
	10/2/2024	27.66	12.52	8.58	-125	0.249	14.7	0.00	200
	12/4/2024	27.18	7.36	8.39	-60	0.272	8.7	10.74	200
	3/6/2025	26.85	8.65	8.38	69	0.265	21.6	0.00	200
	5/8/2025	27.02	14.14	8.19	-64	0.212	5.8	4.13	100
SMW-3SB	12/4/2024	22.98	--	--	--	--	--	--	--
	3/6/2025	22.69	7.27	9.05	255	0.556	36.9	0.00	200
	5/8/2025	22.84	9.77	9.27	54	0.510	13.9	1.14	200

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
ARC-01	7/31/2024	6.89	0.129	20.68	122	2.80	8.0	0.008	1.42	--
	9/25/2024	6.79	0.223	11.67	194	2.61	2.4	0.017	4.66	0.84
	12/5/2024	8.22	0.098	1.26	178	11.75	0.0	0.058	3.5	1.00
	3/11/2025	9.26	0.116	0.38	237	10.30	4.4	4.11	19.75	2.98
	4/28/2025	7.09	0.070	10.57	227	10.28	5.6	0.496	6.10	1.20
ARC-02	7/31/2024	7.72	0.153	19.32	120	1.93	25.8	0.125	11.5	--
	9/25/2024	7.40	0.129	14.76	159	5.05	12.6	0.229	20	--
	12/4/2024	8.52	0.158	0.32	158	6.56	733	0.427	34	--
	2/27/2005	8.77	0.064	1.19	280	7.56	40.8	2.31	61	--
	5/6/2025	6.53	0.080	15.00	209	5.29	26.7	Unsafe Conditions		--
ARC-03	8/6/2024	--	--	--	--	--	--	Dry		--
	9/26/2024	8.04	0.255	11.59	91	7.98	28.3	0.030	8.00	0.62
	12/11/2024	8.15	0.093	0.07	199	16.25	32.6	2.162	14.17	1.50
	3/6/2025	7.55	0.082	1.87	150	10.42	11.7	14.18	13	2.78
	4/28/2025	7.06	0.066	11.19	282	10.65	7.5	3.24	10.7	Bent
BNC-01	8/6/2024	7.39	0.179	22.83	115	8.21	0.0	No Stream Gauging		--
	10/8/2024	8.79	0.158	14.53	45	6.90	0.0	No Stream Gauging		--
	12/11/2024	8.12	0.143	0.00	161	4.2	700	No Stream Gauging		--
	3/11/2025	7.14	0.143	1.56	-5	4.04	0.0	No Stream Gauging		--
	5/6/2025	7.09	0.120	21.95	124	7.41	5.1	No Stream Gauging		--
BNW-01	7/31/2024	7.12	0.184	28.77	111	7.80	2.1	No Stream Gauging		--
	10/8/2024	8.15	0.223	13.65	41	8.37	211	No Stream Gauging		--
	12/11/2024	8.42	0.152	1.49	211	15.75	25.6	No Stream Gauging		--
	2/25/2025	7.49	0.219	2.53	156	9.11	0.0	No Stream Gauging		--
	5/5/2025	7.88	0.218	18.32	156	9.81	11.9	No Stream Gauging		--
CBR-01	7/29/2024	8.16	0.242	24.54	177	8.90	0.0	No Stream Gauging		--
	9/25/2024	7.77	0.295	12.08	175	6.96	1.2	No Stream Gauging		--
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	2/27/2025	8.74	0.092	0.07	348	11.27	32.8	No Stream Gauging		--
	5/6/2025	6.86	0.068	16.47	200	8.75	13.6	No Stream Gauging		--
CBR-02	8/6/2024	7.97	0.246	26.38	92	6.70	0.0	No Stream Gauging		--
	10/3/2024	8.10	0.261	13.84	106	7.32	12.2	No Stream Gauging		3.55
	12/17/2024	8.30	0.118	0.75	229	10.09	39.2	No Stream Gauging		3.20
	3/4/2025	7.42	0.119	1.04	130	11.02	43.9	No Stream Gauging		3.7
	5/6/2025	7.38	0.074	12.26	68	11.60	4.2	No Stream Gauging		Bent
DKC-01	7/29/2024	--	--	--	--	--	--	Dry		--
	9/23/2024	--	--	--	--	--	--	Dry		--
	12/5/2024	7.83	0.159	0.59	250	14.81	0.0	0.131	6.75	--
	3/11/2025	7.99	0.160	-0.02	325	12.12	0.9	9.99	12	--
	4/28/2025	7.25	0.060	8.22	208	12.06	37.5	6.03	8.8	--
DKC-02	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	7.65	0.152	18.34	168	9.39	2.5	0.081	16.00	--
	12/17/2024	7.30	0.081	0.06	189	16.12	24.7	11.557	22.5	--
	2/26/2025	8.26	0.075	0.03	298	11.02	16.5	7.04	24.8	--
	5/7/2025	6.63	0.065	11.43	191	10.88	10.2	3.74	21.5	--
DKC-03	8/6/2024	7.52	0.213	25.28	151	5.21	0.0	No Stream Gauging		--
	9/26/2024	7.83	0.163	14.36	151	6.67	8.7	No Stream Gauging		--
	12/16/2024	7.50	0.087	1.63	237	13.76	47.7	No Stream Gauging		--
	3/3/2025	7.46	0.077	1.31	136	12.06	6.5	No Stream Gauging		--
	4/29/2025	7.31	0.050	8.40	271	11.11	34.5	No Stream Gauging		--
LKS-01	7/28/2024	8.34	0.116	20.87	191	11.12	0.1	No Stream Gauging		--
	10/7/2024	8.91	0.111	13.68	112	9.56	12.4	No Stream Gauging		--
	12/16/2024	7.56	0.212	0.30	236	13.74	37.8	No Stream Gauging		--
	3/4/2025	7.17	0.389	1.22	193	54.3	10.6	No Stream Gauging		--
	4/30/2025	6.88	0.085	10.95	167	11.30	13.2	No Stream Gauging		--
LKS-02	7/28/2024	7.69	0.112	21.91	172	11.11	0.0	No Stream Gauging		--
	10/7/2024	9.23	0.108	13.49	42	10.06	1.2	No Stream Gauging		--
	12/16/2024	8.11	0.115	0.70	62	10.79	17.6	No Stream Gauging		--
	3/3/2025	7.50	0.171	0.93	91	11.58	3.1	No Stream Gauging		--
	5/1/2025	6.64	0.054	6.67	170	11.53	13.5	No Stream Gauging		--

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

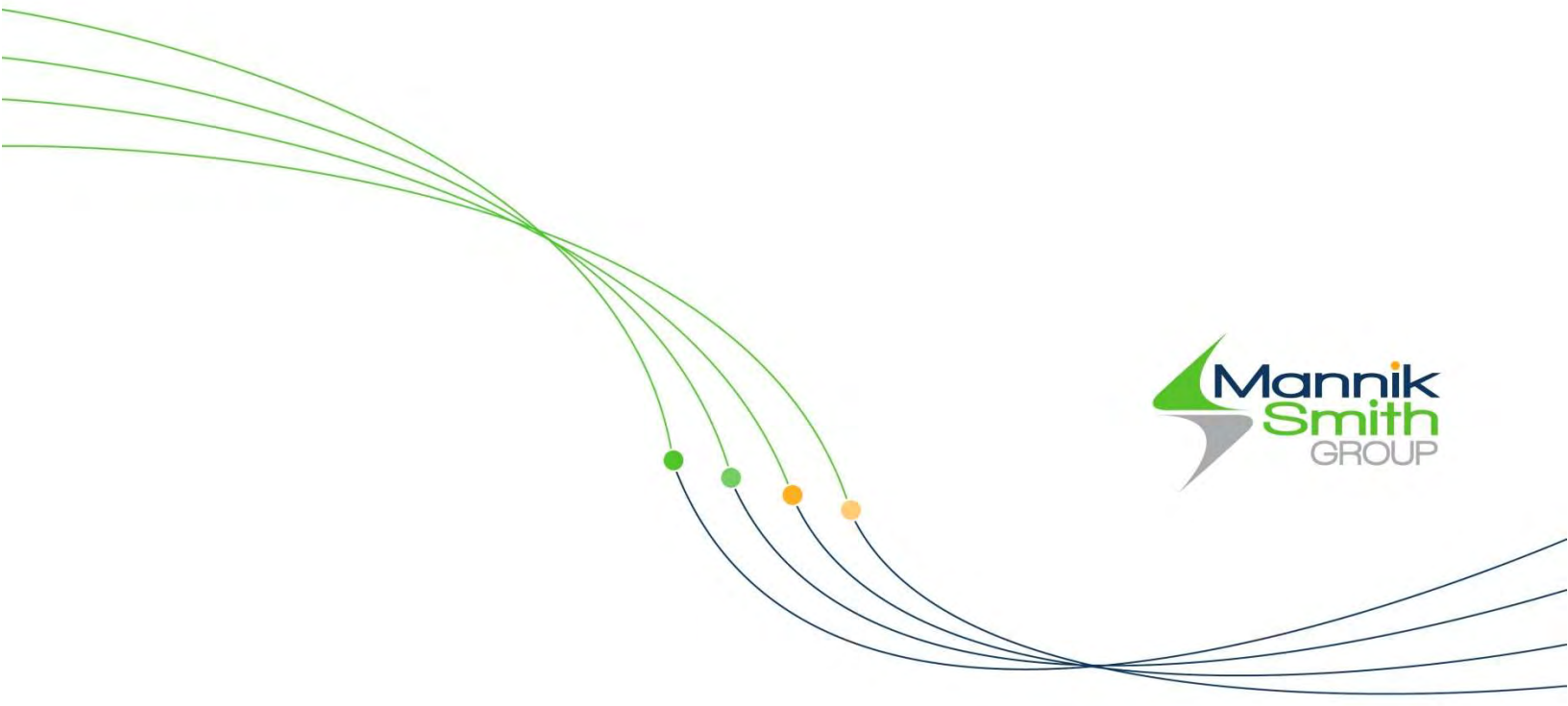
SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
MLC-01	8/6/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/2/2024	12.12	0.275	3.76	-43	14.59	16.3	0.027	2.5	--
	3/3/2025	7.27	0.218	0.49	173	12.23	9.8	0.17	4.25	--
	4/29/2025	7.23	0.133	8.04	261	10.87	19.5	0.77	4	--
MLR-01	7/25/2024	7.72	0.148	15.35	150	7.52	0.1	0.311	16.33	--
	9/23/2024	7.95	0.177	16.42	141	9.50	7.7	No Stream Gauging		1.29
	12/16/2024	7.58	0.088	0.36	199	15.08	32.2	No Stream Gauging		2.05
	3/10/2025	8.64	0.071	0.32	361	11.51	43.4	No Stream Gauging		3.71
	4/28/2025	6.81	0.050	8.35	223	12.17	22.4	No Stream Gauging		2.10
MLR-02	7/25/2024	7.41	0.247	19.59	114	7.46	7.4	0.489	28.17	--
	9/24/2024	8.15	0.265	15.97	116	13.09	1.5	0.086	21.00	0.08
	12/16/2024	7.82	0.140	0.31	234	14.4	57.1	2.504	37.5	1.15
	3/11/2025	7.73	0.180	0.00	145	13.67	18	No Stream Gauging		2.65
	5/5/2025	7.11	0.092	10.50	202	10.38	33.6	15.76	35.5	Bent
MLR-03	7/25/2024	7.79	0.245	15.87	186	9.27	0.0	0.468	28.17	--
	9/23/2024	8.64	0.283	14.30	31	10.02	1.6	No Stream Gauging		0.71
	12/2/2024	9.17	0.168	0.05	192	21.09	17.5	No Stream Gauging		1.30
	2/25/2025	7.88	0.241	-0.10	299	2.29	23.6	No Stream Gauging		1.26
	4/30/2025	7.13	0.067	9.20	164	11.09	15.8	No Stream Gauging		Bent
NTC-01	7/22/2024	7.85	0.208	17.79	39	9.55	34.7	0.074	4.83	--
	9/23/2024	7.56	0.225	15.34	-19	2.17	171	0.021	4.00	--
	12/2/2024	9.87	0.252	1.76	56	14.1	12.7	0.016	5.33	--
	2/25/2025	7.93	0.233	0.53	254	8.92	15.6	0.63	7.5	--
	4/30/2025	6.65	0.105	14.11	175	2.20	2.2	0.58	7	--
PNC-01	7/29/2024	6.53	0.119	21.62	171	2.13	1.2	0.008	2.17	--
	9/23/2024	7.33	0.285	16.70	175	1.51	21.6	0.015	2.25	0.83
	12/5/2024	7.22	0.085	0.93	131	10.99	55.1	0.015	1.33	1.00
	3/11/2025	8.91	0.041	0.02	293	12.69	51.7	5.73	4	1.9
	4/28/2025	6.83	0.047	9.87	198	10.13	9.2	0.91	3.2	1.32
PNC-02	7/29/2024	7.29	0.293	27.19	72	4.63	41.0	0.068	10.84	--
	9/24/2024	7.73	0.343	17.27	136	12.59	7.9	0.213	53.30	1.22
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	3/10/2025	9.29	0.129	-0.05	289	9.63	230	7.12	55	2.09
	5/5/2025	6.95	135	17.87	0.1	7.76	670	1.77	56	1.90
PNC-03	8/1/2024	7.79	0.453	20.11	105	4.62	0.0	0.023	4.00	--
	9/24/2024	7.84	0.395	15.97	138	10.22	6.4	0.053	6.33	0.43
	12/9/2024	8.92	0.274	1.72	168	10.26	10.0	3.440	18.92	1.31
	3/10/2025	7.60	0.173	0.42	143	12.94	8.0	17.77	21	2.3
	5/7/2025	7.86	0.124	12.94	170	9.16	26.4	3.37	20.5	1.22
PNC-04	8/7/2024	7.35	0.481	17.08	157	9.73	0.0	0.011	5.34	--
	9/26/2024	7.82	0.412	13.69	138	7.89	2.6	0.082	7.00	0.58
	12/17/2024	8.27	0.241	0.06	276	15.12	19.9	10.975	15.5	1.70
	3/4/2025	7.47	0.179	0.00	136	13.72	11.6	3.33	15.67	--
	5/1/2025	6.85	0.099	9.79	204	11.09	5.6	7.99	21.75	Bent
PRC-01	7/22/2024	8.22	0.972	24.40	110	9.33	47.9	1.011	6.17	--
	9/24/2024	7.37	0.481	18.86	114	7.68	3.3	0.072	7.0	0.20
	12/11/2024	8.11	0.938	0.56	192	13.84	21.1	11.443	16.0	0.75
	3/4/2025	7.54	0.914	0.28	195	13.14	6.8	5.50	15.5	--
	5/7/2025	8.00	0.429	16.32	112	9.34	20.5	16.63	16.0	0.75
PRC-02	7/22/2024	8.05	0.984	19.87	132	11.13	10.6	0.805	5.17	--
	9/23/2024	7.91	1.030	13.89	112	7.33	0.3	0.050	5.00	--
	12/2/2024	8.95	0.821	0.13	-109	19.4	25.6	5.142	6.66	--
	2/25/2025	7.99	0.745	0.13	420	12.63	7.6	1.93	8	--
	4/30/2025	6.83	0.381	11.35	162	10.72	14.0	Unsafe Conditions		--

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
PTC-01	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/11/2024	8.03	0.215	-0.07	231	14.47	2.7	0.271	9.0	--
	3/6/2025	7.45	0.224	0.83	114	12.02	7.3	0.92	7.25	--
	4/29/2025	7.44	0.12	7.86	258	4.88	4.7	0.58	6.59	--
SBD-01	7/29/2024	7.65	0.224	28.82	123	5.98	89.5	No Stream Gauging		--
	9/24/2024	7.71	0.246	16.34	33	3.86	132.0	No Stream Gauging		--
	12/10/2024	7.67	0.235	3.89	199	6.18	57.7	No Stream Gauging		--
	2/24/2025	7.31	0.260	1.08	101	0.46	147	No Stream Gauging		--
	4/29/2025	7.28	0.109	10.45	219	6.35	9.5	No Stream Gauging		--
SBW-01	7/29/2024	8.17	0.152	26.48	138	5.96	0.0	No Stream Gauging		--
	9/24/2024	7.92	0.191	13.78	121	7.36	10.3	No Stream Gauging		--
	12/10/2024	7.55	0.181	0.46	206	6.64	63.0	No Stream Gauging		--
	2/24/2025	7.32	0.428	0.35	164	7.69	40.5	No Stream Gauging		--
	4/29/2025	7.45	0.21	8.90	298	5.84	5.4	No Stream Gauging		--
TBN-01	7/31/2024	7.13	0.866	25.82	108	8.52	4.4	No Stream Gauging		--
	10/7/2024	7.85	1.030	13.31	143	10.92	29.9	No Stream Gauging		--
	12/11/2024	8.02	0.618	0.19	198	13.83	52.1	No Stream Gauging		--
	2/24/2025	7.46	0.601	0.80	321	4.70	2.8	No Stream Gauging		--
	5/1/2025	8.25	0.376	11.62	165	11.57	47.2	No Stream Gauging		--
TBS-01	7/28/2024	7.55	0.754	28.43	120	10.25	0.0	No Stream Gauging		--
	10/8/2024	8.47	1.040	8.60	116	12.87	7.8	No Stream Gauging		--
	12/11/2024	8.30	0.396	4.94	178	11.19	170	No Stream Gauging		--
	2/24/2025	7.46	0.484	0.61	426	6.02	11.1	No Stream Gauging		--
	5/1/2025	8.05	0.601	12.44	164	11.35	14.8	No Stream Gauging		--

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

APPENDIX A
FIELD SHEETS



LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 5/6/25

PERSONNEL: EHC & MMS

OBSERVERS:

SAMPLE LOCATION: MW-1A-R

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 77°F Sunny

DEPTH OF WELL: 24 ft

SCREEN LENGTH:

TUBING TYPE: Polyteflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 9.97 ft

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 17:03

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1706	11.14	12.86	8.00	157	0.698	61.7	4.91	0.25	200	
1709	12.21	11.23	7.93	163	0.704	55.0	3.86	0.50		
1712	12.92	10.66	7.85	169	0.692	37.5	3.44	0.75		
1715	14.01	10.34	7.78	173	0.688	32.4	3.35	1.00		
1718	14.45	10.10	7.76	176	0.685	31.3	3.29	1.25	↓	
1721	14.83	10.06	7.76	176	0.685	31.1	3.27	1.50		

SAMPLE ID: MW-1A-R_20250506 & MW-1A-R_20250506-FBLL

SAMPLE DATE: 5/6/25

SAMPLE TIME: 1730

Notes: No lid or steel cover on well upon arrival. Open to elements.

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1B-R

DATE: 5/6/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 77°F Sunny

DEPTH OF WELL: 32.30

DEPTH TO WATER LEVEL: 10.56

PURGE START TIME: 1725

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polytetfon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1728	10.77	10.95	7.98	161	0.704	12.8	12.00	0.25	200	
1731	10.91	11.29	7.94	158	0.706	17.9	10.35	0.50	↓	
1734	10.99	11.44	7.91	155	0.704	19.1	9.60	0.75	↓	
1737	11.08	11.31	7.89	149	0.704	20.9	8.95	1.00	↓	

SAMPLE ID: MW-1B-R_20250506 & MW-1B-R_20250506_FBLL

SAMPLE DATE: 5/6/25

SAMPLE TIME: 1800

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 5-5-25

PERSONNEL: JC

OBSERVERS: —

SAMPLE LOCATION: MW-2A

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUN, LT BREEZE, ~65°F

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: _____

MONITORING EQUIPMENT: U.S. FLOW HORIBA

DEPTH TO WATER LEVEL: 5.62 FT

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 11:55

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
12:10	6.45	20.06	6.60	-51	1.10	2.6	6.01		~100	
12:15	6.75	17.51	6.76	-67	1.13	1.7	1.65		↓	
12:20	7.10	16.95	6.74	-74	1.13	0.9	0.99			
12:25	7.65	16.72	6.76	-78	1.14	1.0	0.81			

SAMPLE ID: MW-2A_20250505, MW-2A_20250505_FBL, DUP-01-GW_20250505, DUP-01-GW_20250505_FBL

SAMPLE DATE: 5-5-25

SAMPLE TIME: 12:45

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2B

DATE: 5-5-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUN, LT BREEZE, ~65°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 6.08

PURGE START TIME: 14:15

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE:

CASING TYPE: PVC

MONITORING EQUIPMENT: U.S. ENV. HORIBA

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:18	6.60	23.10	7.11	109	0.750	20.3	1.85		200	
14:23	7.21	17.83	6.99	109	0.801	19.6	0.76		↓	
14:28	7.57	16.76	6.94	106	0.810	16.4	0.58		↓	
14:33	7.82	16.03	6.92	104	0.818	12.9	0.52		↓	
14:38	8.02	15.99	6.90	103	0.820	4.0	0.50		↓	

SAMPLE ID: MW-2B_20250505 AND MW-2B_20250505_FBLK

SAMPLE DATE: 5-5-25

SAMPLE TIME: 1445

Notes: DTW AT MW-25B = 83.89 FT

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3A

DATE: 4-28-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: cloudy, 50°F, scattered showers

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.12

PURGE START TIME: 10:27

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Polytetflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1030	5.46	11.38	7.09	-34	2.36	25.1	1.82	0	200	
1035	5.71	10.99	7.06	-7	2.36	20.0	1.15	0.25	↓	
1040	5.94	10.45	7.05	7	2.40	15.1	0.81	0.5	↓	
1045	6.11	10.36	7.05	6	2.39	14.8	0.77	0.75	↓	
1100	6.32	10.21	7.05	4	2.36	14.8	0.67	1.0	↓	
				Sample	collected	at	11:00			

SAMPLE ID: MW-3A_20250428 & MW-3A_20250428_FBLL

SAMPLE DATE: 4-28-25

SAMPLE TIME: 11:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

875
100
CASE 1st

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 5/5/25

PERSONNEL: EEC + MMS

OBSERVERS:

SAMPLE LOCATION: MW-3B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 48°F Sunny

DEPTH OF WELL: 15.60 ft

SCREEN LENGTH:

TUBING TYPE: Polyteflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 4.64 ft

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 0855

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
0858	4.98	10.85	7.42	149	0.788	2.3	1.62	0.25	200	
0901	5.40	9.58	7.29	162	0.816	2.8	0.98	0.50		
0904	5.67	9.33	7.27	168	0.821	2.6	0.85	0.75		
0907	5.94	9.27	7.27	172	0.822	3.4	0.78	1.00		
0910	6.21	9.18	7.27	175	0.818	2.5	0.69	1.25	↓	
0913	6.43	9.20	7.28	176	0.818	3.0	0.69	1.50		

SAMPLE ID: MW-3B-20250505 & MW-3B-20250505-FBLL

SAMPLE DATE: 5/5/25

SAMPLE TIME: 09:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-5A

DATE: 5/7/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EEC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 46°F Sunny

DEPTH OF WELL: 31.25

DEPTH TO WATER LEVEL: 3.84

PURGE START TIME: 11:20

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1123	4.12	9.77	7.31	202	1.35	7.0	0.83	0.25	200	
1126	4.56	9.63	7.28	202	1.35	6.6	0.59	0.50	↓	
1129	4.77	9.49	7.32	201	1.36	7.2	0.45	0.75	↓	
1132	4.95	9.52	7.30	200	1.36	6.1	0.38	1.00	↓	

SAMPLE ID: MW-5A_20250507 + MW-5A_20250507_FB&L

SAMPLE DATE: 5/7/25

SAMPLE TIME: 1145

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 5-7-25

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: MW-55B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 46°F, Sunny

DEPTH OF WELL: >100

SCREEN LENGTH:

TUBING TYPE: Poly teflon

DEPTH TO WATER LEVEL: top of casing

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 1224

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1227		11.47	8.53	112	2.20	92.2	12.32	0.25	200	
1230		11.04	8.64	11	2.31	74.6	9.75	0.50		
1233		10.82	8.69	-28	2.29	74.6	9.43	0.75		
1236		10.73	8.70	-56	2.23	78.2	8.60	1.00		
1239		10.63	8.71	-69	2.18	108	8.16	1.25	↓	
1242		10.57	8.72	-77	2.15	130	7.80	1.50		
1245		10.51	8.73	-82	2.14	128	7.57	1.75		

SAMPLE ID: MW-55B-20250507 & MW-55B-20250507-FILL

SAMPLE DATE: 5-7-25

SAMPLE TIME: 1245

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 5/7/25

SAMPLE LOCATION: MW-10

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

PERSONNEL: EKC & MMS

OBSERVERS:

SITE CONDITIONS: 44°F Sunny

DEPTH OF WELL: 20.75 ft

DEPTH TO WATER LEVEL: 4.45 ft

PURGE START TIME: 1533

SCREEN LENGTH:

WELL DIAMETER: 1"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1536	4.83	12.93	6.78	-66	1.98	55.1	1.05	0.25	200	
1539	5.14	12.10	6.78	-77	2.13	32.3	0.75	0.50	1	
1542	5.19	11.27	6.72	-91	2.30	42.3	0.64	0.75	1	
1545	5.24	11.17	6.71	-92	2.31	44.4	0.59	1.00	↓	
1548	5.28	11.17	6.71	-93	2.32	38.4	0.52	1.25		

SAMPLE ID: MW-10_20250507 & MW-10_20250507_FBLL

SAMPLE DATE: 5/7/25

SAMPLE TIME: 1600

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4/29/25

PERSONNEL: RRC + MMS

OBSERVERS:

SAMPLE LOCATION: MW-31

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 34°F Snowing

DEPTH OF WELL: 74 Ft

SCREEN LENGTH:

TUBING TYPE: Polyteflon

DEPTH TO WATER LEVEL: 50.12 Ft

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 12:40

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
~~1243~~		Pump broke mid-purge. Fixed pump,								
~~1246~~		took one reading then sampled								
~~1249~~		it could break again.								
~~1252~~										
13:17	50.30	7.00	8.31	206	0.384	>1000	6.99	2.352	200	

SAMPLE ID: MW-31_20250429 + MW-31_20250429_FBLL

SAMPLE DATE: 4/29/28

SAMPLE TIME: 13:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-35

DATE: 4/30/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 57°F Sunny

DEPTH OF WELL: 22 ft

DEPTH TO WATER LEVEL: 16.14 ft

PURGE START TIME: 16:36

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
16:39	16.84	20.14	7.46	72	0.348	129	1.08	0.12	100	
16:42	17.35	19.46	7.45	77	0.341	135	0.72	0.24	1	
		-Sampled due to fast drawdown-							↓	

SAMPLE ID: MW-35_20250430 & MW-35_20250430-FBLK

SAMPLE DATE: 4/30/25

SAMPLE TIME: 1700

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-355B

DATE: 5-7-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUN, ~47°F, WINDY

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 18.18

PURGE START TIME: 13:45

SCREEN LENGTH:

WELL DIAMETER: 2-INCH

TUBING TYPE:

CASING TYPE: PVC

MONITORING EQUIPMENT: U.S. ENV. HORIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
15:10		10.08	7.66	36	0.509	>1000	10.05		200	
15:15		9.84	7.68	98	0.509	>1000	9.38		↓	
15:20		9.75	7.67	132	0.506	>1000	8.09			
15:25		9.60	7.65	140	0.504	>1000	7.87			
15:30		9.53	7.63	143	0.503	>1000	7.82			

SAMPLE ID: MW-355B_20250507, MW-355B-20250507_FBLL

SAMPLE DATE: 5-7-25

SAMPLE TIME: 15:30

Notes: TURNED CLOUDY AT ~14:00, DTW = 64.55 FT, DTW = 70.20 AT 14:18. DTW = 90.08 AT 14:31, SLOWED PUMP. DTW BACK UP TO 88.60 AT 14:40, STILL AT 88.60 AT 15:00. PURGED ~ 60 GALS THEN SLOWED TO SAMPLE.

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW. 355B

DATE: 4.29.25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JO

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 37°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 18.42

PURGE START TIME: 16:48

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE:

CASING TYPE: PVC

MONITORING EQUIPMENT:

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
16:55	63.12							15		111
1700	70+							~~5~~ 20		1
1705								30		11
1710								37		1
1715								44		1
1720								49		1
1725								55		1
1730								60		
1735								62.5		
17[illegible]			Ran dry, let recharge for 5 min							
17:45								67.5		
[illegible]50			Ran dry, let recharge 5 min					72.5		
17:55			Ran dry, let recharge 5 Min					77.5		
18:05			Ran dry, let recharge 5 min					81.5		
18:15			Ran dry, let recharge 5 min					86		
18:25				Purge complete				91		

SAMPLE ID:

SAMPLE DATE:

SAMPLE TIME:

Notes: No Sample Purge only

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-36

DATE: 4/30/25
PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
PERSONNEL: EAC & MMS
SITE ADDRESS: White Pine, MI
OBSERVERS:
SITE CONDITIONS: 57° F Sunny

DEPTH OF WELL: 18.0 ft
DEPTH TO WATER LEVEL: 2.15 ft
PURGE START TIME: 1528
SCREEN LENGTH:
WELL DIAMETER: 2"
TUBING TYPE: Poly teflon
CASING TYPE: PVC
MONITORING EQUIPMENT: Horiba u-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1531	3.51	19.94	7.06	-84	0.597	5.7	0.60	0.25	200	
1534	4.46	19.31	7.03	-95	0.594	5.4	0.31	0.50	↓	
1537	5.11	18.68	7.02	-100	0.594	5.0	0.25	0.75	↓	
1540	5.90	18.32	7.01	-103	0.594	4.7	0.24	1.00	↓	
1543	6.60	17.84	7.01	-104	0.594	4.8	0.24	1.25	↓	
1546	7.20	17.67	7.00	-105	0.592	4.8	0.23	1.50	↓	

SAMPLE ID: MW-36-20250430 + MW-36-20250430-FBLL
SAMPLE DATE: 4/30/25
SAMPLE TIME: 1600

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-37

DATE: 5/1/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EEC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 52°F Cloudy

DEPTH OF WELL: 21.2 ft

DEPTH TO WATER LEVEL: 8.78 ft

PURGE START TIME: 10:09

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
10:12	9.22	10.58	7.50	142	0.399	8.8	7.01	0.12	200	
10:15	9.50	10.89	7.27	160	0.396	5.4	6.07	0.24	↓	
10:18	9.61	10.81	7.32	168	0.398	3.9	5.56	0.36	↓	
10:21	9.72	10.60	7.33	175	0.402	3.5	5.40	0.48	↓	
10:24	9.85	10.50	7.31	179	0.402	3.4	5.42	0.60	↓	

SAMPLE ID: MW-37_20250501 & MW-37_20250501_FBLL

SAMPLE DATE: 5/1/25

SAMPLE TIME: 1030

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-38

DATE: 5/7/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 49°F Sunny

DEPTH OF WELL: 30.5 ft

DEPTH TO WATER LEVEL: 6.42 ft

PURGE START TIME: 1357

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1400	7.61	9.46	7.80	143	0.448	3.0	5.98	0.25	200	
1403	8.53	8.92	7.72	146	0.446	3.2	5.21	0.50	↓	
1406	9.19	8.85	7.70	147	0.446	4.6	5.02	0.75	↓	
1409		8.80	7.69	147	0.446	4.9	4.81	1.00	↓	

SAMPLE ID: MW-38_20250507 & MW-38_20250507_FBLL

SAMPLE DATE: 5/7/25

SAMPLE TIME: 1430

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 5/1/25

SAMPLE LOCATION: MW-41

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

PERSONNEL: EHE + MMS

OBSERVERS:

SITE CONDITIONS: 48°F Cloudy

DEPTH OF WELL: 30.50 ft

DEPTH TO WATER LEVEL: 24.38 ft

PURGE START TIME: 0839

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0842	24.56	14.00	7.99	84	0.406	93.5	7.36	0.12	100	
0845	24.73	13.87	7.84	110	0.406	92.2	7.00	0.24	↓	
		- Sampled	due to	fast	drawdown -					

SAMPLE ID: MW-41_20250501 & MW-41_20250501_FBLK

SAMPLE DATE: 5/1/25

SAMPLE TIME: 0845

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
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DATE: 5/7/25

SAMPLE LOCATION: MW-42

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

PERSONNEL: EEC & MMS

OBSERVERS:

SITE CONDITIONS: 48 °F Sunny

DEPTH OF WELL: 29.71 Ft

DEPTH TO WATER LEVEL: 3.59 Ft

PURGE START TIME: 1442

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1445	3.09	11.76	9.09	112	0.282	19.4	4.22	0.25	200	
1448	4.56	11.46	9.11	112	0.279	17.7	3.32	0.50	"	
1451	5.60	11.52	9.11	113	0.277	18.2	3.28	0.75	"	
1454	6.58	11.70	9.11	113	0.276	18.7	3.20	1.00	"	

SAMPLE ID: MW-42.20250507 & MW-42.20250507_FBLL

SAMPLE DATE: 5/7/25

SAMPLE TIME: 1500

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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DATE: 5/6/25

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: MW-43

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 48°F Sunny

DEPTH OF WELL: 28 ft

SCREEN LENGTH:

TUBING TYPE: Polyfelon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 8.78 ft

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 0809

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0812	9.61	13.23	8.18	85	0.424	65.9	2.05	0.25	200	
0815	10.37	13.22	8.05	97	0.422	67.9	0.72	0.50	↓	
0818	10.67	12.87	8.02	102	0.424	66.7	0.68	0.75	↓	
0821	10.93	11.48	7.97	109	0.438	62.3	0.73	1.00	↓	
0824	11.12	11.00	7.96	112	0.447	61.0	0.76	1.25	↓	

SAMPLE ID: MW-43_20250506 + MW-43_20250506_FBLL

SAMPLE DATE: 5/6/25

SAMPLE TIME: 0830

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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DATE: 5/6/25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: MW-435B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 60°F Sonny

DEPTH OF WELL: >100

SCREEN LENGTH:

TUBING TYPE: Polyteflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 17.74 ft

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 11:46

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
11:49	18.14	16.30	7.37	137	4.01	16.7	7.24	0.25	200	
11:52	18.86	15.20	7.28	78	4.14	15.2	6.91	0.50		
11:55	19.55	14.24	7.21	64	4.20	15.9	6.59	0.75		
11:58	20.12	14.83	7.19	62	4.18	13.9	6.14	1.00		
12:01	20.82	14.98	7.19	61	4.19	15.2	5.92	1.25	↓	
12:04	21.14	15.02	7.18	60	4.17	14.3	5.80	1.50		

SAMPLE ID: MW-435B_20250506 + MW-435B_20250506_FBLL

SAMPLE DATE: 5/6/25

SAMPLE TIME: 1230

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-44

DATE: 5/6/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EKC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 54°F Sunny

DEPTH OF WELL: 39.4 ft

DEPTH TO WATER LEVEL: 13.44 ft

PURGE START TIME: 0915

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
0918	13.64	13.25	8.26	137	0.684	14.6	3.32	0.25	200	
0921	13.82	13.34	8.22	139	0.687	36.6	2.04	0.50	↓	
0924	13.85	13.13	8.21	139	0.689	47.5	1.79	0.75	↓	
0927	13.89	13.06	8.20	140	0.690	48.1	1.74	1.00	↓	
0930										

SAMPLE ID: MW-44_20250506 & MW-44_20250506_FBLL

SAMPLE DATE: 5/6/25

SAMPLE TIME: 0945

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: NB1-1

DATE: 5/5/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EEC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F Sunny

DEPTH OF WELL: 24.90 ft

DEPTH TO WATER LEVEL: 2.70 ft

PURGE START TIME: 1200

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1203	2.87	14.47	8.10	-193	1.04	26.3	2.48	0.25	200	
1206	2.94	14.07	8.22	-241	1.04	18.5	1.07	0.50	"	
1209	3.10	13.47	8.23	-253	1.07	18.1	0.53	0.75	"	
1212	3.21	13.62	8.23	-261	1.07	16.7	0.37	1.00	"	
1215	3.33	13.64	8.23	-262	1.05	18.1	0.37	1.25	↓	

SAMPLE ID: NB1-1_20250505 & NB1-1_20250505_FBLL

SAMPLE DATE: 5/5/25

SAMPLE TIME: 1230

Notes: Black particles at beginning of purge. Strong odor.

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: NB1 - 3

DATE: 5/5/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F, Sunny

DEPTH OF WELL: 34.6

DEPTH TO WATER LEVEL: 2.94

PURGE START TIME: 1240

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1243	3.99	18.68	7.79	-93	0.823	16.5	1.55	0.25	200	
1246	4.86	18.39	7.58	-106	0.824	17.1	0.79	0.50	↓	
1249	5.51	17.36	7.52	-118	0.833	17.0	0.37	0.75		
1252	6.16	17.08	7.50	-120	0.839	17.6	0.31	1.00	↓	
1255	6.55	16.96	7.49	-124	0.842	17.2	0.26	1.25		
1258	6.90	16.79	7.50	-125	0.846	17.6	0.22	1.50		

SAMPLE ID: NB1-3_20250505 + NB1-3_20250505_FBLL

SAMPLE DATE: 5/5/25

SAMPLE TIME: 1300

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NB2-1

DATE: 4/30/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EAC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 51°F Sunny

DEPTH OF WELL: 12.2

DEPTH TO WATER LEVEL: 2.56 ft

PURGE START TIME: 1237

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1240	2.97	10.34	7.41	-225	0.956	4.1	0.93	0.25	200	
1243	3.25	10.19	7.41	-238	0.954	4.9	0.65	0.50	"	
1246	3.31	10.22	7.42	-246	0.966	4.6	0.54	0.75	"	
1249	3.38	10.23	7.41	-255	0.974	4.9	0.49	1.00	"	
									↓	

SAMPLE ID: NB2-1_20250430 & NB2-1_20250430_FBLL

SAMPLE DATE: 4/30/25

SAMPLE TIME: 1300

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NB2-3

DATE: 4/30/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EEC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 51°F Sunny

DEPTH OF WELL: 30.15 ft

DEPTH TO WATER LEVEL: 2.69 ft

PURGE START TIME: 1326

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Poly Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1329	3.98	16.15	7.56	-106	0.974	5.8	1.03	0.25	200	
1332	5.60	15.77	7.52	-114	0.973	5.2	0.27	0.50	"	
1335	6.10	14.28	7.52	-118	0.990	7.1	1.23	0.75	"	
1338	6.81	12.70	7.53	-118	1.05	9.8	1.32	1.00	"	
1341	7.22	13.13	7.54	-118	1.03	11.6	1.25	1.25	↓	
1344	7.60	13.35	7.53	-119	1.03	8.6	1.22	1.50		
1347	8.03	13.72	7.54	-119	1.03	9.1	1.20	1.75		

SAMPLE ID: NB2-3_20250430 + NB2-3_20250430_FBLL

SAMPLE DATE: 4/30/25

SAMPLE TIME: 1400

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-1

DATE: 4/29/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 37°F Cloudy

DEPTH OF WELL: 39.36 ft

DEPTH TO WATER LEVEL: 23.7 ft

PURGE START TIME: 1615

SCREEN LENGTH:

WELL DIAMETER: 3 in

TUBING TYPE: Poly teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1618	23.89	6.79	8.09	187	0.364	>1000	15.07	0.25	200	
1621	24.08	7.20	8.12	148	0.367	>1000	8.65	0.50		
1624	24.42	7.37	8.16	150	0.368	>1000	8.72	0.75		
1627	24.79	6.92	8.17	165	0.372	917	9.92	1.00		
1630	24.86	6.92	8.19	169	0.372	861	9.36	1.25		
1633	24.93	6.85	8.20	172	0.372	811	9.15	1.50		
1636	25.00	6.76	8.19	177	0.371	785	9.21	1.75		
1639	25.09	6.64	8.20	178	0.371	794	9.18	2.00		

SAMPLE ID: SMW-1_20250429 + SMW-1_20250429_FBLL

SAMPLE DATE: 4/29/25

SAMPLE TIME: 1640

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4/30/25

SAMPLE LOCATION: SMW-1SB

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

PERSONNEL: ERC & MMS

OBSERVERS:

SITE CONDITIONS: 41°F Sunny

DEPTH OF WELL: > 100 ft

DEPTH TO WATER LEVEL: 21.37 ft

PURGE START TIME: 10:30

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Poly Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:33	23.41	7.87	8.55	37	0.000	342	12.85	0.25	200	
10:36	24.01	7.92	8.48	36	0.181	17.6	10.41	0.50	1	
10:39	25.10	7.96	8.44	36	0.195	16.8	8.61	0.75	1	
10:42	25.96	8.01	8.39	37	0.195	16.9	8.59	1.00	1	
									↓	

SAMPLE ID: SMW-1SB-20250430 + SMW-1SB_20250430_FBLL

SAMPLE DATE: 4/30/25

SAMPLE TIME: 1045

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 5/8/25

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: SMW-3

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 37°F Sunny

DEPTH OF WELL: 57 ft

SCREEN LENGTH:

TUBING TYPE: Polyethelon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 27.02

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 0904

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0907	27.14	17.90	8.58	95	0.211	8.0	6.92	0.12	100	
0910	27.23	16.89	8.47	5	0.212	6.6	5.18	0.24	↓	
0913	27.26	16.13	8.42	-22	0.210	6.6	5.17	0.36	↓	
0916	27.30	15.50	8.32	-38	0.208	6.4	4.66	0.48	↓	
0919	27.32	15.04	8.25	-45	0.209	6.3	4.75	0.60	↓	
0922	27.34	14.55	8.20	-54	0.210	5.8	4.64	0.72	↓	
0925	27.36	14.32	8.19	-61	0.211	6.4	4.31	0.84	↓	
0928	27.38	14.14	8.19	-64	0.212	5.8	4.13	0.96	↓	

SAMPLE ID: SMW-3_20250508 + SMW-3_20250508_FBLL

SAMPLE DATE: 5-8-25

SAMPLE TIME: 0930

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. GREATING SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-3SB

DATE: 5-8-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 42°F, Sunny

DEPTH OF WELL: ~138ft

DEPTH TO WATER LEVEL: 22.84

PURGE START TIME: 0955

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Aleris Peristaltic Pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0958	23.46	9.80	8.95	90	0.512	30.6	2.80	0.25	200	
1001	23.98	9.55	9.01	84	0.514	28.7	2.01	0.50		
1003	24.22	9.57	9.04	80	0.514	28.0	1.56	0.75		
1006	24.40	9.51	9.10	72	0.513	25.1	1.09	1.00		
1009	24.61	9.60	9.24	64	0.511	21.3	0.94	1.25		
1012	24.77	9.74	9.25	57	0.510	16.4	1.07	1.50		
1015	24.99	9.77	9.27	54	0.510	13.9	1.14	1.75	↓	

SAMPLE ID: SMW-3SB_20250508 + SMW-3SB_20250508_FBLL

SAMPLE DATE: 5-8-25

SAMPLE TIME: 1015

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-01

DATE: 4-28-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 55°F Raining

GAUGE READING START: 1.20 ft

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.09

CONDUCTIVITY: 0.070 mS/cm

TEMPERATURE: 10.57 °C

ORP: 227 mV

DO: 10.28 mg/l

TURBIDITY: 5.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1.5	0				
2	1.7	0.5	0.023			
3	2.1	0.65	0.087			
4	2.7	0.75	0.167			
5	3.1	0.95	0.120			
6	3.7	0.95	0.191			
7	4.1	1.05	0.133			
8	4.7	0.95	0.199			
9	5.1	0.85	0.138			
10	5.7	0.6	0.068			
11	6.1	0.65	0.044			
12	6.7	0.3	-0.033			
13	7.1	0.3	0.005			
14	7.6	edge of water				
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.496

TOTAL WIDTH (ft): 6.10

SAMPLE ID: ARC-01_20250428 & ARC-01_20250428_FBLI

SAMPLE TIME: 1345

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-02

DATE: 5/6/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? O N

SITE NAME: White Pine Copper

PERSONNEL: EKC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 58°F Sunny

GAUGE READING START: —

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	6.53		ORP	209	mV
CONDUCTIVITY	0.080	mS/cm	DO	5.29	mg/l
TEMPERATURE	15.00	°C	TURBIDITY	26.7	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Unsafe Stream Conditions Did not gauge

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: ARC-02_20250506 & ARC-02_20250506_FSLL

SAMPLE TIME: 1045

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: ~~ARC-03~~ MS 4-28-25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: ARC-03

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 55°F Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.06

CONDUCTIVITY: 0.066 mS/cm

TEMPERATURE: 11.19 °C

ORP: 282 mV

DO: 10.65 mg/l

TURBIDITY: 7.5 NTU

*Stream Gauge Knocked over

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	3.3	0				
2	3.6	0.1	0.0			
3	4.6	0.3	-0.041			
4	5.6	0.4	0.126			
5	6.6	0.6	0.420			
6	7.6	0.7	0.595			
7	8.6	0.85	0.528			
8	9.6	0.9	0.744			
9	10.6	0.9	0.837			
10	11.6	0.85	0.864			
11	12.6	0.80	-0.056			
12	13.6	0.5	-0.084			
13	14.0	edge of water				
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 3.239

TOTAL WIDTH (ft): 10.70

SAMPLE ID: ARC-03_20250428 & ARC-03_20250428_FBU

SAMPLE TIME: 1540

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNC-01

DATE: 5/6/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 77° F Sunny

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.09		ORP	124	mV
CONDUCTIVITY	0.120	mS/cm	DO	7.41	mg/l
TEMPERATURE	21.95	°C	TURBIDITY	5.1	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: BNC-01_20250506 & BNC-01_20250506_FBLL

SAMPLE TIME: 1830

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 5/5/25

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: BNW-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 62°F Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.88		ORP	156	mV
CONDUCTIVITY	0.218	mS/cm	DO	9.81	mg/l
TEMPERATURE	18.32	°C	TURBIDITY	11.9	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
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20						
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22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: BNW-01_20250505 + BNW-01_20250505_FB

SAMPLE TIME: 1510

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 5/6/25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: CBR - 01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 65°F Sonny

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 6.86

CONDUCTIVITY: 0.068 mS/cm

TEMPERATURE: 16.47 °C

ORP: 200 mV

DO: 8.75 mg/l

TURBIDITY: 13.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: CBR-01_20250506 & CBR-01_20250506_FBLL

SAMPLE TIME: 1400

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 5-6-25

SAMPLE LOCATION: CBR-02

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUN, ~60°F

GAUGE READING START: BENT OVER

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

pH: 7.38

CONDUCTIVITY: 0.074 mS/cm

TEMPERATURE: 12.26 °C

ORP: 68 mV

DO: 11.60 mg/l

TURBIDITY: 4.2 NTU

MONITORING EQUIPMENT: US ENV. HORIBA U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: CBR-02-20250506, CBR-02-20250506-FBLL

SAMPLE TIME: 10:45

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-01

DATE: 4-28-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ELC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 55°F Cloudy

GAUGE READING START: —

pH 7.25

ORP 208 mV

GAUGE READING END:

CONDUCTIVITY 0.060 mS/cm

DO 12.06 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE 8.22 °C

TURBIDITY [illegible] NTU

MONITORING EQUIPMENT: Horiba - U-52

37.5

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	1.5	0				
2	2.0	0.3	-0.110			
3	2.5	0.55	0.082			
4	3.0	0.7	0.691			
5	3.5	0.75	1.475			
6	4.0	0.85	1.822			
7	4.5	0.8	1.725			
8	5.0	0.7	1.482			
9	5.5	0.7	1.690			
10	6.0	0.7	1.690			
11	6.5	0.6	1.512			
12	7.0	0.55	1.750			
13	7.5	0.5	1.543			
14	8.0	0.45	1.381			
15	8.5	0.4	1.143			
16	9.0	0.4	0.791			
17	9.5	0.2	0.425			
18	10.0	0.1	0.001			
19	10.3	edge of	water			
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 6.028

TOTAL WIDTH (ft): 8.80

SAMPLE ID: DKC-01_20250428 ← DKC-01_20250428.FBL

SAMPLE TIME: 1200

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-02

DATE: 5/7/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? 0 N

SITE NAME: White Pine Copper

PERSONNEL: ERL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 44°F Sunny

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 6.63

CONDUCTIVITY: 0.065 mS/cm

TEMPERATURE: 11.43 °C

ORP: 191 mV

DO: 10.88 mg/l

TURBIDITY: 10.2 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	2.5	0				
2	3	0.35	0.057			
3	5	0.65	-0.066			
4	7	0.45	0.040			
5	9	0.35	0.760			
6	11	0.30	1.702			
7	13	0.40	1.478			
8	15	0.35	-0.067			measured right downstream of rock
9	17	0.20	1.776			
10	19	0.35	0.070			
11	21	0.30	0.495			
12	23	0.15	0.076			
13	24	edge of	water			
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 3.737

TOTAL WIDTH (ft): 21.50

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: DKC-02_20250507 & DKC-02_20250507-FBLL

SAMPLE TIME: 0845

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL - CREATIVE SPIRIT — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-03

DATE: 4-29-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Snowy, 35°F

GAUGE READING START: NA

pH: 7.31

ORP: 271 mV

GAUGE READING END:

CONDUCTIVITY: 0.050 mS/cm

DO: 11.11 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 8.40 °C

TURBIDITY: 34.5 NTU

MONITORING EQUIPMENT: MS/D Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: DKC-03_20250429 + DKC-03_20250429_FBLL

SAMPLE TIME: 11:00

MS/MSD collected

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Current repeatedly shifted direction during sampling.

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. SMART SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-01

DATE: 4-30-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 42°F

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: ~~YSI~~ Horiba U-52 US Env

pH	6.88		ORP	167	mV
CONDUCTIVITY	0.085	mS/cm	DO	11.30	mg/l
TEMPERATURE	10.95	°C	TURBIDITY	13.2	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -

TOTAL WIDTH (ft): -

SAMPLE ID: LKS-01_20250430 & LKS-01_20250430 FBLL

SAMPLE TIME: 10:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-02

DATE: 5-1-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 50°F

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 6.64

CONDUCTIVITY: 0.054 mS/cm

TEMPERATURE: 6.67 °C

Horiba U-52

US Env.

ORP: 170 mV

DO: 11.53 mg/l

TURBIDITY: 13.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): –

TOTAL WIDTH (ft): –

SAMPLE ID: LKS-02-20250501 (4)

SAMPLE TIME: 8:00

LKS-02-20250501 - FBLL

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4-29-25

PERSONNEL: SD

OBSERVERS:

SAMPLE LOCATION: MLC-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Snowy, 39°F

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: MS6 Horiba U-52 ~~MS20~~

pH: 7.23

CONDUCTIVITY: 0.133 mS/cm

TEMPERATURE: 8.04 °C

ORP: 261 mV

DO: 10.87 mg/l

TURBIDITY: 19.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0.1	0.0			
1 (at water edge)	4" ~~0.500~~	0.4	0.810			
2	8"	0.4	0.511			
3	1'					
4	1'4	0.55	0.516			
5	1'8	0.6	0.555			
6	2'	0.5	0.668			
7	2'4"	0.4	0.640			
8	2'8"	0.35	0.502			
9	3'	0.3	0.614			
10	3'4	0.2	0.463			
11	3'8	0.2	0.578			
12	4'	0.1	0.0			
13	4'4"	0.1	0.0			
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.768

TOTAL WIDTH (ft): 4.00

SAMPLE ID: MLC-01_20250429 & MLC-01_20250429_FBLK

SAMPLE TIME: 9:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-01

DATE: 04-28-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) / N

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 55°F, Rainy

GAUGE READING START: R

GAUGE READING END:

AVERAGE GAUGE HEIGHT: 2.10

MONITORING EQUIPMENT: Horiba U-52

pH	6.81		ORP	223	mV
CONDUCTIVITY	0.050	mS/cm	DO	12.17	mg/l
TEMPERATURE	8.35	°C	TURBIDITY	22.4	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: MLR-01_20250428 & MLR-01_20250428_FBLL

SAMPLE TIME: 09:50

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-02

DATE: 5/5/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ECC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 53°F Sunny

GAUGE READING START: Knocked down

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.11		ORP	202	mV
CONDUCTIVITY	0.092	mS/cm	DO	10.38	mg/l
TEMPERATURE	10.50	°C	TURBIDITY	33.6	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	6	0				
2	6.5	0.1	-0.021			
3	9	0.2	0.031			
4	11.5	0.35	0.401			
5	14	0.7	0.475			
6	16.5	0.8	0.512			
7	19	0.8	0.188			Obstruction upstream (rock)
8	21.5	1.1	0.553	0.236		
9	24	1.7	~~0.385~~ ms ~~0.385~~		0.385	
10	26.5	1.95	0.987			
11	29	1.5	0.818			
12	31.5	1.6		0.242	0.449	
13	34	1.0	0.492			
14	36.5	0.8	0.488			
15	39	0.5	0.072			
16	41.5					
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 15.758

TOTAL WIDTH (ft): 35.50

SAMPLE ID: MLR-02_20250505 + MLR-02.20250505_FBLL

SAMPLE TIME: 1030

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-03

DATE: 4-30-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

GAUGE READING START: Bent over

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: ~~YSI~~ Horiba U-52

US FnW

pH: 7.13

CONDUCTIVITY: ~~9.2010~~ mS/cm 0.067

TEMPERATURE: 9.20 °C

ORP: 164 mV

DO: 11.09 mg/l

TURBIDITY: 15.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): –

TOTAL WIDTH (ft): –

SAMPLE ID: MLR-03_20250430 + MLR-03_20250430_FALL

SAMPLE TIME: 15:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Staff gauge damaged, no reading

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NTC-01

DATE: 4.30.25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 45°F

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: ~~YSI~~ Horiba U-52 US EnV

pH: ~~6.75~~ 6.65

CONDUCTIVITY: 0.105 mS/cm

TEMPERATURE: 14.11 °C

ORP: 175 mV

DO: 2.20 mg/l

TURBIDITY: 2.2 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0	0			
1 (at water edge)	1' 3"	0	0			
2	1' 6"	0.1	0.003			
3	2'	0.1	0.012			
4	2.5'	0.3	0.294			
5	3'	0.35	0.231			
6	3.5'	0.5	0.273			
7	4'	0.6	0.543			
8	4.5'	0.6	0.316			
9	5'	0.6	0.303			
10	5.5'	0.55	0.254			
11	6'	0.4	0.028			
12	6.5'	0.25	0.023			
13	7'	0.2	0.00			
14	7.5'	0.15	0.0			
15	8'	0.1	0.0			
16	8' 3"	0	0			
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.583

TOTAL WIDTH (ft): 7.00

SAMPLE ID: NTC-01_20250430 & ~~NTC-02~~ DUP-01-SW_20250430 + NTC-01_20250430_FULL

SAMPLE TIME: 11:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-01

DATE: 4/28/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EKC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 55°F Cloudy

GAUGE READING START: 1.32 ft

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 6.83

CONDUCTIVITY: 0.047 mS/cm

TEMPERATURE: 9.87 °C

ORP: 198 mV

DO: 10.13 mg/l

TURBIDITY: 9.2 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1.6	0				
2	1.9	1.2	0.051			
3	2.2	1.2	0.101			
4	2.5	1.2	0.206			
5	2.8	1.25	0.291			
6	3.1	1.2	0.372			
7	3.4	1.2	0.458			
8	3.7	1.15	0.409			
9	4.0	1.15	0.351			
10	4.3	1.1	0.229			
11	4.6	1.0	0.126			
12	4.8	edge	of	water		
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.906

TOTAL WIDTH (ft): 5.20

SAMPLE ID: PNC-01_20250428 & PNC-01_20250428_FBLL

SAMPLE TIME: 1430

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-02

DATE: 5/5/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F Sunny

GAUGE READING START: 1.9

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH: 6.95

CONDUCTIVITY: 135 mS/cm

TEMPERATURE: 17.87 °C

ORP: 0.100 mV

DO: 7.76 mg/l

TURBIDITY: 670 NTU

MONITORING EQUIPMENT:

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	2ft	0				
2	2.5 ft	1.1	0.014			
3	6.5 Ft	2.2		0.009	0.030	
4	10.5ft	2.2		0.059	-0.012	
5	14.5ft	1	0.041			
6	18.5ft	1.05	0.082			
7	22.5ft	1.8		0.002	0.043	
8	26.5ft	1.9		0.001	0.023	
9	30.5ft	1.4	0.010			
10	34.5ft	1.15	0.026			
11	38.5ft	1.1	0.019			
12	42.5ft	1.0	-0.013			
13	46.5ft	1.25	0.051			
14	50.5ft	1.5	0.027			
15	54.5 ft	1.1	-0.006			
16	58.0ft					edge
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 1.774

TOTAL WIDTH (ft): 56.00

SAMPLE ID: PNC-02_20250505 & PNC-02-20250505 - FBLE

SAMPLE TIME: 14:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-03

DATE: 5/7/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: QRC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 45°F Sunny

GAUGE READING START: 1.22

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.86		ORP	170	mV
CONDUCTIVITY	0.124	mS/cm	DO	9.16	mg/l
TEMPERATURE	12.94	°C	TURBIDITY	26.4	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	1.5	0				
2	2	0.5	-0.008			
3	4	0.85	0.004			
4	6	0.9	-0.013			
5	8	1.3	0.071			
6	10	1.6		0.012	0.034	
7	12	1.35	0.095			
8	14	1.2	0.430			
9	16	1.2	0.374			
10	18	0.7	0.450			
11	20	0.8	0.191			
12	22	edge of water				
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 3.366

TOTAL WIDTH (ft): 20.50

SAMPLE ID: PNC-03_20250507 = PNC-03_20250507.FBLL

SAMPLE TIME: 1045

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-04

DATE: 5.1.25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 50°F

GAUGE READING START: GAUGE BENT OVER

pH: 6.85

ORP: 204 mV

GAUGE READING END:

CONDUCTIVITY: 0.099 mS/cm

DO: 11.09 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 9.79 °C

TURBIDITY: 5.6 NTU

MONITORING EQUIPMENT: ~~YSI~~ Eur. Horiba U-52

Serial 3530-1132

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	1'9"	0	0			
2	2'	0.1	0.0			
3	3'	0.1	0.152			
4	4'	0.1	0.017			
5	5'	0.15	0.567			
6	6'	0.2	0.822			
7	7'	0.4	0.804			
8	8'	0.3	0.701			
9	9'	0.4	0.851			
10	10'	0.5	0.967			
11	11'	0.5	0.940			
12	12'	0.5	1.166			
13	13'	0.5	1.192			
14	14'	0.5	1.037			
15	15'	0.55	0.966			
16	16'	0.7	0.844			
17	17'	0.9	0.811			
18	18'	1.0	0.777			
19	19'	1.0	0.643			
20	20'	0.9	0.557			
21	21'	0.7	0.451			
22	22'	0.55	0.192			
23	23'	0.10	0.062			
24	23'6"	0	0			
25						

STREAM FLOW (cfs): 7.989

TOTAL WIDTH (ft): 21.75

SAMPLE ID: PNC-04_20250501 + PNC-04_20250501_FBLK

SAMPLE TIME: 10:20

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-01

DATE: 5/7/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EEC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 49°F Sunny

GAUGE READING START: 0.75 Ft

pH: 8.0

ORP: 112 mV

GAUGE READING END:

CONDUCTIVITY: 0.429 mS/cm

DO: 9.34 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 16.32 °C

TURBIDITY: 20.5 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	1.5	0				
2	2.0	0.5	0.511			
3	3.5	0.55	1.350			
4	5.0	0.6	0.492			
5	6.5	0.6	2.645			
6	8.0	0.6	2.572			
7	9.5	0.5	1.296			
8	11.0	0.7	2.563			
9	12.5	0.8	2.929			
10	14.0	0.9	2.112			
11	15.5	0.5	-0.051			
12	17.0	0.3	0.432			
13	17.5	edge of water				
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 16.628

TOTAL WIDTH (ft): 16.00

SAMPLE ID: PRC-01_20250507 + PRC-01_20250507_FBLL

SAMPLE TIME: 1700

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-02

DATE: 4-30-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 60°F

GAUGE READING START: NA

pH: 6.83

ORP: 162 mV

GAUGE READING END:

CONDUCTIVITY: 0.381 mS/cm

DO: 10.72 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 11.35 °C

TURBIDITY: 14.0 NTU

MONITORING EQUIPMENT: Horiba U-52

US ENV

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Unsafe to gauge stream due to water level and velocity

PRC-02_20250430 + PRC-02_20250430-FB.LL

14:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PTC-01

DATE: 4-29-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Rainy, 36°F

GAUGE READING START: NA

pH: 7.44

ORP: 258 mV

GAUGE READING END:

CONDUCTIVITY: 0.120 mS/cm

DO: 11.88 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 7.86 °C

TURBIDITY: 4.7 NTU

MONITORING EQUIPMENT: MSG Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0	0			
1 (at water edge)	1' 10"	0.1	0.0			
2	2' 4"	0.3	0.413			
3	2' 10"	0.3	0.174			
4	3' 4"	0.1	0.495			
5	3' 10"	0.1	1.045			
6	4' 4"	0.1	0.658			
7	4' 10"	0.3	0.879			
8	5' 4"	0.3	0.636			
9	5' 10"	0.3	0.347			
10	6' 4"	0.3	0.110			
11	6' 10"	0.2	0.473			
12	7' 4"	0.25	0.262			
13	7' 10"	0.2	0.048			
14	8' 4"	0.1	0.012			
15	8' 5"	0	0			
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.579

TOTAL WIDTH (ft): 6.59

SAMPLE ID: PTC-01_20250429 + PTC-01_20250429-FBLL

SAMPLE TIME: 14:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: SBD-01

DATE: 4/29/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 34°F SNOW

GAUGE READING START: —

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.28

CONDUCTIVITY: 0.109 mS/cm

TEMPERATURE: 10.45 °c

ORP: 219 mV

DO: 6.35 mg/l

TURBIDITY: 9.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: SBD-01_20250429 + SBD-01_20250429 FULL

SAMPLE TIME: 0915

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: SBW-01

DATE: 4/29/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? G N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 37°F SNOWING

GAUGE READING START: —

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.45

CONDUCTIVITY: 0.210 mS/cm

TEMPERATURE: 8.90 °C

ORP: 298 mV

DO: 5.84 mg/l

TURBIDITY: 5.4 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: SBW-01_20250429 & SBW-01_20250429_FBLL

SAMPLE TIME: 0950

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. www.MannikSmithGroup.com

SAMPLE LOCATION: TBN-01

DATE: 5/1/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 51°F Cloudy

GAUGE READING START: —

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	8.25		ORP	165	mV
CONDUCTIVITY	0.376	mS/cm	DO	11.57	mg/l
TEMPERATURE	11.62	°C	TURBIDITY	47.2	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: TBN-01-20250501 & TBN-01-20250501-FBLL

SAMPLE TIME: 1145

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: TBS-01

DATE: 5/1/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 51°F cloudy

GAUGE READING START: —

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	8.05		ORP	164	mV
CONDUCTIVITY	0.601	mS/cm	DO	11.35	mg/l
TEMPERATURE	12.44	°C	TURBIDITY	14.8	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: TBS-01-20250501 & TBS-01-20250501-FBLK

SAMPLE TIME: 1115

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

APPENDIX B
PHOTOGRAPH LOG



Photo 1: ARC-01 facing east (04-28-2025)



Photo 2: ARC-02 facing north (05-06-2025). Ponding from beaver activity.



Photo 3: ARC-03 facing west (04-28-2025)



Photo 4: BNC-01 facing northeast (05-06-2025)



Photo 5: BNW-01 facing north (05-05-2025)



Photo 6: CBR-01 facing northeast (05-06-2025)



Photo 7: CBR-02 facing southeast (05-06-2025). Note bent over staff gauge.



Photo 8: DKC-01 facing southeast (04-28-2025)



Photo 9: DKC-02 facing southwest (05-07-2025)



Photo 10: DKC-03 facing west (04-29-2025)



Photo 11: LKS-01 facing northwest (04-30-2025)



Photo 12: LKS-02 facing northwest (05-01-2025)



Photo 13: MLC-01 facing northwest (04-29-2025)



Photo 14: MLR-01 facing north (04-28-2025)



Photo 15: MLR-02 facing west (05-05-2025)



Photo 16: MLR-03 facing west (04-30-2025)



Photo 17: NTC-01 facing southwest (04-30-2025)



Photo 18: PNC-01 facing northwest (04-28-2025). Note animal trap to left of staff gauge.



Photo 19: PNC-02 facing east (05-05-2025). Ponding from beaver activity.



Photo 20: PNC-03 facing southeast (05-07-2025)



Photo 21: PNC-04 facing southeast (05-01-2025). Bent over staff gauge.



Photo 22: PRC-01 facing east (05-07-2025)



Photo 23: PRC-02 facing south (05-01-2025)



Photo 24: PTC-01 facing west (04-29-2025)



Photo 25: SBD-01 facing south (04-29-2025)



Photo 26: SBW-01 facing south (04-29-2025)



Photo 27: TBN-01 facing southwest (05-01-2025)



Photo 28: TBS-01 facing northwest (05-01-2025)



Photo 29: ARC-03 facing west (04-28-2025). Note bent over staff gauge.



Photo 30: Path to CBR-01 (05-06-2025)



Photo 31: Path to MW-44 (05-06-2025)



Photo 32: Animal trap at PNC-01 (04-28-2025)



Photo 33: Beaver dam downstream of ARC-02 (05-06-2025)



Photo 34: Downstream of beaver dam near ARC-02, proposed new sampling location (05-06-2025).

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

April & May 2025

Part 2 of 2

June 9, 2025

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Baseline Sampling Field Results for April/May 2025

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in April and May, 2025 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's February 4, 2025 *Proposal for Groundwater and Surface Water Sampling*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). **Figure 1**, *Groundwater Monitoring Locations* and **Figure 2**, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between April 28th and May 8th, 2025, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (**Figure 1**) using low-flow sampling procedures with a peristaltic, bladder, or down-hole centrifugal pump depending on the depth to groundwater and location. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells and prior experience at certain locations. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in ***Table 1****, Groundwater Field Parameter Summary*. Copies of the field sheets are provided in ***Appendix A****, Field Sheets*.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtering for dissolved low level and dissolved methyl mercury samples was conducted at a controlled location within WPC's White Pine office using FlipMate™ 50 Filtration System

0.45 um filters. A field blank for low level mercury (FB-02_20250507_FBLL) was also collected at the filtering location. The filters were manufacturer certified for background metals to be less than 0.0005 micrograms per liter (ug/L) mercury.

Trace Analytical Laboratories, Inc. (Trace) previously provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was re-used between sampling events for sample collection. The teflon tubing used during sample collection was retained for reuse during subsequent sampling events and is was stored at MSG's Houghton, Michigan office between sampling events. Existing poly tubing encountered in many of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection.

MSG collected a total of 28 groundwater samples, plus one complete field blank, duplicate from MW-2A (DUP-01-GW_20250505), and a matrix spike/matrix spike duplicate (MS/MSD) from MW-5A. During this sampling event, MW-2SB was once again gauged but not sampled.

SURFACE WATER GAUGING AND SAMPLING

Between April 28th and May 8th, 2025, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (**Figure 2**) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure (SOP) 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein.

An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements at most of the stream locations. Locations ARC-02 and PRC-02 were sampled but deemed unsafe for wading to collect depth and velocity readings due to the high water levels and/or fast current. Copies of the stream gauging field sheets and stream flow calculation sheets are included in **Appendix A**. Calculated stream flows are summarized in ***Table 2****, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in **Table 2**. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw directly from the surface water body, or from a spare unpreserved bottle filled from the surface water body, and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were processed at WPC's White Pine office using FlipMate™ 50 Filtration System 0.45 um filters as described above.

MSG collected a total of 28 surface water samples. A duplicate sample from NTC-01 (DUP-01-SW_20250430), a MS/MSD from DKC-03, and a field blank were also collected. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. Photographs of the stream gauging and sampling locations are provided in ***Appendix B****, Photograph Log.*

RECOMMENDATIONS

MSG recommends considering alternative sampling locations for ARC-02 and PNC-02. These sampling conditions have significantly changed since the first sampling event in the summer of 2024 due to beaver activity damming the streams. The stream blockages have resulted in the water depths increasing (flooding the valleys) and water flow to become nearly stagnant. MSG proposes moving the sampling and gauging locations downstream of the dams for a

better representation of stream conditions and for safer wading to collect gauging data. Photos of current conditions are provided in ***Appendix B****, Photograph Log.*

MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,



Jed Chrestensen, P.E.
Project Manager

FIGURES

Lake Superior
LKS-01
LKS-02
PTC-01
NTC-01
MLC-01
PNC-04
DKC-03
CBR-02
M 64
MLR-03
PRC-02
Native Creek
Patent Creek
Miles Creek
Stony Creek
Duck Creek
ARC-03
BNC-01
Little Iron River
Mineral River
Perch Creek
Ash Creek
PNC-03
DKC-02
PRC-01
BNW-01
TBN-01
Townline Rd
L P Walsh Rd
Floodwood River
MLR-02
Big Iron River
M 64
TBS-01
Caribou Creek
ARC-02
PNC-02
Little Cranberry River
SBD-01
SBW-01
West Branch Duck Creek
East Branch Duck River
Argentine Creek
Halfway Creek
Town Line Creek
Cranberry River
Potato Farm Rd
ARC-01
PNC-01
L P Walsh Rd
DKC-01
CBR-01
MLR-01
Patent Creek
Caribou Creek
Pine Creek
Calf Creek
Tolfrey Creek
Paystreak Creek
Federal Forest Road 630
Cranberry River
Old M 64
Anderson Creek
Mineral River
Sleepy Creek
Sandhill Creek
Bush Creek

LEGEND

- Water Quality Sampling Location
- Water Quality and Flow Monitoring Station
- Water Quality and Continuous Flow Monitoring Station
- Major Road
- Minor Road
- River/Stream
- Lake/Pond

NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

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This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:	
Drawn By: BJW1	Checked By: JMW3	Project: 23W200

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APPENDIX B
PHOTOGRAPH LOG



Photo 1: ARC-01 facing east (04-28-2025)



Photo 2: ARC-02 facing north (05-06-2025). Ponding from beaver activity.



Photo 3: ARC-03 facing west (04-28-2025)



Photo 4: BNC-01 facing northeast (05-06-2025)



Photo 17: NTC-01 facing southwest (04-30-2025)



Photo 18: PNC-01 facing northwest (04-28-2025). Note animal trap to left of staff gauge.



Photo 19: PNC-02 facing east (05-05-2025). Ponding from beaver activity.



Photo 20: PNC-03 facing southeast (05-07-2025)

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

August 2025

September 24, 2025

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Baseline Sampling Field Results for August 2025

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in August 2025 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's February 4, 2025 *Proposal for Groundwater and Surface Water Sampling*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). Figure 1, *Groundwater Monitoring Locations* and Figure 2, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between August 4th and August 13th, 2025, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (Figure 1) using low-flow sampling procedures with a peristaltic, bladder, or down-hole centrifugal pump depending on the depth to groundwater and location. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells and prior experience at certain locations. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in *Table 1, Groundwater Field Parameter Summary*. Copies of the field sheets are provided in *Appendix A, Field Sheets*.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtering for dissolved low level and dissolved methyl mercury samples was conducted at a controlled location within WPC's White Pine office using FlipMate™ 50 Filtration System

0.45 um filters. A field blank for low level mercury (FB-02_20250812_FBLL) was also collected at the filtering location. The filters were manufacturer certified for background metals to be less than 0.0005 micrograms per liter (ug/L) mercury.

Trace Analytical Laboratories, Inc. (Trace) previously provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was re-used between sampling events for sample collection. The Teflon tubing used during sample collection was retained for reuse during subsequent sampling events and is was stored at MSG's Houghton, Michigan office between sampling events. Existing poly tubing encountered in many of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection. Pressure transducers encountered at six locations were temporarily removed from the monitoring wells to facilitate groundwater sampling, then re-installed.

MSG collected a total of 28 groundwater samples, plus one complete field blank, duplicate from MW-2A (DUP-01-GW_20250805), a matrix spike/matrix spike duplicate (MS/MSD) from MW-3A, and an equipment blank from the bladder pump. During this sampling event, MW-2SB was once again gauged but not sampled.

SURFACE WATER GAUGING AND SAMPLING

Between August 4th and August 13th, 2025, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (Figure 2) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure (SOP) 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein.

An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements at most of the stream locations. Locations ARC-02 and PNC-02 were relocated upstream of their previous sampling locations due to beaver activity damming the streams and creating ponds. MSG was able to collect a sample for PNC-02 but was unable to locate a safe area for wading due to the ponded water depths. The new sampling points were located at:

- ARC-02 = 46.77648633 degrees north and 89.45904353 degrees west
- PNC-02 = 46.76986812 degrees north and 89.50415613 degrees west

Copies of the stream gauging field sheets and stream flow calculation sheets are included in Appendix A. Calculated stream flows are summarized in *Table 2, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in Table 2. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw directly from the surface water body, or from a spare unpreserved bottle filled from the surface water body, and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were processed at WPC's White Pine office using FlipMate™ 50 Filtration System 0.45 um filters as described above.

MSG collected a total of 27 surface water samples. A duplicate sample from NTC-01 (DUP-01-SW_20250806), a MS/MSD from DKC-03, and a field blank were also collected. Location MLC-01 was dry. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. Photographs of the stream gauging and sampling locations are provided in *Appendix B, Photograph Log.*

DISCUSSION AND RECOMMENDATIONS

Beaver activity has significantly changed the landscape around the ARC-02 and PNC-02 locations since the initial baseline sampling event in the summer of 2024. MSG conducted reconnaissance both upstream and downstream from the original ARC-02 location and observed at least a dozen beaver dams within approximately 1,000 feet of the original sampling location. Similar conditions are present near PNC-02.

The Standard Operating Procedure for Channel/Stream Flow Rate –Site Selection Criteria states that "As a rule, the stream should be straight for a distance upstream and downstream of the measuring cross-section that is the greater of the two: 1) at least three channel widths, or 2) at least 300 feet." Additionally, "The stream flow site is at least 100 feet upstream/downstream of a narrowing or widening of the stream channel due to natural conditions (i.e., tree fall, meandering stream, confluences with other streams)" At ARC-02 and PNC-02, MSG was unable to locate new sampling locations that met both of those criteria due to the beaver activity. An accessible position along the stream that appeared minimally ponded was selected as an alternative for ARC-02, however the water was nearly stagnant. A slightly less ponded location that could be safely accessed was selected as an alternative for PNC-02, but the ponded water depths prevented wading and stream gauging. MSG recommends that these stream sections be evaluated for beaver control and dam removal if possible.

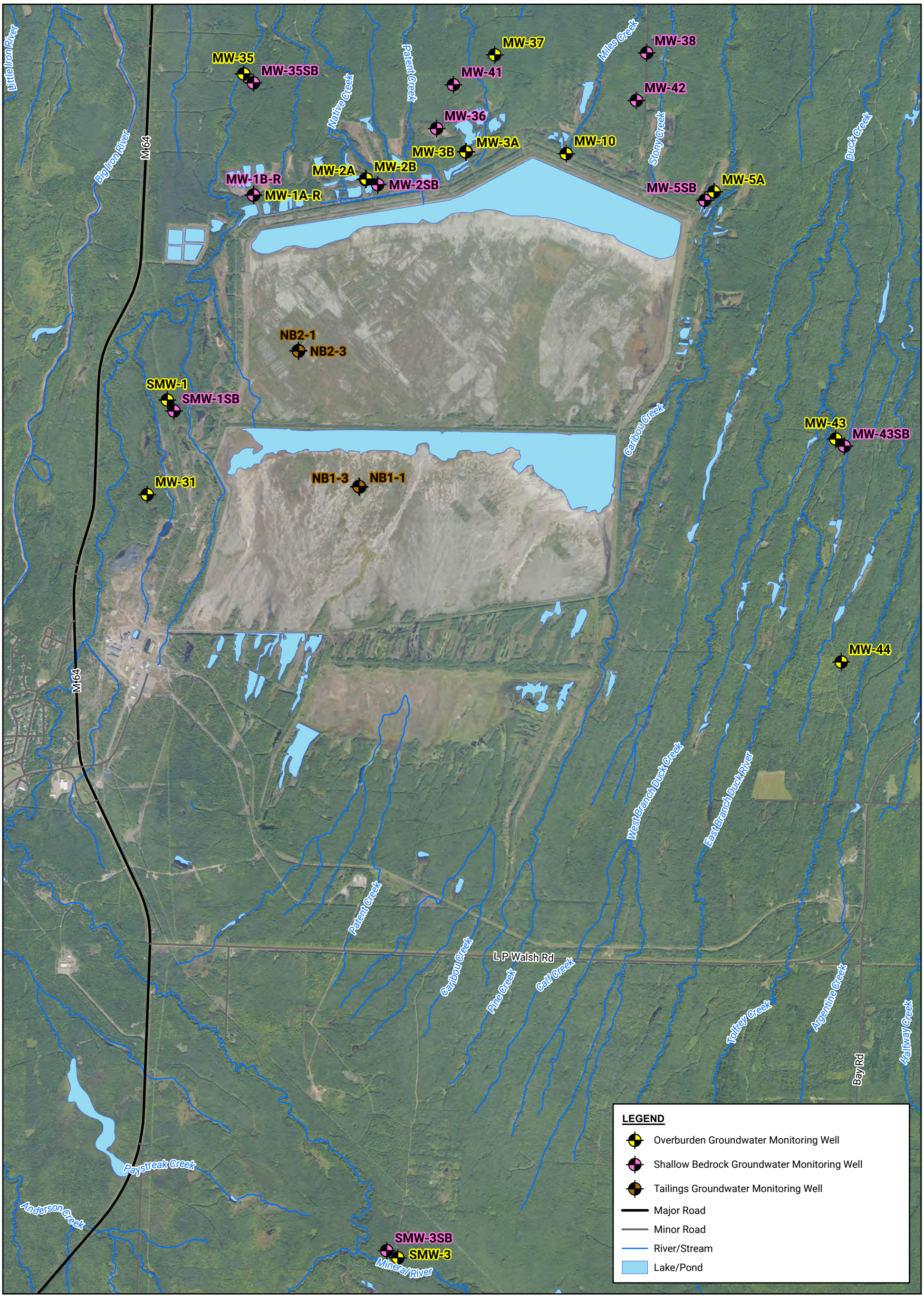
MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,



Jed Chrestensen, P.E.
Project Manager

FIGURES



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

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WHITE PINE COPPER LLC

FIGURE 1

GROUNDWATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 24W005	

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Lake Superior
LKS-01
LKS-02
PTC-01
NTC-01
MLC-01
PNC-04
DKC-03
CBR-02
M 64
MLR-03
PRC-02
Native Creek
Patent Creek
Miles Creek
Stony Creek
Duck Creek
ARC-03
BNC-01
Little Iron River
Mineral River
Perch Creek
Ash Creek
PNC-03
DKC-02
PRC-01
BNW-01
TBN-01
Townline Rd
L P Walsh Rd
Floodwood River
MLR-02
Big Iron River
TBS-01
Caribou Creek
ARC-02
PNC-02
Little Cranberry River
SBD-01
SBW-01
West Branch Duck Creek
East Branch Duck River
Argentine Creek
Halfway Creek
Town Line Creek
Cranberry River
Potato Farm Rd
PNC-01
DKC-01
ARC-01
CBR-01
MLR-01
Patent Creek
Caribou Creek
Pine Creek
Calf Creek
Tolfrey Creek
Paystreak Creek
Federal Forest Road 630
Cranberry River
Old M 64
Anderson Creek
Mineral River
Sandy'll Creek
Bush Creek
Sleepy Creek

LEGEND

- Water Quality Sampling Location
- Water Quality and Flow Monitoring Station
- Water Quality and Continuous Flow Monitoring Station
- Major Road
- Minor Road
- River/Stream
- Lake/Pond

NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
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WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:	
Drawn By: BJW1	Checked By: JMW3	Project: 23W200

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TABLES

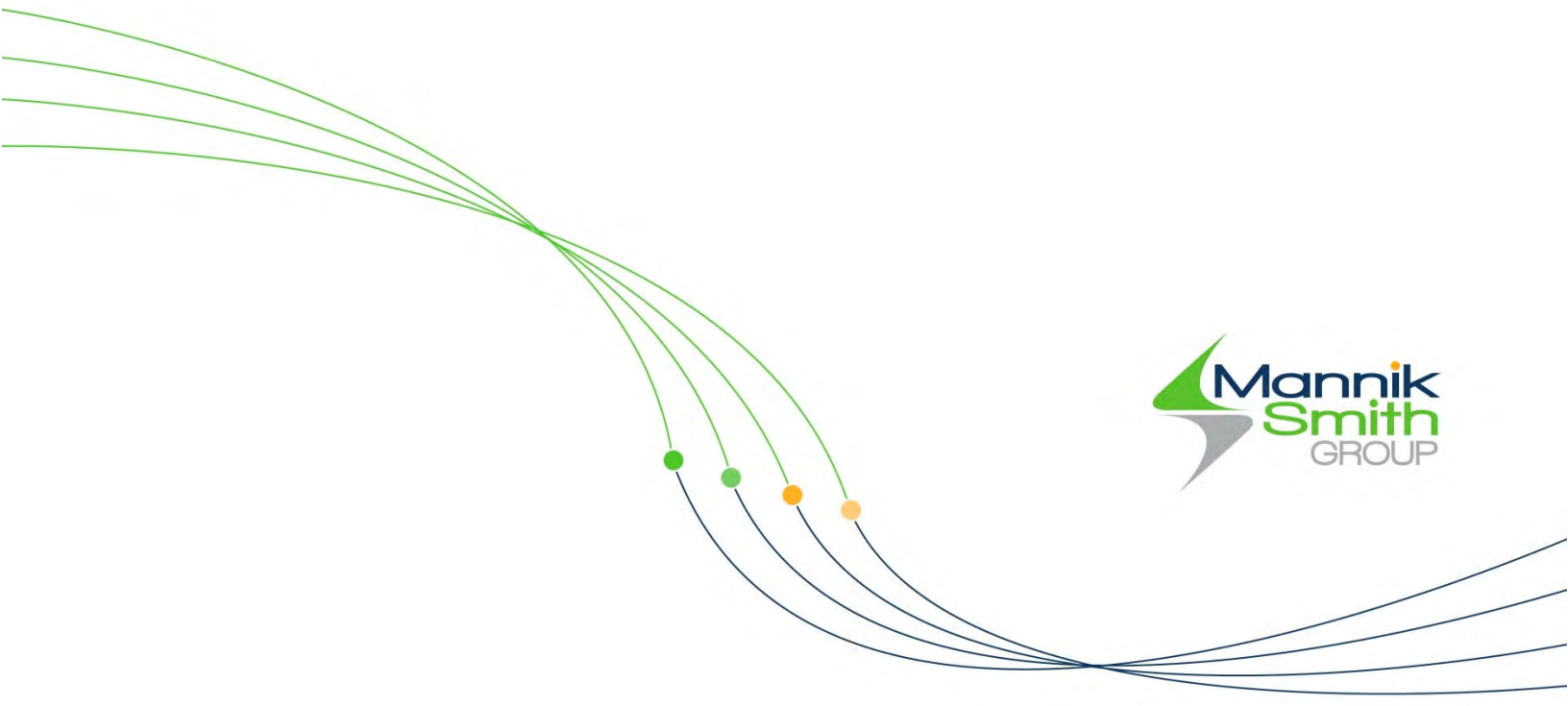


TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-1AR	7/31/2024	9.51	16.98	8.05	136	0.659	1.7	0.42	100
	9/30/2024	10.92	12.99	7.24	157	0.729	6.3	0.00	200
	12/5/2024	11.73	8.07	8.26	175	0.706	8.6	12.19	200
	2/24/2025	10.97	7.61	7.91	136	0.777	29.1	4.87	200
	5/6/2025	9.97	10.06	7.76	176	0.685	31.1	3.27	200
	8/6/2025	9.59	18.03	7.94	105	0.498	0.3	0.80	200
MW-1BR	7/31/2024	9.56	20.90	7.85	-124	0.707	23.7	0.00	100
	9/30/2024	10.78	12.94	7.71	-57	0.859	3.9	0.00	200
	12/5/2024	11.94	6.20	8.06	32	0.796	0.0	11.78	200
	2/24/2025	11.11	8.01	7.77	94	0.888	1.5	0.92	200
	5/6/2025	10.56	11.31	7.89	149	0.704	20.9	8.95	200
	8/6/2025	9.66	15.39	7.86	28	0.591	0.0	0.23	200
MW-2A	8/1/2024	10.59	14.18	7.30	-189	1.230	72.8	0.24	200
	10/1/2024	10.75	13.15	7.42	-162	1.350	0.0	0.00	200
	12/10/2024	6.24	6.88	7.76	-68	1.36	9.5	0.00	200
	2/25/2025	5.81	6.56	7.27	66	1.44	5.7	0.83	200
	5/5/2025	5.62	16.72	6.76	-78	1.14	1.0	0.81	100
	8/5/2025	9.31	17.97	7.19	-142	0.927	8.0	0.29	200
MW-2B	8/1/2024	11.21	15.70	7.15	-3	0.937	6.8	0.33	200
	10/1/2024	10.73	15.34	7.24	22	1.170	16.2	4.39	200
	12/10/2024	6.40	8.59	7.86	118	1.09	9.3	0.66	200
	2/25/2025	6.32	6.27	7.25	131	1.09	11.8	1.87	200
	5/5/2025	6.08	15.99	6.90	103	0.82	4.0	0.50	200
	8/5/2025	9.39	18.39	7.18	-74	0.703	49.0	0.27	200
MW-2SB	12/17/2024	85.72	--	--	--	--	--	--	--
	2/25/2025	84.18	--	--	--	--	--	--	--
	5/5/2025	83.89	--	--	--	--	--	--	--
	8/5/2025	83.55	--	--	--	--	--	--	--
MW-3A	7/30/2024	10.94	21.99	7.13	-46	1.580	103	0.20	200
	10/1/2024	12.69	15.82	7.14	-87	2.080	19.2	0.00	200
	12/10/2024	8.54	8.01	7.65	-42	2.49	1.8	0.00	200
	2/26/2025	5.58	6.68	7.14	-58	2.51	3.1	1.16	200
	4/28/2025	5.12	10.21	7.05	4	2.36	14.8	0.67	200
	8/4/2025	9.62	15.38	7.09	-97	1.88	0.8	0.58	200
MW-3B	7/30/2024	10.74	13.46	7.19	-216	0.903	0.0	0.19	200
	10/1/2024	12.18	15.83	7.20	-60	1.580	0.0	0.55	200
	12/10/2024	7.99	5.43	8.00	102	0.969	0.0	5.68	200
	2/26/2025	5.03	5.87	7.30	162	1.02	2.9	3.01	200
	5/5/2025	4.64	9.20	7.28	176	0.818	3.0	0.69	200
	8/5/2025	9.25	15.12	7.06	159	0.774	2.4	1.21	200
MW-5A	7/30/2024	11.84	18.60	7.36	72	1.340	0.0	1.66	200
	10/2/2024	9.19	14.38	7.21	46	1.650	1.9	0.00	200
	12/9/2024	3.55	10.57	7.98	27	1.48	0.0	10.45	200
	2/26/2025	3.39	5.11	7.29	168	1.66	4.3	2.86	200
	5/7/2025	3.84	9.52	7.30	200	1.36	6.1	0.38	200
	8/4/2025	8.54	15.04	7.29	-161	1.12	4.7	0.29	200
MW-5SB	9/30/2024	0.05	23.30	8.55	-35	2.060	190.0	2.10	200
	12/9/2024	0.00	8.27	9.33	-87	1.27	9.0	0.00	200
	3/10/2025	0.00	12.24	8.96	-106	1.42	96	0.86	200
	5/7/2025	0.00	10.51	8.73	-82	2.14	128	7.57	200
	8/4/2025	0.00	15.17	8.38	-159	1.98	3.4	0.48	200
MW-10	8/6/2024	5.82	14.77	6.10	-24	2.330	0.4	0.00	150
	9/30/2024	5.81	18.64	6.43	-54	2.490	3.6	0.00	200
	12/3/2024	4.90	7.71	7.02	-78	2.59	7.9	0.00	200
	2/25/2025	4.76	7.57	6.62	-35	2.63	7.1	0.82	200
	5/7/2025	4.45	11.17	6.71	-93	2.32	38.4	0.52	200
	8/4/2025	5.78	16.08	6.60	-150	1.89	9.8	0.48	200
MW-31	7/30/2024	50.71	12.47	8.10	51	0.359	>1000	0.00	200
	10/7/2024	49.50	10.26	8.97	-30	0.397	278	0.50	200
	12/9/2024	48.67	6.10	8.10	37	0.347	>1000	1.23	200
	3/11/2025	51.37	4.30	8.36	83	0.450	102	2.89	200
	4/29/2025	50.12	7.00	8.31	206	0.384	>1000	6.99	200
	8/12/2025	51.45	15.63	8.33	-65	0.376	>1000	7.86	200
MW-35	7/28/2024	16.63	--	--	--	--	--	--	--
	9/30/2024	19.78	9.46	9.40	152	0.612	28.3	3.19	100
	12/3/2024	20.13	5.41	8.09	154	0.462	180	9.96	100
	3/10/2025	17.25	7.85	10.19	321	0.413	163	5.66	100
	4/30/2025	16.14	19.46	7.45	77	0.341	123	0.72	100
	8/12/2025	16.92	20.52	7.55	133	0.376	671	1.39	100
MW-35SB	12/17/2024	26.59	5.58	8.84	168	0.554	>1000	9.58	100
	3/10/2025	21.09	7.65	8.67	-215	0.617	>1000	0.89	500
	5/7/2025	18.18	9.53	7.63	143	0.503	>1000	7.82	200
	8/11/2025	19.06	14.61	8.75	90	0.394	657	1.38	400
MW-36	7/28/2024	6.83	19.53	7.17	-207	0.668	261	0.58	200
	9/30/2024	5.94	20.43	8.10	-155	0.667	49.9	0.68	200
	12/3/2024	2.93	6.78	8.11	126	0.587	12.5	0.25	200
	3/4/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.15	17.67	7.00	-105	0.592	4.8	0.23	200
	8/11/2025	4.54	22.12	7.17	-99	0.682	14.8	1.81	200
MW-37	7/28/2024	14.11	24.22	7.34	-69	0.438	89.8	0.85	200
	10/2/2024	16.81	11.55	8.03	-11	0.534	24.7	1.83	200
	12/3/2024	16.94	8.88	8.53	145	0.413	13.6	10.54	200
	3/4/2025	11.62	3.58	11.59	356	0.473	27.0	9.81	200
	5/1/2025	8.78	10.50	7.31	179	0.402	3.4	5.42	200
	8/11/2025	14.91	14.00	7.51	114	0.529	48.1	4.40	100

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-38	7/28/2024	12.31	11.70	7.66	115	0.525	0.0	0.94	200
	10/7/2024	15.95	10.22	7.32	142	0.570	3.9	0.00	200
	12/3/2024	16.11	7.01	8.65	192	0.597	4.3	2.47	200
	3/4/2025	9.97	6.40	8.65	269	0.614	15.1	4.03	200
	5/7/2025	6.42	8.80	7.69	147	0.446	4.9	4.81	200
	8/6/2025	11.25	15.31	7.66	136	0.324	0.0	0.58	200
MW-41	7/24/2024	7.90	14.99	7.40	164	0.539	78.1	9.10	200
	9/30/2024	28.33	14.70	8.43	172	0.610	172	5.89	100
	12/3/2024	28.64	--	--	--	--	--	--	--
	3/4/2025	25.94	2.33	10.42	329	0.582	35.8	8.51	100
	5/1/2025	24.38	13.87	7.84	110	0.406	92.2	7.00	100
	8/11/2025	25.85	20.60	7.86	159	0.610	107	5.73	100
MW-42	7/28/2024	5.62	16.37	8.50	51	0.354	0.0	3.45	200
	10/7/2024	8.42	12.70	8.71	106	0.316	35.8	0.56	200
	12/3/2024	6.95	5.74	8.91	174	0.315	11.9	2.16	200
	3/4/2025	3.94	5.66	9.76	255	0.332	148	4.91	200
	5/7/2025	3.59	11.70	9.11	113	0.276	18.7	3.20	200
	8/6/2025	5.14	16.96	9.06	68	0.222	116	2.22	200
MW-43	7/31/2024	13.61	18.32	8.02	-33	0.419	274	0.40	200
	9/25/2024	17.31	11.93	7.98	167	0.501	17.7	0.00	200
	12/4/2024	15.54	7.43	8.21	134	0.452	38.1	0.00	200
	2/26/2025	10.47	6.69	8.87	323	0.511	50.3	0.00	200
	5/6/2025	8.78	11.00	7.96	112	0.447	61.0	0.76	200
	8/5/2025	12.31	12.37	8.03	204	0.506	30.1	0.87	200
MW-43SB	10/1/2024	3.65	12.23	8.51	17	4.520	1.7	1.51	150
	12/16/2024	Frozen	--	--	--	--	--	--	--
	2/27/2025	8.38	6.53	7.24	73	4.74	33.5	1.26	200
	5/6/2025	17.74	15.02	7.18	60	4.17	14.3	5.8	200
	8/5/2025	0.43	16.30	7.14	94	4.33	3.4	1.16	200
MW-44	7/31/2024	15.10	13.58	7.69	-194	0.614	50.6	0.06	200
	9/25/2024	17.89	13.72	8.38	-141	0.809	89.4	0.00	200
	12/4/2024	17.21	8.74	8.33	-61	0.633	15.0	0.00	200
	2/26/2025	14.63	6.00	8.76	285	0.800	18.4	0.00	200
	5/6/2025	13.44	13.06	8.20	140	0.690	48.1	1.74	200
	8/5/2025	14.85	14.20	7.93	-107	0.738	8.2	0.83	200
NB1-1	7/24/2024	5.61	13.20	6.86	-128	1.290	0.0	0.16	200
	10/2/2024	5.78	16.04	7.74	-228	1.080	29.0	0.00	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.59	6.01	8.08	-85	1.19	25.1	0.00	200
	5/5/2025	2.70	13.64	8.23	-262	1.05	18.1	0.37	200
	8/7/2025	5.62	18.63	7.82	-280	0.972	6.3	0.54	200
NB1-3	7/24/2024	6.21	13.64	7.89	-273	1.000	54.2	0.31	200
	10/2/2024	6.47	14.05	7.82	-175	1.000	22.3	0.37	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.93	7.07	7.97	86	1.03	46.3	0.00	200
	5/5/2025	2.94	16.79	7.50	-125	0.846	17.6	0.22	200
	8/7/2025	5.85	21.78	7.37	-156	0.88	8.5	1.45	200
NB2-1	7/24/2024	6.45	17.91	6.93	-166	2.260	62.4	0.32	200
	9/30/2024	6.21	25.97	7.21	-124	2.020	0.0	0.10	100
	12/2/2024	2.66	7.19	8.10	-177	1.10	13.7	0.00	200
	3/3/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.56	10.23	7.41	-255	0.974	4.9	0.49	200
	8/12/2025	6.33	19.10	6.93	-62	2.24	40.4	0.82	200
NB2-3	7/24/2024	6.25	13.99	6.54	-42	1.110	0.0	0.00	200
	9/30/2024	5.80	26.73	7.88	-189	0.889	0.0	0.01	200
	12/2/2024	2.96	8.18	8.40	-78	1.03	14.9	13.01	200
	3/3/2025	2.57	7.87	8.45	14	1.12	20.3	0.00	200
	4/30/2025	2.69	13.72	7.54	-119	1.03	9.1	1.20	200
	8/12/2025	5.74	17.22	7.44	-76	1.10	80.4	3.59	200
SMW-1	7/25/2024	23.52	9.22	8.21	-84	0.403	73.0	14.06	200
	10/2/2024	23.90	10.08	8.12	-106	0.463	212.0	0.00	200
	12/9/2024	24.79	8.17	8.32	107	0.337	71.9	0.00	200
	3/3/2025	24.25	8.32	8.85	82	0.388	119	1.94	200
	4/29/2025	23.70	6.64	8.20	178	0.371	794	9.18	200
	8/13/2025	23.71	11.12	7.85	155	0.401	9.4	1.80	200
SMW-1SB	12/9/2024	25.15	5.58	8.99	134	0.362	73.2	15.83	200
	3/3/2025	25.35	9.08	9.60	158	0.399	108	7.95	200
	4/30/2025	21.37	8.01	8.39	37	0.195	16.9	8.59	200
	8/13/2025	23.43	12.74	9.01	-49	0.368	6.1	7.14	200
SMW-3	8/6/2024	27.68	10.84	8.14	88	0.262	11.1	5.41	200
	10/2/2024	27.66	12.52	8.58	-125	0.249	14.7	0.00	200
	12/4/2024	27.18	7.36	8.39	-60	0.272	8.7	10.74	200
	3/6/2025	26.85	8.65	8.38	69	0.265	21.6	0.00	200
	5/8/2025	27.02	14.14	8.19	-64	0.212	5.8	4.13	100
	8/7/2025	27.40	13.71	8.69	-164	0.191	3.7	2.70	200
SMW-3SB	12/4/2024	22.98	--	--	--	--	--	--	--
	3/6/2025	22.69	7.27	9.05	255	0.556	36.9	0.00	200
	5/8/2025	22.84	9.77	9.27	54	0.510	13.9	1.14	200
	8/7/2025	23.14	15.54	9.12	-32	0.400	0.9	0.94	200

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

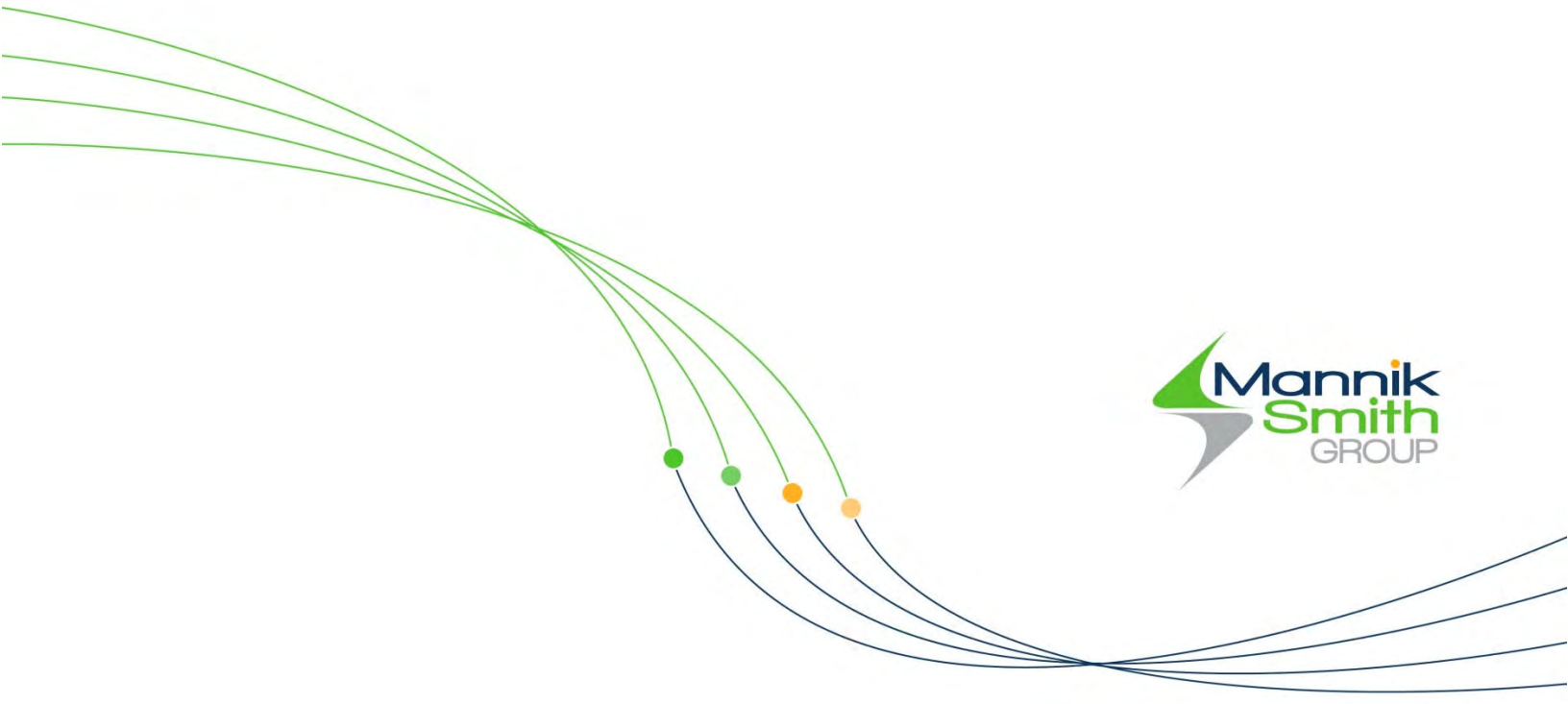
SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
ARC-01	7/31/2024	6.89	0.129	20.68	122	2.80	8.0	0.008	1.4	--
	9/25/2024	6.79	0.223	11.67	194	2.61	2.4	0.017	4.7	0.84
	12/5/2024	8.22	0.098	1.26	178	11.75	0.0	0.058	3.5	1.00
	3/11/2025	9.26	0.116	0.38	237	10.30	4.4	4.110	19.8	2.98
	4/28/2025	7.09	0.070	10.57	227	10.28	5.6	0.496	6.1	1.20
	8/4/2025	6.46	0.192	16.67	285	5.70	6.8	-0.043	5.4	1.00
ARC-02	7/31/2024	7.72	0.153	19.32	120	1.93	25.8	0.125	11.5	--
	9/25/2024	7.40	0.129	14.76	159	5.05	12.6	0.229	20.0	--
	12/4/2024	8.52	0.158	0.32	158	6.56	733	0.427	34.0	--
	2/27/2005	8.77	0.064	1.19	280	7.56	40.8	2.310	61.0	--
	5/6/2025	6.53	0.080	15.00	209	5.29	26.7	Unsafe Conditions		--
	8/5/2025	6.48	0.138	18.06	137	1.65	37.1	-0.040	8.3	--
ARC-03	8/6/2024	--	--	--	--	--	--	Dry		--
	9/26/2024	8.04	0.255	11.59	91	7.98	28.3	0.030	8.0	0.62
	12/11/2024	8.15	0.093	0.07	199	16.25	32.6	2.162	14.2	1.50
	3/6/2025	7.55	0.082	1.87	150	10.42	11.7	14.180	13.0	2.78
	4/28/2025	7.06	0.066	11.19	282	10.65	7.5	3.239	10.7	Bent
	8/13/2025	7.57	0.202	18.34	149	5.71	2.0	0.018	8.0	0.72
BNC-01	8/6/2024	7.39	0.179	22.83	115	8.21	0.0	No Stream Gauging		--
	10/8/2024	8.79	0.158	14.53	45	6.90	0.0	No Stream Gauging		--
	12/11/2024	8.12	0.143	0.00	161	4.2	700	No Stream Gauging		--
	3/11/2025	7.14	0.143	1.56	-5	4.04	0.0	No Stream Gauging		--
	5/6/2025	7.09	0.120	21.95	124	7.41	5.1	No Stream Gauging		--
	8/6/2025	7.12	0.143	24.56	271	5.6	2.9	No Stream Gauging		--
BNW-01	7/31/2024	7.12	0.184	28.77	111	7.80	2.1	No Stream Gauging		--
	10/8/2024	8.15	0.223	13.65	41	8.37	211	No Stream Gauging		--
	12/11/2024	8.42	0.152	1.49	211	15.75	25.6	No Stream Gauging		--
	2/25/2025	7.49	0.219	2.53	156	9.11	0.0	No Stream Gauging		--
	5/5/2025	7.88	0.218	18.32	156	9.81	11.9	No Stream Gauging		--
	8/6/2025	8.91	0.152	25.41	208	5.60	2.7	No Stream Gauging		--
CBR-01	7/29/2024	8.16	0.242	24.54	177	8.90	0.0	No Stream Gauging		--
	9/25/2024	7.77	0.295	12.08	175	6.96	1.2	No Stream Gauging		--
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	2/27/2025	8.74	0.092	0.07	348	11.27	32.8	No Stream Gauging		--
	5/6/2025	6.86	0.068	16.47	200	8.75	13.6	No Stream Gauging		--
	8/5/2025	8.53	0.201	23.39	185	6.53	9.8	No Stream Gauging		--
CBR-02	8/6/2024	7.97	0.246	26.38	92	6.70	0.0	No Stream Gauging		--
	10/3/2024	8.10	0.261	13.84	106	7.32	12.2	No Stream Gauging		3.55
	12/17/2024	8.30	0.118	0.75	229	10.09	39.2	No Stream Gauging		3.20
	3/4/2025	7.42	0.119	1.04	130	11.02	43.9	No Stream Gauging		3.70
	5/6/2025	7.38	0.074	12.26	68	11.60	4.2	No Stream Gauging		Bent
	8/11/2025	7.41	0.163	23.42	114	3.82	0.0	No Stream Gauging		3.56
DKC-01	7/29/2024	--	--	--	--	--	--	Dry		--
	9/23/2024	--	--	--	--	--	--	Dry		--
	12/5/2024	7.83	0.159	0.59	250	14.81	0.0	0.131	6.8	--
	3/11/2025	7.99	0.160	-0.02	325	12.12	0.9	9.990	12.0	--
	4/28/2025	7.25	0.060	8.22	208	12.06	37.5	6.028	8.8	--
	8/4/2025	7.57	0.167	16.20	331	7.44	0.6	-0.004	4.1	--
DKC-02	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	7.65	0.152	18.34	168	9.39	2.5	0.081	16.0	--
	12/17/2024	7.30	0.081	0.06	189	16.12	24.7	11.557	22.5	--
	2/26/2025	8.26	0.075	0.03	298	11.02	16.5	7.040	24.8	--
	5/7/2025	6.63	0.065	11.43	191	10.88	10.2	3.737	21.5	--
	8/13/2025	7.67	0.126	19.46	154	6.18	2.3	0.020	8.2	--
DKC-03	8/6/2024	7.52	0.213	25.28	151	5.21	0.0	No Stream Gauging		--
	9/26/2024	7.83	0.163	14.36	151	6.67	8.7	No Stream Gauging		--
	12/16/2024	7.50	0.087	1.63	237	13.76	47.7	No Stream Gauging		--
	3/3/2025	7.46	0.077	1.31	136	12.06	6.5	No Stream Gauging		--
	4/29/2025	7.31	0.050	8.40	271	11.11	34.5	No Stream Gauging		--
	8/12/2025	7.43	0.108	24.53	110	5.02	1.2	No Stream Gauging		--
LKS-01	7/28/2024	8.34	0.116	20.87	191	11.12	0.1	No Stream Gauging		--
	10/7/2024	8.91	0.111	13.68	112	9.56	12.4	No Stream Gauging		--
	12/16/2024	7.56	0.212	0.30	236	13.74	37.8	No Stream Gauging		--
	3/4/2025	7.17	0.389	1.22	193	54.3	10.6	No Stream Gauging		--
	4/30/2025	6.88	0.085	10.95	167	11.30	13.2	No Stream Gauging		--
	8/12/2025	8.30	0.082	21.78	85	10.98	10.9	No Stream Gauging		--
LKS-02	7/28/2024	7.69	0.112	21.91	172	11.11	0.0	No Stream Gauging		--
	10/7/2024	9.23	0.108	13.49	42	10.06	1.2	No Stream Gauging		--
	12/16/2024	8.11	0.115	0.70	62	10.79	17.6	No Stream Gauging		--
	3/3/2025	7.50	0.171	0.93	91	11.58	3.1	No Stream Gauging		--
	5/1/2025	6.64	0.054	6.67	170	11.53	13.5	No Stream Gauging		--
	8/12/2025	8.13	0.080	20.94	104	9.37	0.0	No Stream Gauging		--
MLC-01	8/6/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/2/2024	12.12	0.275	3.76	-43	14.59	16.3	0.027	2.5	--
	3/3/2025	7.27	0.218	0.49	173	12.23	9.8	0.170	4.3	--
	4/29/2025	7.23	0.133	8.04	261	10.87	19.5	0.768	4.0	--
	8/6/2025	--	--	--	--	--	--	Dry		--
MLR-01	7/25/2024	7.72	0.148	15.35	150	7.52	0.1	0.311	16.3	--
	9/23/2024	7.95	0.177	16.42	141	9.50	7.7	No Stream Gauging		1.29
	12/16/2024	7.58	0.088	0.36	199	15.08	32.2	No Stream Gauging		2.05
	3/10/2025	8.64	0.071	0.32	361	11.51	43.4	No Stream Gauging		3.71
	4/28/2025	6.81	0.050	8.35	223	12.17	22.4	No Stream Gauging		2.10
	8/13/2025	7.81	0.112	21.31	130	7.03	0.0	0.051	13.9	1.27
MLR-02	7/25/2024	7.41	0.247	19.59	114	7.46	7.4	0.489	28.2	--
	9/24/2024	8.15	0.265	15.97	116	13.09	1.5	0.086	21.0	0.08
	12/16/2024	7.82	0.140	0.31	234	14.4	57.1	2.504	37.5	1.15
	3/11/2025	7.73	0.180	0.00	145	13.67	18	No Stream Gauging		2.65
	5/5/2025	7.11	0.092	10.50	202	10.38	33.6	15.758	35.5	Bent
	8/4/2025	7.72	0.190	20.85	292	6.22	19.6	0.083	25.0	0.15

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
MLR-03	7/25/2024	7.79	0.245	15.87	186	9.27	0.0	0.468	28.2	--
	9/23/2024	8.64	0.283	14.30	31	10.02	1.6	No Stream Gauging		0.71
	12/2/2024	9.17	0.168	0.05	192	21.09	17.5	No Stream Gauging		1.30
	2/25/2025	7.88	0.241	-0.10	299	2.29	23.6	No Stream Gauging		1.26
	4/30/2025	7.13	0.067	9.20	164	11.09	15.8	No Stream Gauging		Bent
	8/6/2025	8.01	0.195	18.55	223	7.68	1.9	No Stream Gauging		Missing
NTC-01	7/22/2024	7.85	0.208	17.79	39	9.55	34.7	0.074	4.8	--
	9/23/2024	7.56	0.225	15.34	-19	2.17	171	0.021	4.0	--
	12/2/2024	9.87	0.252	1.76	56	14.1	12.7	0.016	5.3	--
	2/25/2025	7.93	0.233	0.53	254	8.92	15.6	0.630	7.5	--
	4/30/2025	6.65	0.105	14.11	175	2.20	2.2	0.583	7.0	--
	8/6/2025	7.40	0.143	19.93	234	4.94	2.9	0.001	5.3	--
PNC-01	7/29/2024	6.53	0.119	21.62	171	2.13	1.2	0.008	2.2	--
	9/23/2024	7.33	0.285	16.70	175	1.51	21.6	0.015	2.3	0.83
	12/5/2024	7.22	0.085	0.93	131	10.99	55.1	0.015	1.3	1.00
	3/11/2025	8.91	0.041	0.02	293	12.69	51.7	5.730	4.0	1.90
	4/28/2025	6.83	0.047	9.87	198	10.13	9.2	0.906	3.2	1.32
	8/13/2025	6.84	0.095	20.81	147	0.085	6.6	0.008	2.3	0.83
PNC-02	7/29/2024	7.29	0.293	27.19	72	4.63	41.0	0.068	10.8	--
	9/24/2024	7.73	0.343	17.27	136	12.59	7.9	0.213	53.3	1.22
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	3/10/2025	9.29	0.129	-0.05	289	9.63	230	7.120	55.0	2.09
	5/5/2025	6.95	135	17.87	0.1	7.76	670	1.774	56.0	1.90
	8/4/2025	7.52	0.281	22.14	308	5.16	19.9	Not Accessible		--
PNC-03	8/1/2024	7.79	0.453	20.11	105	4.62	0.0	0.023	4.0	--
	9/24/2024	7.84	0.395	15.97	138	10.22	6.4	0.053	6.3	0.43
	12/9/2024	8.92	0.274	1.72	168	10.26	10.0	3.440	18.9	1.31
	3/10/2025	7.60	0.173	0.42	143	12.94	8.0	17.770	21.0	2.3
	5/7/2025	7.86	0.124	12.94	170	9.16	26.4	3.366	20.5	1.22
	8/6/2025	7.88	0.315	20.16	247	6.67	1.5	-0.032	20.0	0.78
PNC-04	8/7/2024	7.35	0.481	17.08	157	9.73	0.0	0.011	5.3	--
	9/26/2024	7.82	0.412	13.69	138	7.89	2.6	0.082	7.0	0.58
	12/17/2024	8.27	0.241	0.06	276	15.12	19.9	10.975	15.5	1.70
	3/4/2025	7.47	0.179	0.00	136	13.72	11.6	3.330	15.7	--
	5/1/2025	6.85	0.099	9.79	204	11.09	5.6	7.990	21.8	Bent
	8/11/2025	7.90	0.267	20.01	75	8.62	0.0	0.060	4.9	Missing
PRC-01	7/22/2024	8.22	0.972	24.40	110	9.33	47.9	1.011	6.2	--
	9/24/2024	7.37	0.481	18.86	114	7.68	3.3	0.072	7.0	0.20
	12/11/2024	8.11	0.938	0.56	192	13.84	21.1	11.443	16.0	0.75
	3/4/2025	7.54	0.914	0.28	195	13.14	6.8	5.500	15.5	--
	5/7/2025	8.00	0.429	16.32	112	9.34	20.5	16.628	16.0	0.75
	8/6/2025	7.94	0.689	24.25	191	7.86	16.7	0.299	11.0	0.18
PRC-02	7/22/2024	8.05	0.984	19.87	132	11.13	10.6	0.805	5.2	--
	9/23/2024	7.91	1.030	13.89	112	7.33	0.3	0.050	5.0	--
	12/2/2024	8.95	0.821	0.13	-109	19.4	25.6	5.142	6.7	--
	2/25/2025	7.99	0.745	0.13	420	12.63	7.6	1.930	8.0	--
	4/30/2025	6.83	0.381	11.35	162	10.72	14.0	Unsafe Conditions		--
	8/6/2025	7.92	0.701	19.81	240	6.00	2.4	0.153	5.7	--
PTC-01	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/11/2024	8.03	0.215	-0.07	231	14.47	2.7	0.271	9.0	--
	3/6/2025	7.45	0.224	0.83	114	12.02	7.3	0.920	7.3	--
	4/29/2025	7.44	0.12	7.86	258	4.88	4.7	0.579	6.6	--
	8/11/2025	7.73	0.196	19.29	126	6.07	0.0	0.017	7.0	--
SBD-01	7/29/2024	7.65	0.224	28.82	123	5.98	89.5	No Stream Gauging		--
	9/24/2024	7.71	0.246	16.34	33	3.86	132.0	No Stream Gauging		--
	12/10/2024	7.67	0.235	3.89	199	6.18	57.7	No Stream Gauging		--
	2/24/2025	7.31	0.260	1.08	101	0.46	147	No Stream Gauging		--
	4/29/2025	7.28	0.109	10.45	219	6.35	9.5	No Stream Gauging		--
	8/4/2025	6.82	0.159	21.37	251	2.42	7.8	No Stream Gauging		--
SBW-01	7/29/2024	8.17	0.152	26.48	138	5.96	0.0	No Stream Gauging		--
	9/24/2024	7.92	0.191	13.78	121	7.36	10.3	No Stream Gauging		--
	12/10/2024	7.55	0.181	0.46	206	6.64	63.0	No Stream Gauging		--
	2/24/2025	7.32	0.428	0.35	164	7.69	40.5	No Stream Gauging		--
	4/29/2025	7.45	0.21	8.90	298	5.84	5.4	No Stream Gauging		--
	8/4/2025	6.99	0.138	25.17	339	3.44	242	No Stream Gauging		--
TBN-01	7/31/2024	7.13	0.866	25.82	108	8.52	4.4	No Stream Gauging		--
	10/7/2024	7.85	1.030	13.31	143	10.92	29.9	No Stream Gauging		--
	12/11/2024	8.02	0.618	0.19	198	13.83	52.1	No Stream Gauging		--
	2/24/2025	7.46	0.601	0.80	321	4.70	2.8	No Stream Gauging		--
	5/1/2025	8.25	0.376	11.62	165	11.57	47.2	No Stream Gauging		--
	8/6/2025	9.30	0.607	23.61	179	8.13	3.3	No Stream Gauging		--
TBS-01	7/28/2024	7.55	0.754	28.43	120	10.25	0.0	No Stream Gauging		--
	10/8/2024	8.47	1.040	8.60	116	12.87	7.8	No Stream Gauging		--
	12/11/2024	8.30	0.396	4.94	178	11.19	170	No Stream Gauging		--
	2/24/2025	7.46	0.484	0.61	426	6.02	11.1	No Stream Gauging		--
	5/1/2025	8.05	0.601	12.44	164	11.35	14.8	No Stream Gauging		--
	8/13/2025	9.03	2.28	24.71	55	4.29	1.2	No Stream Gauging		--

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

APPENDIX A
FIELD SHEETS



LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8-6-25

PERSONNEL: JD

OBSERVERS:

SAMPLE LOCATION: MW-1AR

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 80°F

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: 1/4" Teflon

DEPTH TO WATER LEVEL: 9.59

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 14:37

MONITORING EQUIPMENT: MSG- Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:40	10.55	20.82	8.14	97	0.470	7.1	1.77	0	200	
1445	11.98	19.12	7.95	105	0.472	1.6	0.88	0.25	↓	
1450	12.33	18.13	7.94	105	0.495	1.2	0.88	0.5	↓	
1455	13.02	18.04	7.94	105	0.499	1.0	0.83	0.75	↓	
1500	13.73	18.03	7.94	105	0.498	0.3	0.80	1.0	↓	
			Sample collected at 15:30							

SAMPLE ID: MW-1AR_20250806 & MW-1AR_20250806_FBLK

SAMPLE DATE: 8-6-25

SAMPLE TIME: 15:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1BR

DATE: 8-6-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 80°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 9.66

PURGE START TIME: 13:07

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1310	10.09	20.66	8.03	116	0.490	0.8	0.92	0	200	
1315	10.22	17.58	7.94	114	0.524	0.0	0.47	0.25		
1320	10.36	17.60	7.92	55	0.550	0.0	0.34	0.5		
1325	10.41	17.32	7.89	-3	0.573	0.0	0.30	0.75		
1330	10.52	16.84	7.88	-1	0.584	0.0	0.27	1.0		
1335	10.63	16.20	7.87	12	0.595	0.0	0.24	1.25		
1340	10.74	15.87	7.87	19	0.592	0.0	0.25	1.50		
1345	10.82	15.63	7.87	24	0.591	0.0	0.24	1.75		
1350	10.94	15.52	7.86	26	0.588	0.0	0.23	2.0		
1355	11.02	15.39	7.86	28	0.591	0.0	0.23	2.25		
		Sample co	lected at		14:20					

SAMPLE ID: MW-1BR_20250806 & MW-1BR_20250806_FBLL

SAMPLE DATE: ~~14:20~~ 8-6-25

SAMPLE TIME: 14:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8-5-25

PERSONNEL: JD

OBSERVERS:

SAMPLE LOCATION: MW-24

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Hazy, 75°F

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: 1/4" Teflon

DEPTH TO WATER LEVEL: 9.31

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 12:17

MONITORING EQUIPMENT: MSG Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1220	9.62	23.13	7.29	-128	0.892	9.6	1.75	0	200	
1225	10.01	19.14	7.20	-138	0.933	7.9	0.75	0.25		
1230	10.40	18.55	7.19	-142	0.930	8.0	0.46	0.5		
1235	10.84	18.19	7.19	-143	0.932	7.2	0.38	0.75		
1240	11.18	18.06	7.19	-143	0.929	8.4	0.32	1.0		
1245	11.65	17.97	7.19	-142	0.927	8.0	0.29	1.25		
			Sample	collected	at	13:20				

SAMPLE ID: MW-2A_20250805 & MW-2A_20250805_FBLL, DUP-01-GW_20250805 & DUP-01-GW_20250805_FBLL

SAMPLE DATE: 8-5-25

SAMPLE TIME: 13:20

Notes: MW-25B DTW - 83.55

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2B

DATE: 8-5-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JO

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Hazy, 80°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 9.39

PURGE START TIME: 14:17

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1420	10.13	26.08	7.32	-70	0.702	55.9	1.50	0	200	
1425	10.34	20.89	7.23	-82	0.731	53.7	0.80	0.25	↑	
1430	10.67	19.44	7.20	-73	0.721	55.2	0.40	0.5		
1435	10.96	18.85	7.19	-70	0.711	55.5	0.33	0.75		
1440	11.19	18.64	7.18	-71	0.705	56.0	0.28	1.0		
1445	11.49	18.43	7.18	-72	0.704	52.1	0.28	1.25		
1450	11.73	18.39	7.18	-74	0.703	49.0	0.27	1.5	↓	
				Sample collected		at	15:20			

SAMPLE ID: MW-2B_20250805 + MW-2B_20250805_FBLL

SAMPLE DATE: 8-5-25

SAMPLE TIME: 15:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3A

DATE: 8-4-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 70°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 9.62

PURGE START TIME: 14:56

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1500	9.98	18.97	7.13	-93	1.84	12.2	1.94	0	200	
1505	10.29	16.64	7.11	-100	1.86	12.2	0.96	0.25		
1510	10.60	16.13	7.09	-92	1.86	9.9	1.90	0.5		
1515	10.75	16.41	7.08	-92	1.85	10.1	2.13	0.75		
1520	10.82	16.17	7.08	-90	1.89	4.9	0.80	1.0		
1525	10.90	15.96	7.08	-92	1.89	3.0	0.46	1.25		
1530	10.95	15.51	7.09	-95	1.88	0.9	0.54	1.5		
1535	11.02	15.38	7.09	-97	1.88	0.8	0.58	1.75	↓	
		Sample	collected at		16:20					

SAMPLE ID: MW-3A_20250804 & MW-3A_20250804_FBLL

SAMPLE DATE: 8-4-25

SAMPLE TIME: 16:20

Notes: MS/MSD collected

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3B

DATE: 8-5-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Hazy, 70°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 9.25

PURGE START TIME: 10:45

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1050	9.60	16.39	7.09	143	0.784	3.1	2.87	0	200	
1055	9.84	15.19	7.07	153	0.782	2.3	1.38	0.25	↓	
1100	10.05	15.24	7.06	157	0.778	2.1	1.23	0.5	↓	
1105	10.28	15.24	7.06	158	0.775	5.4	1.24	0.75	↓	
1110	10.40	15.12	7.06	159	0.774	2.4	1.21	1.0	↓	
~~1150~~			Sample collected at			11:40				

SAMPLE ID: MW-3B_20250805 & MW-3B_20250805_FBLL

SAMPLE DATE: 8-5-25

SAMPLE TIME: 11:40

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-5A

DATE: 8.4.25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 70°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 8.54

PURGE START TIME: 11:12

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
11:15	8.94	16.43	7.39	78	1.12	16.1	2.41	0.0	200	
1120	9.12	15.80	7.32	25	1.11	8.2	1.14	0.25		
1125	9.21	15.63	7.32	11	1.11	10.0	0.65	0.5		
1130	9.30	15.45	7.32	-16	1.11	7.9	0.49	0.75		
1135	9.37	15.40	7.32	-40	1.10	6.5	0.40	1.0		
1140	9.46	15.26	7.31	-65	1.10	5.4	0.35	1.25		
1145	9.48	15.31	7.31	-79	1.10	6.0	0.36	1.5		
1150	9.52	15.34	7.31	-98	1.12	5.8	0.35	1.75		
1155	9.55	15.25	7.30	-118	1.12	5.8	0.31	2.0		
1200	9.57	15.10	7.29	-138	1.12	4.8	0.27	2.25		
1205	9.57	15.07	7.29	-148	1.12	4.9	0.30	2.50		
1210	9.57	15.04	7.29	-161	1.12	4.7	0.29	2.75		
		Sample collected at 12:20								

SAMPLE ID: MW-5A_20250804 & MW-5A_20250804_FDLL

SAMPLE DATE: 8-4-25

SAMPLE TIME: 12:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-55B

DATE: 8-4-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 70°F

DEPTH OF WELL: -

DEPTH TO WATER LEVEL: 0.00

PURGE START TIME: 9:32

SCREEN LENGTH: -

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MS6 Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
9:35	0.0	16.48	7.56	173	0.813	5.1	4.14	0	200	
9:40	0.0	15.56	7.96	20	1.48	3.6	1.86	0.25	|	
9:45	0.0	15.41	8.07	-116	1.84	3.8	1.05	0.5	|	
9:50	0.0	15.31	8.20	-140	1.97	2.5	0.79	0.75	|	
9:55	0.0	15.19	8.31	-155	2.02	3.3	0.62	1.0	|	
1000	0.0	15.14	8.35	-159	2.01	3.9	0.53	1.25	|	
1005	0.0	15.13	8.37	-159	2.00	3.6	0.52	1.5	|	
1010	0.0	15.17	8.38	-159	1.98	3.4	0.48	1.75	✓	
				Sample	collected	at	10:30			

SAMPLE ID: MW-55B_20250804 + MW-55B_20250804_FBLL

SAMPLE DATE: 8.4.25

SAMPLE TIME: 10:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-10

DATE: 8.4.25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 70°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.78

PURGE START TIME: 13:01

SCREEN LENGTH:

WELL DIAMETER: 1.5"

TUBING TYPE: 3/8" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1305	6.21	20.58	6.77	-105	1.40	22.8	2.04	0	200	
1310	6.39	17.36	6.63	-130	1.74	21.5	0.87	0.25		
1315	6.42	17.22	6.62	-136	1.81	18.8	0.58	0.5		
1320	6.42	17.23	6.61	-142	1.85	18.2	0.65	0.75		
1325	6.44	17.12	6.61	-145	1.86	16.9	0.51	1.0		
1330	6.45	17.08	6.61	-148	1.87	15.3	0.48	1.25		
1335	6.47	16.31	6.60	-150	1.89	11.9	0.54	1.5		
1340	6.49	16.19	6.60	-150	1.89	9.3	0.50	1.75		
1345	6.51	16.08	6.60	-150	1.89	9.8	0.48	2.0		
	Sample collected at 14:15									

SAMPLE ID: MW-10_20250804 & MW-10_20250804-FBLK

SAMPLE DATE: ~~14:15~~ 8.4.25

SAMPLE TIME: 14:15

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. INTENSIVE SERVICE.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-31

DATE: 8/12/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: MMS & ERL

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 75°F Partly Cloudy

DEPTH OF WELL: 73 ft

DEPTH TO WATER LEVEL: 51.45 ft

PURGE START TIME: 14:52

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:55	49.38	26.14	8.57	112	0.407	>1000	7.56	0.25	200	
14:58	49.45	24.38	8.57	116	0.404	>1000	7.96	0.50		
15:01	49.58	23.14	8.52	62	0.372	>1000	7.78	0.75		
15:04	49.63	18.90	8.47	17	0.393	>1000	8.93	1.00		
15:07	49.45	19.53	8.42	-2	0.372	>1000	7.99	1.25		
15:10	49.66	17.68	8.38	-28	0.377	>1000	7.75	1.50		
15:13	49.68	17.15	8.37	-38	0.379	>1000	8.05	1.75		
15:16	49.69	17.89	8.35	-54	0.369	>1000	7.43	2.00		
15:19	49.71	15.93	8.35	-61	0.383	>1000	7.96	2.25		
15:22	49.72	15.87	8.33	-56	0.379	>1000	7.89	2.50		
15:25	49.73	15.63	8.33	-65	0.376	>1000	7.86	2.75	▼	

SAMPLE ID: MW-31_20250812 & MW-31_20250812_FBLL

SAMPLE DATE: 8/12/25

SAMPLE TIME: 15:45

Notes: Water level reads different in the "water level" section due to the bladder pump & tubing displacing the water.

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE MIND.
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SAMPLE LOCATION: MW-35

DATE: 8/12/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EKC MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 71°F Cloudy

DEPTH OF WELL: 22.00Ft

DEPTH TO WATER LEVEL: 16.92

PURGE START TIME: 10:17

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:20	17.50	20.52	7.55	133	0.376	671	1.39	0.12	100	

SAMPLE ID: MW-35_20250812 + MW-35_20250812_FIELD

SAMPLE DATE: 8/12/25

SAMPLE TIME: 10:30

Notes: Sampled due to fast drawdown

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. INVESTED HERE. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-355B

DATE: 8-11-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 80°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 19.06

PURGE START TIME: 14:25

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/2" PE

CASING TYPE: PVC

MONITORING EQUIPMENT: MS6 Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1425	19.48	17.03	8.77	85	0.366	37.1	9.91	0	400	
1430	19.69	17.43	8.75	87	0.375	1000+	8.21	~~0.25~~ 0.5		
1435	19.75	18.53	8.73	88	0.384	1000+	7.31	~~0.5~~ 1.0		
1440	19.97	18.90	8.72	89	0.380	1000+	0.88	~~0.75~~ 1.5		
14:45	21.00	12.69	8.76	93	0.395	1000+	1.58	~~1.0~~ 2.0		
14:50	21.17	13.40	8.74	92	0.395	1000+	2.09	2.5		
14:55	21.31	13.35	8.75	91	0.394	764	1.85	3.0		
15:00	21.44	13.98	8.75	90	0.394	729	1.59	3.5		
15:05	21.62	14.31	8.76	90	0.393	673	1.45	4.0		
15:10	21.78	14.61	8.75	90	0.394	657	1.38	4.5	↓	
			Sample collected at			15:30				

SAMPLE ID: MW-355B_20250811 + MW-355B_20250811_FBLK

SAMPLE DATE: 8-11-25

SAMPLE TIME: 15:30

Notes: After sampling, pumped well for ~ 2 hours
Approximately 72 gallons purged

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-355B

DATE: 8.14.25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

PERSONNEL:

OBSERVERS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 19.49

PURGE START TIME: 9:30

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/2" PE

CASING TYPE: PVC

MONITORING EQUIPMENT:

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
9:45	80.08									
10:00	101.77			Pump off from		10:00-	10:10			
10:15	96.12									
10:30	99.73			Pump off from		10:25-	10:35			
10:45	100.00									
11:00	98.42			Pump off from		10:53-	11:05			
11:15	>101			Pump off from		11:18-	11:23			
11:30	>100									

SAMPLE ID: NA

SAMPLE DATE: NA

SAMPLE TIME: NA

Notes: No sample - Purge only

~ 60 Gal purged

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Date: 8/11/25
Personnel: ERC & MMS
Depth of well: 18.00 ft
Tubing type: Polyteflon
Monitoring Equipment: Horiba U-52
Purge start time: 14:32

Sample Location: MW-36
Project #: 401.24007 18.000
Site Name: White Pine Copper
Site Address: White Pine, MI
site conditions: 74°f Sunny
Depth to water level: 4.54 ft
Well Diameter: 2"
Casing Type: PVC

Time	water Level	Temp (°C)	Ph	ORP (mV)	COND. (ms/cm)	TURB. (NTU)²	DO (mg/L)¹	Volume Purged (Gal)	Pump Rate (ml/min)
14:35	5.62	31.69	7.27	-80	0.626	17.3	2.11	0.25	200
14:38	6.17	28.15	7.21	-93	0.644	17.2	1.84	0.50	↓
14:41	6.59	24.88	7.20	-93	0.663	16.1	1.84	0.75	
14:44	7.21	23.91	7.18	-90	0.674	16.6	1.80	1.00	
14:47	7.56	22.53	7.17	-96	0.680	15.4	1.83	1.25	
14:50	7.85	22.12	7.17	-99	0.682	14.8	1.81	1.50	

SAMPLE ID: MW-36.20250811 + MW-36.20250811_FIELL
SAMPLE DATE: 8/11/25
SAMPLE TIME: 15:00

NOTES: Crane back at ~1600

LOW FLOW GROUND WATER SAMPLING FORM

Date: 8/11/25

Personnel: ERC + MMS
observers:

Depth of well: 21.17 ft
screen length:
Tubing type: Polyteflon
Monitoring Equipment: Horiba U-52

Sample location: MW-37
Project #: 401.2400718.000
site name: White Pine Copper
site address: White Pine MI
site condition: 71°F Partly Cloudy
Depth to water level: 14.91 ft
Well Diameter: 2"
casing type: PVC
Purge start: 09:50

Time	Water Level	Temp (°C)	Ph	ORP (MV)	COND. (ms/cm)	TURB. (NTU)²	DO (mg/L)	Volume Purge (Gal)	Pump Rate (ml/min)
09:53	15.64	14.00	7.51	114	0.529	48.1	4.40	0.12	100
09:56									

SAMPLE ID: MW-37_20250811 + MW-37_20250811-FBLL

SAMPLE DATE: 8/11/25

SAMPLE TIME: 1000

NOTES: Returned at 1600 to fill rest of samples due to empty well
depth to water = 14.95 ft

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-38

DATE: 8-6-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 65°F, Sunny

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 11.25

PURGE START TIME: 8:46

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MS6 Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
8:50	12.17	17.49	7.80	121	0.298	3.4	0.68	0	200	
8:55	12.62	16.90	7.67	128	0.308	0.0	0.51	0.25	↓	
9:00	13.13	16.10	7.65	132	0.316	0.0	0.49	0.5	↓	
9:05	13.68	15.51	7.66	135	0.321	0.0	0.56	0.75	↓	
9:10	14.19	15.31	7.66	136	0.324	0.0	0.58	1.0	↓	

SAMPLE ID: MW-38_20250806 & MW-38_20250806_FBLK

SAMPLE DATE: 8-6-25

SAMPLE TIME: 9:40

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Date: 8/11/25

Personnel: ERC & MMS

Depth of well: 29.65 ft

Tubing type: Polytefton

Monitoring Equipment: Horiba U-52

Sample Location: MW-41

Project #: 401.240071B.000

Site Name: White Pine Copper

Site Address: White Pine MI

Site Conditions: 70°F Partly Cloudy

Depth to water: 25.85 ft

well Diameter: 2" Purge start time: 11:25

Casing type: PVC

TIME	water level	TEMP (°C)	Ph	ORP (mV)	COND. (ms/cm)	TURB (NTU)²	DO (mg/L)¹	volume purged (GAL	Pump Rate (ml/min)
11:28	26.28	20.60	7.86	159	0.610	107	5.73	0.12	100

SAMPLE ID: MW-41-20250811 + MW-41-20250811_FBLL

SAMPLE DATE: 8/11/25

SAMPLE TIME: 11:30

NOTES: Sampled due to fast drawdown
Came back @ 1540 to fill rest of bottles due to running out of water
- depth to water = 29.45 ft

Returned at 09:00 on 8/12/2025 to fill rest of bottles. Well is dry, no recharge overnight

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-42

DATE: 8-6-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 70°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.14

PURGE START TIME: 10:22

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1025	5.86	17.84	8.77	87	0.214	1000+	10.39	0	200	
1030	6.67	16.95	9.03	75	0.217	317	9.20	0.25	|	
1035	7.42	16.58	9.05	71	0.224	196	8.20	0.5	|	
1040	8.00	16.63	9.05	70	0.224	287	7.36	0.75	|	
1045	8.59	16.60	9.06	69	0.223	153	6.85	1.0	|	
1050	9.15	16.39	9.06	69	0.224	68.4	2.20	1.25	|	
1055	9.72	16.76	9.06	68	0.222	96.1	2.23	1.50	|	
1100	10.39	16.84	9.06	68	0.222	104	2.19	1.75	|	
105	11.03	16.96	9.06	68	0.222	116	2.22	2.00	↓	
			Sample collected at			11:30				

SAMPLE ID: MW-42_20250806 & MW-42_20250806_FD2

SAMPLE DATE: 8-6-25

SAMPLE TIME: 11:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-43

DATE: 8-5-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 80° Cloudy

DEPTH OF WELL: 28.0 ft

DEPTH TO WATER LEVEL: 12.31 ft

PURGE START TIME: 12:05

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
12:08	13.29	16.37	8.05	192	0.552	43.0	2.14	0.25	200	
12:11	14.27	13.75	8.05	197	0.542	39.1	1.57	0.50	↓	
12:14	14.97	12.88	8.04	200	0.524	33.3	1.15	0.75	↓	
12:17	15.29	12.44	8.03	201	0.518	33.5	1.08	1.00	↓	
12:20	15.60	12.59	8.03	202	0.508	32.9	0.93	1.25	↓	
12:23	15.96	12.37	8.03	204	0.506	30.1	0.87	1.50	↓	

SAMPLE ID: MW-43_20250805 & MW-43_20250805_FBLL

SAMPLE DATE: 08-05-2025

SAMPLE TIME: 12:30

Notes: FOTH water elevation data skewed from 12:00 - 13:15

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8/5/25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: MW-435B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 74°F Cloudy

DEPTH OF WELL: >100 ft

SCREEN LENGTH:

TUBING TYPE: Polyteflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 0.43 ft

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 10:43

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1045	1.72	19.06	7.10	20	4.12	4.1	5.69	0.25	200	
1048	2.01	16.30	7.16	7	4.06	5.3	3.24	0.50		
1051	2.62	16.09	7.14	31	4.10	3.5	2.08	0.75		
1054	3.14	16.20	7.13	56	4.21	4.0	1.85	1.00		
1057	3.77	16.27	7.13	70	4.26	3.8	1.72	1.25		
1100	4.21	16.28	7.13	84	4.32	4.1	1.41	1.50		
1103	4.83	16.29	7.14	92	4.34	3.6	1.21	1.75		
1106	5.06	16.30	7.14	94	4.33	3.4	1.16	1.50		

SAMPLE ID: MW-435B_20250805 & MW-435B_20250805_FBLK

SAMPLE DATE: 8/5/25

SAMPLE TIME: 1115

Notes: FOTH water elevation data skewed from 10:30 - 11:33

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-44

DATE: 8-5-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 80°F Partly Cloudy

DEPTH OF WELL: 38.65 ft

DEPTH TO WATER LEVEL: 14.85 ft

PURGE START TIME: 1320

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1323	14.94	15.92	7.79	-88	0.735	9.0	2.12	0.25	200	
1326	15.03	15.31	7.79	-128	0.743	9.6	1.35	0.50	"	
1329	15.12	15.22	7.88	-129	0.748	8.3	1.15	0.75	"	
1332	15.20	14.86	7.99	-119	0.747	7.9	1.06	1.00	"	
1335	15.22	14.33	7.98	-112	0.741	7.8	0.98	1.25	↓	
1338	15.25	14.20	7.93	-107	0.738	8.2	0.83	1.5		

SAMPLE ID: MW-44_20250805 & MW-44_20250805_FB LL

SAMPLE DATE: 8-5-25

SAMPLE TIME: MS/~~MSD~~ 1400

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

8

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8-7-25

PERSONNEL: ERC • MMS

OBSERVERS:

SAMPLE LOCATION: NB1-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 74°F Sunny

DEPTH OF WELL: 24.70

SCREEN LENGTH:

TUBING TYPE: Polyteflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 5.62

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 0905

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0908	5.75	20.91	7.90	-134	1.03	9.8	1.64	0.25	200	
0911	5.93	20.34	7.83	-180	1.02	8.6	0.97	0.50		
0914	6.11	19.96	7.82	-200	1.01	8.4	0.74	0.75		
0917	6.24	19.59	7.81	-220	0.989	8.4	0.61	1.00		
0920	6.36	19.28	7.81	-239	0.976	7.5	0.54	1.25		
0923	6.38	19.01	7.81	-254	0.970	7.2	0.53	1.50		
0927	6.41	18.72	7.81	-264	0.973	6.5	0.54	1.75		
0930	6.45	18.60	7.82	-273	0.974	7.1	0.56	2.00		
0933	6.48	18.60	7.82	-277	0.974	6.1	0.58	2.25		
0936	6.51	18.63	7.82	-280	0.972	6.3	0.54	2.50		

SAMPLE ID: NB1-1_20250807 + NB1-1_20250807_FBLL

SAMPLE DATE: 8-7-25

SAMPLE TIME: 0940

Notes: Odor from well, oil / sewer smell

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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DATE: 8-7-25

SAMPLE LOCATION: NB1-3

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 74°F Sunny

PERSONNEL: ERC + MMS

OBSERVERS:

DEPTH OF WELL: 34.60 ft

DEPTH TO WATER LEVEL: 5.85 ft

PURGE START TIME: 1005

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1008	6.87	22.15	7.62	-149	0.973	10.9	1.96	0.25	200	
1011	7.92	22.01	7.41	-134	0.929	10.2	1.61	0.50	↓	
1014	8.24	21.86	7.35	-136	0.902	11.4	1.58	0.75	↓	
1017	8.68	21.79	7.34	-146	0.890	9.9	1.49	1.00	↓	
1020	9.32	21.77	7.36	-152	0.884	8.8	1.46	1.25	↓	
1023	9.71	21.78	7.37	-156	0.880	8.5	1.45	1.50	↓	

SAMPLE ID: NB1-3_20250807 + NB1-3-20250807-FBLL

SAMPLE DATE: 8-7-25

SAMPLE TIME: 1025

Notes: Odor in well, oil/sewer smell

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NB2-1

DATE: 8-12-2025

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 75°F, Partly Cloudy

DEPTH OF WELL: 12.20

DEPTH TO WATER LEVEL: 6.33

PURGE START TIME: 12:38

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
12:41	6.55	22.01	6.90	-46	2.31	147	2.05	0.25	200	
12:44	6.79	20.96	6.91	-50	2.29	115	1.17	0.50	↓	
12:47	6.81	19.94	6.92	-55	2.28	77.6	0.90	0.75	↓	
12:50	6.84	19.35	6.93	-58	2.25	55.0	0.85	1.00	↓	
12:53	6.86	19.10	6.93	-62	2.24	40.4	0.82	1.25	↓	
~~12:56~~										

SAMPLE ID: NB2-1_20250812 + NB2-1_20250812_FBLL

SAMPLE DATE: 8-12-2025

SAMPLE TIME: 13:20

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NB2-3

DATE: 8-12-2025

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 75°F, Partly Cloudy

DEPTH OF WELL: 30.31

DEPTH TO WATER LEVEL: 5.74

PURGE START TIME: 11:40

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ~~PVC~~ Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
11:43	6.69	17.07	7.78	-78	1.08	178	2.15	0.25	200	
11:46	7.65	16.68	7.70	-81	1.10	145	2.70	0.50	↓	
11:49	8.15	16.73	7.51	-81	1.13	114	4.59	0.75	↓	
11:52	8.65	16.90	7.48	-77	1.11	97.1	3.85	1.00	↓	
11:55	8.92	17.12	7.46	-76	1.11	80.6	3.63	1.25	↓	
11:58	9.20	17.10	7.45	-76	1.11	83.8	3.62	1.50	↓	
12:01	9.41	17.22	7.44	-76	1.10	80.4	3.59	1.75	↓	

SAMPLE ID: NB2-3_20250812 + NB2-3_20250812_FBLL

SAMPLE DATE: 08-12-2025

SAMPLE TIME: 1225

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8-13-2025

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: ~~SMW-01~~ SMW-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 65°F, Partly Cloudy

DEPTH OF WELL: 38.00

SCREEN LENGTH:

TUBING TYPE: Polyteflon

MONITORING EQUIPMENT: Horiba U-52, Bladder pump

DEPTH TO WATER LEVEL: 23.71

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: ~~10~~ 09:03

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
~~10~~ 09:06	24.45	12.92	7.89	146	0.387	13.5	2.92	0.25	200	
10:09	25.13	12.30	7.87	148	0.391	11.3	2.38	0.50	|	
10:12	25.64	11.67	7.86	151	0.397	10.3	2.06	0.75	|	
10:15	26.14	11.37	7.85	153	0.399	10.3	1.86	1.00	|	
10:18	26.61	11.22	7.85	154	0.402	9.1	1.82	1.25	|	
10:21	27.12	11.12	7.85	155	0.401	9.4	1.80	1.50	↓	

SAMPLE ID: SMW-1-20250813 + SMW-1-20250813-FBLL

SAMPLE DATE: 8-13-2025

SAMPLE TIME: 10:30

Notes: * collected equipment blank

FOTH water level probe disrupted from 09:24 - 10:48

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. — www.MannikSmithGroup.com

DATE: 8-13-2025

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: SMW-15B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 67°F, Partly Cloudy

DEPTH OF WELL: >100

SCREEN LENGTH:

TUBING TYPE: polyteflon

MONITORING EQUIPMENT: Horiba U-52, Bladder pump

DEPTH TO WATER LEVEL: 23.43

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 11:15

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
11:18	27.01	14.90	9.02	46	0.368	8.0	8.97	0.25	200	
11:21	28.18	13.64	9.00	6	0.366	6.1	8.37	0.50	↓	
11:24	28.53	13.27	9.00	-13	0.368	6.1	8.13	0.75	↓	
11:27	28.92	12.92	9.00	-26	0.368	6.0	7.86	1.00	↓	
11:30	29.21	12.76	9.00	-43	0.369	6.2	7.57	1.25	↓	
11:33	29.65	12.80	9.00	-44	0.367	6.2	7.31	1.50	↓	
11:36	30.02	12.74	9.01	-49	0.368	6.1	7.14	1.75	↓	

SAMPLE ID: SMW-15B_20250813 + SMW-15B_20250813_FBLL

SAMPLE DATE: 8-13-2025

SAMPLE TIME: 1145

Notes:

FOTH elevation water probe out of well 10:55 - 12:51

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-3

DATE: 8.7.25

PROJECT #: 401.2400718.000

PERSONNEL: JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 75°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 27.40

PURGE START TIME: 10:14

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 3/8" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSA Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1020	27.68	19.16	8.30	7	0.191	33.7	6.74	0	200	
1025	28.04	14.34	8.49	-154	0.186	9.6	3.71	0.25	↓	
1030	28.24	13.69	8.62	-168	0.185	4.6	3.43	0.5	↓	
1035	28.35	13.58	8.65	-164	0.186	1.7	3.28	0.75	↓	
1040	28.42	13.70	8.65	-165	0.186	2.0	2.57	1.0	↓	
1045	28.54	13.45	8.68	-164	0.189	2.3	2.47	1.25	↓	
1050	28.67	13.65	8.69	-164	0.190	4.1	2.61	1.5	↓	
1055	28.81	13.71	8.69	-164	0.191	3.7	2.70	1.75	↓	
			Sample collected at			11:30				

SAMPLE ID: SMW-3_20250807 + SMW-3_20250807_FBLK

SAMPLE DATE: 8.7.25

SAMPLE TIME: 11:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-3SB

DATE: 8-7-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 68°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 23.14

PURGE START TIME: 8:34

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 3/8" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG- Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
8:45	23.48	18.81	9.03	74	0.390	1.3	2.83	0	200	
8:50	24.12	15.94	9.12	31	0.388	1.7	1.11	0.25	↓	
8:55	24.24	15.60	9.12	-2	0.395	0.0	0.93	0.5	↓	
9:00	24.42	15.65	9.12	-24	0.401	0.7	0.98	0.75	↓	
9:05	24.54	15.63	9.12	-29	0.400	0.8	0.98	1.0	↓	
9:10	24.68	15.54	9.12	-32	0.400	0.9	0.94	1.25	↓	
			Sample collected at			9:40				

SAMPLE ID: ~~SMW-3SB~~ SMW-3SB_20250807 & SMW-3SB_20250807_FBLL

SAMPLE DATE: 8-7-25

SAMPLE TIME: 9:40

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-01

DATE: 8-4-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: GRC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 67°F Cloudy

GAUGE READING START: 1.0 ft

pH: 6.46

ORP: 285 mV

GAUGE READING END:

CONDUCTIVITY: 0.192 mS/cm

DO: 5.70 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 16.67 °C

TURBIDITY: 6.8 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1 ft	0				
2	1.3	0.4	-0.007			
3	1.6	0.6	-0.008			
4	1.9	0.6	-0.019			
5	2.2	0.6	0.010			
6	2.5	0.65	-0.011			
7	2.8	0.75	-0.010			
8	3.1	0.75	-0.007			
9	3.4	0.70	-0.002			
10	3.7	0.80	-0.001			
11	4.0	0.85	-0.007			
12	4.3	0.80	-0.009			
13	4.6	0.70	-0.007			
14	4.9	0.50	-0.006			
15	5.2	0.50	0.002			
16	5.5	0.50	-0.007			
17	5.8	0.40	-0.005			
18	6.1	0.25	-0.009			
19	6.4	edge of water				
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.043

TOTAL WIDTH (ft): 5.40

SAMPLE ID: ARC-01_20250804 & FBLL

SAMPLE TIME: 10:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE MINDS. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-02

DATE: 8/5/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 70°F Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	6.48		ORP	137	mV
CONDUCTIVITY	0.138	mS/cm	DO	1.65	mg/l
TEMPERATURE	18.06	°C	TURBIDITY	37.1	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	1.5	0				
2	2	0.75	-0.012			
3	2.5	1.30	-0.010			
4	3	1.45	-0.011			
5	3.5	1.45	-0.007			
6	4	1.60		-0.003	-0.005	
7	4.5	1.50		-0.007	-0.002	
8	5	1.35	-0.003			
9	5.5	1.20	-0.001			
10	6	1.05	-0.001			
11	6.5	0.95	-0.001			
12	7	0.85	0.001			
13	7.5	0.65	-0.004			
14	8	0.50	-0.004			
15	8.5	0.45	-0.008			
16	9	0.35	-0.009			
17	9.5	0.10	-0.009			
18	9.75	edge of water				
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.041

TOTAL WIDTH (ft): 8.25

SAMPLE ID: ARC-02-20250805 & FBLL

SAMPLE TIME: 0930

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Collected MS/MSD

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SAMPLE LOCATION: ARC-03

DATE: 8.13.25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 65°F

GAUGE READING START: 0.72

pH: 7.57

ORP: 149 mV

GAUGE READING END: 0.72

CONDUCTIVITY: 18.34 mS/cm

DO: 5.71 mg/l

AVERAGE GAUGE HEIGHT: 0.72

TEMPERATURE: 0.202 °C

TURBIDITY: 2.0 NTU

MONITORING EQUIPMENT: MSG- Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
water edge	5'11" ft	0 ft	0 ft/s	ft/s	ft/s	
0 (at stake)	6"	0.1	0.0			
1 (at water edge)	~~6~~ 1'	0.1	0.0			
2	1'6"	0.1	0.11			
3	2'	0.3	0.007			
4	2'6"	0.45	0.005			
5	3'	0.4	0.00			
6	3'6"	0.5	0.006			
7	4'	0.5	0.002			
8	4'6"	0.5	0.001			
9	5'	0.4	0.001			
10	5'6"	0.4	0.008			
11	6'	0.3	0.020			
12	6'6"	0.3	0.010			
13	7'	0.25	0.008			
14	7'6"	0.15	0.008			
15	8'	0.1	0.00			
16	8'5"	0	0			End
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.018

TOTAL WIDTH (ft): 8.08

SAMPLE ID: ARC-03_20250813 & FBLL

SAMPLE TIME: 9:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE MINDS. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNC-01

DATE: 8-6-2025

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 78°F, Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Hor. ba U-52

pH	7.12		ORP	0.143	mV
CONDUCTIVITY	271	mS/cm	DO	5.6	mg/l
TEMPERATURE	24.56	°C	TURBIDITY	2.92	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NA

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: BNC-01_20250806 + BNC-01_EC ~~20250806FBL~~ 20250806-FBLL

SAMPLE TIME: 15:10

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNW-01

DATE: 8-6-2025

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 78°F, Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	8.91		ORP	208	mV
CONDUCTIVITY	0.152	mS/cm	DO	5.60	mg/l
TEMPERATURE	25.41	°C	TURBIDITY	2.7	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7			NA			
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: BNW-01-20250806 & FBLL

SAMPLE TIME: 1600

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-01

DATE: 8-5-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 80°F Partly Cloudy

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba -U52

pH	8.53		ORP	185	mV
CONDUCTIVITY	0.201	mS/cm	DO	6.53	mg/l
TEMPERATURE	23.39	°C	TURBIDITY	9.8	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: CBR-01-20250805 & FBLL

SAMPLE TIME: 1515

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: CRR-02

DATE: 8-11-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS: DL

SITE CONDITIONS: Sunny, 75°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH: 7.41 — ORP: 114 mV

CONDUCTIVITY: 0.163 mS/cm — DO: 3.82 mg/l

TEMPERATURE: 23.42 °C — TURBIDITY: 0.0 NTU

MONITORING EQUIPMENT: MS6 - Hach U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Staff Gauge 3.56

CRR-02_20250811 & FBLL

8-11-25 11:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-01

DATE: 8/4/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 67°F Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.57

CONDUCTIVITY: 0.167 mS/cm

TEMPERATURE: 16.20 °C

ORP: 331 mV

DO: 7.44 mg/l

TURBIDITY: 0.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	0.3	0				
2	0.5	0.1	-0.007			
3	0.8	0.35	0.006			
4	1.1	0.25	0.020			
5	1.4	0.25	-0.010			
6	1.7	0.35	-0.001			
7	2.0	0.40	-0.016			
8	2.3	0.35	-0.021			
9	2.6	0.30	0.002			
10	2.9	0.20	-0.012			
11	3.2	0.10	0.004			
12	3.5	0.10	-0.011			
13	3.8	0.10	0.001			
14	4.1	0.05	0			
15	4.4	edge of water				
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.004

TOTAL WIDTH (ft): 4.10

SAMPLE ID: DKC-01-20250804 & FBLL

SAMPLE TIME: 1115

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-02

DATE: 8-13-25
PROJECT #: 401.2400718.000
PHOTO TAKEN? (Y) N
PERSONNEL: JD
SITE NAME: White Pine Copper
OBSERVERS:
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: Cloudy, 70°F

GAUGE READING START: X
GAUGE READING END:
AVERAGE GAUGE HEIGHT:
MONITORING EQUIPMENT: MS6 - Horiba U-52

pH: 7.67
CONDUCTIVITY: 0.126 mS/cm
TEMPERATURE: 19.46 °C
ORP: 154 mV
DO: 6.18 mg/l
TURBIDITY: 2.3 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0					
1 (at water edge)	2' 2"	0	0			
2	2' 6"	0.1	0.0			
3	3'	0.2	0.032			
4	3' 6"	0.3	0.026			
5	4'	0.3	0.004			
6	4' 6"	0.3	0.005			
7	5'	0.4	0.019			
8	5' 6"	0.45	0.004			
9	6'	0.4	0.001			
10	6' 6"	0.25	0.010			
11	7'	0.3	0.008			
12	7' 6"	0.3	0.004			
13	8'	0.3	0.006			
14	8' 6"	0.3	0.001			
15	9'	0.2	0.010			
16	9' 6"	0.2	0.009			
17	10'	0.2	0.010			
18	10' 4"	0	0			
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.020
TOTAL WIDTH (ft): 8.17
SAMPLE ID: DKC-02_20250813 & FBLL
SAMPLE TIME: 11:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

SAMPLE LOCATION: DKC-03

DATE: 8-12-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 80°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: MS6- Horiba U-52

pH: 7.43

CONDUCTIVITY: 0.108 mS/cm

TEMPERATURE: 24.53 °C

ORP: 110 mV

DO: 5.02 mg/l

TURBIDITY: 1.2 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: DKC-01_20250812 & FBLL

SAMPLE TIME: 14:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. GREATER SPIRIT
www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-01

DATE: 8-12-2025

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 74°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH	8.30		ORP	85	mV
CONDUCTIVITY	0.082	mS/cm	DO	10.98	mg/l
TEMPERATURE	21.78	°C	TURBIDITY	10.9	NTU

MONITORING EQUIPMENT: MS/4 Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): N/A

TOTAL WIDTH (ft): N/A

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

LKS-01_20250812 & FBLL
8.12.25
11:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8.12.25

PERSONNEL: SD

OBSERVERS:

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: MSG Horiba U-52

SAMPLE LOCATION: LKS-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 65°F

PHOTO TAKEN? (Y) N

pH 8.13

CONDUCTIVITY 0.010 mS/cm

TEMPERATURE 20.94 °C

ORP 104 mV

DO 9.37 mg/l

TURBIDITY 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) NA

TOTAL WIDTH (ft) N.A.

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

LKS-02_20250812 & FBLL

8.12.25 9:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-01

DATE: 8-13-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Rainy, 55°F

GAUGE READING START: 1.27

pH: 7.81

ORP: 130 mV

GAUGE READING END:

CONDUCTIVITY: 0.112 mS/cm

DO: 7.03 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 21.31 °C

TURBIDITY: 0.0 NTU

MONITORING EQUIPMENT: MSG-Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0					
1 (at water edge)	9"	0	0			
2	1'	0.9	0.007			
3	2'	0.4	0.006			
4	3'	0.6	0.004			
5	4'	0.4	0.016			
6	5'	0.5	0.001			
7	6'	0.6	0.036			
8	7'	0.5	0.018			
9	8'	0.4	0.004			
10	9'	0.5	0.002			
11	10'	0.4	0.00			
12	11'	0.9	0.007			
13	12'	0.2	0.005			
14	13'	0.25	0.004			
15	14'	0.1	0.0			
16	14' 8"	0.0	0.0			
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.051

TOTAL WIDTH (ft): 13.92

SAMPLE ID: MLR-01_20250813 & FBLL

SAMPLE TIME: 15:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-02

DATE: 8/4/25
PROJECT #: 401.2400718.000
PHOTO TAKEN? (Y) N
SITE NAME: White Pine Copper
PERSONNEL: ERC & MMS
SITE ADDRESS: White Pine, MI
OBSERVERS:
SITE CONDITIONS: 77°F Cloudy

GAUGE READING START: 0.15
GAUGE READING END:
AVERAGE GAUGE HEIGHT:
MONITORING EQUIPMENT: Horiba U-52

pH 7.72
CONDUCTIVITY 0.190 mS/cm
TEMPERATURE 20.85 °C

ORP 292 mV
DO 6.22 mg/l
TURBIDITY 19.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	9	0				
2	11	0.3	-0.006			
3	13	0.35	-0.013			
4	15	0.30	-0.019			
5	17	0.35	-0.007			
6	19	0.70	0.023			
7	21	0.90	0.002			
8	23	0.80	0.028			
9	25	0.60	0.024			
10	27	0.60	-0.006			
11	29	0.45	0.008			
12	31	0.45	0.006			
13	33	0.20	-0.009			
14	34	edge of water				
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.083
TOTAL WIDTH (ft): 25.00
SAMPLE ID: MLR-02-20250804 & FBLL
SAMPLE TIME: 1630

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-03

DATE: 8-6-23

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 70°F Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	8.01		ORP	223	mV
CONDUCTIVITY	0.195	mS/cm	DO	7.68	mg/l
TEMPERATURE	18.55	°C	TURBIDITY	1.9	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: MLR-03_20250806 & FBLC

SAMPLE TIME: 0900

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

DUP collected

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NTC-01

DATE: 8/6/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EAC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 73°F Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.40		ORP	234	mV
CONDUCTIVITY	0.143	mS/cm	DO	4.94	mg/l
TEMPERATURE	19.93	°C	TURBIDITY	2.9	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	4	0				
2	4.33	0.10	0			
3	4.66	0.15	-0.005			
4	5	0.25	-0.008			
5	5.33	0.30	-0.010			
6	5.66	0.40	-0.007			
7	6	0.50	-0.008			
8	6.33	0.50	-0.013			
9	6.66	0.50	-0.002			
10	7	0.50	0.005			
11	7.33	0.50	-0.005			
12	7.66	0.40	0.049			
13	8	0.35	0.010			
14	8.33	0.35	0.007			
15	8.66	0.20	-0.016			
16	9	0.10	-0.006			
17	9.33	edge of water				
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.001

TOTAL WIDTH (ft): 5.3

SAMPLE ID: NTC-01_20250806 & FBLL

SAMPLE TIME: 1045

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.

SAMPLE LOCATION: PNC-01

DATE: 8-13-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 75°F

GAUGE READING START: 0.83

GAUGE READING END: 0.83

AVERAGE GAUGE HEIGHT: 0.83

pH: ~~7.~~ 6.84

CONDUCTIVITY: 0.095 mS/cm

TEMPERATURE: 20.81 °C

ORP: 147 mV

DO: 0.085 mg/l

TURBIDITY: 6.6 NTU

MONITORING EQUIPMENT: MSG - Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0	0			
1 (at water edge)	7"	0.0	0.0			
2	9"	0.7	0.0			
3	1'	0.8	0.003			
4	1.25'	0.8	0.0			
5	1.5'	0.85	0.005			
6	1.75'	0.9	0.003			
7	2.0'	0.9	0.007			
8	2.25'	0.8	0.007			
9	2.5'	0.8	0.008			
10	2.75'	0.8	0.007			
11	2' 11"	0.0	0.0			
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.008

TOTAL WIDTH (ft): 2.3

SAMPLE ID: PNC-01_20250813 & FBLL

SAMPLE TIME: 14:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-02

DATE: 8-4-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ELC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 77°F Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.52		ORP	308	mV
CONDUCTIVITY	0.281	mS/cm	DO	5.16	mg/l
TEMPERATURE	22.14	°C	TURBIDITY	19.9	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Could not stream gauge due to beaver activity. Moved sampling location upstream of beaver dam. GPS collected.

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: PNC-02-20250804 & FBLC

SAMPLE TIME: 1515

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-03 MMS

DATE: 8/6/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EEL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 77°F Cloudy

GAUGE READING START: 0.78

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.88

CONDUCTIVITY: 0.315 mS/cm

TEMPERATURE: 20.16 °C

ORP: 247 mV

DO: 6.67 mg/l

TURBIDITY: 1.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	3	0				
2	3.5	0.15	0.006			
3	5	0.30	0.002			
4	6.5	0.40	-0.012			
5	8	0.45	-0.010			
6	9.5	0.80	-0.006			
7	11	1.0	-0.009			
8	12.5	0.90	0.003			
9	14	0.80	-0.003			
10	15.5	0.80	0.003			
11	17	0.70	0.006			
12	18.5	0.30	-0.016			
13	20	0.20	-0.005			
14	21.5	0.20	-0.002			
15	23	edge of water				
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.032

TOTAL WIDTH (ft): 20.0

SAMPLE ID: PNC-03-20250806 & FBLL

SAMPLE TIME: 1400

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-04

DATE: 8.11.25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JO

SITE ADDRESS: White Pine, MI

OBSERVERS: JC

SITE CONDITIONS: Sunny, 70°C

GAUGE READING START: DESTROYED

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH: 7.90

CONDUCTIVITY: 0.267 mS/cm

TEMPERATURE: 20.01 °C

ORP: 75 mV

DO: 8.62 mg/l

TURBIDITY: 0.0 NTU

MONITORING EQUIPMENT: MS6 Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	3"	0	0			
2	4" (1/3')	0.1	0.006			
3	2/3'	0.2	0.000			
4	1'	0.15	0.009			
5	1 1/3	0.15	0.048			
6	1 2/3	0.10	0.061			
7	2	0.15	0.096			
8	2 1/3	0.15	0.019			
9	2 2/3	0.15	0.076			
10	3	0.15	0.207			
11	3 1/3	0.15	0.178			
12	3 2/3	0.15	0.192			
13	4	0.15	0.180			
14	4 1/3	0.15	0.112			
15	4 2/3	0.1	0.062			
16	5	0.1	0.000			
17	5'2"	0	0			
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.060

TOTAL WIDTH (ft): 4.917

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

8.11.25
10:00

PNC-04_20250811
& FBLL

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-01

DATE: 8/6/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EEC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 76°F cloudy

GAUGE READING START: 0.18

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.94

CONDUCTIVITY: 0.689 mS/cm

TEMPERATURE: 24.25 °C

ORP: 191 mV

DO: 7.86 mg/l

TURBIDITY: 16.7 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	8	0				
2	9	<0.10	0			Too shallow
3	10	<0.10	0			↓
4	11	<0.10	0			
5	12	<0.10	0			
6	13	<0.10	0			
7	14	0.10	0.067			
8	15	0.15	0.523			
9	16	0.15	0.269			
10	17	0.30	0.363			
11	18	0.20	0.323			
12	19	edge	of water			
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.299

TOTAL WIDTH (ft): 11.0

SAMPLE ID: PRC-01_20250806 & FBLC

SAMPLE TIME: 1250

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8/6/25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: PRC-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 70°F Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 7.92

CONDUCTIVITY: 0.701 mS/cm

TEMPERATURE: 19.81 °C

ORP: 240 mV

DO: 6.00 mg/l

TURBIDITY: 2.4 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	10"	0				
2	1	0.10	0.005			
3	1.5	0.20	0.028			
4	2	0.40	0.035			
5	2.5	0.55	0.074			
6	3	0.65	0.095			
7	3.5	0.60	0.115			
8	4	0.60	0.099			
9	4.5	0.40	0.075			
10	5	0.20	0.087			
11	5.5	0.10	0.052			
12	6	0.10	0.019			
13	6.5 edge of	water				
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.153

TOTAL WIDTH (ft): 6.0

SAMPLE ID: PRC-02_20250806 & FBLC

SAMPLE TIME: 0945

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PTC-01

DATE: 8-11-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: M, SUNNY, BRISK, ~75°F

GAUGE READING START: —

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH: 7.73

CONDUCTIVITY: 0.196 mS/cm

TEMPERATURE: 19.29 °C

ORP: 126 mV

DO: 6.07 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	1/3 (4")	0	0			
2	0.5	0.1	0			
3	1	0.1	0			
4	1.5	0.15	0			
5	2	0.1	0			
6	2.5	0.15	0.080			
7	3	0.15	0.005			
8	3.5	0.2	0.004			
9	4	0.1	0.010			
10	4.5	0.2	0.002			
11	5	0.15	0.034			
12	5.5	0.15	0.005			
13	6	0.15	0.092			
14	6.5	0.1	0.001			
15	7	0.1	0.000			
16	7 1/3	0	0			
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.017

TOTAL WIDTH (ft): 7.00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

PTC-01. 20250811, 12:00
FBLL

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8/4/25

PERSONNEL: GRC & MMS

OBSERVERS:

SAMPLE LOCATION: SBD-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 74°F Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 6.82

CONDUCTIVITY: 0.159 mS/cm

TEMPERATURE: 21.37 °C

ORP: 251 mV

DO: 2.42 mg/l

TURBIDITY: 7.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: SBD-01-20250804 & FBLC

SAMPLE TIME: 1300

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 8-4-25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: SBW-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 78°F Partly Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	6.99		ORP	339	mV
CONDUCTIVITY	0.138	mS/cm	DO	3.44	mg/l
TEMPERATURE	25.17	°C	TURBIDITY	242	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: SBW-01-20250804 & FBLC

SAMPLE TIME: 1430

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: TBN-01

DATE: 8/6/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 81°F Cloudy / Sprinkling

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	9.30		ORP	179	mV
CONDUCTIVITY	0.607	mS/cm	DO	8.13	mg/l
TEMPERATURE	23.61	°C	TURBIDITY	3.3	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: TBN-01-20250806 & FBLC

SAMPLE TIME: 1445

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 8-13-2025

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: TBS-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 69°F, Partly Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: —

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 9.03

CONDUCTIVITY: 2.28 mS/cm

TEMPERATURE: 24.71 °C

ORP: 55 mV

DO: 4.29 mg/l

TURBIDITY: 1.2 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: TBS-01_20250813 & FBLC

SAMPLE TIME: 14:10

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

APPENDIX B
PHOTOGRAPH LOG



Photo 1: ARC-01 facing east (08-04-2025)



Photo 2: ARC-02 facing north (08-05-2025). New sampling location.



Photo 3: ARC-03 facing south (08-13-2025)



Photo 4: BNC-01 facing northeast (08-06-2025)



Photo 5: BNW-01 facing north (08-06-2025)



Photo 6: CBR-01 facing northeast (08-05-2025)



Photo 7: CBR-02 facing southeast (08-11-2025)



Photo 8: DKC-01 facing southeast (08-04-2025)



Photo 9: DKC-02 facing south (08-13-2025)



Photo 10: DKC-03 facing south (08-12-2025)



Photo 11: LKS-01 facing northwest (08-12-2025)



Photo 12: LKS-02 facing northwest (08-12-2025)



Photo 13: MLC-01 facing northwest (08-06-2025)



Photo 14: MLR-01 facing west (08-13-2025)



Photo 15: MLR-02 facing southwest (08-04-2025)



Photo 16: MLR-03 facing southwest (08-06-2025)



Photo 17: NTC-01 facing southwest (08-06-2025)



Photo 18: PNC-01 facing north (08-13-2025)



Photo 19: PNC-02 facing south (08-04-2025). New sampling location.



Photo 20: PNC-03 facing east (08-06-2025)



Photo 21: PNC-04 facing southeast (08-11-2025)



Photo 22: PRC-01 facing southeast (08-06-2025)



Photo 23: PRC-02 facing south (08-06-2025)



Photo 24: PTC-01 facing south (08-11-2025)



Photo 25: SBD-01 facing southwest (08-04-2025)



Photo 26: SBW-01 facing southwest (08-04-2025)



Photo 27: TBN-01 facing southeast (08-06-2025)



Photo 28: TBS-01 facing southwest (08-13-2025)

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

October 2025

November 11, 2025

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Baseline Sampling Field Results for October 2025

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in October 2025 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's February 4, 2025 *Proposal for Groundwater and Surface Water Sampling*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). **Figure 1**, *Groundwater Monitoring Locations* and **Figure 2**, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between October 20th and 30th, 2025, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (**Figure 1**) using low-flow sampling procedures with a peristaltic, bladder, or down-hole centrifugal pump depending on the depth to groundwater and location. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells and prior experience at certain locations. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in ***Table 1****, Groundwater Field Parameter Summary*. Copies of the field sheets are provided in ***Appendix A****, Field Sheets*.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtering for dissolved low level mercury and dissolved methyl mercury samples was conducted at a controlled location within WPC's White Pine office using FlipMate™ 50 Filtration

System 0.45 um filters. A field blank for low level mercury (FB-02_20251027_FBLL) was also collected at the filtering location. The filters were manufacturer certified for background metals to be less than 0.0005 micrograms per liter (ug/L) mercury.

Trace Analytical Laboratories, Inc. (Trace) previously provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was re-used between sampling events for sample collection. The Teflon tubing used during sample collection was retained for reuse during subsequent sampling events and was stored at MSG's Houghton, Michigan office between sampling events. Existing poly tubing encountered in many of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection.

Pressure transducers encountered at six locations were temporarily removed from the monitoring wells to facilitate groundwater sampling, the data was downloaded, then were re-installed. The transducers were removed from MW-5SB and MW-43SB and packer assemblies were installed in preparation of winter. The two removed transducers are stored in labeled bags at WPC's White Pine office. Upon arrival at MW-5SB and MW-43SB, there was no evidence of groundwater leakage. After compression cap removal, MW-5SB released groundwater from the top of the casing (overflow from artesian pressure), but no hissing from pressure release occurred. MSG's crews allowed approximately 10 minutes for the wells to stabilize before gauging and purging. Additionally, MSG downloaded the Vibrating Wire Piezometer (VWP) data from WP598, WP584, and WP585. All downloaded data was provided via email to Foth Infrastructure & Environment, LLC.

MSG collected a total of 28 groundwater samples, plus one complete field blank, duplicate from MW-2A (DUP-01-GW_20251020), a matrix spike/matrix spike duplicate (MS/MSD) from MW-5A, and an equipment blank from the bladder pump. During this sampling event, MW-2SB was once again gauged but not sampled. Insufficient groundwater was present in MW-41 to fill a complete bottle set. MSG returned to MW-41 on 10/21/2025 and 10/29/2025 but the well had not recovered. Therefore, low level mercury and methyl mercury samples were not collected at this location.

SURFACE WATER GAUGING AND SAMPLING

Between October 20th and 30th, 2025, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (**Figure 2**) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure (SOP) 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein.

An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements at most of the stream locations. Due to ponding from beaver activity, PNC-02 was deemed unsafe for wading and stream gauging, similar to the August sampling event. Copies of the stream gauging field sheets and stream flow calculation sheets are included in **Appendix A**. Calculated stream flows are summarized in ***Table 2****, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in **Table 2**. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw directly from the surface water body, or from a spare unpreserved bottle filled from the surface water body, and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were processed at WPC's White Pine office using FlipMate™ 50 Filtration System 0.45 um filters as described above.

MSG collected a total of 26 surface water samples. A duplicate sample from SBD-01 (DUP-01-SW_20251020), a MS/MSD from ARC-03, and a field blank were also collected. Locations MLC-01 and PTC-01 were dry. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. Photographs of the stream gauging and sampling locations are provided in ***Appendix B****, Photograph Log.*

DISCUSSION AND RECOMMENDATIONS

Beaver activity has significantly changed the landscape around the ARC-02 and PNC-02 locations since the initial baseline sampling event in the summer of 2024. MSG conducted reconnaissance both upstream and downstream from the original ARC-02 location and observed at least a dozen beaver dams within approximately 1,000 feet of the original sampling location. Similar conditions are present near PNC-02. MSG also noted the start of beaver activity at location PNC-03.

The Standard Operating Procedure for Channel/Stream Flow Rate –Site Selection Criteria states that "As a rule, the stream should be straight for a distance upstream and downstream of the measuring cross-section that is the greater of the two: 1) at least three channel widths, or 2) at least 300 feet." Additionally, "The stream flow site is at least 100 feet upstream/downstream of a narrowing or widening of the stream channel due to natural conditions (i.e., tree fall, meandering stream, confluences with other streams)" At ARC-02 and PNC-02, MSG was unable to locate new sampling locations that met both of those criteria due to the beaver activity. An accessible position along the stream that appeared minimally ponded was selected as an alternative for ARC-02, however the water was nearly stagnant. A slightly less ponded location that could be safely accessed was selected as an alternative for PNC-02, but the ponded water depths prevented wading and stream gauging. MSG recommends that the stream sections associated with ARC-02, PNC-02, and PNC-03 be evaluated for beaver control and dam removal if possible.

Additionally, MSG noted the following observations during the October sampling event:

- Strong winds out of the northwest were present for the first few days of the sampling event, along with rain on 10/22/2025. These conditions may have influenced the stream gauging results.
- Most of the smaller streams contained significant quantities of fallen leaves and in many cases water flow was not visually apparent.
- At MLR-02 on 10/20/2025, it was observed that the direction of water flow varied with the wind direction.

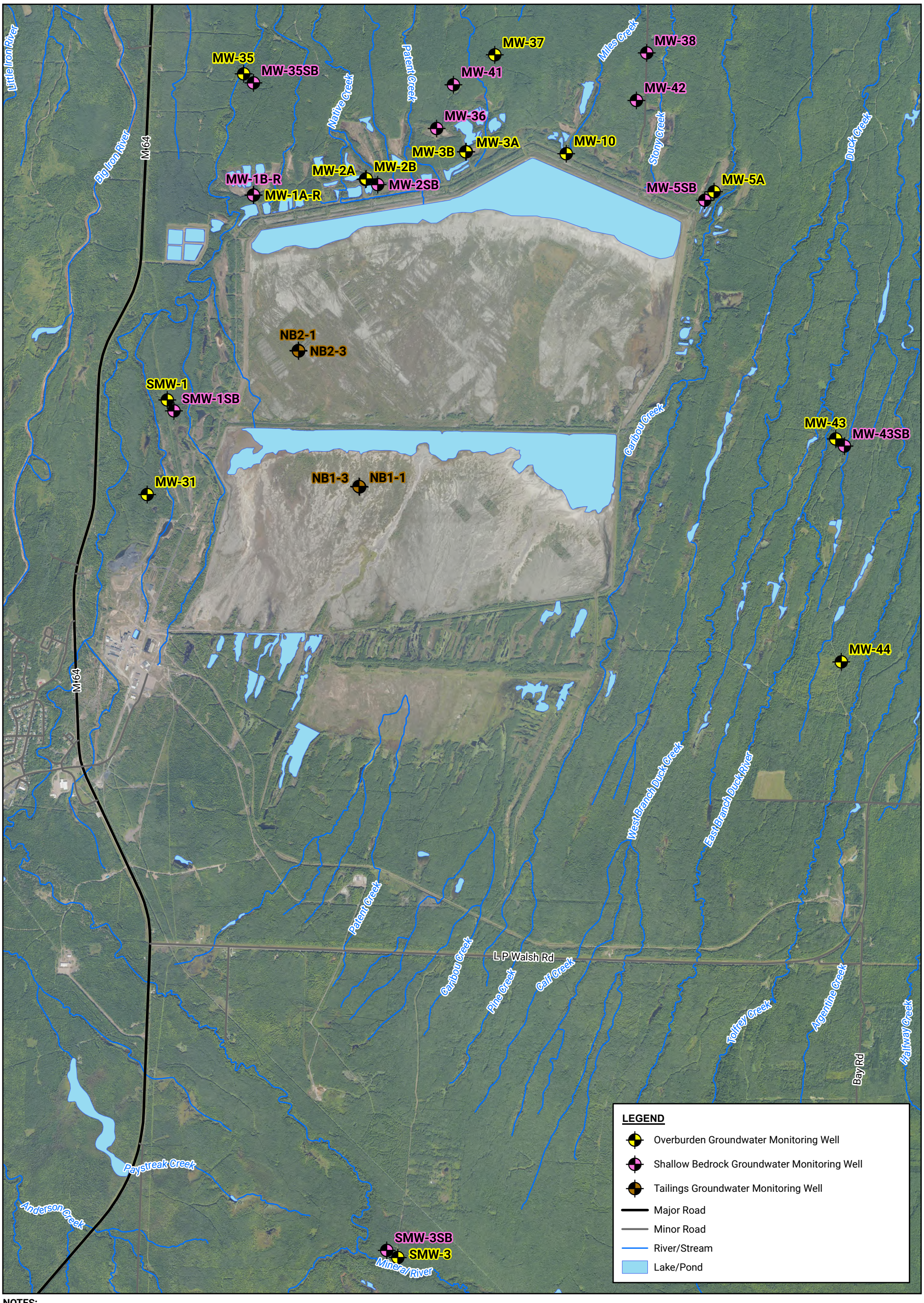
MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,



Jed Chrestensen, P.E.
Project Manager

FIGURES



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 1,500 3,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

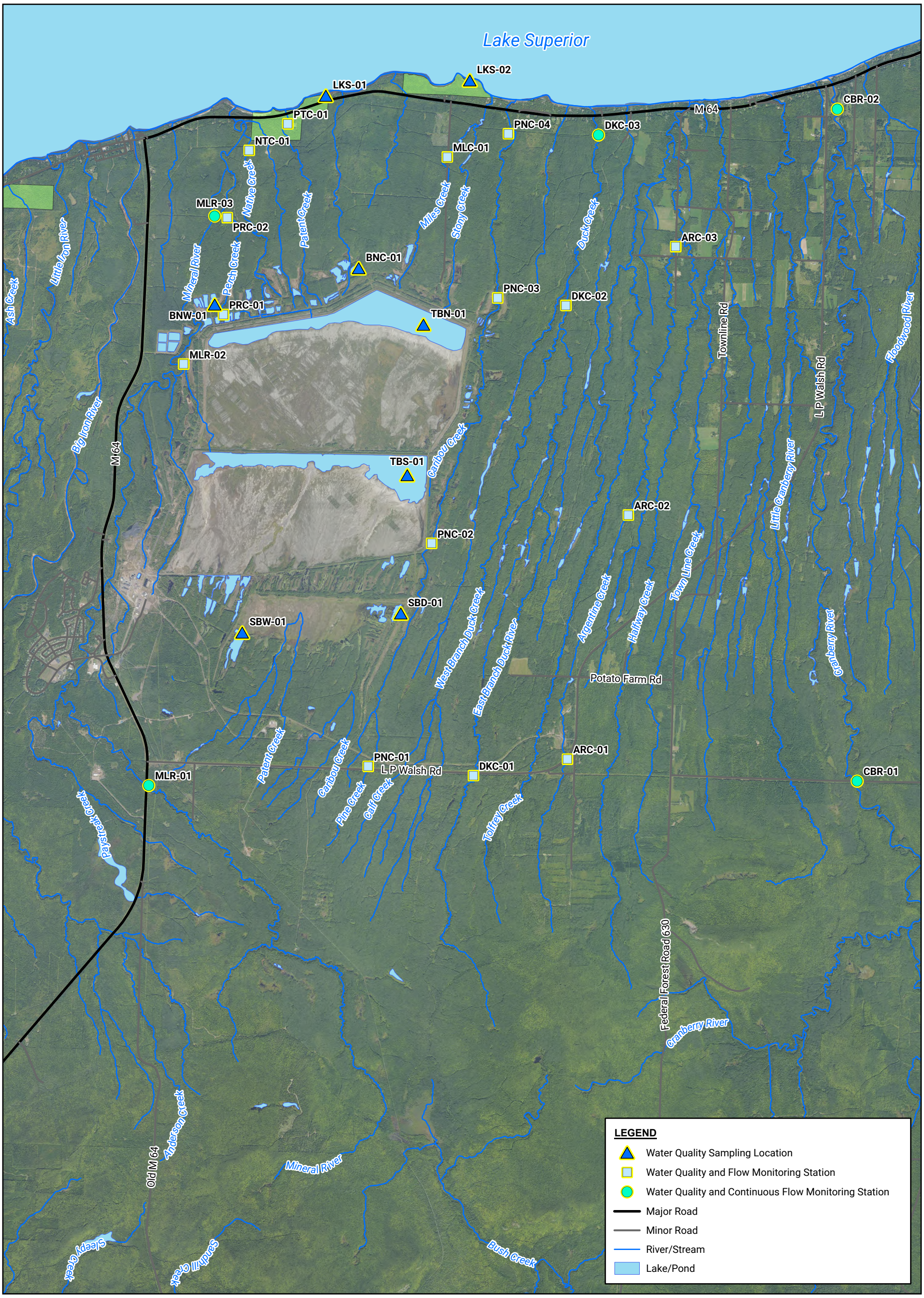
WHITE PINE COPPER LLC

FIGURE 1

GROUNDWATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 24W005	

Q:\White Pine Copper\23W200\GIS\aprx\Quarterly Sampling RFP\GW and SW Quarterly Sampling RFP.aprx 5/23/2024 10:48 AM



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

N

0 2,500 5,000 Feet

WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 23W200	

Q:\White Pine Copper\23W200\GIS\aprx\Quarterly Sampling RFP\GW and SW Quarterly Sampling RFP.aprx 5/23/2024 10:56 AM

TABLES

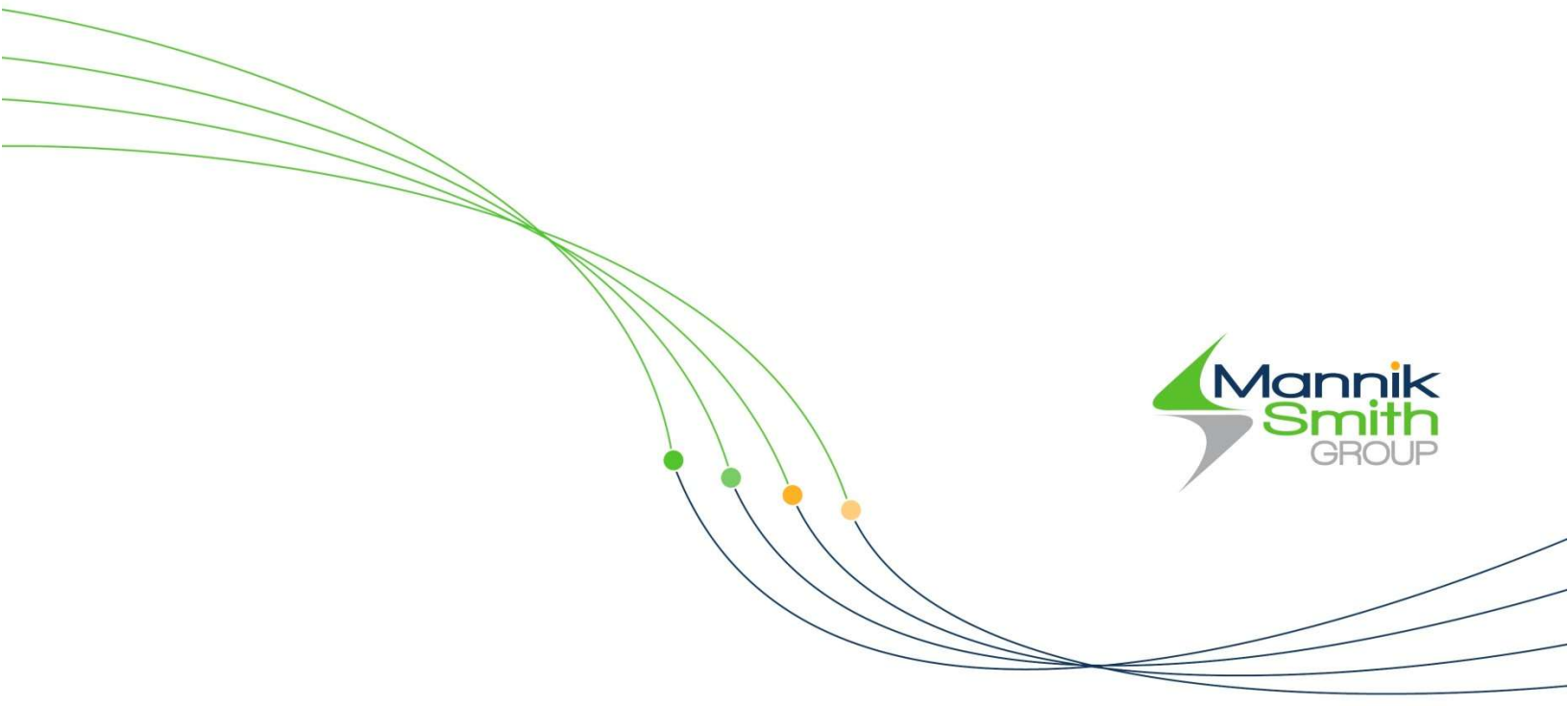


TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-1AR	7/31/2024	9.51	16.98	8.05	136	0.659	1.7	0.42	100
	9/30/2024	10.92	12.99	7.24	157	0.729	6.3	0.00	200
	12/5/2024	11.73	8.07	8.26	175	0.706	8.6	12.19	200
	2/24/2025	10.97	7.61	7.91	136	0.777	29.1	4.87	200
	5/6/2025	9.97	10.06	7.76	176	0.685	31.1	3.27	200
	8/6/2025	9.59	18.03	7.94	105	0.498	0.3	0.80	200
	10/20/2025	11.14	11.93	8.00	110	0.659	0.0	5.11	200
MW-1BR	7/31/2024	9.56	20.90	7.85	-124	0.707	23.7	0.00	100
	9/30/2024	10.78	12.94	7.71	-57	0.859	3.9	0.00	200
	12/5/2024	11.94	6.20	8.06	32	0.796	0.0	11.78	200
	2/24/2025	11.11	8.01	7.77	94	0.888	1.5	0.92	200
	5/6/2025	10.56	11.31	7.89	149	0.704	20.9	8.95	200
	8/6/2025	9.66	15.39	7.86	28	0.591	0.0	0.23	200
	10/20/2025	11.16	11.04	7.83	56	0.767	0.0	0.40	200
MW-2A	8/1/2024	10.59	14.18	7.30	-189	1.230	72.8	0.24	200
	10/1/2024	10.75	13.15	7.42	-162	1.350	0.0	0.00	200
	12/10/2024	6.24	6.88	7.76	-68	1.36	9.5	0.00	200
	2/25/2025	5.81	6.56	7.27	66	1.44	5.7	0.83	200
	5/5/2025	5.62	16.72	6.76	-78	1.14	1.0	0.81	100
	8/5/2025	9.31	17.97	7.19	-142	0.927	8.0	0.29	200
	10/20/2025	9.64	14.62	7.1	-174	1.11	0.0	0.34	200
MW-2B	8/1/2024	11.21	15.70	7.15	-3	0.937	6.8	0.33	200
	10/1/2024	10.73	15.34	7.24	22	1.170	16.2	4.39	200
	12/10/2024	6.40	8.59	7.86	118	1.09	9.3	0.66	200
	2/25/2025	6.32	6.27	7.25	131	1.09	11.8	1.87	200
	5/5/2025	6.08	15.99	6.90	103	0.82	4.0	0.50	200
	8/5/2025	9.39	18.39	7.18	-74	0.703	49.0	0.27	200
	10/29/2025	7.26	12.85	7.20	-88	1.04	0.0	0.39	200
MW-2SB	12/17/2024	85.72	--	--	--	--	--	--	--
	2/25/2025	84.18	--	--	--	--	--	--	--
	5/5/2025	83.89	--	--	--	--	--	--	--
	8/5/2025	83.55	--	--	--	--	--	--	--
	10/20/2025	83.34	--	--	--	--	--	--	--
MW-3A	7/30/2024	10.94	21.99	7.13	-46	1.580	103	0.20	200
	10/1/2024	12.69	15.82	7.14	-87	2.080	19.2	0.00	200
	12/10/2024	8.54	8.01	7.65	-42	2.49	1.8	0.00	200
	2/26/2025	5.58	6.68	7.14	-58	2.51	3.1	1.16	200
	4/28/2025	5.12	10.21	7.05	4	2.36	14.8	0.67	200
	8/4/2025	9.62	15.38	7.09	-97	1.88	0.8	0.58	200
	10/29/2025	10.09	10.36	7.08	-107	2.55	0	0.31	200
MW-3B	7/30/2024	10.74	13.46	7.19	-216	0.903	0.0	0.19	200
	10/1/2024	12.18	15.83	7.20	-60	1.580	0.0	0.55	200
	12/10/2024	7.99	5.43	8.00	102	0.969	0.0	5.68	200
	2/26/2025	5.03	5.87	7.30	162	1.02	2.9	3.01	200
	5/5/2025	4.64	9.20	7.28	176	0.818	3.0	0.69	200
	8/5/2025	9.25	15.12	7.06	159	0.774	2.4	1.21	200
	10/29/2025	9.48	11.52	7.05	64	1.9	0.0	0.37	200
MW-5A	7/30/2024	11.84	18.60	7.36	72	1.340	0.0	1.66	200
	10/2/2024	9.19	14.38	7.21	46	1.650	1.9	0.00	200
	12/9/2024	3.55	10.57	7.98	27	1.48	0.0	10.45	200
	2/26/2025	3.39	5.11	7.29	168	1.66	4.3	2.86	200
	5/7/2025	3.84	9.52	7.30	200	1.36	6.1	0.38	200
	8/4/2025	8.54	15.04	7.29	-161	1.12	4.7	0.29	200
	10/21/2025	8.10	12.37	7.27	-73	1.53	0.0	0.39	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-5SB	9/30/2024	0.05	23.30	8.55	-35	2.060	190.0	2.10	200
	12/9/2024	0.00	8.27	9.33	-87	1.27	9.0	0.00	200
	3/10/2025	0.00	12.24	8.96	-106	1.42	96	0.86	200
	5/7/2025	0.00	10.51	8.73	-82	2.14	128	7.57	200
	8/4/2025	0.00	15.17	8.38	-159	1.98	3.4	0.48	200
	10/21/2025	0.00	11.37	8.86	-131	1.57	0.0	0.81	200
MW-10	8/6/2024	5.82	14.77	6.10	-24	2.330	0.4	0.00	150
	9/30/2024	5.81	18.64	6.43	-54	2.490	3.6	0.00	200
	12/3/2024	4.90	7.71	7.02	-78	2.59	7.9	0.00	200
	2/25/2025	4.76	7.57	6.62	-35	2.63	7.1	0.82	200
	5/7/2025	4.45	11.17	6.71	-93	2.32	38.4	0.52	200
	8/4/2025	5.78	16.08	6.60	-150	1.89	9.8	0.48	200
	10/29/2025	5.72	12.04	6.68	-59	2.4	0.0	0.43	200
MW-31	7/30/2024	50.71	12.47	8.10	51	0.359	>1000	0.00	200
	10/7/2024	49.50	10.26	8.97	-30	0.397	278	0.50	200
	12/9/2024	48.67	6.10	8.10	37	0.347	>1000	1.23	200
	3/11/2025	51.37	4.30	8.36	83	0.450	102	2.89	200
	4/29/2025	50.12	7.00	8.31	206	0.384	>1000	6.99	200
	8/12/2025	51.45	15.63	8.33	-65	0.376	>1000	7.86	200
	10/27/2025	49.75	10.74	8.47	126	0.384	805	11.70	200
MW-35	7/28/2024	16.63	--	--	--	--	--	--	--
	9/30/2024	19.78	9.46	9.40	152	0.612	28.3	3.19	100
	12/3/2024	20.13	5.41	8.09	154	0.462	180	9.96	100
	3/10/2025	17.25	7.85	10.19	321	0.413	163	5.66	100
	4/30/2025	16.14	19.46	7.45	77	0.341	123	0.72	100
	8/12/2025	16.92	20.52	7.55	133	0.376	671	1.39	100
	10/27/2025	19.39	11.46	6.15	98	0.403	115	8.58	100
MW-35SB	12/17/2024	26.59	5.58	8.84	168	0.554	>1000	9.58	100
	3/10/2025	21.09	7.65	8.67	-215	0.617	>1000	0.89	500
	5/7/2025	18.18	9.53	7.63	143	0.503	>1000	7.82	200
	8/11/2025	19.06	14.61	8.75	90	0.394	657	1.38	400
	10/22/2025	22.98	9.07	8.90	94	0.47	561	1.86	500
MW-36	7/28/2024	6.83	19.53	7.17	-207	0.668	261	0.58	200
	9/30/2024	5.94	20.43	8.10	-155	0.667	49.9	0.68	200
	12/3/2024	2.93	6.78	8.11	126	0.587	12.5	0.25	200
	3/4/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.15	17.67	7.00	-105	0.592	4.8	0.23	200
	8/11/2025	4.54	22.12	7.17	-99	0.682	14.8	1.81	200
	10/23/2025	3.39	13.58	7.12	-100	0.668	20.4	0.81	200
MW-37	7/28/2024	14.11	24.22	7.34	-69	0.438	89.8	0.85	200
	10/2/2024	16.81	11.55	8.03	-11	0.534	24.7	1.83	200
	12/3/2024	16.94	8.88	8.53	145	0.413	13.6	10.54	200
	3/4/2025	11.62	3.58	11.59	356	0.473	27.0	9.81	200
	5/1/2025	8.78	10.50	7.31	179	0.402	3.4	5.42	200
	8/11/2025	14.91	14.00	7.51	114	0.529	48.1	4.40	100
	10/21/2025	16.89	10.96	7.57	154	0.481	>1000	6.11	100
MW-38	7/28/2024	12.31	11.70	7.66	115	0.525	0.0	0.94	200
	10/7/2024	15.95	10.22	7.32	142	0.570	3.9	0.00	200
	12/3/2024	16.11	7.01	8.65	192	0.597	4.3	2.47	200
	3/4/2025	9.97	6.40	8.65	269	0.614	15.1	4.03	200
	5/7/2025	6.42	8.80	7.69	147	0.446	4.9	4.81	200
	8/6/2025	11.25	15.31	7.66	136	0.324	0.0	0.58	200
	10/23/2025	15.38	9.91	7.90	203	0.46	0.0	1.73	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-41	7/24/2024	7.90	14.99	7.40	164	0.539	78.1	9.10	200
	9/30/2024	28.33	14.70	8.43	172	0.610	172	5.89	100
	12/3/2024	28.64	--	--	--	--	--	--	--
	3/4/2025	25.94	2.33	10.42	329	0.582	35.8	8.51	100
	5/1/2025	24.38	13.87	7.84	110	0.406	92.2	7.00	100
	8/11/2025	25.85	20.60	7.86	159	0.610	107	5.73	100
	10/21/2025	27.94	10.41	7.73	157	0.637	65.6	8.60	100
MW-42	7/28/2024	5.62	16.37	8.50	51	0.354	0.0	3.45	200
	10/7/2024	8.42	12.70	8.71	106	0.316	35.8	0.56	200
	12/3/2024	6.95	5.74	8.91	174	0.315	11.9	2.16	200
	3/4/2025	3.94	5.66	9.76	255	0.332	148	4.91	200
	5/7/2025	3.59	11.70	9.11	113	0.276	18.7	3.20	200
	8/6/2025	5.14	16.96	9.06	68	0.222	116	2.22	200
	10/23/2025	7.67	9.97	9.02	141	0.288	0	1.48	200
MW-43	7/31/2024	13.61	18.32	8.02	-33	0.419	274	0.40	200
	9/25/2024	17.31	11.93	7.98	167	0.501	17.7	0.00	200
	12/4/2024	15.54	7.43	8.21	134	0.452	38.1	0.00	200
	2/26/2025	10.47	6.69	8.87	323	0.511	50.3	0.00	200
	5/6/2025	8.78	11.00	7.96	112	0.447	61.0	0.76	200
	8/5/2025	12.31	12.37	8.03	204	0.506	30.1	0.87	200
	10/22/2025	16.01	9.30	8.02	35	0.522	108.0	0.86	200
MW-43SB	10/1/2024	3.65	12.23	8.51	17	4.520	1.7	1.51	150
	12/16/2024	Frozen	--	--	--	--	--	--	--
	2/27/2025	8.38	6.53	7.24	73	4.74	33.5	1.26	200
	5/6/2025	17.74	15.02	7.18	60	4.17	14.3	5.8	200
	8/5/2025	0.43	16.30	7.14	94	4.33	3.4	1.16	200
	10/22/2025	0.75	9.43	7.09	-82	4.08	6.9	1.11	200
MW-44	7/31/2024	15.10	13.58	7.69	-194	0.614	50.6	0.06	200
	9/25/2024	17.89	13.72	8.38	-141	0.809	89.4	0.00	200
	12/4/2024	17.21	8.74	8.33	-61	0.633	15.0	0.00	200
	2/26/2025	14.63	6.00	8.76	285	0.800	18.4	0.00	200
	5/6/2025	13.44	13.06	8.20	140	0.690	48.1	1.74	200
	8/5/2025	14.85	14.20	7.93	-107	0.738	8.2	0.83	200
	10/22/2025	17.03	9.24	8.16	-34	0.769	12.7	0.81	200
NB1-1	7/24/2024	5.61	13.20	6.86	-128	1.290	0.0	0.16	200
	10/2/2024	5.78	16.04	7.74	-228	1.080	29.0	0.00	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.59	6.01	8.08	-85	1.19	25.1	0.00	200
	5/5/2025	2.70	13.64	8.23	-262	1.05	18.1	0.37	200
	8/7/2025	5.62	18.63	7.82	-280	0.972	6.3	0.54	200
	10/28/2025	4.97	10.77	7.85	-181	1.09	41.2	0.63	200
NB1-3	7/24/2024	6.21	13.64	7.89	-273	1.000	54.2	0.31	200
	10/2/2024	6.47	14.05	7.82	-175	1.000	22.3	0.37	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.93	7.07	7.97	86	1.03	46.3	0.00	200
	5/5/2025	2.94	16.79	7.50	-125	0.846	17.6	0.22	200
	8/7/2025	5.85	21.78	7.37	-156	0.88	8.5	1.45	200
	10/28/2025	5.40	10.59	7.45	-140	1.03	9.9	1.14	200
NB2-1	7/24/2024	6.45	17.91	6.93	-166	2.260	62.4	0.32	200
	9/30/2024	6.21	25.97	7.21	-124	2.020	0.0	0.10	100
	12/2/2024	2.66	7.19	8.10	-177	1.10	13.7	0.00	200
	3/3/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.56	10.23	7.41	-255	0.974	4.9	0.49	200
	8/12/2025	6.33	19.10	6.93	-62	2.24	40.4	0.82	200
	10/28/2025	2.77	15.36	7.11	-93	1.48	7.4	0.55	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
NB2-3	7/24/2024	6.25	13.99	6.54	-42	1.110	0.0	0.00	200
	9/30/2024	5.80	26.73	7.88	-189	0.889	0.0	0.01	200
	12/2/2024	2.96	8.18	8.40	-78	1.03	14.9	13.01	200
	3/3/2025	2.57	7.87	8.45	14	1.12	20.3	0.00	200
	4/30/2025	2.69	13.72	7.54	-119	1.03	9.1	1.20	200
	8/12/2025	5.74	17.22	7.44	-76	1.10	80.4	3.59	200
	10/28/2025	3.28	13.47	7.87	-80	1.09	0.0	0.81	200
SMW-1	7/25/2024	23.52	9.22	8.21	-84	0.403	73.0	14.06	200
	10/2/2024	23.90	10.08	8.12	-106	0.463	212.0	0.00	200
	12/9/2024	24.79	8.17	8.32	107	0.337	71.9	0.00	200
	3/3/2025	24.25	8.32	8.85	82	0.388	119	1.94	200
	4/29/2025	23.70	6.64	8.20	178	0.371	794	9.18	200
	8/13/2025	23.71	11.12	7.85	155	0.401	9.4	1.80	200
	10/27/2025	24.50	9.44	7.99	38	0.386	20.8	5.59	200
SMW-1SB	12/9/2024	25.15	5.58	8.99	134	0.362	73.2	15.83	200
	3/3/2025	25.35	9.08	9.60	158	0.399	108	7.95	200
	4/30/2025	21.37	8.01	8.39	37	0.195	16.9	8.59	200
	8/13/2025	23.43	12.74	9.01	-49	0.368	6.1	7.14	200
	10/27/2025	26.00	13.25	8.97	-47	0.345	18.5	2.15	200
SMW-3	8/6/2024	27.68	10.84	8.14	88	0.262	11.1	5.41	200
	10/2/2024	27.66	12.52	8.58	-125	0.249	14.7	0.00	200
	12/4/2024	27.18	7.36	8.39	-60	0.272	8.7	10.74	200
	3/6/2025	26.85	8.65	8.38	69	0.265	21.6	0.00	200
	5/8/2025	27.02	14.14	8.19	-64	0.212	5.8	4.13	100
	8/7/2025	27.40	13.71	8.69	-164	0.191	3.7	2.70	200
	10/22/2025	27.18	8.78	8.29	-18	0.258	0.0	8.12	200
SMW-3SB	12/4/2024	22.98	--	--	--	--	--	--	--
	3/6/2025	22.69	7.27	9.05	255	0.556	36.9	0.00	200
	5/8/2025	22.84	9.77	9.27	54	0.510	13.9	1.14	200
	8/7/2025	23.14	15.54	9.12	-32	0.400	0.9	0.94	200
	10/22/2025	22.89	8.99	9.1	-63	0.513	0	0.97	200

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
ARC-01	7/31/2024	6.89	0.129	20.68	122	2.80	8.0	0.008	1.4	--
	9/25/2024	6.79	0.223	11.67	194	2.61	2.4	0.017	4.7	0.84
	12/5/2024	8.22	0.098	1.26	178	11.75	0.0	0.058	3.5	1.00
	3/11/2025	9.26	0.116	0.38	237	10.30	4.4	4.110	19.8	2.98
	4/28/2025	7.09	0.070	10.57	227	10.28	5.6	0.496	6.1	1.20
	8/4/2025	6.46	0.192	16.67	285	5.70	6.8	-0.043	5.4	1.00
	10/20/2025	6.37	0.225	7.75	46	2.20	51.0	-0.121	6.33	1.00
ARC-02	7/31/2024	7.72	0.153	19.32	120	1.93	25.8	0.125	11.5	--
	9/25/2024	7.40	0.129	14.76	159	5.05	12.6	0.229	20.0	--
	12/4/2024	8.52	0.158	0.32	158	6.56	733	0.427	34.0	--
	2/27/2005	8.77	0.064	1.19	280	7.56	40.8	2.310	61.0	--
	5/6/2025	6.53	0.080	15.00	209	5.29	26.7	Unsafe Conditions		--
	8/5/2025	6.48	0.138	18.06	137	1.65	37.1	-0.040	8.25	--
	10/22/2025	6.56	0.117	9.99	70	3.11	42.5	-0.266	10.25	--
ARC-03	8/6/2024	--	--	--	--	--	--	Dry		--
	9/26/2024	8.04	0.255	11.59	91	7.98	28.3	0.030	8.0	0.62
	12/11/2024	8.15	0.093	0.07	199	16.25	32.6	2.162	14.2	1.50
	3/6/2025	7.55	0.082	1.87	150	10.42	11.7	14.180	13.0	2.78
	4/28/2025	7.06	0.066	11.19	282	10.65	7.5	3.239	10.7	Bent
	8/13/2025	7.57	0.202	18.34	149	5.71	2.0	0.018	8.0	0.72
	10/27/2025	7.51	0.132	8.54	167	12.58	0.0	0.541	9.0	0.95
BNC-01	8/6/2024	7.39	0.179	22.83	115	8.21	0.0	No Stream Gauging		--
	10/8/2024	8.79	0.158	14.53	45	6.90	0.0	No Stream Gauging		--
	12/11/2024	8.12	0.143	0.00	161	4.2	700	No Stream Gauging		--
	3/11/2025	7.14	0.143	1.56	-5	4.04	0.0	No Stream Gauging		--
	5/6/2025	7.09	0.120	21.95	124	7.41	5.1	No Stream Gauging		--
	8/6/2025	7.12	0.143	24.56	271	5.6	2.9	No Stream Gauging		--
	10/29/2025	7.55	0.129	9.08	146	6.82	0.0	No Stream Gauging		--
BNW-01	7/31/2024	7.12	0.184	28.77	111	7.80	2.1	No Stream Gauging		--
	10/8/2024	8.15	0.223	13.65	41	8.37	211	No Stream Gauging		--
	12/11/2024	8.42	0.152	1.49	211	15.75	25.6	No Stream Gauging		--
	2/25/2025	7.49	0.219	2.53	156	9.11	0.0	No Stream Gauging		--
	5/5/2025	7.88	0.218	18.32	156	9.81	11.9	No Stream Gauging		--
	8/6/2025	8.91	0.152	25.41	208	5.60	2.7	No Stream Gauging		--
	10/20/2025	8.32	0.218	16.51	114	11.58	0.0	No Stream Gauging		--
CBR-01	7/29/2024	8.16	0.242	24.54	177	8.90	0.0	No Stream Gauging		--
	9/25/2024	7.77	0.295	12.08	175	6.96	1.2	No Stream Gauging		--
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	2/27/2025	8.74	0.092	0.07	348	11.27	32.8	No Stream Gauging		--
	5/6/2025	6.86	0.068	16.47	200	8.75	13.6	No Stream Gauging		--
	8/5/2025	8.53	0.201	23.39	185	6.53	9.8	No Stream Gauging		--
	10/22/2025	7.48	0.091	8.81	154	10.16	102	No Stream Gauging		--
CBR-02	8/6/2024	7.97	0.246	26.38	92	6.70	0.0	No Stream Gauging		--
	10/3/2024	8.10	0.261	13.84	106	7.32	12.2	No Stream Gauging		3.55
	12/17/2024	8.30	0.118	0.75	229	10.09	39.2	No Stream Gauging		3.20
	3/4/2025	7.42	0.119	1.04	130	11.02	43.9	No Stream Gauging		3.70
	5/6/2025	7.38	0.074	12.26	68	11.60	4.2	No Stream Gauging		Bent
	8/11/2025	7.41	0.163	23.42	114	3.82	0.0	No Stream Gauging		3.56
	10/27/2025	7.76	0.097	7.18	151	11.28	0.0	No Stream Gauging		3.31
DKC-01	7/29/2024	--	--	--	--	--	--	Dry		--
	9/23/2024	--	--	--	--	--	--	Dry		--
	12/5/2024	7.83	0.159	0.59	250	14.81	0.0	0.131	6.8	--
	3/11/2025	7.99	0.160	-0.02	325	12.12	0.9	9.990	12.0	--
	4/28/2025	7.25	0.060	8.22	208	12.06	37.5	6.028	8.8	--
	8/4/2025	7.57	0.167	16.20	331	7.44	0.6	-0.004	4.1	--
	10/20/2025	7.10	0.193	7.78	123	5.19	26.5	-0.042	4.5	--

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
DKC-02	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	7.65	0.152	18.34	168	9.39	2.5	0.081	16.0	--
	12/17/2024	7.30	0.081	0.06	189	16.12	24.7	11.557	22.5	--
	2/26/2025	8.26	0.075	0.03	298	11.02	16.5	7.040	24.8	--
	5/7/2025	6.63	0.065	11.43	191	10.88	10.2	3.737	21.5	--
	8/13/2025	7.67	0.126	19.46	154	6.18	2.3	0.020	8.17	--
	10/27/2025	7.74	0.135	5.45	146	12.13	0.0	0.724	19.33	--
DKC-03	8/6/2024	7.52	0.213	25.28	151	5.21	0.0	No Stream Gauging		--
	9/26/2024	7.83	0.163	14.36	151	6.67	8.7	No Stream Gauging		--
	12/16/2024	7.50	0.087	1.63	237	13.76	47.7	No Stream Gauging		--
	3/3/2025	7.46	0.077	1.31	136	12.06	6.5	No Stream Gauging		--
	4/29/2025	7.31	0.050	8.40	271	11.11	34.5	No Stream Gauging		--
	8/12/2025	7.43	0.108	24.53	110	5.02	1.2	No Stream Gauging		--
	10/27/2025	7.70	0.139	9.28	154	9.94	0.0	No Stream Gauging		--
LKS-01	7/28/2024	8.34	0.116	20.87	191	11.12	0.1	No Stream Gauging		--
	10/7/2024	8.91	0.111	13.68	112	9.56	12.4	No Stream Gauging		--
	12/16/2024	7.56	0.212	0.30	236	13.74	37.8	No Stream Gauging		--
	3/4/2025	7.17	0.389	1.22	193	54.3	10.6	No Stream Gauging		--
	4/30/2025	6.88	0.085	10.95	167	11.30	13.2	No Stream Gauging		--
	8/12/2025	8.30	0.082	21.78	85	10.98	10.9	No Stream Gauging		--
	10/28/2025	8.18	0.100	9.04	121	12.26	9.6	No Stream Gauging		--
LKS-02	7/28/2024	7.69	0.112	21.91	172	11.11	0.0	No Stream Gauging		--
	10/7/2024	9.23	0.108	13.49	42	10.06	1.2	No Stream Gauging		--
	12/16/2024	8.11	0.115	0.70	62	10.79	17.6	No Stream Gauging		--
	3/3/2025	7.50	0.171	0.93	91	11.58	3.1	No Stream Gauging		--
	5/1/2025	6.64	0.054	6.67	170	11.53	13.5	No Stream Gauging		--
	8/12/2025	8.13	0.080	20.94	104	9.37	0.0	No Stream Gauging		--
	10/28/2025	8.03	0.099	9.42	29	11.3	40.0	No Stream Gauging		--
MLC-01	8/6/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/2/2024	12.12	0.275	3.76	-43	14.59	16.3	0.027	2.5	--
	3/3/2025	7.27	0.218	0.49	173	12.23	9.8	0.170	4.3	--
	4/29/2025	7.23	0.133	8.04	261	10.87	19.5	0.768	4.0	--
	8/6/2025	--	--	--	--	--	--	Dry		--
	10/28/2025	--	--	--	--	--	--	Dry		--
MLR-01	7/25/2024	7.72	0.148	15.35	150	7.52	0.1	0.311	16.3	--
	9/23/2024	7.95	0.177	16.42	141	9.50	7.7	No Stream Gauging		1.29
	12/16/2024	7.58	0.088	0.36	199	15.08	32.2	No Stream Gauging		2.05
	3/10/2025	8.64	0.071	0.32	361	11.51	43.4	No Stream Gauging		3.71
	4/28/2025	6.81	0.050	8.35	223	12.17	22.4	No Stream Gauging		2.10
	8/13/2025	7.81	0.112	21.31	130	7.03	0.0	0.051	13.9	1.27
	10/28/2025	7.15	0.085	6.49	165	11.25	0.0	No Stream Gauging		1.60
MLR-02	7/25/2024	7.41	0.247	19.59	114	7.46	7.4	0.489	28.2	--
	9/24/2024	8.15	0.265	15.97	116	13.09	1.5	0.086	21.0	0.08
	12/16/2024	7.82	0.140	0.31	234	14.4	57.1	2.504	37.5	1.15
	3/11/2025	7.73	0.180	0.00	145	13.67	18	No Stream Gauging		2.65
	5/5/2025	7.11	0.092	10.50	202	10.38	33.6	15.758	35.5	Bent
	8/4/2025	7.72	0.190	20.85	292	6.22	19.6	0.083	25.0	0.15
	10/20/2025	7.70	0.204	10.53	171	7.36	48.2	-0.074	24.83	0.12
MLR-03	7/25/2024	7.79	0.245	15.87	186	9.27	0.0	0.468	28.2	--
	9/23/2024	8.64	0.283	14.30	31	10.02	1.6	No Stream Gauging		0.71
	12/2/2024	9.17	0.168	0.05	192	21.09	17.5	No Stream Gauging		1.30
	2/25/2025	7.88	0.241	-0.10	299	2.29	23.6	No Stream Gauging		1.26
	4/30/2025	7.13	0.067	9.20	164	11.09	15.8	No Stream Gauging		Bent
	8/6/2025	8.01	0.195	18.55	223	7.68	1.9	No Stream Gauging		Missing
	10/21/2025	7.55	0.204	9.48	145	7.15	30.3	No Stream Gauging		Missing

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
NTC-01	7/22/2024	7.85	0.208	17.79	39	9.55	34.7	0.074	4.8	--
	9/23/2024	7.56	0.225	15.34	-19	2.17	171	0.021	4.0	--
	12/2/2024	9.87	0.252	1.76	56	14.1	12.7	0.016	5.3	--
	2/25/2025	7.93	0.233	0.53	254	8.92	15.6	0.630	7.5	--
	4/30/2025	6.65	0.105	14.11	175	2.20	2.2	0.583	7.0	--
	8/6/2025	7.40	0.143	19.93	234	4.94	2.9	0.001	5.3	--
	10/21/2025	6.82	0.229	10.79	-70	1.55	167	-0.028	4.6	--
PNC-01	7/29/2024	6.53	0.119	21.62	171	2.13	1.2	0.008	2.2	--
	9/23/2024	7.33	0.285	16.70	175	1.51	21.6	0.015	2.3	0.83
	12/5/2024	7.22	0.085	0.93	131	10.99	55.1	0.015	1.3	1.00
	3/11/2025	8.91	0.041	0.02	293	12.69	51.7	5.730	4.0	1.90
	4/28/2025	6.83	0.047	9.87	198	10.13	9.2	0.906	3.2	1.32
	8/13/2025	6.84	0.095	20.81	147	0.085	6.6	0.008	2.3	0.83
	10/29/2025	6.76	0.108	9.22	95	5.73	2.0	-0.042	2.8	0.88
PNC-02	7/29/2024	7.29	0.293	27.19	72	4.63	41.0	0.068	10.8	--
	9/24/2024	7.73	0.343	17.27	136	12.59	7.9	0.213	53.3	1.22
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	3/10/2025	9.29	0.129	-0.05	289	9.63	230	7.120	55.0	2.09
	5/5/2025	6.95	135	17.87	0.1	7.76	670	1.774	56.0	1.90
	8/4/2025	7.52	0.281	22.14	308	5.16	19.9	Not Accessible		--
	10/20/2025	7.36	0.334	10.98	119	5.06	277	Not Accessible		--
PNC-03	8/1/2024	7.79	0.453	20.11	105	4.62	0.0	0.023	4.0	--
	9/24/2024	7.84	0.395	15.97	138	10.22	6.4	0.053	6.3	0.43
	12/9/2024	8.92	0.274	1.72	168	10.26	10.0	3.440	18.9	1.31
	3/10/2025	7.60	0.173	0.42	143	12.94	8.0	17.770	21.0	2.3
	5/7/2025	7.86	0.124	12.94	170	9.16	26.4	3.366	20.5	1.22
	8/6/2025	7.88	0.315	20.16	247	6.67	1.5	-0.032	20.0	0.78
	10/29/2025	7.52	0.346	6.71	136	6.97	0.0	-0.800	20.08	1.36
PNC-04	8/7/2024	7.35	0.481	17.08	157	9.73	0.0	0.011	5.3	--
	9/26/2024	7.82	0.412	13.69	138	7.89	2.6	0.082	7.0	0.58
	12/17/2024	8.27	0.241	0.06	276	15.12	19.9	10.975	15.5	1.70
	3/4/2025	7.47	0.179	0.00	136	13.72	11.6	3.330	15.7	--
	5/1/2025	6.85	0.099	9.79	204	11.09	5.6	7.990	21.8	Bent
	8/11/2025	7.90	0.267	20.01	75	8.62	0.0	0.060	4.9	Missing
	10/27/2025	7.70	0.349	5.86	132	11.79	0.0	0.469	6.34	0.24
PRC-01	7/22/2024	8.22	0.972	24.40	110	9.33	47.9	1.011	6.2	--
	9/24/2024	7.37	0.481	18.86	114	7.68	3.3	0.072	7.0	0.20
	12/11/2024	8.11	0.938	0.56	192	13.84	21.1	11.443	16.0	0.75
	3/4/2025	7.54	0.914	0.28	195	13.14	6.8	5.500	15.5	--
	5/7/2025	8.00	0.429	16.32	112	9.34	20.5	16.628	16.0	0.75
	8/6/2025	7.94	0.689	24.25	191	7.86	16.7	0.299	11.0	0.18
	10/29/2025	7.93	0.982	8.42	1	10.82	10.1	1.177	15.0	0.25
PRC-02	7/22/2024	8.05	0.984	19.87	132	11.13	10.6	0.805	5.2	--
	9/23/2024	7.91	1.030	13.89	112	7.33	0.3	0.050	5.0	--
	12/2/2024	8.95	0.821	0.13	-109	19.4	25.6	5.142	6.7	--
	2/25/2025	7.99	0.745	0.13	420	12.63	7.6	1.930	8.0	--
	4/30/2025	6.83	0.381	11.35	162	10.72	14.0	Unsafe Conditions		--
	8/6/2025	7.92	0.701	19.81	240	6.00	2.4	0.153	5.7	--
	10/21/2025	7.71	0.941	9.64	174	7.65	12.0	0.271	6.0	--
PTC-01	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/11/2024	8.03	0.215	-0.07	231	14.47	2.7	0.271	9.0	--
	3/6/2025	7.45	0.224	0.83	114	12.02	7.3	0.920	7.3	--
	4/29/2025	7.44	0.12	7.86	258	4.88	4.7	0.579	6.6	--
	8/11/2025	7.73	0.196	19.29	126	6.07	0.0	0.017	7.0	--
	10/27/2025	--	--	--	--	--	--	Dry		--

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
SBD-01	7/29/2024	7.65	0.224	28.82	123	5.98	89.5	No Stream Gauging		--
	9/24/2024	7.71	0.246	16.34	33	3.86	132.0	No Stream Gauging		--
	12/10/2024	7.67	0.235	3.89	199	6.18	57.7	No Stream Gauging		--
	2/24/2025	7.31	0.260	1.08	101	0.46	147	No Stream Gauging		--
	4/29/2025	7.28	0.109	10.45	219	6.35	9.5	No Stream Gauging		--
	8/4/2025	6.82	0.159	21.37	251	2.42	7.8	No Stream Gauging		--
	10/20/2025	7.07	0.176	11.47	153	4.06	31.0	No Stream Gauging		--
SBW-01	7/29/2024	8.17	0.152	26.48	138	5.96	0.0	No Stream Gauging		--
	9/24/2024	7.92	0.191	13.78	121	7.36	10.3	No Stream Gauging		--
	12/10/2024	7.55	0.181	0.46	206	6.64	63.0	No Stream Gauging		--
	2/24/2025	7.32	0.428	0.35	164	7.69	40.5	No Stream Gauging		--
	4/29/2025	7.45	0.21	8.90	298	5.84	5.4	No Stream Gauging		--
	8/4/2025	6.99	0.138	25.17	339	3.44	242	No Stream Gauging		--
	10/20/2025	7.55	0.201	9.04	156	7.00	18.0	No Stream Gauging		--
TBN-01	7/31/2024	7.13	0.866	25.82	108	8.52	4.4	No Stream Gauging		--
	10/7/2024	7.85	1.030	13.31	143	10.92	29.9	No Stream Gauging		--
	12/11/2024	8.02	0.618	0.19	198	13.83	52.1	No Stream Gauging		--
	2/24/2025	7.46	0.601	0.80	321	4.70	2.8	No Stream Gauging		--
	5/1/2025	8.25	0.376	11.62	165	11.57	47.2	No Stream Gauging		--
	8/6/2025	9.30	0.607	23.61	179	8.13	3.3	No Stream Gauging		--
	10/29/2025	8.17	0.943	10.03	131	7.90	12.2	No Stream Gauging		--
TBS-01	7/28/2024	7.55	0.754	28.43	120	10.25	0.0	No Stream Gauging		--
	10/8/2024	8.47	1.040	8.60	116	12.87	7.8	No Stream Gauging		--
	12/11/2024	8.30	0.396	4.94	178	11.19	170	No Stream Gauging		--
	2/24/2025	7.46	0.484	0.61	426	6.02	11.1	No Stream Gauging		--
	5/1/2025	8.05	0.601	12.44	164	11.35	14.8	No Stream Gauging		--
	8/13/2025	9.03	2.28	24.71	55	4.29	1.2	No Stream Gauging		--
	10/20/2025	8.26	2.32	11.34	139	10.54	17.8	No Stream Gauging		--

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

APPENDIX A
FIELD SHEETS

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1AR

DATE: 10-20-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 45°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 11.14

PURGE START TIME: 11:56

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MS/D - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1200	11.28	11.74	8.01	108	0.668	0.0	10.79	0	200	
1205	13.63	11.61	8.00	112	0.661	0.0	10.33	0.25	↓	
1210	14.58	11.69	7.98	111	0.658	0.9	4.05	0.5	↓	
1215	15.64	11.83	7.99	110	0.659	0.0	5.04	0.75	↓	
1220	16.12	11.83	8.00	111	0.660	0.0	6.06	1.0	↓	
1225	16.42	11.85	8.00	111	0.658	0.0	5.37	1.25	↓	
1230	16.71	11.93	8.00	110	0.659	0.0	5.11	1.5	↓	
				Sample collected		at 13:00				

SAMPLE ID: MW-1AR_20251020 & MW-1AR_20251020_FBLK

SAMPLE DATE: 10-20-25

SAMPLE TIME: 13:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1BR

DATE: 10-20-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 45°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 11.16

PURGE START TIME: 10:40

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ¼" ~~PE~~ Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1045	11.67	13.88	6.61	211	0.759	0.0	5.14	0	200	
1050	11.80	13.42	7.53	173	0.696	0.0	1.23	0.25	↓	
1055	11.94	12.60	7.73	141	0.704	0.0	0.74	0.5	↓	
1100	12.10	11.82	7.82	90	0.725	0.0	0.55	0.75	↓	
1105	12.13	11.67	7.82	82	0.758	0.0	0.50	1.0	↓	
1110	12.23	11.36	7.83	~~6~~5	0.766	0.0	0.46	1.25	↓	
1115	~~11.17~~ 12.26	11.17	7.83	62	0.765	0.0	0.45	1.5	↓	
1120	12.31	11.04	7.83	56	0.767	0.0	0.40	1.75	↓	
		Sample collected at			11:30					

SAMPLE ID: MW-1BR_20251020 + MW-1BR_20251020_FBLK

SAMPLE DATE: 10-20-25

SAMPLE TIME: 11:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2A

DATE: 10-20-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Partly cloudy, 45°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 9.64

PURGE START TIME: 14:57

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE:

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
15:00	9.96	17.59	7.28	-129	1.05	0.0	3.02	0	200	
1505	10.76	15.14	7.10	-173	1.09	0.0	0.49	0.25		
1510	11.19	15.02	7.10	-170	1.09	0.0	0.39	0.5		
1515	11.69	14.84	7.10	-172	1.10	0.0	0.35	0.75		
1520	12.03	14.71	7.10	-174	1.10	0.0	0.35	1.0		
1525	12.39	14.62	7.10	-174	1.11	0.0	0.34	1.25		
				Sample collected at			16:00			

SAMPLE ID: MW-2A_20251020 & MW-2A_20251020_FBLL, DUP-01-GW_20251020 & DUP-01-GW_20251020_FBLL

SAMPLE DATE: 10-20-25

SAMPLE TIME: 16:00

Notes:

MW-2SB DTW - 83.34

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2B

DATE: 10-29-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 50°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 7.26

PURGE START TIME: 14:27

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 3/8" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG- Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1430	7.71	12.32	7.46	-87	1.10	48.7	1.15	0	200	
1435	7.92	12.65	7.22	-99	1.08	12.7	0.64	0.25		
1440	8.16	12.73	7.21	-95	1.07	0.0	0.55	0.5		
1445	8.42	12.81	7.20	-92	1.07	0.0	0.48	0.75		
1450	8.69	12.84	7.19	-90	1.06	0.0	0.43	1.0		
1455	8.82	12.85	7.20	-88	1.04	0.0	0.39	1.25	↓	
				Sample collected		at	15:30			

SAMPLE ID: MW-2B_20251029 & MW-2B 20251029_FBLK

SAMPLE DATE: 10-29-25

SAMPLE TIME: 15:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3A

DATE: 10-29-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 40°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 10.09

PURGE START TIME: 11:03

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MS6 - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1105	10.39	10.40	7.16	-107	2.56	26.5	0.86	0	200	
1110	10.88	10.33	7.12	-129	2.56	0.0	0.58	0.25		
1115	11.08	10.34	7.08	-115	2.55	0.0	0.45	0.5		
1120	11.58	10.35	7.08	-111	2.55	0.0	0.39	0.75		
1125	12.01	10.35	7.08	-109	2.55	0.0	0.35	1.0		
1130	12.41	10.36	7.08	-107	2.55	0.0	0.31	1.25		
		Sample collected at 12:00								

SAMPLE ID: MW-3A_20251029 + MW-3A_20251029_FBLC

SAMPLE DATE: 10-29-25

SAMPLE TIME: 12:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3B

DATE: 10-29-25

PROJECT #: 401.2400718.000

PERSONNEL: JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 30°F, Sunny

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 9.48

PURGE START TIME: 9:58

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: ¼" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1000	9.87	12.06	7.25	144	1.90	0.0	1.21	0	200	
1005	10.11	11.55	7.09	67	1.94	0.0	0.72	0.25	↓	
1010	10.34	11.53	7.08	63	1.95	0.0	0.57	0.5	↓	
1015	10.72	11.54	7.07	61	1.95	0.0	0.44	0.75	↓	
1020	10.96	11.55	7.06	60	1.93	0.0	0.40	1.0	↓	
1025	11.12	11.52	7.05	64	1.90	0.0	0.37	1.25	↓	
				Sample collected at			11:00			

SAMPLE ID: MW-3B_20251029 & MW-3B_20251029_FBLK

SAMPLE DATE: 10-29-25

SAMPLE TIME: 11:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 10-21-25
PERSONNEL: JD
OBSERVERS:

SAMPLE LOCATION: MW-5A
PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: Cloudy, 40°F

DEPTH OF WELL:
SCREEN LENGTH:
TUBING TYPE: 1/4" Teflon
MONITORING EQUIPMENT: MSG- Horiba U-52

DEPTH TO WATER LEVEL: 8.10
WELL DIAMETER: 3"
CASING TYPE: PVC

PURGE START TIME: 8:53

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
08:55	8.33	11.59	7.55	-49	1.55	0.0	1.40	0	200	
09:00	8.51	12.22	7.32	-97	1.53	2.0	0.75	0.25		
0905	8.76	12.33	7.31	-107	1.53	0.0	0.55	0.5		
0910	8.84	12.38	7.30	-112	1.52	0.0	0.45	0.75		
0915	8.93	12.41	7.30	-106	1.51	0.0	0.43	1.0		
0920	8.97	12.47	7.30	-89	1.48	2.1	0.41	1.25		
0925	9.02	12.47	7.29	-82	1.52	0.0	0.41	1.5		
0930	9.06	12.40	7.26	-77	1.52	0.0	0.41	1.75		
0935	9.10	12.37	7.27	-73	1.53	0.0	0.39	2.0	↓	

SAMPLE ID: MW-5A_20251021 + MW-5A_20251021_FBLC
SAMPLE DATE: 10-21-25
SAMPLE TIME: 10:00
Notes: MS/MSD collected

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-55B

DATE: 10-21-25
PERSONNEL: JD
OBSERVERS:

PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: Cloudy, 40°F

DEPTH OF WELL:
SCREEN LENGTH:
TUBING TYPE: 1/4" Teflon

DEPTH TO WATER LEVEL: 0.0
WELL DIAMETER: 2"
CASING TYPE: PVC

PURGE START TIME: 11:57

MONITORING EQUIPMENT: MSG- Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1200	0.0	10.66	7.84	84	1.69	2.6	9.71	0	200	
1205	0.0	11.06	8.21	-93	2.82	8.5	4.66	0.25		
1210	0.0	11.15	8.41	-114	2.73	0.0	2.40	0.5		
1215	0.0	11.15	8.37	-118	2.21	0.0	1.69	0.75		
1220	0.0	11.21	8.33	-116	1.66	0.0	1.34	1.0		
1225	0.0	11.19	8.51	-120	1.62	0.0	1.79	1.25		
1230	0.0	11.22	8.73	-122	1.56	0.0	1.70	1.5		
1235	0.0	11.24	8.82	-123	1.52	0.0	1.31	1.75		
1240	0.0	11.25	8.83	-123	1.56	0.0	1.17	2.0		
1245	~~0.0~~ 0.50	11.30	8.84	-126	1.58	0.0	1.05	2.25		
1250	0.75	11.34	8.85	-129	1.58	0.0	0.93	2.5		
1255	1.0	11.37	8.86	-131	1.57	0.0	0.81	2.75		
			Sample collected at			13:00				

SAMPLE ID: MW-55B_20251021 & MW-55B_20251021_FBLL
SAMPLE DATE: 10-21-25
SAMPLE TIME: 13:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-10

DATE: 10-29-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 52°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.72

PURGE START TIME: 13:07

SCREEN LENGTH:

WELL DIAMETER: 1.5"

TUBING TYPE: 3/8" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1310	6.11	10.27	7.37	18	2.31	0.0	2.28	0	200	
1315	6.27	11.11	6.63	-36	2.44	0.0	0.81	0.25	↓	
1320	6.33	11.35	6.66	-52	2.43	0.0	0.64	0.5	↓	
1325	6.51	11.92	6.67	-55	2.40	0.0	0.47	0.75	↓	
1330	6.57	12.04	6.68	-59	2.40	0.0	0.43	1.0	↓	
1340	6.65							1.25	↓	
				Sample collected at 14:00						

SAMPLE ID: MW-10_20251029 & MW-10_20251029_FBLL

SAMPLE DATE: 10-29-25

SAMPLE TIME: 14:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-31

DATE: 10/27/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 42°F Sunny

DEPTH OF WELL: 72.10

DEPTH TO WATER LEVEL: 49.75

PURGE START TIME: 11:27

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
11:30	48.81	10.42	8.52	121	0.388	848	12.51	0.25	200	
11:33	49.36	10.60	8.50	123	0.385	836	12.15	0.50	↓	
11:36	49.38	10.71	8.49	125	0.384	825	11.77	0.75	↓	
11:39	49.40	10.74	8.47	126	0.384	805	11.70	1.00	↓	

SAMPLE ID: MW-31_20251027 & MW-31_20251027_FBLL

SAMPLE DATE: 10/27/25

SAMPLE TIME: 11:45

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10/27/25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: MW-35

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 36°F Sunny

DEPTH OF WELL: 21.89

SCREEN LENGTH:

TUBING TYPE: Polytefton

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 19.39

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 10:00

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:03	19.95	11.46	6.15	98	0.403	115	8.58		~~100~~	100

SAMPLE ID: MW-35-20251027 MW-35_20251028 @ 1315

SAMPLE DATE: 10/27/25

SAMPLE TIME: 1015

Notes: One reading due to low water level
Came back 10/28/25 @ 1300 to fill mercury bottles
water depth = 19.40

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-35 SB

DATE: 10-22-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 22.98

PURGE START TIME: 14:12

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ~~3/8~~ 1/2" PE

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG- Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:20	23.61	8.79	8.98	87	0.492	31.9	3.32	0	500	
1425	24.09	8.67	8.95	90	0.493	>1000	2.42	1.25	↓	
1430	24.37	9.00	8.85	94	0.489	1000+	2.17	2.5	↓	
1435	24.78	9.12	8.93	89	0.480	840	2.10	3.75	↓	
1440	25.08	9.11	8.87	91	0.476	653	1.99	5	↓	
1445	25.19	9.07	8.95	88	0.475	640	1.90	6.25	↓	
1450	25.34	9.16	8.91	90	0.479	603	1.98	7.5	↓	
1455	25.89	9.15	8.89	92	0.472	587	1.91	8.75	↓	
1500	26.21	9.07	8.90	94	0.470	561	1.86	10.0	↓	
				Sample collected at 15:30						

SAMPLE ID: MW-35 SB_20251022 & MW-355B_20251022

SAMPLE DATE: 10-22-25

SAMPLE TIME: 15:30

Notes: Purged well for 2 hours after sampling
~85 gallons purged

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10/23/25

SAMPLE LOCATION: MW-36

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: GWC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 43°F Cloudy

DEPTH OF WELL: 17.97

DEPTH TO WATER LEVEL: 3.39

PURGE START TIME: 10:20

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:23	4.35	13.69	6.99	-80	0.672	76.1	2.60	0.25	200	
10:26	5.33	13.69	7.05	-97	0.681	53.8	1.47	0.50	↓	
10:29	5.97	13.65	7.05	-104	0.683	53.6	1.09	0.75	↓	
10:32	6.64	13.60	7.06	-107	0.683	45.1	0.91	1.00	↓	
10:35	6.98	13.59	7.10	-104	0.671	21.4	0.84	1.25	↓	
10:38	7.34	13.58	7.12	-100	0.668	20.4	0.81	1.50	↓	

SAMPLE ID: MW-36-20251023 & MW-36-20251023-FBLL

SAMPLE DATE: 10-23-25

SAMPLE TIME: 10:40

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10/21/25

PERSONNEL: EEC & MMS

OBSERVERS:

SAMPLE LOCATION: MW-37

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 42°F Raining

DEPTH OF WELL: 21.16

SCREEN LENGTH:

TUBING TYPE: Polytefion

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 16.89

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 1254

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1257	17.64	10.96	7.57	154	0.481	>1000	6.11	0.12	100	

SAMPLE ID: MW-37_20251021 & MW-37_20251021_FBLL

SAMPLE DATE: 10/21/25

SAMPLE TIME: 1400

Notes: Sampled partly due to fast drawdown
Came back 10/23/25 to finish sampling @ 0930
Well depth — 18.87 36°F partly cloudy

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10-23-25

PERSONNEL: JD

OBSERVERS:

SAMPLE LOCATION: MW-38

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 40°F

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: 1/4" Teflon

MONITORING EQUIPMENT: MSG - Horiba U-52

DEPTH TO WATER LEVEL: 15.38

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 9:27

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0930	16.21	9.38	7.94	214	0.431	0.0	3.35	0	200	
0935	16.96	9.88	7.69	212	0.436	0.0	1.28	0.25		
0940	17.58	9.96	7.73	210	0.440	0.0	1.15	0.5		
0945	18.11	9.95	7.78	209	0.447	0.0	1.32	0.75		
0950	18.48	9.99	7.83	207	0.449	0.0	1.43	1.0		
0955	19.03	9.99	7.88	206	0.453	0.0	1.64	1.25		
1000	19.52	9.91	7.90	203	0.460	0.0	1.73	1.5	↓	
				Sample collected at 10:30						

SAMPLE ID: MW-38_20251023 & MW-38_20251023_FBLK

SAMPLE DATE: 10-23-25

SAMPLE TIME: 10:30

Notes: Had to stop pumping during sampling b/c well ran dry & wait for recharge

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
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SAMPLE LOCATION: MW-41

DATE: 10/21/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EAC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 40°F Raining

DEPTH OF WELL: 29.63

DEPTH TO WATER LEVEL: 27.94

PURGE START TIME: 14:08

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Dayflo Flow

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:11	28.22	10.41	7.73	157	0.637	65.6	8.60		100	

SAMPLE ID: MW-41-20251021

SAMPLE DATE: 10/21/25

SAMPLE TIME: 1415

Notes: Well went Dry
Came back 10/29/25 depth to water = 29.57
Did not Sample

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-42

DATE: 10-23-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 39°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 7.67

PURGE START TIME: 7:57

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG- Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0800	8.73	12.47	9.12	80	0.305	29.8	3.07	0	200	
0805	9.71	10.92	9.04	126	0.300	30.3	1.53	0.25	↓	
0810	10.33	10.50	9.00	133	0.296	36.0	1.52	0.5	↓	
0815	11.18	10.25	8.99	138	0.293	36.1	1.55	0.75	↓	
0820	11.81	10.04	9.00	140	0.291	25.4	1.52	1.0	↓	
0825	12.36	9.97	9.02	141	0.288	0.0	1.48	1.25	↓	
		Sample collected at 8:45								

SAMPLE ID: MW-42_20251023 + MW-42_20251023_FBLK

SAMPLE DATE: 10-23-25

SAMPLE TIME: 8:45

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-43

DATE: 10-22-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERL & MNS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 38°F, Rainy

DEPTH OF WELL: 27.83

DEPTH TO WATER LEVEL: 16.01

PURGE START TIME: 12:00

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: polyteFlon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
12:03	16.80	9.18	7.96	51	0.584	113	3.41	0.25	200	
12:06	17.16	9.24	8.02	44	0.545	93.8	1.33	0.50	"	
12:09	17.93	9.28	8.02	40	0.527	104	1.03	0.75	"	
12:12	18.13	9.27	8.02	38	0.526	118	0.94	1.00	"	
12:15	18.48	9.30	8.02	35	0.522	108	0.86	1.25	√	
~~12:18~~										

SAMPLE ID: MW-43_20251022 & FBLL

SAMPLE DATE: 10-22-25

SAMPLE TIME: 12:30

Notes: Took transducer data, returned to well

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-43SB

DATE: 10/22/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 39°F Raining

DEPTH OF WELL: >100

DEPTH TO WATER LEVEL: 0.75

PURGE START TIME: 10:13

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:16	2.45	9.51	7.37	-2	3.93	25.8	6.65	0.25	200	
10:19	3.02	9.50	7.16	-61	4.00	11.6	3.21	0.50	↓	
10:22	3.61	9.54	7.12	-71	4.06	11.2	1.93	0.75		
10:25	4.20	9.53	7.11	-72	4.07	10.0	1.75	1.00		
10:28	4.88	9.51	7.11	-75	4.08	11.3	1.44	1.25		
10:31	5.63	9.45	7.10	-77	4.08	8.6	1.33	1.50		
10:34	6.12	9.45	7.09	-79	4.08	7.9	1.19	1.75		
10:37	6.81	9.43	7.09	-82	4.08	6.9	1.11	2.00	↓	

SAMPLE ID: MW-43SB-20251022 & MW-43SB-20251022-FBLL

SAMPLE DATE: 10/22/25

SAMPLE TIME: 10:40

Notes: Took transducer data, removed from well

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-44

DATE: 10-22-25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EC & MS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 39° F, Rainy

DEPTH OF WELL: 36.84

DEPTH TO WATER LEVEL: 17.03

PURGE START TIME: 13:28

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
13:31	17.21	9.37	8.83	40	0.829	17.3	2.30	0.25	200	
13:34	17.42	9.33	8.94	19	0.831	17.7	1.51	0.50		
13:37	17.43	9.31	8.91	7	0.833	16.4	1.24	0.75		
13:40	17.43	9.31	8.73	0	0.829	15.9	1.04	1.00		
13:43	17.43	9.29	8.60	-2	0.818	15.0	0.89	1.25		
13:46	17.43	9.29	8.46	-6	0.812	15.1	0.87	1.50		
13:49	17.43	9.29	8.32	-14	0.797	13.7	0.84	1.75		
13:52	17.44	9.28	8.28	-20	0.790	13.0	0.83	2.00		
13:55	17.44	9.25	8.19	-30	0.776	12.5	0.82	2.25		
13:58	17.44	9.24	8.16	-34	0.769	12.7	0.81	2.50	↓	

SAMPLE ID: MW-43_20251022 & FBLL

SAMPLE DATE: 10-22-25

SAMPLE TIME: 14:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10/28/25

PERSONNEL: ERC + MMS

OBSERVERS:

SAMPLE LOCATION: NB 1-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 29°F Sunny

DEPTH OF WELL: 24.67

SCREEN LENGTH:

TUBING TYPE: PolyTeflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 4.97

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 09:37

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
09:40	5.24	11.69	7.88	-113	1.06	109	1.56	0.25	200	
09:43	5.50	11.36	7.88	-149	1.08	65.7	0.87	0.50		
09:46	5.54	11.02	7.89	-157	1.09	100	1.28	0.75		
09:49	5.58	11.02	7.88	-163	1.09	66.0	0.87	1.00		
09:52	5.60	10.95	7.86	-171	1.09	48.1	0.71	1.25		
09:55	5.61	10.81	7.85	-179	1.09	51.1	0.66	1.50		
09:58	5.62	10.77	7.85	-181	1.09	41.2	0.63	1.75		

SAMPLE ID: NB1-1_20251028 & NB1-1_20251028_FBLL

SAMPLE DATE: 10/28/25

SAMPLE TIME: 10:00

Notes: odor present, clumps of black debris sporatically present in sample train that caused spikes in turbidity

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NB1-3

DATE: 10/28/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EEC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 29°F Sunny

DEPTH OF WELL: 34.59

DEPTH TO WATER LEVEL: 5.40

PURGE START TIME: 10:49

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyethelon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
10:52	6.45	10.04	7.51	-119	1.03	11.3	2.11	0.25	200	
10:55	7.50	10.24	7.42	-124	1.03	11.2	2.41	0.50	↓	
10:58	8.12	10.35	7.40	-130	1.03	10.5	2.26	0.75	↓	
11:01	8.84	10.43	7.41	-133	1.04	9.8	1.65	1.00	↓	
11:04	9.40	10.51	7.44	-138	1.03	11.1	1.15	1.25	↓	
11:07	9.95	10.56	7.44	-139	1.03	10.6	1.14	1.50	↓	
11:10	10.33	10.59	7.45	-140	1.03	9.9	1.14	1.75	↓	

SAMPLE ID: NB1-3_20251028 + NB1-3-20251028_FBLL

SAMPLE DATE: 10/28/25

SAMPLE TIME: 11:20

Notes: Odor present

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10/28/25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: NB2-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 48°F Sunny

DEPTH OF WELL: 12.20

SCREEN LENGTH:

TUBING TYPE: Polyteflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 2.77

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 14:47

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
14:50	2.98	15.75	7.12	-72	1.52	47.7	2.22	0.25	200	
14:53	3.46	15.56	7.11	-80	1.50	40.8	1.22	0.50		
14:56	3.53	15.34	7.13	-84	1.48	37.6	0.80	0.75		
14:59	3.58	15.29	7.12	-87	1.48	22.4	0.65	1.00		
15:02	3.60	15.31	7.12	-89	1.48	5.8	0.63	1.25		
15:05	3.61	15.33	7.12	-90	1.48	11.2	0.60	1.50		
15:08	3.62	15.36	7.11	-93	1.48	7.4	0.55	1.75		

SAMPLE ID: NB2-1_20251028 + NB2-1_20251028-FBLL

SAMPLE DATE: 10/28/25

SAMPLE TIME: 15:15

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NB2-3

DATE: 10/28/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 48°F Sunny

DEPTH OF WELL: 30.10

DEPTH TO WATER LEVEL: 3.28

PURGE START TIME: 13:55

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyethelon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
13:58	4.20	13.73	7.88	-71	1.10	0.0	2.40	0.25	200	
14:01	5.15	13.63	7.87	-79	1.09	0.0	1.42	0.50	↓	
14:04	5.63	13.59	7.86	-80	1.09	0.0	1.14	0.75	↓	
14:07	6.01	13.53	7.86	-78	1.09	0.0	0.90	1.00	↓	
14:10	6.59	13.47	7.87	-80	1.09	0.0	0.81	1.25	↓	

SAMPLE ID: NB2-3_20251028 & NB2-3_20251028_FBLL

SAMPLE DATE: 10/28/25

SAMPLE TIME: 14:15

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-1

DATE: 10/27/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: CRL RMMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 51°F Sunny

DEPTH OF WELL: 37.85

DEPTH TO WATER LEVEL: 24.50

PURGE START TIME: 14:40

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: Polyethon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:43	25.13	11.45	8.00	85	0.386	210	5.96	0.25	200	
14:46	25.50	8.78	7.89	-89	0.390	139	1.47	0.50		
14:49	25.80	9.58	7.90	-98	0.390	72.6	1.31	0.75		
14:52	26.45	9.51	7.90	-83	0.389	52.0	1.77	1.00		
14:55	27.08	9.46	7.93	-27	0.388	36.9	3.41	1.25		
14:58	27.58	9.44	7.96	12	0.388	31.0	4.63	1.50		
15:01	28.18	9.47	7.96	22	0.387	28.1	5.01	1.75		
15:04	28.39	9.45	7.98	34	0.386	23.8	5.45	2.00		
15:07	28.82	9.42	7.98	36	0.386	21.0	5.53	2.25		
15:10	29.08	9.44	7.99	38	0.386	20.8	5.59	2.50		

SAMPLE ID: SMW-1_20251027 & SMW-1_20251027_FB LL

SAMPLE DATE: 10/27/25

SAMPLE TIME: 15:15

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-1SB

DATE: 10/27/25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 55°F Sunny

DEPTH OF WELL: >100

DEPTH TO WATER LEVEL: 26.0

PURGE START TIME: 16:09

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
16:12	26.41	13.80	8.59	73	0.374	176	10.66	0.25	200	
16:15	26.84	13.56	8.77	33	0.360	34.2	8.13	0.50		
16:18	27.39	13.52	8.95	-8	0.348	29.1	2.90	0.75		
16:21	27.75	13.26	8.97	-25	0.347	25.4	1.98	1.00		
16:24	28.10	13.26	8.97	-41	0.345	25.7	1.80	1.25		
16:27	28.47	13.20	8.97	-44	0.345	20.1	1.99	1.50		
16:30	28.89	13.25	8.97	-47	0.345	18.5	2.15	1.75	↓	

SAMPLE ID: SMW-1SB_20251027 & SMW-1SB_20251027_FBLL

SAMPLE DATE: 10/27/25

SAMPLE TIME: 16:35

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-3

DATE: 10.22.25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Rainy, 40°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 27.18

PURGE START TIME: 10:38

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 3/8" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG- Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1050	26.89	7.37	8.44	134	0.277	0.0	9.22	0	200	
1055	26.95	8.23	8.36	-32	0.272	0.0	7.04	0.25	↓	
1100	27.02	8.41	8.32	-44	0.269	0.0	5.88	0.5	↓	
1105	27.04	8.46	8.33	-37	0.268	0.0	6.22	0.75	↓	
1110	27.06	8.55	8.32	-28	0.266	0.0	6.89	1.0	↓	
1115	27.09	8.53	8.32	-26	0.260	0.0	7.62	1.25	↓	
1120	27.12	8.70	8.29	-22	0.258	0.0	7.91	1.5	↓	
1125	27.14	8.78	8.29	-18	0.258	0.0	8.12	1.75		
				Sample	collected	at	12:00			

SAMPLE ID: SMW-3_20251022 & SMW-3_20251022_FBLL

SAMPLE DATE: 10-22-25

SAMPLE TIME: 12:00

Notes: Bladder pump used

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: SMW. 3 SB

DATE: 10.22.25

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Rainy, 40°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 22.89

PURGE START TIME: 8:42

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MS6 - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0845	23.01	11.30	9.06	64	0.511	0.0	6.68	0	200	
0850	23.33	10.31	9.07	17	0.518	0.0	1.88	0.25		
0855	23.62	10.11	9.08	-6	0.517	0.0	1.57	0.5		
0900	23.96	9.53	9.09	-39	0.516	0.0	1.10	0.75		
0905	24.24	9.38	9.08	-54	0.517	0.0	1.07	1.0		
0910	24.44	9.17	9.09	-60	0.514	0.0	1.02	1.25		
0915	24.68	8.99	9.10	-63	0.513	0.0	0.97	1.5	↓	
			Sample collected at				10:00			

SAMPLE ID: SMW-3SB_20251022 & SMW-3SB_20251022_FBLK

SAMPLE DATE: 10.22.25

SAMPLE TIME: 10:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-01

DATE: 10-20-2025

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 35°F Cloudy

GAUGE READING START: 1.0 ft

pH: 6.37

ORP: 46 mV

GAUGE READING END:

CONDUCTIVITY: 0.225 mS/cm

DO: 2.20 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 7.75 °C

TURBIDITY: 51.0 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	0.67	0				
2	0.83	0.3	-0.016			
3	1.33	0.4	-0.039			
4	1.83	0.6	-0.036			
5	2.33	0.7	-0.036			
6	2.83	0.8	-0.025			
7	3.33	0.95	-0.032			
8	3.83	0.9	-0.030			
9	4.33	0.8	-0.030			
10	4.83	0.6	-0.031			
11	5.33	0.5	-0.039			
12	5.83	0.5	-0.036			
13	6.33	0.5	-0.032			
14	6.83	0.2	-0.016			
15	7	edge of	water			
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.121

TOTAL WIDTH (ft): 6.33'

SAMPLE ID: ARC-01_20251020 & ARC-01-20251020_FBL

SAMPLE TIME: 0930

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

* little to no flow from visual eye

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-02

DATE: 10/22/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EAL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 40°F Raining

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH: 6.56

CONDUCTIVITY: 0.117 mS/cm

TEMPERATURE: 9.99 °C

ORP: 70 mV

DO: 3.11 mg/l

TURBIDITY: 42.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	2	0				
2	2.5	0.35	-0.035			
3	3.5	1.3	-0.033			
4	4.5	1.5		-0.020	-0.044	
5	5.5	1.5		-0.041	-0.038	
6	6.5	1.15	-0.030			
7	7.5	0.9	-0.025			
8	8.5	0.6	-0.030			
9	9.5	0.5	-0.030			
10	10.5	0.4	-0.037			
11	11.5	0.1	-0.023			
12	12.25	edge	of water			
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.266

TOTAL WIDTH (ft): 10.25'

SAMPLE ID: ARC-02_20251022 & ARC-02_20251022-FB2L

SAMPLE TIME: 1615

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-03

DATE: 10-27-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Sunny, 55°F

GAUGE READING START: 0.95

GAUGE READING END: X

AVERAGE GAUGE HEIGHT: X

MONITORING EQUIPMENT: MSG- Horiba U-52

pH	7.51		ORP	167 mV
CONDUCTIVITY	0.132 mS/cm		DO	12.58 mg/l
TEMPERATURE	8.54 °C		TURBIDITY	0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	8"	0	0			
2	9"	0.2	0			
3	1'3"	0.3	0.027			
4	1'9"	0.25	0.000			
5	2'3"	0.45	0.000			
6	2'9"	0.6	0.000			
7	3'3"	0.6	0.003			
8	3'9"	0.6	0.032			
9	4'3"	0.55	-0.041			
10	4'9"	0.7	0.140			
11	5'3"	0.6	0.226			
12	5'9"	0.65	0.296			
13	6'3"	0.6	0.271			
14	6'9"	0.5	0.408			
15	7'3"	0.45	0.337			
16	7'9"	0.35	0.214			
17	8'3"	0.3	0.159			
18	8'9"	0.3	0.047			
19	9'3"	0.1	-0.057			
20	9'8"	0	0			water edge
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.541

TOTAL WIDTH (ft): 9.0'

SAMPLE ID: ARC-03_20251027 & FBLL

SAMPLE TIME: 15:00

MS/MSD collected

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNC-01

DATE: 10/29/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: RLL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 52°F Partly Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.55		ORP	146	mV
CONDUCTIVITY	0.129	mS/cm	DO	6.82	mg/l
TEMPERATURE	9.08	°C	TURBIDITY	0	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9			No Gauging			
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: BNC-01_20251029 & BNC-01_20251029_FBLL

SAMPLE TIME: 1400

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNW-01

DATE: 10-20-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 50°F

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: MS/5 - Horiba U-52

pH	8.32		ORP	114	mV
CONDUCTIVITY	0.218	mS/cm	DO	11.58	mg/l
TEMPERATURE	16.51	°C	TURBIDITY	0.0	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: BNW-01_20251020 & BNW-01_20251020_FB2L

SAMPLE TIME: 14:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-01

DATE: 10/27/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: GRC + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 42°F Raining

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.48		ORP	154	mV
CONDUCTIVITY	0.091	mS/cm	DO	10.16	mg/l
TEMPERATURE	8.81	°C	TURBIDITY	102	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: CBR-01_20251027 & CBR-01_20251027-FBLL

SAMPLE TIME: 1730

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-02

DATE: 10-27-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, SBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Sunny, 50°F

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: 3.31

MONITORING EQUIPMENT: YSI Pro 556 - Horiba U-52

pH: 7.76

CONDUCTIVITY: 0.097 mS/cm

TEMPERATURE: 7.18 °C

ORP: 151 mV

DO: 11.28 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: CBR-02_20251027 & FBLK

SAMPLE TIME: 12:45

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10-20-25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: DKC-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 43°F Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.10	ORP	123 mV
CONDUCTIVITY	0.193 mS/cm	DO	5.19 mg/l
TEMPERATURE	7.78 °C	TURBIDITY	26.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1	0				
2	1.5	0.35	-0.035			
3	2	0.4	-0.027			
4	2.5	0.45	-0.038			
5	3	0.45	-0.022			
6	3.5	0.45	-0.034			
7	4	0.35	-0.032			
8	4.5	0.25	-0.019			
9	5	0.2	-0.018			
10	5.5	edge of water				
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.042

TOTAL WIDTH (ft): 4.5'

SAMPLE ID: DKC-01-20251020r

SAMPLE TIME: 1030 DKC-01-20251020-FBLL

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-02

DATE: 10-27-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUN, ~40°F

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: NA

MONITORING EQUIPMENT: MSG- Horiba U-52

pH: 7.74

CONDUCTIVITY: 0.135 mS/cm

TEMPERATURE: 5.45 °C

ORP: 146 mV

DO: 12.13 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	2	0	0			
1 (at water edge)	2.5	0.3	0.00			
2	3.5	0.2	0.005			
3	4.5	0.55	0.140			
4	5.5	0.5	0.020			
5	6.5	0.45	0.002			
6	7.5	0.45	0.028			
7	8.5	0.45	0.177			
8	9.5	0.3	0.190			
9	10.5	0.2	0.246			
10	11.5	0.35	0.206			
11	12.5	0.3	0.134			
12	13.5	0.35	0.143			
13	14.5	0.4	0.072			
14	15.5	0.4	0.170			
15	16.5	0.35	0.261			
16	17.5	0.3	0.241			
17	18.5	0.25	0.055			
18	19.5	0.4	0.00			
19	20.5	0.2	0.00			
20	21'4"	0	0			water's edge
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.796

TOTAL WIDTH (ft): 19.33

SAMPLE ID: DKC-02_20251027 & FBLL

SAMPLE TIME: 11:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-03

DATE: 10-27-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 55°F

GAUGE READING START: X No staff gauge

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: MS6 - Horiba U-52

pH	7.70		ORP	154	mV
CONDUCTIVITY	0.139	mS/cm	DO	9.94	mg/l
TEMPERATURE	9.28	°C	TURBIDITY	0.0	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: DKC-03_20251027 & FBLL

SAMPLE TIME: 16:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-01

DATE: 10-28-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Clear, 30° F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH 8.18

CONDUCTIVITY 0.100 mS/cm

TEMPERATURE 9.04 °C

ORP 121 mV

DO 12.26 ~~9.68~~ mg/l

TURBIDITY 9.6 NTU

MONITORING EQUIPMENT: MSL - Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) —

TOTAL WIDTH (ft) —

SAMPLE ID: LKS-01_20251028 dup FBLL

SAMPLE TIME: 8:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LCS-02

DATE: 10-28-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 30°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH 8.03

CONDUCTIVITY 0.099 mS/cm

TEMPERATURE 9.42 °C

ORP 29 mV

DO 11.30 mg/l

TURBIDITY 40.0 NTU

MONITORING EQUIPMENT: MSG- Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) —

TOTAL WIDTH (ft) —

SAMPLE ID: LCS-02_20251028 & FBLL

SAMPLE TIME: 9:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10-28-25

PERSONNEL: JD

OBSERVERS:

SAMPLE LOCATION: MCC-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 35°F

PHOTO TAKEN? (Y) N

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH

CONDUCTIVITY mS/cm

TEMPERATURE °C

ORP mV

DO mg/l

TURBIDITY NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) —

TOTAL WIDTH (ft) —

SAMPLE ID: N/O Sample

SAMPLE TIME:

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-01

DATE: 10-28-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: DD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 53°F

GAUGE READING START: 1.60

GAUGE READING END: X

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: MSG - Horiba U-52

pH: 7.15

CONDUCTIVITY: 0.085 mS/cm

TEMPERATURE: 6.49 °C

ORP: 165 mV

DO: 11.25 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: MLR-01_20251028 & FBLL

SAMPLE TIME: 14:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-02

DATE: ~~10-20-25~~ 10-20-25
PERSONNEL: ERC & MMS
OBSERVERS:

PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: 59°F Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: 0.12
GAUGE READING END:
AVERAGE GAUGE HEIGHT:
MONITORING EQUIPMENT: Horiba U-52

pH	7.70	ORP	171 mV
CONDUCTIVITY	0.204 mS/cm	DO	7.36 mg/l
TEMPERATURE	10.53 °c	TURBIDITY	48.2 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	6	0				
1 (at water edge)	9.33	0				
2	10	0.1	0			
3	12	0.2	-0.022			
4	14	0.2	-0.034			
5	16	0.35	-0.035			
6	18	0.6	0.013			
7	20	0.8	0.037			
8	22	0.95	0.012			
9	24	0.7	-0.039			
10	26	0.55	0.005			
11	28	0.6	0.003			
12	30	0.55	-0.045			
13	32	0.4	-0.033			
14	34	0.1	-0.029			
15	34.16	edge	of	water		
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.074

TOTAL WIDTH (ft): 24.83'

SAMPLE ID: MLR-02_20251020 + MLR-02_20251020_FBL

SAMPLE TIME: 1715

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

* Flow of water shifts with wind direction.

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-03

DATE: 10-21-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 40°F Cloudy

GAUGE READING START: N/A

pH 7.55

ORP 145 mV

GAUGE READING END:

CONDUCTIVITY 0.204 mS/cm

DO 7.15 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE 9.48 °C

TURBIDITY 30.3 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) —

TOTAL WIDTH (ft) —

SAMPLE ID: MLR-03_20251021 & MLR-03_20251021_FBLL

SAMPLE TIME: 1045

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NTC-01

DATE: 10/21/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 45 °F Cloudy

GAUGE READING START: NA

pH: 6.82

ORP: -70 mV

GAUGE READING END:

CONDUCTIVITY: 0.229 mS/cm

DO: 1.55 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 10.79 °C

TURBIDITY: 167 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	3.75	0				
2	4	0.1	-0.033			
3	4.5	0.2	-0.035			
4	5	0.3	0.042			
5	5.5	0.3	-0.031			
6	6	0.4	-0.027			
7	6.5	0.4	-0.031			
8	7	0.3	-0.036			
9	7.5	0.25	-0.035			
10	8	0.2	-0.037			
11	8.33	edge	of	water		
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.028

TOTAL WIDTH (ft): 4.6'

SAMPLE ID: NTC-01-20251021 + NTC-01-20251021-FB LL

SAMPLE TIME: 0915

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-01

DATE: 10/29/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: GRC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 34°F Sunny

GAUGE READING START: 0.88

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	6.76		ORP	95	mV
CONDUCTIVITY	0.108	mS/cm	DO	5.73	mg/l
TEMPERATURE	9.22	°C	TURBIDITY	2.0	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	1.17	0				
2	1.5	0.8	-0.025			
3	1.75	0.85	-0.024			
4	2.0	0.9	-0.023			
5	2.25	0.9	-0.014			
6	2.5	0.65	-0.005			
7	2.75	0.85	-0.021			
8	3.0	0.8	-0.023			
9	3.25	0.75	-0.017			
10	3.5	0.7	-0.025			
11	3.75	0.7	-0.028			
12	4.0	edge of water				
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.042

TOTAL WIDTH (ft): 2.81

SAMPLE ID: PNC-01_20251029 & PNC-01_20251029_FBLL

SAMPLE TIME: 0945

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-02

DATE: 10-26-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 59°F Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.36		ORP	119	mV
CONDUCTIVITY	0.334	mS/cm	DO	5.06	mg/l
TEMPERATURE	10.98	°C	TURBIDITY	277	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO GAUGING

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: PNC-01.20251020 & PNC-01.20251020-FBLL

SAMPLE TIME: 1520

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-03_

DATE: 10/29/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERL + MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 50°F sunny

GAUGE READING START: 1.36

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.52		ORP	136	mV
CONDUCTIVITY	0.346	mS/cm	DO	6.97	mg/l
TEMPERATURE	6.71	°C	TURBIDITY	0	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	5.75	0				
2	6	0.5	-0.036			
3	8	1	-0.063			
4	10	1	-0.059			
5	12	1.25	-0.037			
6	14	1.6	[illegible]	-0.039	-0.025	
7	16	1.5		-0.036	-0.068	
8	18	1.4	-0.005			
9	20	1.3	-0.022			
10	22	1	-0.009			
11	24	1	-0.050			
12	RAM 25.83		edge of water			
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -0.800

TOTAL WIDTH (ft): 20.08'

SAMPLE ID: PNC-03_20251029 + PNC-03_20251029_FBLL

SAMPLE TIME: 1300

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Beginning formation of *Beaver dam present upstream of Sampling location

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10-27

PERSONNEL: JD, JBC

OBSERVERS:

SAMPLE LOCATION: PNC-04

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: SUN, ~35°F

PHOTO TAKEN? (Y) N

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT: 0.24

MONITORING EQUIPMENT: MS6- Horiba U-52

pH: 7.70

CONDUCTIVITY: 0.349 mS/cm

TEMPERATURE: 5.86 °C

ORP: 132 mV

DO: 11.79 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	5'4"					
1 (at water edge)	5'8"	0.1	0.00			
2	6'0"	0.1	0.00			
3	6'4"	0.1	0.101			
4	6'8"	0.1	0.112			
5	7'0"	0.1	0.007			
6	7'4"	0.1	0.010			
7	7'8"	0.2	0.476			
8	8'0"	0.2	0.426			
9	8'4"	0.2	0.540			
10	8'8"	0.25	0.487			
11	9'0"	0.25	0.441			
12	9'4"	0.25	1.142			
13	9'8"	0.25	0.616			
14	10'0"	0.2	0.635			
15	10'4"	0.2	0.687			
16	10'8"	0.15	0.531			
17	11'0"	0.15	0.417			
18	11'4"	0.1	0.162			
19	11'8"	0.0	0.00			
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.469

TOTAL WIDTH (ft): 6.33'

SAMPLE ID: ~~DUP-02-20251027~~ PNC-04_20251027

SAMPLE TIME: 10:00

FBLL

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-01

DATE: 10/29/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? 6 N

SITE NAME: White Pine Copper

PERSONNEL: ERL & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 38°F Sunny

GAUGE READING START: 0.25

pH: 7.93

ORP: [illegible] 1 mV

GAUGE READING END:

CONDUCTIVITY: 0.982 mS/cm

DO: 10.82 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 8.42 °c

TURBIDITY: 10.1 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1	0				
2	2.5	0.05	0.001			
3	[illegible] 4	0.1	1.076			
4	[illegible] 5.5	0.1	0.082			
5	[illegible] 7	0.1	0.156			
6	8.5	0.1	0.221			
7	[illegible] 10	0.2	0.170			
8	[illegible] 11.5	0.25	0.974			
9	[illegible] 13	0.4	0.632			
10	[illegible] 14.5	0.3	0.336			
11	16	edge of water				
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 1.177

TOTAL WIDTH (ft): 15'

SAMPLE ID: PRC-01-20251029 & PRC-01-20251029_FBLL

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE TIME: 1100

* lots of leaves in River

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-02

DATE: 10/21/25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & MMS

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 40°F Cloudy

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.71		ORP	174	mV
CONDUCTIVITY	0.941	mS/cm	DO	7.65	mg/l
TEMPERATURE	9.64	°C	TURBIDITY	12.0	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	1.75	0				
2	2	0.1	-0.014			
3	2.5	0.2	0.615			
4	3	0.4	0.084			
5	3.5	0.6	0.097			
6	4	0.8	0.139			
7	4.5	0.7	0.139			
8	5	0.7	0.150			
9	5.5	0.6	0.128			
10	6	0.25	0.145			
11	6.5	0.2	0.108			
12	7	0.1	0.005			
13	7.75	edge of water				
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): 0.271

TOTAL WIDTH (ft): 6.0'

SAMPLE ID: PRC-02_20251021 & PRC-02_20251021_FB

SAMPLE TIME: 1145

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PTC-01

DATE: 10-27-25

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 55°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT:

pH

CONDUCTIVITY mS/cm

TEMPERATURE °C

ORP mV

DO mg/l

TURBIDITY NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

DCJ

STREAM FLOW (cfs) —

TOTAL WIDTH (ft) —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID:

SAMPLE TIME: Dry - No sample

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10-20-25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: SBD-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 53°F Partly Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.07		ORP	153	mV
CONDUCTIVITY	0.176	mS/cm	DO	4.06	mg/l
TEMPERATURE	11.47	°C	TURBIDITY	31.0	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO GAUGING

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: SBD-01_20251020 & SBD-01_20251020.FBLL

SAMPLE TIME: 1300 DUP-01-SW-20251020 & DUP-01-SW-20251020

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10/20/25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: SBW - 01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 48°F ~~Sunny~~ Partly Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.55		ORP	156 mV
CONDUCTIVITY	0.201 mS/cm		DO	7.00 mg/l
TEMPERATURE	9.04 °C		TURBIDITY	18.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: SBW-01-20251020 + SBW-01-20251020-FBLK

SAMPLE TIME: 1200

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10/29/25

PERSONNEL: GLC HMMS

OBSERVERS:

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

SAMPLE LOCATION: TBN-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 50°F Partly Cloudy

PHOTO TAKEN? Y N

pH	8.17		ORP	131	mV
CONDUCTIVITY	0.943	mS/cm	DO	7.9	mg/l
TEMPERATURE	10.03	°C	TURBIDITY	12.2	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6			NO			
7			GAUGING			
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: TBN-01_20251029 - TBN-01_20251029_FBLL

SAMPLE TIME: 1515

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 10/20/25

PERSONNEL: ERC & MMS

OBSERVERS:

SAMPLE LOCATION: TBS-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 57°F Partly cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	8.26		ORP	139	mV
CONDUCTIVITY	2.32	mS/cm	DO	10.54	mg/l
TEMPERATURE	11.34	°C	TURBIDITY	17.8	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO GAUGING

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: TBS-01_20251020 & TBS-01_20251020_FBLL

SAMPLE TIME: 1415

APPENDIX B
PHOTOGRAPH LOG



Photo 1: ARC-01 facing east (10-20-2025)



Photo 2: ARC-02 facing north (10-22-2025)



Photo 3: ARC-03 facing south (10-27-2025)



Photo 4: BNC-01 facing north (10-29-2025)



Photo 5: BNW-01 facing northwest (10-20-2025)



Photo 6: CBR-01 facing northwest (10-22-2025). Sampled on the opposite side of the stream due to high water levels.



Photo 7: CBR-02 facing east (10-27-2025)



Photo 8: DKC-01 facing southeast (10-20-2025)



Photo 9: DKC-02 facing south (10-27-2025)



Photo 10: DKC-03 facing west (10-27-2025)



Photo 11: LKS-01 facing west (10-28-2025)



Photo 12: LKS-02 facing northwest (10-28-2025)



Photo 13: MLC-01 facing southwest (10-28-2025)



Photo 14: MLR-01 facing west (10-28-2025)



Photo 15: MLR-02 facing south (10-20-2025)



Photo 16: MLR-03 facing west (10-21-2025)



Photo 17: NTC-01 facing south (10-21-2025)

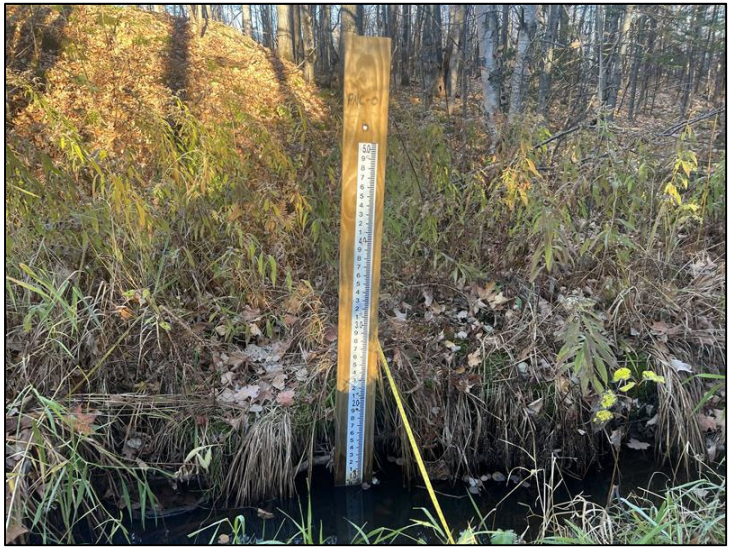


Photo 18: PNC-01 facing northwest (10-29-2025)



Photo 19: PNC-02 facing south (10-20-2025)



Photo 20: PNC-03 facing east (10-29-2025)



Photo 21: PNC-04 facing south (10-27-2025)



Photo 22: PRC-01 facing east (10-29-2025)



Photo 23: PRC-02 facing south (10-21-2025)



Photo 24: PTC-01 facing southwest (10-27-2025)



Photo 25: SBD-01 facing southwest (10-20-2025)



Photo 26: SBW-01 facing southwest (10-20-2025)



Photo 27: TBN-01 facing south (10-29-2025)



Photo 28: TBS-01 facing west (10-20-2025)

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

February 2026

March 20, 2026

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Baseline Sampling Field Results for February 2026

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in February 2026 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's January 5, 2026 proposal for *White Pine North 2026 Baseline Monitoring*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). **Figure 1**, *Groundwater Monitoring Locations* and **Figure 2**, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between February 10th and 23rd, 2026, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (**Figure 1**) using low-flow sampling procedures with a peristaltic, bladder, or down-hole centrifugal pump depending on the depth to groundwater and location. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells, limited water column available for sampling, and prior experience at certain locations. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in ***Table 1****, Groundwater Field Parameter Summary*. Copies of the field sheets are provided in ***Appendix A****, Field Sheets*.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtering for dissolved low level mercury and dissolved methyl mercury samples was conducted at a controlled location within WPC's White Pine office using FlipMate™ 50 Filtration System 0.45 um filters. A field blank for low level mercury (FB-02_20250212_FBLL) was also collected at the filtering

location. The filters were manufacturer certified for background metals to be less than 0.0005 micrograms per liter (ug/L) mercury.

Trace Analytical Laboratories, Inc. (Trace) previously provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was re-used between sampling events for sample collection. The tubing used during sample collection was retained for reuse during subsequent sampling events and was stored within WPC's White Pine office between sampling events. Existing poly tubing encountered in many of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection.

Pressure transducers encountered at four locations were temporarily removed from the monitoring wells to facilitate groundwater sampling, the data was downloaded, then were re-installed after sampling was completed. Upon arrival at MW-43SB, the packer assembly was removed from the monitoring well and MSG's crew allowed approximately 10 minutes for the well to stabilize before gauging and purging. Additionally, MSG downloaded the Vibrating Wire Piezometer (VWP) data from WP598, WP584, and WP585. All downloaded data was provided via email to Foth Infrastructure & Environment, LLC.

MSG collected a total of 23 groundwater samples, plus one complete field blank, duplicate from MW-1BR (DUP-01-GW_20260218), a matrix spike/matrix spike duplicate (MS/MSD) from MW-2B, and an equipment blank from the bladder pump. During this sampling event, MW-41 did not produce sufficient groundwater to collect a full sample, MW-2SB was gauged but not sampled, and the groundwater in MW-5SB, MW-36, NB2-1, and NB2-3 was frozen and could not be sampled. Additionally, MW-37 was inaccessible due to numerous downed trees blocking the pathway.

SURFACE WATER GAUGING AND SAMPLING

Between February 9th and 24th, 2026, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (**Figure 2**) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure (SOP) 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein.

An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements at most of the stream locations. Due to unpredictable ice conditions and/or water depths, PNC-02 and PRC-02 were sampled but deemed unsafe for wading to collect depth and velocity readings. Copies of the stream gauging field sheets and stream flow calculation sheets are included in **Appendix A**. Calculated stream flows are summarized in ***Table 2****, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in **Table 2**. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw directly from the surface water body, or from a spare unpreserved bottle filled from the surface water body, and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were processed at WPC's White Pine office using FlipMate™ 50 Filtration System 0.45 um filters as described above.

MSG collected a total of 28 surface water samples. A duplicate sample from ARC-03 (DUP-01-SW_20260216), a MS/MSD from DKC-03, and a field blank were also collected. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. Photographs of the stream gauging and sampling locations are provided in ***Appendix B****, Photograph Log.*

DISCUSSION AND RECOMMENDATIONS

As discussed in the field results letter for the October 2025 sampling event, MSG recommends that the stream sections associated with ARC-02, PNC-02, and PNC-03 be evaluated for beaver control and dam removal if possible.

Due to the weather conditions, MSG was not able to look for the staff gauges associated with NTC-01 and PRC-02, which we have not previously seen. We will include that in the April 2026 baseline sampling effort.

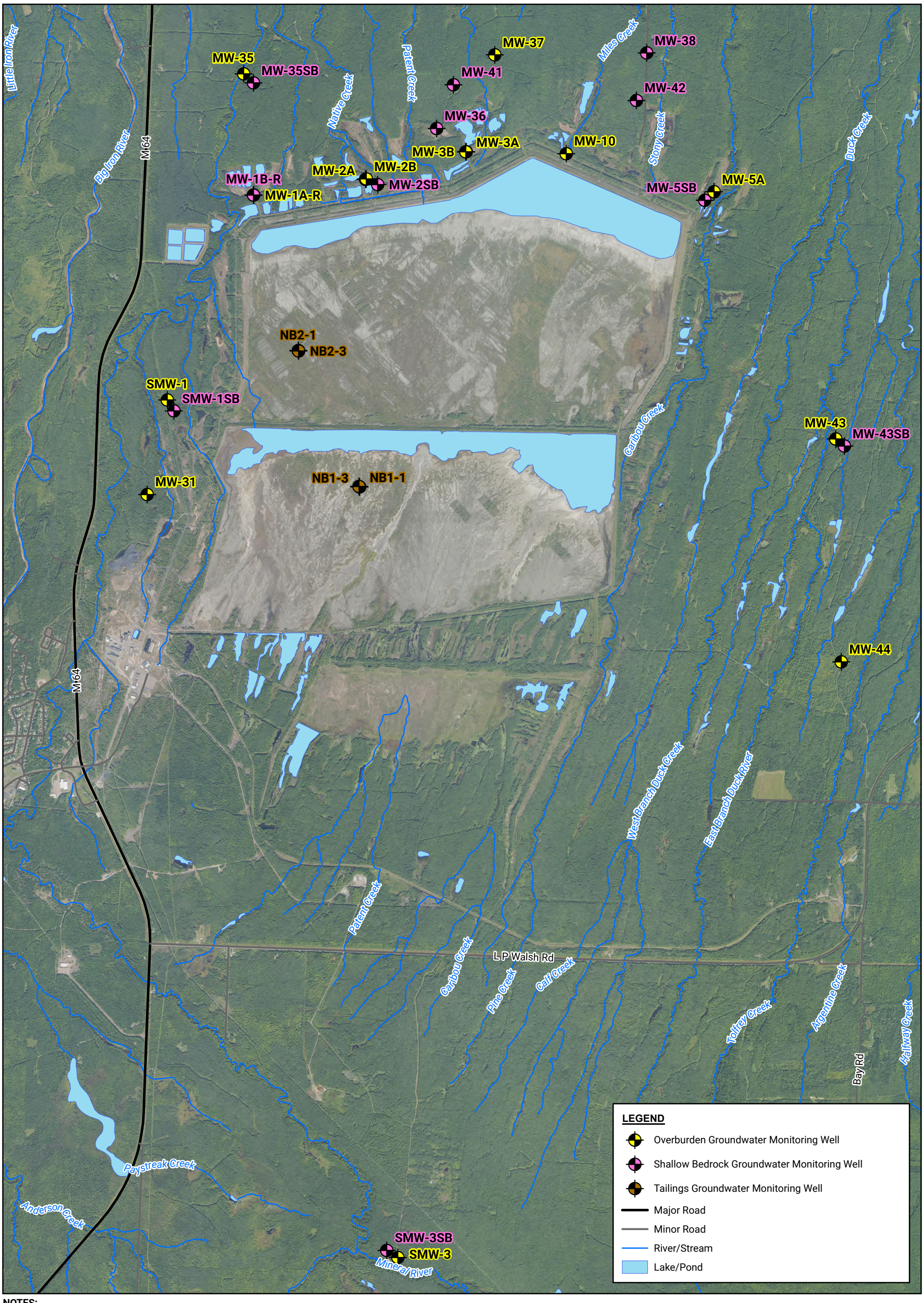
MSG crews cleared fallen and bent over trees that were above the snow pack along the trails to MW-35 and MW-36/41, and were able to navigate around and over fallen trees on other trails with the exception of the trail to MW-37. MSG recommends checking and clearing all of the trails through wooded areas prior to the April sampling event if possible.

MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,

Jed Chrestensen, P.E.
Project Manager

FIGURES



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 1,500 3,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

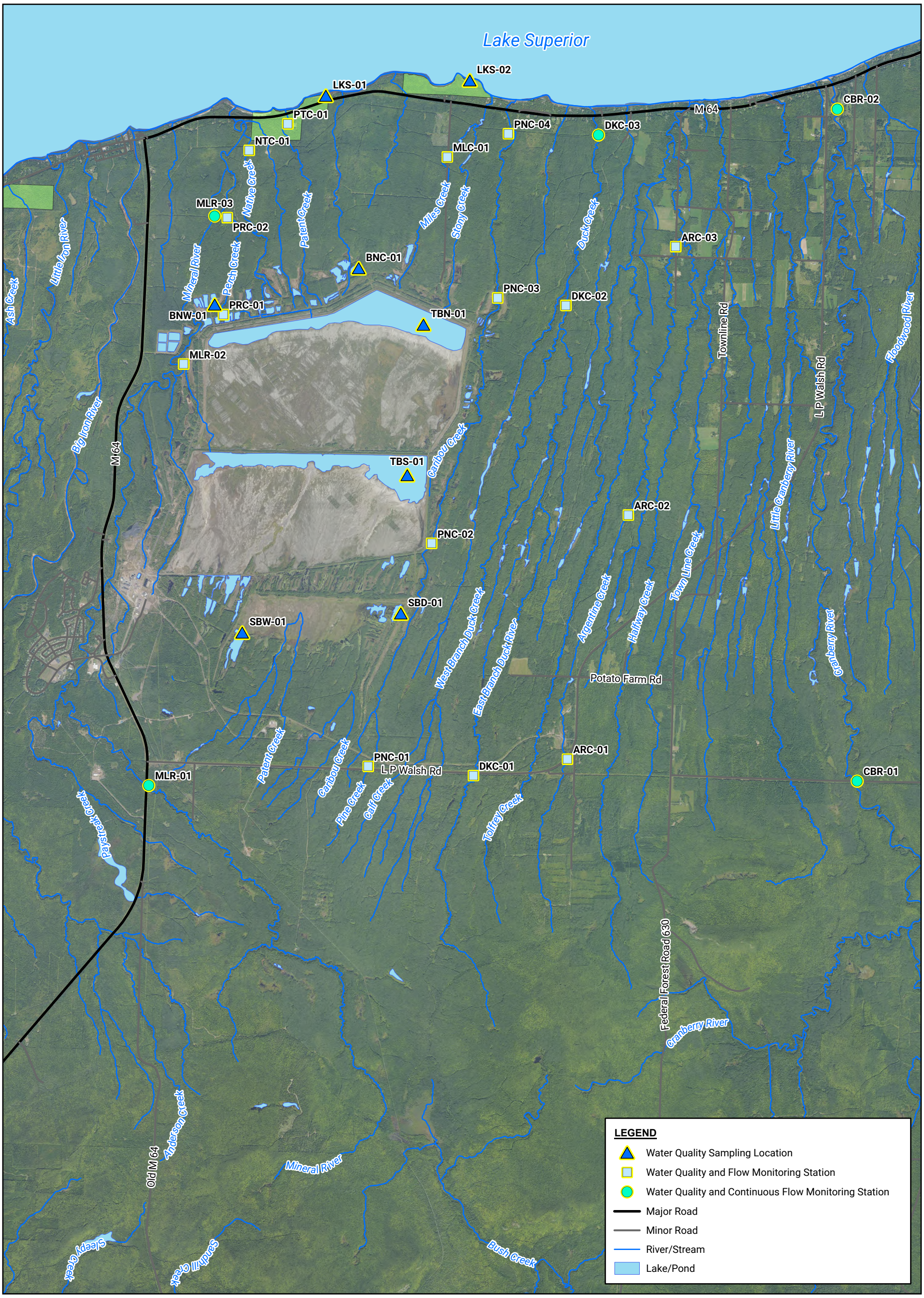
WHITE PINE COPPER LLC

FIGURE 1

GROUNDWATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 24W005	

Q:\White Pine Copper\23W200\GIS\aprx\Quarterly Sampling RFP\GW and SW Quarterly Sampling RFP.aprx 5/23/2024 10:48 AM



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

N

0 2,500 5,000 Feet

WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 23W200	

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TABLES

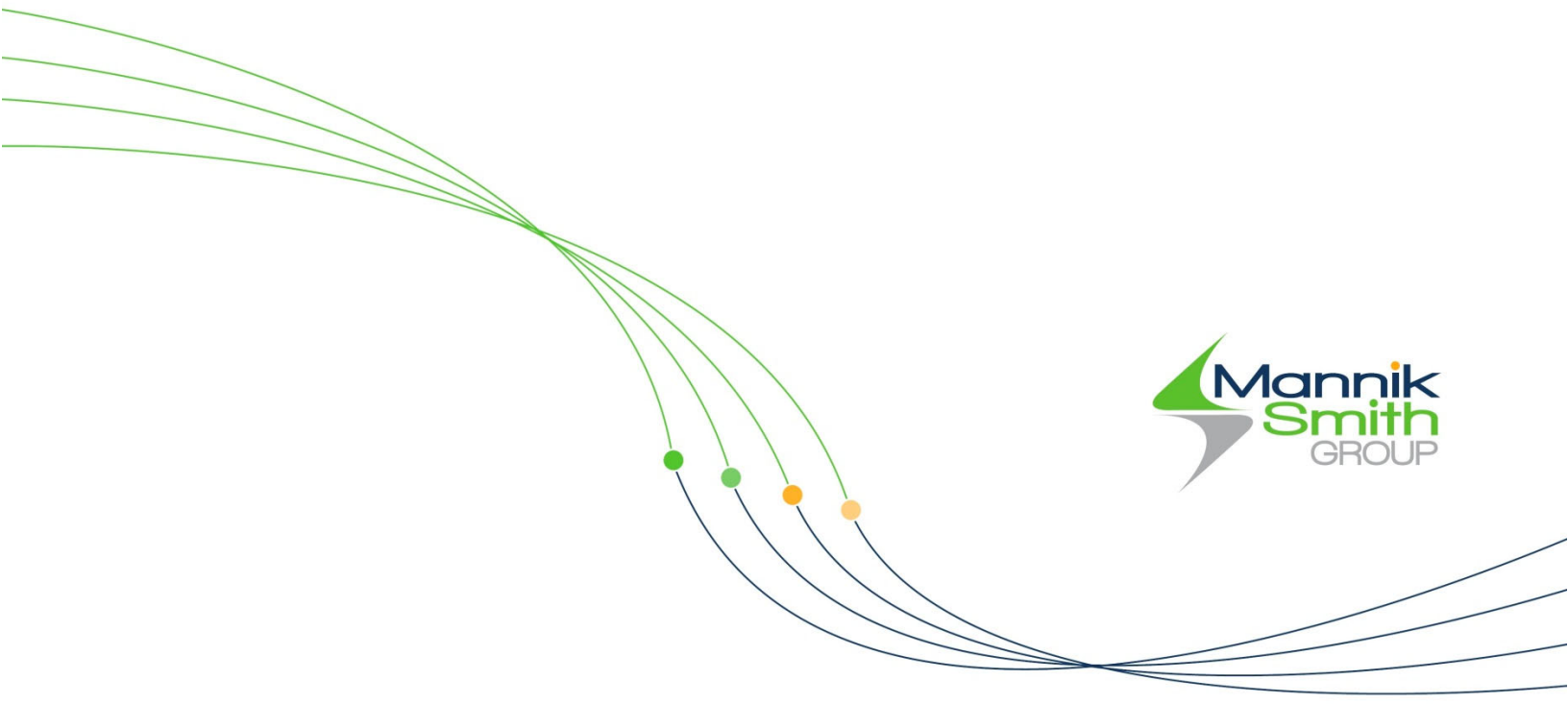


TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-1AR	7/31/2024	9.51	16.98	8.05	136	0.659	1.7	0.42	100
	9/30/2024	10.92	12.99	7.24	157	0.729	6.3	0.00	200
	12/5/2024	11.73	8.07	8.26	175	0.706	8.6	12.19	200
	2/24/2025	10.97	7.61	7.91	136	0.777	29.1	4.87	200
	5/6/2025	9.97	10.06	7.76	176	0.685	31.1	3.27	200
	8/6/2025	9.59	18.03	7.94	105	0.498	0.3	0.80	200
	10/20/2025	11.14	11.93	8.00	110	0.659	0.0	5.11	200
	2/17/2026	11.36	7.48	8.16	188	0.666	2.6	9.36	200
MW-1BR	7/31/2024	9.56	20.90	7.85	-124	0.707	23.7	0.00	100
	9/30/2024	10.78	12.94	7.71	-57	0.859	3.9	0.00	200
	12/5/2024	11.94	6.20	8.06	32	0.796	0.0	11.78	200
	2/24/2025	11.11	8.01	7.77	94	0.888	1.5	0.92	200
	5/6/2025	10.56	11.31	7.89	149	0.704	20.9	8.95	200
	8/6/2025	9.66	15.39	7.86	28	0.591	0.0	0.23	200
	10/20/2025	11.16	11.04	7.83	56	0.767	0.0	0.40	200
	2/18/2026	11.42	7.83	7.95	182	0.786	2.1	0.66	200
MW-2A	8/1/2024	10.59	14.18	7.30	-189	1.230	72.8	0.24	200
	10/1/2024	10.75	13.15	7.42	-162	1.350	0.0	0.00	200
	12/10/2024	6.24	6.88	7.76	-68	1.36	9.5	0.00	200
	2/25/2025	5.81	6.56	7.27	66	1.44	5.7	0.83	200
	5/5/2025	5.62	16.72	6.76	-78	1.14	1.0	0.81	100
	8/5/2025	9.31	17.97	7.19	-142	0.927	8.0	0.29	200
	10/20/2025	9.64	14.62	7.10	-174	1.11	0.0	0.34	200
	2/19/2026	5.88	7.76	7.51	23	1.14	0.0	1.27	200
MW-2B	8/1/2024	11.21	15.70	7.15	-3	0.937	6.8	0.33	200
	10/1/2024	10.73	15.34	7.24	22	1.170	16.2	4.39	200
	12/10/2024	6.40	8.59	7.86	118	1.09	9.3	0.66	200
	2/25/2025	6.32	6.27	7.25	131	1.09	11.8	1.87	200
	5/5/2025	6.08	15.99	6.90	103	0.82	4.0	0.50	200
	8/5/2025	9.39	18.39	7.18	-74	0.703	49.0	0.27	200
	10/29/2025	7.26	12.85	7.20	-88	1.04	0.0	0.39	200
	2/18/2026	5.54	3.87	7.45	120	1.00	16.8	1.66	200
MW-2SB	12/17/2024	85.72	--	--	--	--	--	--	--
	2/25/2025	84.18	--	--	--	--	--	--	--
	5/5/2025	83.89	--	--	--	--	--	--	--
	8/5/2025	83.55	--	--	--	--	--	--	--
	10/20/2025	83.34	--	--	--	--	--	--	--
	2/23/2026	83.06	--	--	--	--	--	--	--
MW-3A	7/30/2024	10.94	21.99	7.13	-46	1.580	103	0.20	200
	10/1/2024	12.69	15.82	7.14	-87	2.080	19.2	0.00	200
	12/10/2024	8.54	8.01	7.65	-42	2.49	1.8	0.00	200
	2/26/2025	5.58	6.68	7.14	-58	2.51	3.1	1.16	200
	4/28/2025	5.12	10.21	7.05	4	2.36	14.8	0.67	200
	8/4/2025	9.62	15.38	7.09	-97	1.88	0.8	0.58	200
	10/29/2025	10.09	10.36	7.08	-107	2.55	0	0.31	200
	2/23/2026	6.22	6.47	7.25	14	2.21	103	1.27	200
MW-3B	7/30/2024	10.74	13.46	7.19	-216	0.903	0.0	0.19	200
	10/1/2024	12.18	15.83	7.20	-60	1.58	0.0	0.55	200
	12/10/2024	7.99	5.43	8.00	102	0.969	0.0	5.68	200
	2/26/2025	5.03	5.87	7.30	162	1.02	2.9	3.01	200
	5/5/2025	4.64	9.20	7.28	176	0.818	3.0	0.69	200
	8/5/2025	9.25	15.12	7.06	159	0.774	2.4	1.21	200
	10/29/2025	9.48	11.52	7.05	64	1.9	0.0	0.37	200
	2/23/2026	5.60	1.84	7.44	162	0.845	12.6	4.61	200
MW-5A	7/30/2024	11.84	18.60	7.36	72	1.34	0.0	1.66	200
	10/2/2024	9.19	14.38	7.21	46	1.65	1.9	0.00	200
	12/9/2024	3.55	10.57	7.98	27	1.48	0.0	10.45	200
	2/26/2025	3.39	5.11	7.29	168	1.66	4.3	2.86	200
	5/7/2025	3.84	9.52	7.30	200	1.36	6.1	0.38	200
	8/4/2025	8.54	15.04	7.29	-161	1.12	4.7	0.29	200
	10/21/2025	8.10	12.37	7.27	-73	1.53	0.0	0.39	200
	2/11/2026	3.91	6.93	7.36	29	1.48	0.0	2.95	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-5SB	9/30/2024	0.05	23.30	8.55	-35	2.06	190.0	2.10	200
	12/9/2024	0.00	8.27	9.33	-87	1.27	9.0	0.00	200
	3/10/2025	0.00	12.24	8.96	-106	1.42	96	0.86	200
	5/7/2025	0.00	10.51	8.73	-82	2.14	128	7.57	200
	8/4/2025	0.00	15.17	8.38	-159	1.98	3.4	0.48	200
	10/21/2025	0.00	11.37	8.86	-131	1.57	0.0	0.81	200
	2/11/2026	Frozen	--	--	--	--	--	--	--
MW-10	8/6/2024	5.82	14.77	6.10	-24	2.33	0.4	0.00	150
	9/30/2024	5.81	18.64	6.43	-54	2.49	3.6	0.00	200
	12/3/2024	4.90	7.71	7.02	-78	2.59	7.9	0.00	200
	2/25/2025	4.76	7.57	6.62	-35	2.63	7.1	0.82	200
	5/7/2025	4.45	11.17	6.71	-93	2.32	38.4	0.52	200
	8/4/2025	5.78	16.08	6.60	-150	1.89	9.8	0.48	200
	10/29/2025	5.72	12.04	6.68	-59	2.40	0.0	0.43	200
	2/11/2026	5.30	6.14	6.71	-188	2.55	14.1	0.39	200
MW-31	7/30/2024	50.71	12.47	8.10	51	0.359	>1000	0.00	200
	10/7/2024	49.50	10.26	8.97	-30	0.397	278	0.50	200
	12/9/2024	48.67	6.10	8.10	37	0.347	>1000	1.23	200
	3/11/2025	51.37	4.30	8.36	83	0.450	102	2.89	200
	4/29/2025	50.12	7.00	8.31	206	0.384	>1000	6.99	200
	8/12/2025	51.45	15.63	8.33	-65	0.376	>1000	7.86	200
	10/27/2025	49.75	10.74	8.47	126	0.384	805	11.70	200
	2/16/2026	50.93	7.94	8.35	137	0.371	>1000	1.39	200
MW-35	7/28/2024	16.63	--	--	--	--	--	--	--
	9/30/2024	19.78	9.46	9.40	152	0.612	28.3	3.19	100
	12/3/2024	20.13	5.41	8.09	154	0.462	180	9.96	100
	3/10/2025	17.25	7.85	10.19	321	0.413	163	5.66	100
	4/30/2025	16.14	19.46	7.45	77	0.341	123	0.72	100
	8/12/2025	16.92	20.52	7.55	133	0.376	671	1.39	100
	10/27/2025	19.39	11.46	6.15	98	0.403	115	8.58	100
	2/16/2026	17.76	7.84	7.60	170	0.397	196	6.07	100
MW-35SB	12/17/2024	26.59	5.58	8.84	168	0.554	>1000	9.58	100
	3/10/2025	21.09	7.65	8.67	-215	0.617	>1000	0.89	500
	5/7/2025	18.18	9.53	7.63	143	0.503	>1000	7.82	200
	8/11/2025	19.06	14.61	8.75	90	0.394	657	1.38	400
	10/22/2025	22.98	9.07	8.90	94	0.470	561	1.86	500
	2/17/2026	19.40	7.75	8.83	90	0.530	535	0.68	500
MW-36	7/28/2024	6.83	19.53	7.17	-207	0.668	261	0.58	200
	9/30/2024	5.94	20.43	8.10	-155	0.667	49.9	0.68	200
	12/3/2024	2.93	6.78	8.11	126	0.587	12.5	0.25	200
	3/4/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.15	17.67	7.00	-105	0.592	4.8	0.23	200
	8/11/2025	4.54	22.12	7.17	-99	0.682	14.8	1.81	200
	10/23/2025	3.39	13.58	7.12	-100	0.668	20.4	0.81	200
	2/23/2026	Frozen	--	--	--	--	--	--	--
MW-37	7/28/2024	14.11	24.22	7.34	-69	0.438	89.8	0.85	200
	10/2/2024	16.81	11.55	8.03	-11	0.534	24.7	1.83	200
	12/3/2024	16.94	8.88	8.53	145	0.413	13.6	10.54	200
	3/4/2025	11.62	3.58	11.59	356	0.473	27.0	9.81	200
	5/1/2025	8.78	10.50	7.31	179	0.402	3.4	5.42	200
	8/11/2025	14.91	14.00	7.51	114	0.529	48.1	4.40	100
	10/21/2025	16.89	10.96	7.57	154	0.481	>1000	6.11	100
	2/23/2026	Inaccessible	--	--	--	--	--	--	--
MW-38	7/28/2024	12.31	11.70	7.66	115	0.525	0.0	0.94	200
	10/7/2024	15.95	10.22	7.32	142	0.570	3.9	0.00	200
	12/3/2024	16.11	7.01	8.65	192	0.597	4.3	2.47	200
	3/4/2025	9.97	6.40	8.65	269	0.614	15.1	4.03	200
	5/7/2025	6.42	8.80	7.69	147	0.446	4.9	4.81	200
	8/6/2025	11.25	15.31	7.66	136	0.324	0.0	0.58	200
	10/23/2025	15.38	9.91	7.90	203	0.460	0.0	1.73	200
	2/18/2026	9.07	6.24	8.06	187	0.520	6.1	3.74	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-41	7/24/2024	7.90	14.99	7.40	164	0.539	78.1	9.10	200
	9/30/2024	28.33	14.70	8.43	172	0.610	172	5.89	100
	12/3/2024	28.64	--	--	--	--	--	--	--
	3/4/2025	25.94	2.33	10.42	329	0.582	35.8	8.51	100
	5/1/2025	24.38	13.87	7.84	110	0.406	92.2	7.00	100
	8/11/2025	25.85	20.60	7.86	159	0.610	107	5.73	100
	10/21/2025	27.94	10.41	7.73	157	0.637	65.6	8.60	100
	2/23/2026	25.70	2.28	8.02	54	0.617	79	2.54	100
MW-42	7/28/2024	5.62	16.37	8.50	51	0.354	0.0	3.45	200
	10/7/2024	8.42	12.70	8.71	106	0.316	35.8	0.56	200
	12/3/2024	6.95	5.74	8.91	174	0.315	11.9	2.16	200
	3/4/2025	3.94	5.66	9.76	255	0.332	148	4.91	200
	5/7/2025	3.59	11.70	9.11	113	0.276	18.7	3.20	200
	8/6/2025	5.14	16.96	9.06	68	0.222	116	2.22	200
	10/23/2025	7.67	9.97	9.02	141	0.288	0	1.48	200
	2/18/2026	4.94	5.53	9.00	155	0.300	42	5.33	200
MW-43	7/31/2024	13.61	18.32	8.02	-33	0.419	274	0.40	200
	9/25/2024	17.31	11.93	7.98	167	0.501	17.7	0.00	200
	12/4/2024	15.54	7.43	8.21	134	0.452	38.1	0.00	200
	2/26/2025	10.47	6.69	8.87	323	0.511	50.3	0.00	200
	5/6/2025	8.78	11.00	7.96	112	0.447	61.0	0.76	200
	8/5/2025	12.31	12.37	8.03	204	0.506	30.1	0.87	200
	10/22/2025	16.01	9.30	8.02	35	0.522	108.0	0.86	200
	2/11/2026	10.34	2.62	8.10	92	0.487	36.8	1.99	200
MW-43SB	10/1/2024	3.65	12.23	8.51	17	4.520	1.7	1.51	150
	12/16/2024	Frozen	--	--	--	--	--	--	--
	2/27/2025	8.38	6.53	7.24	73	4.74	33.5	1.26	200
	5/6/2025	17.74	15.02	7.18	60	4.17	14.3	5.8	200
	8/5/2025	0.43	16.30	7.14	94	4.33	3.4	1.16	200
	10/22/2025	0.75	9.43	7.09	-82	4.08	6.9	1.11	200
	2/11/2026	7.43	5.96	7.24	0	4.44	27.5	1.17	200
MW-44	7/31/2024	15.10	13.58	7.69	-194	0.614	50.6	0.06	200
	9/25/2024	17.89	13.72	8.38	-141	0.809	89.4	0.00	200
	12/4/2024	17.21	8.74	8.33	-61	0.633	15.0	0.00	200
	2/26/2025	14.63	6.00	8.76	285	0.800	18.4	0.00	200
	5/6/2025	13.44	13.06	8.20	140	0.690	48.1	1.74	200
	8/5/2025	14.85	14.20	7.93	-107	0.738	8.2	0.83	200
	10/22/2025	17.03	9.24	8.16	-34	0.769	12.7	0.81	200
	2/11/2026	14.28	5.07	8.22	58	0.725	22.9	1.42	200
NB1-1	7/24/2024	5.61	13.20	6.86	-128	1.290	0.0	0.16	200
	10/2/2024	5.78	16.04	7.74	-228	1.080	29.0	0.00	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.59	6.01	8.08	-85	1.19	25.1	0.00	200
	5/5/2025	2.70	13.64	8.23	-262	1.05	18.1	0.37	200
	8/7/2025	5.62	18.63	7.82	-280	0.972	6.3	0.54	200
	10/28/2025	4.97	10.77	7.85	-181	1.09	41.2	0.63	200
	2/10/2026	2.50	7.18	7.94	-152	1.11	28	0.88	200
NB1-3	7/24/2024	6.21	13.64	7.89	-273	1.000	54.2	0.31	200
	10/2/2024	6.47	14.05	7.82	-175	1.000	22.3	0.37	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.93	7.07	7.97	86	1.03	46.3	0.00	200
	5/5/2025	2.94	16.79	7.50	-125	0.846	17.6	0.22	200
	8/7/2025	5.85	21.78	7.37	-156	0.88	8.5	1.45	200
	10/28/2025	5.40	10.59	7.45	-140	1.03	9.9	1.14	200
	2/10/2026	2.72	7.46	6.81	50	0.812	18.4	0.82	200
NB2-1	7/24/2024	6.45	17.91	6.93	-166	2.260	62.4	0.32	200
	9/30/2024	6.21	25.97	7.21	-124	2.020	0.0	0.10	100
	12/2/2024	2.66	7.19	8.10	-177	1.10	13.7	0.00	200
	3/3/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.56	10.23	7.41	-255	0.974	4.9	0.49	200
	8/12/2025	6.33	19.10	6.93	-62	2.24	40.4	0.82	200
	10/28/2025	2.77	15.36	7.11	-93	1.48	7.4	0.55	200
	2/10/2026	Frozen	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
NB2-3	7/24/2024	6.25	13.99	6.54	-42	1.110	0.0	0.00	200
	9/30/2024	5.80	26.73	7.88	-189	0.889	0.0	0.01	200
	12/2/2024	2.96	8.18	8.40	-78	1.03	14.9	13.01	200
	3/3/2025	2.57	7.87	8.45	14	1.12	20.3	0.00	200
	4/30/2025	2.69	13.72	7.54	-119	1.03	9.1	1.20	200
	8/12/2025	5.74	17.22	7.44	-76	1.10	80.4	3.59	200
	10/28/2025	3.28	13.47	7.87	-80	1.09	0.0	0.81	200
	2/10/2026	Frozen	--	--	--	--	--	--	--
SMW-1	7/25/2024	23.52	9.22	8.21	-84	0.403	73.0	14.06	200
	10/2/2024	23.90	10.08	8.12	-106	0.463	212.0	0.00	200
	12/9/2024	24.79	8.17	8.32	107	0.337	71.9	0.00	200
	3/3/2025	24.25	8.32	8.85	82	0.388	119	1.94	200
	4/29/2025	23.70	6.64	8.20	178	0.371	794	9.18	200
	8/13/2025	23.71	11.12	7.85	155	0.401	9.4	1.80	200
	10/27/2025	24.50	9.44	7.99	38	0.386	20.8	5.59	200
	2/16/2026	25.98	7.84	8.20	129	0.357	28.5	11.09	200
SMW-1SB	12/9/2024	25.15	5.58	8.99	134	0.362	73.2	15.83	200
	3/3/2025	25.35	9.08	9.60	158	0.399	108	7.95	200
	4/30/2025	21.37	8.01	8.39	37	0.195	16.9	8.59	200
	8/13/2025	23.43	12.74	9.01	-49	0.368	6.1	7.14	200
	10/27/2025	26.00	13.25	8.97	-47	0.345	18.5	2.15	200
	2/16/2026	26.95	7.51	8.96	91	0.358	6.8	10.34	200
SMW-3	8/6/2024	27.68	10.84	8.14	88	0.262	11.1	5.41	200
	10/2/2024	27.66	12.52	8.58	-125	0.249	14.7	0.00	200
	12/4/2024	27.18	7.36	8.39	-60	0.272	8.7	10.74	200
	3/6/2025	26.85	8.65	8.38	69	0.265	21.6	0.00	200
	5/8/2025	27.02	14.14	8.19	-64	0.212	5.8	4.13	100
	8/7/2025	27.40	13.71	8.69	-164	0.191	3.7	2.70	200
	10/22/2025	27.18	8.78	8.29	-18	0.258	0.0	8.12	200
	2/18/2026	26.65	8.55	8.75	-95	0.249	9.0	1.00	200
SMW-3SB	12/4/2024	22.98	--	--	--	--	--	--	--
	3/6/2025	22.69	7.27	9.05	255	0.556	36.9	0.00	200
	5/8/2025	22.84	9.77	9.27	54	0.510	13.9	1.14	200
	8/7/2025	23.14	15.54	9.12	-32	0.400	0.9	0.94	200
	10/22/2025	22.89	8.99	9.1	-63	0.513	0	0.97	200
	2/18/2026	22.47	7.32	9.16	19	0.519	21.9	0.99	200

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
ARC-01	7/31/2024	6.89	0.129	20.68	122	2.80	8.0	0.008	1.4	--
	9/25/2024	6.79	0.223	11.67	194	2.61	2.4	0.017	4.7	0.84
	12/5/2024	8.22	0.098	1.26	178	11.75	0.0	0.058	3.5	1.00
	3/11/2025	9.26	0.116	0.38	237	10.30	4.4	4.110	19.8	2.98
	4/28/2025	7.09	0.070	10.57	227	10.28	5.6	0.496	6.1	1.20
	8/4/2025	6.46	0.192	16.67	285	5.70	6.8	-0.043	5.4	1.00
	10/20/2025	6.37	0.225	7.75	46	2.20	51.0	-0.121	6.33	1.00
	2/9/2026	6.36	0.095	0.47	211	12.07	252	-0.061	6.0	1.34
ARC-02	7/31/2024	7.72	0.153	19.32	120	1.93	25.8	0.125	11.5	--
	9/25/2024	7.40	0.129	14.76	159	5.05	12.6	0.229	20.0	--
	12/4/2024	8.52	0.158	0.32	158	6.56	733	0.427	34.0	--
	2/27/2005	8.77	0.064	1.19	280	7.56	40.8	2.310	61.0	--
	5/6/2025	6.53	0.080	15.00	209	5.29	26.7	Unsafe Conditions		--
	8/5/2025	6.48	0.138	18.06	137	1.65	37.1	-0.040	8.25	--
	10/22/2025	6.56	0.117	9.99	70	3.11	42.5	-0.266	10.25	--
	2/23/2026	7.88	0.100	0.95	128	11.99	53.3	0.296	9.0	--
ARC-03	8/6/2024	--	--	--	--	--	--	Dry		--
	9/26/2024	8.04	0.255	11.59	91	7.98	28.3	0.030	8.0	0.62
	12/11/2024	8.15	0.093	0.07	199	16.25	32.6	2.162	14.2	1.50
	3/6/2025	7.55	0.082	1.87	150	10.42	11.7	14.180	13.0	2.78
	4/28/2025	7.06	0.066	11.19	282	10.65	7.5	3.239	10.7	Bent
	8/13/2025	7.57	0.202	18.34	149	5.71	2.0	0.018	8.0	0.72
	10/27/2025	7.51	0.132	8.54	167	12.58	0.0	0.541	9.0	0.95
	2/16/2026	7.50	0.111	0.80	191	13.74	0.5	2.871	7.53	1.65
BNC-01	8/6/2024	7.39	0.179	22.83	115	8.21	0.0	No Stream Gauging		--
	10/8/2024	8.79	0.158	14.53	45	6.90	0.0	No Stream Gauging		--
	12/11/2024	8.12	0.143	0.00	161	4.2	700	No Stream Gauging		--
	3/11/2025	7.14	0.143	1.56	-5	4.04	0.0	No Stream Gauging		--
	5/6/2025	7.09	0.120	21.95	124	7.41	5.1	No Stream Gauging		--
	8/6/2025	7.12	0.143	24.56	271	5.6	2.9	No Stream Gauging		--
	10/29/2025	7.55	0.129	9.08	146	6.82	0.0	No Stream Gauging		--
	2/11/2026	7.80	0.138	1.52	-19	1.83	0.0	No Stream Gauging		--
BNW-01	7/31/2024	7.12	0.184	28.77	111	7.80	2.1	No Stream Gauging		--
	10/8/2024	8.15	0.223	13.65	41	8.37	211	No Stream Gauging		--
	12/11/2024	8.42	0.152	1.49	211	15.75	25.6	No Stream Gauging		--
	2/25/2025	7.49	0.219	2.53	156	9.11	0.0	No Stream Gauging		--
	5/5/2025	7.88	0.218	18.32	156	9.81	11.9	No Stream Gauging		--
	8/6/2025	8.91	0.152	25.41	208	5.60	2.7	No Stream Gauging		--
	10/20/2025	8.32	0.218	16.51	114	11.58	0.0	No Stream Gauging		--
	2/12/2026	7.39	0.312	1.64	90	2.00	9.7	No Stream Gauging		--
CBR-01	7/29/2024	8.16	0.242	24.54	177	8.90	0.0	No Stream Gauging		--
	9/25/2024	7.77	0.295	12.08	175	6.96	1.2	No Stream Gauging		--
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	2/27/2025	8.74	0.092	0.07	348	11.27	32.8	No Stream Gauging		--
	5/6/2025	6.86	0.068	16.47	200	8.75	13.6	No Stream Gauging		--
	8/5/2025	8.53	0.201	23.39	185	6.53	9.8	No Stream Gauging		--
	10/22/2025	7.48	0.091	8.81	154	10.16	102	No Stream Gauging		--
	2/17/2026	7.50	0.107	0.23	187	13.48	11.4	No Stream Gauging		--
CBR-02	8/6/2024	7.97	0.246	26.38	92	6.70	0.0	No Stream Gauging		--
	10/3/2024	8.10	0.261	13.84	106	7.32	12.2	No Stream Gauging		3.55
	12/17/2024	8.30	0.118	0.75	229	10.09	39.2	No Stream Gauging		3.20
	3/4/2025	7.42	0.119	1.04	130	11.02	43.9	No Stream Gauging		3.70
	5/6/2025	7.38	0.074	12.26	68	11.60	4.2	No Stream Gauging		Bent
	8/11/2025	7.41	0.163	23.42	114	3.82	0.0	No Stream Gauging		3.56
	10/27/2025	7.76	0.097	7.18	151	11.28	0.0	No Stream Gauging		3.31
	2/16/2026	7.80	0.126	1.44	127	10.75	0.0	No Stream Gauging		3.83
DKC-01	7/29/2024	--	--	--	--	--	--	Dry		--
	9/23/2024	--	--	--	--	--	--	Dry		--
	12/5/2024	7.83	0.159	0.59	250	14.81	0.0	0.131	6.8	--
	3/11/2025	7.99	0.160	-0.02	325	12.12	0.9	9.990	12.0	--
	4/28/2025	7.25	0.060	8.22	208	12.06	37.5	6.028	8.8	--
	8/4/2025	7.57	0.167	16.20	331	7.44	0.6	-0.004	4.1	--
	10/20/2025	7.10	0.193	7.78	123	5.19	26.5	-0.042	4.5	--
	2/12/2026	7.2	0.102	0.33	188	13.5	11.8	0.356	7.5	--

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
DKC-02	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	7.65	0.152	18.34	168	9.39	2.5	0.081	16.0	--
	12/17/2024	7.30	0.081	0.06	189	16.12	24.7	11.557	22.5	--
	2/26/2025	8.26	0.075	0.03	298	11.02	16.5	7.040	24.8	--
	5/7/2025	6.63	0.065	11.43	191	10.88	10.2	3.737	21.5	--
	8/13/2025	7.67	0.126	19.46	154	6.18	2.3	0.020	8.17	--
	10/27/2025	7.74	0.135	5.45	146	12.13	0.0	0.724	19.33	--
	2/17/2026	7.31	0.092	0.2	145	13.56	10.0	6.868	20.0	--
DKC-03	8/6/2024	7.52	0.213	25.28	151	5.21	0.0	No Stream Gauging		--
	9/26/2024	7.83	0.163	14.36	151	6.67	8.7	No Stream Gauging		--
	12/16/2024	7.50	0.087	1.63	237	13.76	47.7	No Stream Gauging		--
	3/3/2025	7.46	0.077	1.31	136	12.06	6.5	No Stream Gauging		--
	4/29/2025	7.31	0.050	8.40	271	11.11	34.5	No Stream Gauging		--
	8/12/2025	7.43	0.108	24.53	110	5.02	1.2	No Stream Gauging		--
	10/27/2025	7.70	0.139	9.28	154	9.94	0.0	No Stream Gauging		--
	2/9/2026	5.77	0.109	1.30	223	12.46	14.7	No Stream Gauging		--
LKS-01	7/28/2024	8.34	0.116	20.87	191	11.12	0.1	No Stream Gauging		--
	10/7/2024	8.91	0.111	13.68	112	9.56	12.4	No Stream Gauging		--
	12/16/2024	7.56	0.212	0.30	236	13.74	37.8	No Stream Gauging		--
	3/4/2025	7.17	0.389	1.22	193	54.3	10.6	No Stream Gauging		--
	4/30/2025	6.88	0.085	10.95	167	11.30	13.2	No Stream Gauging		--
	8/12/2025	8.30	0.082	21.78	85	10.98	10.9	No Stream Gauging		--
	10/28/2025	8.18	0.100	9.04	121	12.26	9.6	No Stream Gauging		--
	2/23/2026	7.57	0.333	0.35	159	13.95	38.1	No Stream Gauging		--
LKS-02	7/28/2024	7.69	0.112	21.91	172	11.11	0.0	No Stream Gauging		--
	10/7/2024	9.23	0.108	13.49	42	10.06	1.2	No Stream Gauging		--
	12/16/2024	8.11	0.115	0.70	62	10.79	17.6	No Stream Gauging		--
	3/3/2025	7.50	0.171	0.93	91	11.58	3.1	No Stream Gauging		--
	5/1/2025	6.64	0.054	6.67	170	11.53	13.5	No Stream Gauging		--
	8/12/2025	8.13	0.080	20.94	104	9.37	0.0	No Stream Gauging		--
	10/28/2025	8.03	0.099	9.42	29	11.3	40.0	No Stream Gauging		--
	2/24/2026	7.20	0.111	1.57	202	14.15	0.0	No Stream Gauging		--
MLC-01	8/6/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/2/2024	12.12	0.275	3.76	-43	14.59	16.3	0.027	2.5	--
	3/3/2025	7.27	0.218	0.49	173	12.23	9.8	0.170	4.3	--
	4/29/2025	7.23	0.133	8.04	261	10.87	19.5	0.768	4.0	--
	8/6/2025	--	--	--	--	--	--	Dry		--
	10/28/2025	--	--	--	--	--	--	Dry		--
	2/17/2026	7.15	0.207	0.46	216	10.85	38.6	0.074	5.83	--
MLR-01	7/25/2024	7.72	0.148	15.35	150	7.52	0.1	0.311	16.3	--
	9/23/2024	7.95	0.177	16.42	141	9.50	7.7	No Stream Gauging		1.29
	12/16/2024	7.58	0.088	0.36	199	15.08	32.2	No Stream Gauging		2.05
	3/10/2025	8.64	0.071	0.32	361	11.51	43.4	No Stream Gauging		3.71
	4/28/2025	6.81	0.050	8.35	223	12.17	22.4	No Stream Gauging		2.10
	8/13/2025	7.81	0.112	21.31	130	7.03	0.0	0.051	13.9	1.27
	10/28/2025	7.15	0.085	6.49	165	11.25	0.0	No Stream Gauging		1.60
	2/10/2026	6.08	0.097	0.68	236	12.57	7.2	No Stream Gauging		--
MLR-02	7/25/2024	7.41	0.247	19.59	114	7.46	7.4	0.489	28.2	--
	9/24/2024	8.15	0.265	15.97	116	13.09	1.5	0.086	21.0	0.08
	12/16/2024	7.82	0.140	0.31	234	14.4	57.1	2.504	37.5	1.15
	3/11/2025	7.73	0.180	0.00	145	13.67	18	No Stream Gauging		2.65
	5/5/2025	7.11	0.092	10.50	202	10.38	33.6	15.758	35.5	Bent
	8/4/2025	7.72	0.190	20.85	292	6.22	19.6	0.083	25.0	0.15
	10/20/2025	7.70	0.204	10.53	171	7.36	48.2	-0.074	24.83	0.12
	2/24/2026	7.74	0.153	0.19	154	13.29	13.4	15.641	37.5	1.58
MLR-03	7/25/2024	7.79	0.245	15.87	186	9.27	0.0	0.468	28.2	--
	9/23/2024	8.64	0.283	14.30	31	10.02	1.6	No Stream Gauging		0.71
	12/2/2024	9.17	0.168	0.05	192	21.09	17.5	No Stream Gauging		1.30
	2/25/2025	7.88	0.241	-0.10	299	2.29	23.6	No Stream Gauging		1.26
	4/30/2025	7.13	0.067	9.20	164	11.09	15.8	No Stream Gauging		Bent
	8/6/2025	8.01	0.195	18.55	223	7.68	1.9	No Stream Gauging		Missing
	10/21/2025	7.55	0.204	9.48	145	7.15	30.3	No Stream Gauging		Missing
	2/17/2026	7.37	0.176	0.31	183	14.58	17.7	No Stream Gauging		Missing

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
NTC-01	7/22/2024	7.85	0.208	17.79	39	9.55	34.7	0.074	4.8	--
	9/23/2024	7.56	0.225	15.34	-19	2.17	171	0.021	4.0	--
	12/2/2024	9.87	0.252	1.76	56	14.1	12.7	0.016	5.3	--
	2/25/2025	7.93	0.233	0.53	254	8.92	15.6	0.630	7.5	--
	4/30/2025	6.65	0.105	14.11	175	2.20	2.2	0.583	7.0	--
	8/6/2025	7.40	0.143	19.93	234	4.94	2.9	0.001	5.3	--
	10/21/2025	6.82	0.229	10.79	-70	1.55	167	-0.028	4.6	--
	2/17/2026	7.44	0.219	0.33	167	10.72	19.4	0.118	5.5	--
PNC-01	7/29/2024	6.53	0.119	21.62	171	2.13	1.2	0.008	2.2	--
	9/23/2024	7.33	0.285	16.70	175	1.51	21.6	0.015	2.3	0.83
	12/5/2024	7.22	0.085	0.93	131	10.99	55.1	0.015	1.3	1.00
	3/11/2025	8.91	0.041	0.02	293	12.69	51.7	5.730	4.0	1.90
	4/28/2025	6.83	0.047	9.87	198	10.13	9.2	0.906	3.2	1.32
	8/13/2025	6.84	0.095	20.81	147	0.085	6.6	0.008	2.3	0.83
	10/29/2025	6.76	0.108	9.22	95	5.73	2.0	-0.042	2.8	0.88
	2/10/2026	6.56	0.056	0.94	182	11.40	3.1	-0.014	7.0	1.12
PNC-02	7/29/2024	7.29	0.293	27.19	72	4.63	41.0	0.068	10.8	--
	9/24/2024	7.73	0.343	17.27	136	12.59	7.9	0.213	53.3	1.22
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	3/10/2025	9.29	0.129	-0.05	289	9.63	230	7.120	55.0	2.09
	5/5/2025	6.95	135	17.87	0.1	7.76	670	1.774	56.0	1.90
	8/4/2025	7.52	0.281	22.14	308	5.16	19.9	Not Accessible		--
	10/20/2025	7.36	0.334	10.98	119	5.06	277	Not Accessible		--
	2/9/2026	7.37	0.209	0.70	158	9.64	16.1	Not Accessible		--
PNC-03	8/1/2024	7.79	0.453	20.11	105	4.62	0.0	0.023	4.0	--
	9/24/2024	7.84	0.395	15.97	138	10.22	6.4	0.053	6.3	0.43
	12/9/2024	8.92	0.274	1.72	168	10.26	10.0	3.440	18.9	1.31
	3/10/2025	7.60	0.173	0.42	143	12.94	8.0	17.770	21.0	2.3
	5/7/2025	7.86	0.124	12.94	170	9.16	26.4	3.366	20.5	1.22
	8/6/2025	7.88	0.315	20.16	247	6.67	1.5	-0.032	20.0	0.78
	10/29/2025	7.52	0.346	6.71	136	6.97	0.0	-0.800	20.08	1.36
	2/12/2026	7.53	0.217	0.26	159	13.68	19.4	2.111	19.5	2.90
PNC-04	8/7/2024	7.35	0.481	17.08	157	9.73	0.0	0.011	5.3	--
	9/26/2024	7.82	0.412	13.69	138	7.89	2.6	0.082	7.0	0.58
	12/17/2024	8.27	0.241	0.06	276	15.12	19.9	10.975	15.5	1.70
	3/4/2025	7.47	0.179	0.00	136	13.72	11.6	3.330	15.7	--
	5/1/2025	6.85	0.099	9.79	204	11.09	5.6	7.990	21.8	Bent
	8/11/2025	7.90	0.267	20.01	75	8.62	0.0	0.060	4.9	Missing
	10/27/2025	7.70	0.349	5.86	132	11.79	0.0	0.469	6.34	0.24
	2/16/2026	7.65	0.227	0.48	138	14.16	0.0	3.074	12.3	2.60
PRC-01	7/22/2024	8.22	0.972	24.40	110	9.33	47.9	1.011	6.2	--
	9/24/2024	7.37	0.481	18.86	114	7.68	3.3	0.072	7.0	0.20
	12/11/2024	8.11	0.938	0.56	192	13.84	21.1	11.443	16.0	0.75
	3/4/2025	7.54	0.914	0.28	195	13.14	6.8	5.500	15.5	--
	5/7/2025	8.00	0.429	16.32	112	9.34	20.5	16.628	16.0	0.75
	8/6/2025	7.94	0.689	24.25	191	7.86	16.7	0.299	11.0	0.18
	10/29/2025	7.93	0.982	8.42	1	10.82	10.1	1.177	15.0	0.25
	2/10/2026	7.50	1.20	1.05	111	12.34	0.0	2.909	9.5	0.30
PRC-02	7/22/2024	8.05	0.984	19.87	132	11.13	10.6	0.805	5.2	--
	9/23/2024	7.91	1.030	13.89	112	7.33	0.3	0.050	5.0	--
	12/2/2024	8.95	0.821	0.13	-109	19.4	25.6	5.142	6.7	--
	2/25/2025	7.99	0.745	0.13	420	12.63	7.6	1.930	8.0	--
	4/30/2025	6.83	0.381	11.35	162	10.72	14.0	Unsafe Conditions		--
	8/6/2025	7.92	0.701	19.81	240	6.00	2.4	0.153	5.7	--
	10/21/2025	7.71	0.941	9.64	174	7.65	12.0	0.271	6.0	--
	2/17/2026	7.50	0.001	0.23	196	15.78	21.4	Unsafe Conditions		--
PTC-01	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/11/2024	8.03	0.215	-0.07	231	14.47	2.7	0.271	9.0	--
	3/6/2025	7.45	0.224	0.83	114	12.02	7.3	0.920	7.3	--
	4/29/2025	7.44	0.12	7.86	258	4.88	4.7	0.579	6.6	--
	8/11/2025	7.73	0.196	19.29	126	6.07	0.0	0.017	7.0	--
	10/27/2025	--	--	--	--	--	--	Dry		--
	2/16/2026	7.8	0.224	3.57	190	12.75	0	0.113	9.58	--

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
SBD-01	7/29/2024	7.65	0.224	28.82	123	5.98	89.5	No Stream Gauging		--
	9/24/2024	7.71	0.246	16.34	33	3.86	132.0	No Stream Gauging		--
	12/10/2024	7.67	0.235	3.89	199	6.18	57.7	No Stream Gauging		--
	2/24/2025	7.31	0.260	1.08	101	0.46	147	No Stream Gauging		--
	4/29/2025	7.28	0.109	10.45	219	6.35	9.5	No Stream Gauging		--
	8/4/2025	6.82	0.159	21.37	251	2.42	7.8	No Stream Gauging		--
	10/20/2025	7.07	0.176	11.47	153	4.06	31.0	No Stream Gauging		--
	2/9/2026	6.78	0.248	0.46	-22	2.94	51.8	No Stream Gauging		--
SBW-01	7/29/2024	8.17	0.152	26.48	138	5.96	0.0	No Stream Gauging		--
	9/24/2024	7.92	0.191	13.78	121	7.36	10.3	No Stream Gauging		--
	12/10/2024	7.55	0.181	0.46	206	6.64	63.0	No Stream Gauging		--
	2/24/2025	7.32	0.428	0.35	164	7.69	40.5	No Stream Gauging		--
	4/29/2025	7.45	0.21	8.90	298	5.84	5.4	No Stream Gauging		--
	8/4/2025	6.99	0.138	25.17	339	3.44	242	No Stream Gauging		--
	10/20/2025	7.55	0.201	9.04	156	7.00	18.0	No Stream Gauging		--
	2/9/2026	6.65	0.423	1.29	111	3.29	15.9	No Stream Gauging		--
TBN-01	7/31/2024	7.13	0.866	25.82	108	8.52	4.4	No Stream Gauging		--
	10/7/2024	7.85	1.030	13.31	143	10.92	29.9	No Stream Gauging		--
	12/11/2024	8.02	0.618	0.19	198	13.83	52.1	No Stream Gauging		--
	2/24/2025	7.46	0.601	0.80	321	4.70	2.8	No Stream Gauging		--
	5/1/2025	8.25	0.376	11.62	165	11.57	47.2	No Stream Gauging		--
	8/6/2025	9.30	0.607	23.61	179	8.13	3.3	No Stream Gauging		--
	10/29/2025	8.17	0.943	10.03	131	7.90	12.2	No Stream Gauging		--
	2/10/2026	7.56	0.877	0.14	101	3.31	999.0	No Stream Gauging		--
TBS-01	7/28/2024	7.55	0.754	28.43	120	10.25	0.0	No Stream Gauging		--
	10/8/2024	8.47	1.040	8.60	116	12.87	7.8	No Stream Gauging		--
	12/11/2024	8.30	0.396	4.94	178	11.19	170	No Stream Gauging		--
	2/24/2025	7.46	0.484	0.61	426	6.02	11.1	No Stream Gauging		--
	5/1/2025	8.05	0.601	12.44	164	11.35	14.8	No Stream Gauging		--
	8/13/2025	9.03	2.28	24.71	55	4.29	1.2	No Stream Gauging		--
	10/20/2025	8.26	2.32	11.34	139	10.54	17.8	No Stream Gauging		--
	2/10/2026	7.19	1.18	0.54	-10	2.45	8.7	No Stream Gauging		--

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

APPENDIX A
FIELD SHEETS

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1AR

DATE: 2-17-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 40°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 11.36

PURGE START TIME: 16:06

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: ¼" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MS6 - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1610	12.42	7.74	8.33	155	0.667	5.2	11.72	0	200	
1615	13.17	7.88	8.24	167	0.673	4.9	10.89	0.25		
1620	14.35	7.83	8.21	176	0.666	4.5	10.32	0.5		
1625	15.09	7.73	8.19	180	0.665	5.4	10.02	0.75		
1630	15.81	7.63	8.18	181	0.665	3.0	9.74	1.0		
1635	16.25	7.53	8.17	186	0.666	2.9	9.49	1.25		
1640	16.92	7.48	8.16	188	0.666	2.6	9.36	1.5		
				Sample collected at			17:30			

SAMPLE ID: MW-1AR_20260217 + MW-1AR_20260217_FBLK

SAMPLE DATE: 2-17-26

SAMPLE TIME: 17:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1BR

DATE: 2-18-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 32°F, Heavy Snow

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 11.42

PURGE START TIME: 10:00

SCREEN LENGTH:

WELL DIAMETER: 2.0

TUBING TYPE: Hy Tether

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG-Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1005	11.61	8.81	8.11	190	0.709	53.8	2.90	0	200	
1010	11.96	8.28	8.07	192	0.714	19.6	2.14	0.25	↓	
1015	11.99	8.08	8.05	195	0.720	19.3	1.86	0.5	↓	
1020	12.02	7.95	8.01	197	0.742	7.1	1.29	0.75	↓	
1025	12.08	7.87	7.95	197	0.791	4.7	0.89	1.0	↓	
1030	12.12	7.85	7.94	192	0.793	4.3	0.74	1.25	↓	
1035	12.17	7.86	7.94	188	0.787	2.7	0.72	1.5	↓	
1040	12.22	7.83	7.95	182	0.786	2.1	0.66	1.75	↓	
				Sample collected at			11:30			

SAMPLE ID: MW-1BR_20260218 & DUP-01-GW_20260218 & FBLs

SAMPLE DATE: 2-18-26

SAMPLE TIME: 11:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 2-19-26

PERSONNEL: JO

OBSERVERS:

SAMPLE LOCATION: MW-2A

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 30°F

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: 1/4" Teflon

MONITORING EQUIPMENT: MSG - Horiba U-52

DEPTH TO WATER LEVEL: 5.88

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 9:12

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
9:15	6.28	8.86	7.68	185	1.11	1.3	2.46	0	200	
9:20	6.52	8.58	7.54	180	1.12	0.0	1.72	0.25	↓	
9:25	6.80	8.25	7.53	95	1.12	0.0	1.53	0.5	↓	
9:30	7.20	8.02	7.50	36	1.13	0.0	1.41	0.75	↓	
9:35	7.46	7.92	7.50	23	1.13	0.0	1.35	1.0	↓	
9:40	7.81	7.83	7.51	26	1.14	0.0	1.32	1.25	↓	
9:45	8.06	7.76	7.51	23	1.14	0.0	1.27	1.5	↓	
				Sample collected at 11:00						

SAMPLE ID: MW-2A_20260219 + MW-2A_20260219_FBLL

SAMPLE DATE: 2-19-26

SAMPLE TIME: 11:00

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-28

DATE: 2-18-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 32°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.54

PURGE START TIME: 13:48

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: 3/8 Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1350	5.92	4.12	7.69	208	0.997	56.0	9.08	0	200	
1355	6.20	3.26	7.41	196	1.03	57.6	2.35	0.25	↓	
1400	6.48	3.35	7.41	184	1.02	26.5	2.07	0.5	↓	
1405	6.82	3.44	7.43	173	1.02	21.2	1.97	0.75	↓	
1410	6.91	3.61	7.45	158	1.01	21.6	1.91	1.0	↓	
1415	7.11	3.70	7.45	142	1.00	21.4	1.85	1.25	↓	
1420	7.25	3.79	7.45	128	1.00	17.9	1.79	1.5	↓	
1425	7.38	3.83	7.45	124	1.00	17.1	1.71	1.75	↓	
1430	7.51	3.87	7.45	120	1.00	16.8	1.86	2.0	↓	
				Sample collected at 15:00						

SAMPLE ID: MW-28_20260218 & MW-28_20260218_FD

SAMPLE DATE: 2-18-26

SAMPLE TIME: 15:00

Notes: MS/MSD collected

MW-28 - DTW - 83.06

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 2-23-26

PERSONNEL: CSV / ERC

OBSERVERS:

SAMPLE LOCATION: MW-3A

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: snowy, 10°

DEPTH OF WELL: 32.30

SCREEN LENGTH: 10

TUBING TYPE: 1/4" POLY

DEPTH TO WATER LEVEL: 6.22

WELL DIAMETER: 2" 3"

CASING TYPE: PVC

PURGE START TIME: 0930

MONITORING EQUIPMENT: HANNA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0939	7.02	8.46	7.27	-5	2.08	129	1.85	0.25	200	
0942	7.74	7.70	7.26	-8	2.16	139	1.47	0.50		
0945		7.24	7.26	1	2.19	121	1.45	0.75		
0948		6.78	7.25	12	2.21	112	1.33	1.00		
0951		6.47	7.25	14	2.21	103	1.27	1.25		

SAMPLE ID: MW-3A_20260223 & FBLL

SAMPLE DATE: 02-23-26

SAMPLE TIME: 10:00

Notes: yellow water during purge

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 2-23-26

PERSONNEL: ERC / ESV

OBSERVERS:

SAMPLE LOCATION: MW-3B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Snowy (LIGHT) 14°

DEPTH OF WELL: 16.60

SCREEN LENGTH:

TUBING TYPE: 1/4" POLY

DEPTH TO WATER LEVEL: 5.60

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 1608

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1623	6.02	3.14	7.61	157	0.847	50.0	6.92		200	
1626	6.38	2.82	7.47	161	0.837	24.2	4.65		↓	
1629	6.40	2.46	7.44	162	0.841	16.5	4.47			
1632	6.43	2.16	7.44	162	0.842	14.7	4.55			
1635		1.84	7.44	162	0.845	12.6	4.61			

SAMPLE ID: MW-3B-20260223

SAMPLE DATE: 02-23-26

SAMPLE TIME: 1645

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 2-11-26

PERSONNEL: JD

OBSERVERS:

SAMPLE LOCATION: MW-5A

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 21°F

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE: 1/4 Teflon

DEPTH TO WATER LEVEL: 3.91

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 9:38

MONITORING EQUIPMENT: MSG - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
9:40	4.35	8.16	7.22	159	1.44	0.0	4.66	0	200	
9:45	4.48	7.30	7.20	159	1.45	0.0	4.20	0.25		
9:50	4.69	6.76	7.42	155	1.45	0.0	3.99	0.5		
9:55	4.81	6.62	7.43	130	1.47	0.0	3.81	0.75		
1000	4.92	6.67	7.42	78	1.48	0.0	3.54	1.0		
1005	5.02	6.85	7.38	41	1.48	0.0	3.10	1.25		
1010	5.11	6.99	7.37	38	1.48	0.0	3.03	1.5		
1015	5.20	6.97	7.36	33	1.48	0.0	3.00	1.75		
1020	5.29	6.93	7.36	29	1.48	0.0	2.95	2.0		
			Sample collected at 10:30							

SAMPLE ID: MW-5A_20260211 & MW-5A_20260211_FBLL

SAMPLE DATE: 2-11-26

SAMPLE TIME: 10:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 2-11-26

SAMPLE LOCATION: MW-10

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

PERSONNEL: JD

OBSERVERS:

SITE CONDITIONS: Cloudy, 21°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 5.30

PURGE START TIME: 11:57

SCREEN LENGTH:

WELL DIAMETER: 1.5"

TUBING TYPE: 1/4" Teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG - Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1200	5.89	5.94	6.87	-178	2.38	26.0	1.94	0	200	
1205	5.93	5.82	6.77	-162	2.39	25.8	0.94	0.25		
1210	6.00	5.83	6.74	-161	2.44	21.9	0.75	0.5		
1215	6.07	6.08	6.73	-172	2.49	17.2	0.65	0.75		
1220	6.12	6.16	6.72	-181	2.50	14.5	0.49	1.0		
1225	6.16	6.16	6.72	-185	2.52	13.3	0.45	1.25		
1230	6.20	6.12	6.71	-185	2.53	15.4	0.43	1.5		
1235	6.26	6.14	6.71	-188	2.55	14.1	0.39	1.75		
				Sample collected at 13:30						

SAMPLE ID: MW-10-20260211 & MW-10_20260211_FBLK

SAMPLE DATE: 2-11-26

SAMPLE TIME: 13:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-31

DATE: 2-16-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ESV / ERC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Sunny

DEPTH OF WELL: 72.10

DEPTH TO WATER LEVEL: 50.93

PURGE START TIME: 1347

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE:

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1353	50.65'	8.86	8.39	157	0.370	589	9.40			
1356	50.37	8.26	8.47	154	0.374	509	4.73			
1359	50.39	8.09	8.56	156	0.375	604	2.76			
1402	50.45	8.03	8.44	147	0.373	1000	1.84			
1405	50.48	8.00	8.37	144	0.371	1000	1.49			
1408	50.50	7.94	8.35	137	0.371	1000	1.39			
1411										

SAMPLE ID: MW-31_20260216

SAMPLE DATE: 02-16-26

SAMPLE TIME: 1430

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-35

DATE: 2-16-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EJV / ERC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUNNY.

DEPTH OF WELL: 21.50

DEPTH TO WATER LEVEL: 17.76"

PURGE START TIME: 1535

SCREEN LENGTH: —

WELL DIAMETER: 2"

TUBING TYPE: 1/4" POLY

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1542	18.40	7.84	7.60	170	0.397	196	6.07	0.12	100	
		* Sampled due to fast drawdown *								

SAMPLE ID: MW-35_20260216

SAMPLE DATE: 02-16-26

SAMPLE TIME: 1545

Notes: *SAMPLED IMMEDIATELY DUE TO LOW WATER LEVEL *

BLACK GUNK / SEDIMENT PARTICLES

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-355B

DATE: 2-17-26

PROJECT #: 401.2400718.000

PERSONNEL: JD

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 36°F

DEPTH OF WELL:

DEPTH TO WATER LEVEL: 19.40

PURGE START TIME: 12:24

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/2" PE

CASING TYPE: PVC

MONITORING EQUIPMENT: MSG- Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED ~~(Gallons)~~ L	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
12:30	20.28	7.81	8.79	90	0.529	44.5	6.59	0	500	
1235	21.82	8.21	8.83	92	0.532	1000+	1.04	~~2.5~~ 5		
1240	21.96	8.00	8.83	92	0.531	624	0.84	5		
1245	22.03	7.94	8.83	92	0.521	509	0.73	7.5		
1250	22.70	7.75	8.83	92	0.521	519	0.73	10		
1255	22.92	7.78	8.83	90	0.530	537	0.71	12.5		
1300	23.21	7.75	8.83	90	0.530	535	0.68	15		
			Sample collected at				13:30			

SAMPLE ID: MW-355B_20260217 + MW-355B_20260217_FB&C

SAMPLE DATE: 2.17.26

SAMPLE TIME: 13:30

Notes: Purged well after sampling for 45 min, ran dry

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-38

DATE: 2-18-2026

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERL / EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 33°F, Snow/rain

DEPTH OF WELL: 30.45

DEPTH TO WATER LEVEL: 9.07

PURGE START TIME: 14:23

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4 poly

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:30	10.08	6.14	8.10	191	0.518	8.0	6.85	0.25	200	
14:33	11.08	6.25	8.08	190	0.519	4.6	4.61	0.50		
14:36	11.44	6.12	8.08	189	0.552	6.6	4.09	0.75		
14:39	11.71	6.12	8.07	188	0.521	5.2	3.92	1.00		
14:42	11.94	6.22	8.07	187	0.520	5.7	3.74	1.25		
14:45	12.26	6.24	8.06	187	0.520	6.1	3.74	1.50		

SAMPLE ID: MW-38_20260218 & FBLL

SAMPLE DATE: 2-18-2026

SAMPLE TIME: 14:50

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-41

DATE: 2-23-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EJV / ERC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Snowy 11°

DEPTH OF WELL: 29.60

DEPTH TO WATER LEVEL: 25.70

PURGE START TIME: 1412

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" POLY

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1420		2.28	8.02	54	0.617	79.0	2.54	0.12	100	
				* SLOW	RECHARGE =	READINGS *				

SAMPLE ID: MW-41_20260223

SAMPLE DATE: 2-23-26

SAMPLE TIME: 1425

Notes: * DUE TO NO RECHARGE, HARIBA READING *

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 2-18-2026

PERSONNEL: ERC / EJV

OBSERVERS:

SAMPLE LOCATION: MW-42

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 33°F, overcast

DEPTH OF WELL: 29.45

SCREEN LENGTH:

TUBING TYPE: 1/4 poly

MONITORING EQUIPMENT: Hwiba U-52

DEPTH TO WATER LEVEL: 4.94

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 15:41

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
15:50	6.23	5.47	9.00	156	0.301	35.8	6.57	0.25	200	
15:53	7.88	5.49	9.00	155	0.301	52.5	6.07	0.50	↓	
15:56	8.44	5.48	9.00	155	0.300	34.0	5.53	0.75		
15:59	9.05	5.52	9.00	155	0.300	37.5	5.72	1.00		
16:02	9.41	5.53	9.00	155	0.300	42.0	5.33	1.25		

SAMPLE ID: MW-42_20260218 & FBLL

SAMPLE DATE: 2-18-2026

SAMPLE TIME: 16:15

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-43

DATE: 2-11-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EJV / ERC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: OVERCAST, LIGHT SNOW, 21°

DEPTH OF WELL: 27.85'

DEPTH TO WATER LEVEL: 10.34'

PURGE START TIME: 1021

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" POLY

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1031	10.99'	4.24	8.10	86	.489	69.3	6.30	0.25	200	
1034	11.55'	3.18	8.13	90	.505	76.0	3.85	0.50		
1037	11.74'	2.93	8.11	91	.503	76.1	3.17	0.75		
1040	11.94'	2.84	8.10	92	.496	70.4	2.40	1.00		
1043	12.13'	2.74	8.09	92	.492	53.9	2.27	1.25		
1046	12.32'	2.75	8.10	92	.488	44.8	2.13	1.50	↓	
1049	12.41	2.62	8.10	92	.487	36.8	1.99	1.75		

SAMPLE ID: MW-43-20260211 & FBLL

SAMPLE DATE: 02-11-26

SAMPLE TIME: 1100

Notes:

10:16 download off diver (TROLL) returned to well at 11:46

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 2-11-2026

PERSONNEL: ERC / EJV

OBSERVERS:

SAMPLE LOCATION: MW-43SB

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 21°F, overcast, sprinkle of snow

DEPTH OF WELL: >100ft

SCREEN LENGTH:

TUBING TYPE: 1/4 poly

DEPTH TO WATER LEVEL: 7.43

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 14:48

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:52	7.30	4.59	7.62	-16	3.39	29.2	7.35	0.25	200	
14:55	7.11	5.49	7.39	-19	4.24	29.6	3.37	0.50	↓	
14:58	7.95	5.69	7.33	-12	4.38	28.7	2.41	0.75	↓	
15:01	8.78	5.85	7.30	-7	4.40	28.2	1.76	1.00	↓	
15:04	9.58	5.94	7.26	-3	4.42	29.0	1.26	1.25	↓	
15:07	10.30	5.96	7.24	0	4.44	27.5	1.17	1.50	↓	

SAMPLE ID: MW-43SB_20260211 & FBLL

SAMPLE DATE: 2-11-2026

SAMPLE TIME: 15:15

Notes: Odor present, fishy

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-44

DATE: 2-11-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ESV/ERC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: overcast, light snow, 21°F

DEPTH OF WELL: 38.25'

DEPTH TO WATER LEVEL: 14.28'

PURGE START TIME: 1208

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" POLY

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1217	14.43"	5.50	8.45	114	.758	58.4	4.24			
1220	14.57"	5.44	8.50	88	.771	62.6	3.99			
1223	14.58"	5.25	8.43	78	.760	47.1	2.90			
1226	14.58'	4.82'	8.37	69	.756	32.8	2.32			
1229	14.59"	4.83	8.33	65	.750	27.7	2.15			
1232	14.60"	5.06	8.26	61	.736	23.8	1.81			
1235	14.60"	5.07	8.22	58	.725	22.9	1.42			

SAMPLE ID: MW-44-20260211

SAMPLE DATE: 02-11-26

SAMPLE TIME: 1245

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MBI-1

DATE: 02-10-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EJV / ERC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: OVERCAST, WINDY, 28°

DEPTH OF WELL: 24.65 FT

DEPTH TO WATER LEVEL: 2.50 FT

PURGE START TIME: 0911

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" POLY

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0919	2'.76"	5.56°	7.35	-2	1.12	89.4	4.36	0.25	200	
0922	2'.84"	6.04°	7.56	-62	1.12	72.1	3.00	0.50		PAUSED FOR GUNK
0925	2'.93"	5.59°	7.70	-57	1.14	82.0	6.21	0.75		
0928	3.02"	6.81°	7.81	-113	1.12	45.8	1.35	1.00		
0931	3'.10"	6,98	7.88	-130	1.12	38.7	1.00	1.25		
0934	3.18"	7.01	7.92	-140	1.12	33.0	0.92	1.50		
0937	3.26'	7.18	7.94	-152	1.11	28.0	0.88	1.75	↓	

SAMPLE ID: MBI-1_20260210 & FBLL

SAMPLE DATE: 02-10-26

SAMPLE TIME: 0945

Notes: STRONG ODOR * BLACK SLUDGE PRESENT *

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: NBI-3

DATE: 02-10-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC / EJV

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: OVERCAST, GUSTS & WIND,

DEPTH OF WELL: 32.60

DEPTH TO WATER LEVEL: 2.72

PURGE START TIME: 1024

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" POLY

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1030	5.05"	7.08°	7.19	54	.799	41.0	3.27	0.25	200	
1033	5.50"	7.28	6.86	53	.807	29.1	1.90	0.50		
1036	6.95"	7.33	6.82	55	.808	23.7	1.29	0.75		
1039	7.65"	7.14	6.80	58	.816	23.7	1.26	1.00		
1042	8.35'	7.17	6.80	59	.815	23.5	1.05	1.25		
1045	8.80"	7.36	6.80	56	.811	20.5	.86	1.50		
1048	9.29"	7.41	6.81	53	.812	23.9	.87	1.75		
1051	9.69"	7.46	6.81	50	.812	18.4	.82	2.00	↓	

SAMPLE ID: NBI-3.20260210 & FBLL

SAMPLE DATE: 02-10-26

SAMPLE TIME: 11:00

Notes: STRONG ODOR

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NB2-1

DATE: 2-18-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EJV/ERC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL:

PURGE START TIME:

SCREEN LENGTH:

WELL DIAMETER:

TUBING TYPE:

CASING TYPE:

MONITORING EQUIPMENT:

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			

SAMPLE ID:

SAMPLE DATE:

SAMPLE TIME:

Notes: WELL FROZEN @ 15:00

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 2-10-26

PERSONNEL: EJV / ERC

OBSERVERS: _____

SAMPLE LOCATION: NB2-3

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: _____

DEPTH OF WELL: _____

SCREEN LENGTH: _____

TUBING TYPE: _____

DEPTH TO WATER LEVEL: _____

WELL DIAMETER: _____

CASING TYPE: _____

PURGE START TIME: _____

MONITORING EQUIPMENT: _____

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			

SAMPLE ID: _____

SAMPLE DATE: _____

SAMPLE TIME: _____

Notes: FROZEN WELL @ 15:00

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

1004

DATE: 02-16-26

SAMPLE LOCATION: SMW-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: CLEAR, 33°

PERSONNEL: EGV / ERC

OBSERVERS: —

DEPTH OF WELL: >100FT

DEPTH TO WATER LEVEL: 25.98

PURGE START TIME: 0945

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE:

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0958	25'64"	6.91	8.23	140	0.378	13.8	15.46		200	
1001	25'50"	7.62	8.17	136	0.361	12.7	12.77			
1004	25'98"	7.90	8.15	132	0.357	14.16	11.67			
1007	26'46"	7.94	8.15	128	0.356	14.7	11.41			
1010	26.57	7.94	8.16	127	0.356	20.5	11.28			
1013	26.68	7.89	8.19	128	0.356	27.0	11.16			
1016	26.79	7.84	8.20	129	0.357	28.5	11.09			

SAMPLE ID: SMW-1-20260216

SAMPLE DATE: 02-16-26

SAMPLE TIME: 1020

Notes:

@ 0939 TOOK OUT TROLL (DOWNLOAD)

@ 0959 COLLECTED BACKGROUND SAMPLE @ SMW-1 → SET UP @ 1003

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-18B

DATE: 2-16-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC / EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: PARTLY CLOUDY.

DEPTH OF WELL: >100FT

DEPTH TO WATER LEVEL: 26.95

PURGE START TIME: 1120

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE:

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1125	26.80	5.91	8.14	99	0.370	16.5	13.38		200	
1128	26.65	7.20	8.92	86	0.361	7.9	8.74		↓	
1131	27.35	7.43	8.96	85	0.359	7.0	11.03			
1134	28.05	7.50	8.95	88	0.358	5.8	11.94			
1137	28.48	7.49	8.98	90	0.357	7.0	11.19			
1140	28.87	7.51	8.96	91	0.358	6.8	10.34			

SAMPLE ID: SMW-18B-20260216

SAMPLE DATE: 02-16-26

SAMPLE TIME: 1150

Notes:

C1004

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-3

DATE: 2-18-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ESV / ERC

SITE ADDRESS: White Pine, MI

OBSERVERS: /

SITE CONDITIONS: Snowy, 32°

DEPTH OF WELL: 54.70

DEPTH TO WATER LEVEL: 26.65

PURGE START TIME: 0957

SCREEN LENGTH: 15 FT

WELL DIAMETER: 3"

TUBING TYPE:

CASING TYPE: PVC

MONITORING EQUIPMENT: HARIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1010	27.10	6.90	8.62	120	0.245	11.6	1.97			
1013	27.56	8.44	8.61	66	0.239	7.7	1.50			
1016	27.64	8.54	8.65	1	0.242	8.4	1.30			
1019	27.72	8.52	8.63	-48	0.244	8.8	1.10			
1022		8.57	8.72	-77	0.247	9.7	1.05			
1025		8.55	8.75	-95	249	9.0	1.00			
1028										

SAMPLE ID: SMW-3_20260218

SAMPLE DATE: 2-18-26

SAMPLE TIME: 1030

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-35B

DATE: 2-18-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ESV / ERC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SNOWING, 32°

DEPTH OF WELL: >100

DEPTH TO WATER LEVEL: 22.42

PURGE START TIME: 10:45

SCREEN LENGTH:

WELL DIAMETER:

TUBING TYPE: 1/4 poly

CASING TYPE: PVC

MONITORING EQUIPMENT: HORIBA U52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:50	22.91	6.99	9.10	86	0.507	25.3	4.17	0.25	200	
10:53	23.86	7.11	9.13	74	0.511	24.7	2.59	0.50		
10:56	24.05	7.12	9.14	64	0.515	22.0	2.06	0.75		
10:59	24.34	7.20	9.14	55	0.515	19.9	1.76	1.00		
11:02	24.53	7.31	9.15	47	0.515	20.0	1.58	1.25		
11:05	24.75	7.35	9.15	39	0.517	19.4	1.31	1.50		
11:08	24.87	7.34	9.15	31	0.518	17.7	1.12	1.75		
11:11	25.03	7.37	9.15	25	0.518	20.1	1.01	2.00		
11:14	25.19	7.32	9.16	19	0.519	21.9	0.99	2.25	↓	

SAMPLE ID: SMW-35B_20260218 & FBLL

SAMPLE DATE: 2-18-2026

SAMPLE TIME: 11:15

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-01

DATE: 02.09.26 | PROJECT #: 401.2400718.000 | PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EJV / EC | SITE ADDRESS: White Pine, MI

OBSERVERS: | SITE CONDITIONS: MAIL, 28° OVERCAST

GAUGE READING START: | pH: 6.36 | ORP: 211 mV

GAUGE READING END: | CONDUCTIVITY: 0.095 mS/cm | DO: 12.07 mg/l

AVERAGE GAUGE HEIGHT: 3.4 | TEMPERATURE: 0.47 °C | TURBIDITY: 252 NTU

MONITORING EQUIPMENT: HORIBA U-52 | ICE THICKNESS: 2" PARTIALLY ICED

02-12-26

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	2.0	0				
2	2.5	1.1	-0.027			↑
3	3	1.2	-0.029			DEBRIS OF GRASS/LEAVES ETC.
4	3.5	1.2	-0.039			↓
5	4	1.0	-0.030			↓
6	4.5	1.0	0.014			
7	5	0.95	0.028			
8	5.5	0.85	0.014			
9	6	0.80	0.008			
10	6.5	0.65	-0.029			SNOW BLOCKAGE
11	7	0.50	-0.026			SNOW BLOCKAGE
12	7.5	0.35	-0.021			
13	8	0	0			
14	8.5	0				
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): | TOTAL WIDTH (ft): 8.5

SAMPLE ID: ARC-01-20260209

SAMPLE TIME: 10:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Returned to stream gauge on 2/12/2026 at 13:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-02

DATE: 2-23-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = 6 inches

PERSONNEL: JD + JC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 10°F, N. BREEZE, CLOUDY

GAUGE READING START: —

pH: 7.88

ORP: 128 mV

GAUGE READING END: —

CONDUCTIVITY: 0.100 mS/cm

DO: 11.99 mg/l

AVERAGE GAUGE HEIGHT: —

TEMPERATURE: 0.95 °C

TURBIDITY: 53.3 NTU

MONITORING EQUIPMENT: MSG HORIBA U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	0.0	0	0			BANK
2	0.5	2.3		0.124	0.040	
3	1.0	2.1		0.027	0.138	
4	1.5	2.0		-0.008	0.099	
5	2.0	1.8		-0.097	0.083	
6	2.5	1.75		-0.018	0.070	
7	3.0	1.7		0.003	-0.097	
8	3.5	1.4		-0.004		
9	4.0	1.4		0.118		
10	4.5	1.2		0.073		
11	5.0	1.1		-0.011		
12	5.5	1.15		-0.039		
13	6.0	1.05		-0.008		
14	6.5	0.95		-0.009		
15	7.0	0.8		-0.029		
16	7.5	0.5		-0.025		
17	8.0	0.4		-0.024		
18	8.5	0.4		-0.024		
19	9.0	0		0		BANK
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: ARC-02-20260223

SAMPLE TIME: 14:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-03

DATE: 2-16-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = 3-4 inches

PERSONNEL: JD & JC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUN, ~45°F, N. BREEZE

GAUGE READING START: 1.65 TOP OF ICE

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH 7.50

CONDUCTIVITY 0.111 ~~191~~ mS/cm

TEMPERATURE 0.80 °C

ORP 191 mV

DO 13.74 mg/l

TURBIDITY 0.5 NTU

MONITORING EQUIPMENT:

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	0.3	0	0			EDGE ICE TO BOTTOM
2	0.5	0.7	0.317			
3	1.0	0.7	0.357			
4	1.5	0.7	0.670			
5	2.0	0.75	0.781			
6	2.5	0.7	0.858			
7	3.0	0.7	0.996			
8	3.5	0.75	0.939			
9	4.0	0.75	1.100			
10	4.5	0.8	0.916			
11	5.0	0.8	0.761			
12	5.5	0.9	0.018			
13	6.0	1.0	-0.049			
14	6.5	1.0	0.007			
15	7.0	1.0	0.119			
16	7.5	1.0	0.024			
17	7'10"	0	0			EDGE ICE TO BOTTOM
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: ARC-03_20260216

SAMPLE TIME: DUP-01-SW_20260216 12:30

W:\Projects\2024\600-799\2400718\ADMIN\Forms\Stream Flow Measurement Field Form.xlsx

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNC-01

DATE: 2-11-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

ICE THICKNESS = 15 inches

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Partly cloudy, 25°F

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH 7.80

CONDUCTIVITY 0.138 mS/cm

TEMPERATURE 1.52 °C

ORP -19 mV

DO 1.83 mg/l

TURBIDITY 0.0 NTU

MONITORING EQUIPMENT: MSG - Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

SAMPLE ID: BNC-01_20260211

SAMPLE TIME: BNC-01_20260211-FB 16:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNW-01

DATE: 2-12-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = 28 inches

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 4°F, Sunny

GAUGE READING START: X

GAUGE READING END: X

AVERAGE GAUGE HEIGHT: X

pH: 7.39

CONDUCTIVITY: 0.312 mS/cm

TEMPERATURE: 1.64 °C

ORP: 90 mV

DO: 2.00 mg/l

TURBIDITY: 9.7 NTU

MONITORING EQUIPMENT: MSG - Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
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21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: BNW-01_20260212

SAMPLE TIME: BNW-01_20260212_FBLC 10:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-01

DATE: 2-17-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = 18 inches

PERSONNEL: ERC & EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 36°F, Cloudy

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT: NA

MONITORING EQUIPMENT: Horiba U-52

pH	7.50		ORP	187	mV
CONDUCTIVITY	0.107	mS/cm	DO	13.48	mg/l
TEMPERATURE	0.23	°C	TURBIDITY	1.4	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: CBR-01_20260217_FBLL

SAMPLE TIME: 1500

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: CBR-02

DATE: 2-16-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N 0 6

SITE NAME: White Pine Copper

ICE THICKNESS = 16 inches

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Sunny, 36°F

GAUGE READING START: X

GAUGE READING END:

AVERAGE GAUGE HEIGHT: 3.83

pH 7.80

CONDUCTIVITY 0.126 mS/cm

TEMPERATURE 1.44 °C

ORP 127 mV

DO 10.75 ~~11.4~~ mg/l

TURBIDITY 0.0 NTU

MONITORING EQUIPMENT: MSG - Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

SAMPLE ID: CBR-02_20260216

SAMPLE TIME: 11:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-01

DATE: 2-12-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = 2-3" inches

PERSONNEL: EJV/ERC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 28° SUNNY

GAUGE READING START:

pH 7.20

ORP 188 mV

GAUGE READING END:

CONDUCTIVITY 6.102 mS/cm

DO 13.50 mg/l

AVERAGE GAUGE HEIGHT: NA

TEMPERATURE 0.33 °c

TURBIDITY 11.8 NTU

MONITORING EQUIPMENT: Horiba U-52

1430
02-12-26

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	2.25	0				
2	2.5	0.55	0.134			
3	3	0.60	0.182			
4	3.5	0.65	0.304			
5	4	0.55	0.400			
6	4.5	0.50	0.304			
7	5	0.50	0.142			
8	5.5	0.50	0.023			
9	6	0.50	-0.090			ICE OBSTRUCTION
10	6.5	0.50	-0.012			ICE OBSTRUCTION
11	7	0.50	-0.046			↑
12	7.5	0.40	-0.042			↑
13	8	0.55	-0.054			↑
14	8.5	0.50	-0.034			↑
15	9	0.60	+0.032			↑
16	9.5	0.50	+0.038			↑
17	9.75	0				↑
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

SAMPLE ID: DKC-01-20260219

SAMPLE TIME: 0830

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Completed stream gauging on 2/12/2026 at 14:30. Returned for sampling on

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-02

DATE: 2-17-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = 2-5 inches

PERSONNEL: ERC / EJV

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 35° SUNNY

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

pH: 7.31

CONDUCTIVITY: 0.092 mS/cm

TEMPERATURE: 0.2 °C

ORP: 145 mV

DO: 13.56 mg/l

TURBIDITY: 10.0 NTU

MONITORING EQUIPMENT: HARIBA U52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1.5	0				
2	2	0.2	0.018			
3	3.5	0.3	1.037			
4	5	0	0			LOG/ISLAND
5	6.5	0.1	0			ROCK
6	8	0.2	0.925			
7	9.5	0.6	0.046			
8	11	0.75	1.359			
9	12.5	0.7	0.507			
10	14	0.4	3.306			
11	15.5	0.35	0.618			
12	17	0.78	1.628			
13	18.5	0.1	0			ROCKS
14	20	0.1	0			ROCKS
15	21.5	0				
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): [ ]

TOTAL WIDTH (ft): 20

SAMPLE ID: DKC-02-20260217

SAMPLE TIME: 1330

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-03_20260209 ~~FD~~

DATE: 2.9.26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = ~24 inches

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 34°F

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: MSG - Horiba U-52

pH	5.77		ORP	223 mV
CONDUCTIVITY	0.109 mS/cm		DO	12.46 mg/l
TEMPERATURE	1.30 °C		TURBIDITY	14.7 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
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20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: DKC-03_20260209 & DKC-03_20260209_FB

SAMPLE TIME: 15:00

MS/MSD collected

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-01

DATE: 2-23-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = ~36 inches

PERSONNEL: JO, JC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: ~8°F, N BREEZE, CLOUDY

GAUGE READING START: —

pH: 7.57

ORP: 159 mV

GAUGE READING END:

CONDUCTIVITY: 0.333 mS/cm

DO: 13.95 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 0.35 °C

TURBIDITY: 38.1 NTU

MONITORING EQUIPMENT: MSG - Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: LKS-01_20260223

SAMPLE TIME: 17:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-02

DATE: 2-24-26
PERSONNEL: SD, JC
OBSERVERS:

PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: Snowy, 13°F

PHOTO TAKEN? (Y) N
ICE THICKNESS = ~36 inches

GAUGE READING START: X
GAUGE READING END:
AVERAGE GAUGE HEIGHT:
MONITORING EQUIPMENT: MS6 - Horiba U-52

pH: 7.20
CONDUCTIVITY: 0.111 mS/cm
TEMPERATURE: 1.57 °C

ORP: 202 mV
DO: 14.15 mg/l
TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):
TOTAL WIDTH (ft):

SAMPLE ID: LKS-02_20260224
SAMPLE TIME: 10:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLC-01

DATE: 2-19-20

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = 0-.5 inches

PERSONNEL: ALC / ESV

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: snowy, 31°

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: NA

MONITORING EQUIPMENT: MARIBA U52

pH	7.15	ORP	216	mV
CONDUCTIVITY	0.207 mS/cm	DO	10.85	mg/l
TEMPERATURE	0.46 °C	TURBIDITY	38.6	NTU

7.83

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	2FT	0				
2	2.25	0.15	-0.009			
3	2.375	0.45	-0.020			
4	3.25	0.5	0.005			
5	3.75	0.65	0.093			
6	4.25	0.7	0.130			
7	4.75	0.7	0.024			
8	5.25	0.7	0.003			
9	5.75	0.7	0.007			
10	6.25	0.6	-0.016			
11	6.75	0.6	-0.010			
12	7.25	0.45	-0.012			
13	7.85	0.3	0.010			
14	7.83	0				
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): [ ]

TOTAL WIDTH (ft): 5.83

SAMPLE ID: MLC-01_20200219 & FBLL

SAMPLE TIME: 1045

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-01

DATE: 2-10-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

ICE THICKNESS = 3 inches

PERSONNEL: JD

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Cloudy, 29°F

GAUGE READING START: X

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH 6.08

ORP 236 mV

CONDUCTIVITY 0.097 mS/cm

DO 12.57 mg/l

TEMPERATURE 0.68 °C

TURBIDITY 7.2 NTU

MONITORING EQUIPMENT: MS6 - Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): -

TOTAL WIDTH (ft): -

SAMPLE ID: MLR-01_20260210 & MLR-01_20260210_FBLL

SAMPLE TIME: 9:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-02

DATE: 2-24-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = 2-18 inches

PERSONNEL: ERC / EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 20°F, cloudy

GAUGE READING START:

pH: 7.74

ORP: 154 mV

GAUGE READING END:

CONDUCTIVITY: 0.153 mS/cm

DO: 13.29 mg/l

AVERAGE GAUGE HEIGHT: 1.58 w/ice

TEMPERATURE: 0.19 °C

TURBIDITY: 15.4 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0	0			
1 (at water edge)	2.25	0	0			
2	3	0.45	0.074			
3	6	1.0	-0.116			Rock/ice
4	9	1.35	0.518			
5	12	1.65	-	0.197	0.066	
6	15	1.55	-	0.424	0.167	
7	18	1.75	-	0.889	0.630	
8	21	1.90	-	1.105	0.906	
9	24	1.6	-	0.041	-0.073	Rock/ice
10	27	0.95	-0.149			Rock/ice
11	30	1.4	-0.026			Rock/ice
12	33	1.15	0.008			
13	36	0.8	0.049			
14	39	0.6	0.026			
15	39.75	0	0			
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: MLR-02-20260224

SAMPLE TIME: 1000

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-03

DATE: 2-17-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = _____ inches

PERSONNEL: ESV / ERC

SITE ADDRESS: White Pine, MI

OBSERVERS: _____

SITE CONDITIONS: CLEAR, 21°

GAUGE READING START: _____

pH 7.37

ORP 183 mV

GAUGE READING END: _____

CONDUCTIVITY 0.176 mS/cm

DO 14.58 mg/l

AVERAGE GAUGE HEIGHT: _____

TEMPERATURE 0.31 °C

TURBIDITY 17.7 NTU

MONITORING EQUIPMENT: HARIBA U52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10			NO GAUGE READINGS			
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs) _____

TOTAL WIDTH (ft) _____

SAMPLE ID: MLR-03_20260217

SAMPLE TIME: 0930

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NTC-01

DATE: 2-17-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = 0-1 inches

PERSONNEL: ERC / EDV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: sunny

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH 7.44

CONDUCTIVITY 0.219 mS/cm

TEMPERATURE 0.33 °C

ORP 167 mV

DO 10.72 mg/l

TURBIDITY 19.4 NTU

MONITORING EQUIPMENT: HARIBA U52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	1.5	0				
2	1.75	0.2	0.003			
3	2.25	0.2	0.034			
4	2.75	0.4	0.060			
5	3.25	0.35	0.181			
6	3.75	0.3	0.281			
7	4.25	0.3	0.131			
8	4.75	0.4	0.016			
9	5.25	0.3	0.030			
10	5.75	0.3	0.004			
11	6.25	0.1	0.002			
12	6.75	0.1	0			
13	7	0	0			
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft) 5.5 ft

SAMPLE ID: NTC-01_20260217

SAMPLE TIME: 1130

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-01

DATE: 2-10-26

PERSONNEL: JD

OBSERVERS:

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Cloudy, 28°F

PHOTO TAKEN? (Y) N

ICE THICKNESS = 0 inches

GAUGE READING START: 1.12

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: MSG- Horiba U-52

pH 6.56

CONDUCTIVITY 0.056 mS/cm

TEMPERATURE 0.94 °C

ORP 182 mV

DO 11.40 mg/l

TURBIDITY 3.1 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)			-0.061			WATER EDGE
1 (at water edge)	0.5	1.0	-0.054			
2	1.0	1.0	-0.040			
3	1.5	1.6		-0.036	~~0.051~~ ~~0.034~~	
4	2.0	1.75		-0.029	~~0.163~~ ~~0.020~~	
5	2.5	1.65		-0.041	0.094	
6	3.0	1.4	0.009	~~0.009~~		
7	3.5	1.5	0.020			
8	4.0	1.45	-0.050	0.072	-0.020	
9	4.5	1.4	-0.047			
10	5.0	1.2	-0.018			
11	5.5	1.0	-0.044			
12	6.0	0.8	-0.040			
13	6.5	0.6	-0.040			~~WAT~~
14	7.0	0				WATER EDGE
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

SAMPLE ID: PNC-01_20260210 +

SAMPLE TIME: PNC-01_20260210_FBLL 12:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-02

DATE: 02-09-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC / EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: OVERCAST, 36°

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT: NA

MONITORING EQUIPMENT: HARIBA - U52

pH	7.37		ORP	158	mV
CONDUCTIVITY	0.209	mS/cm	DO	9.64	mg/l
TEMPERATURE	0.70	°C	TURBIDITY	16.1	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging Water is too deep

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

SAMPLE ID: PNC-02_20260209 & FBLL

SAMPLE TIME: 17:10

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Ice thickness: 2", more slush layer than ice

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-03

DATE: 2-12-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERC / ESV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 4°, sunny

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT: 2.9

pH: 7.53

CONDUCTIVITY: 0.217 mS/cm

TEMPERATURE: 0026 °C

ORP: 159 mV

DO: 13.68 mg/l

TURBIDITY: 19.4 NTU

MONITORING EQUIPMENT: HARIBA U52 1-5" ICE

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0	0			
1 (at water edge)	1.5	0	0			
2	2	0.9	0.001			
3	3.5	0.85	0.050			
4	5	0.9	0.135			
5	6.5	1.15	-0.042			Ice blockage
6	8	1.4	-0.036			Ice blockage
7	9.5	1.4	-0.025			Ice blockage
8	11	1.3	-0.026			Ice blockage
9	12.5	1.1	0.256			
10	14	1.3	0.383			
11	15.5	1.0	0.183			
12	17	0.7	0.306			
13	18.5	0.5	0.287			
14	20	0.7	0.154			
15	21	0	0			
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft): 19.5 FT

SAMPLE ID: PNC-03_20260212 & FBLL

SAMPLE TIME: 0945

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

*Stream gauge did not work at the time of sample. Returned at 15:30 on 2/12/2026 to complete stream flow.

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-04

DATE: 2-16-26

PERSONNEL: JD & JC

OBSERVERS:

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 32°F

PHOTO TAKEN? (Y) N

ICE THICKNESS = 2-3 inches

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT: 2.60

MONITORING EQUIPMENT: MSG- Horiba U-52

pH: 7.65

CONDUCTIVITY: 0.227 mS/cm

TEMPERATURE: 0.48 °C

ORP: 138 mV

DO: 14.16 mg/l

TURBIDITY: 0.0 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0.0	0	0			
1 (at water edge)	0.0	0	0			
2	0.5	0.5	0.020			
3	1.0	0.5	0.084			
4	1.5	0.6	0.012			
5	2.0	0.55	-0.017			
6	2.5	0.6	0.319			
7	3.0	0.65	0.693			
8	3.5	0.8	0.521			
9	4.0	0.75	0.124			
10	4.5	0.8	0.052			
11	5.0	0.75	0.153			
12	5.5	0.85	0.936			
13	6.0	0.8	0.388			
14	6.5	0.85	0.267			
15	7.0	0.9	0.756			
16	7.5	0.85	1.011			
17	8.0	0.85	1.001			
18	8.5	0.8	0.585			
19	9.0	0.75	0.532			
20	9.5	0.75	0.352			
21	10.0	0.6	-0.342			
22	10.5	0.5	0.471			
23	11.0	0.65	-0.171			
24	11.5	0.6	0.107			WATER'S EDGE
25	12.0	0.6	-0.016			
	12.3	0	0			

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: PNC-04_20260216

SAMPLE TIME: 10:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Staff Gauge 2.60

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-01

DATE: 2-10-26
PROJECT #: 401.2400718.000
PHOTO TAKEN? (Y) N
SITE NAME: White Pine Copper
ICE THICKNESS = 0 inches
PERSONNEL: JD
SITE ADDRESS: White Pine, MI
OBSERVERS: JC
SITE CONDITIONS: Cloudy, 28°F

GAUGE READING START: 0.3
pH 7.50
ORP 111 mV
GAUGE READING END:
CONDUCTIVITY 1.20 mS/cm
DO 12.34 mg/l
AVERAGE GAUGE HEIGHT:
TEMPERATURE 1.05 °C
TURBIDITY 0.0 NTU
MONITORING EQUIPMENT: MSG - Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	1.2	0	0			WATER EDGE
2	1.5	0.4	0.895			
3	2.0	0.55	1.019			
4	2.5	0.6	1.404			
5	3.0	0.75	0.845			
6	3.5	~~0.8~~ 0.7	0.218			
7	4.0	0.75	0.065			
8	4.5	0.75	0.155			
9	5.0	0.7	1.222			
10	5.5	0.6	0.733			
11	6.0	0.5	0.235			
12	6.5	0.45	1.004			
13	7.0	0.3	0.912			
14	7.5	0.3	0.835			
15	8.0	0.2	0.781			
16	8.5	0.2	1.000			
17	9.0	0.3	0.806			
18	9.5	0.2	0.951			
19	10.0	0.1	CANNOT READ			
20	10.7	0	0			WATER EDGE
21						
22						
23						
24						
25						

STREAM FLOW (cfs)

TOTAL WIDTH (ft)

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: PRC-01_20260210

SAMPLE TIME: PRC-01_20260210-FB 15:00

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-02

DATE: 2-17-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

ICE THICKNESS = 3-5 inches

PERSONNEL: ERC / ESV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: SUNNY / CLEAR, 24°

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT:

pH: 7.50

CONDUCTIVITY: 0.001 mS/cm

TEMPERATURE: 0.23 °c

ORP: 196 mV

DO: 15.98 mg/l

TURBIDITY: 21.41 NTU

MONITORING EQUIPMENT: HORIBA U52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9			NO	GAUGE	TAKEN	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: PRC-02-20260217

SAMPLE TIME: 1020

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PTC-01

DATE: 2-16-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = NONE inches

PERSONNEL: JD + JC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUN, ~45°F, N. BREEZE

GAUGE READING START: NA

pH: 7.80

ORP: 190 mV

GAUGE READING END:

CONDUCTIVITY: 0.224 mS/cm

DO: 12.75 mg/l

AVERAGE GAUGE HEIGHT:

TEMPERATURE: 3.57 °C

TURBIDITY: 0.0 NTU

MONITORING EQUIPMENT: MSG HORIBA U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	7"	0	0			WATER EDGE
2	1.0	0.25		-0.025		
3	1.5	0.3		0.000		
4	2.0	0.3		-0.020		
5	2.5	0.2		0.136		
6	3.0	0.4		0.033		
7	3.5	0.3		0.009		
8	4.0	0.3		-0.006		
9	4.5	0.3		0.057		
10	5.0	0.3		-0.007		
11	5.5	0.2		0.109		
12	6.0	0.35		0.086		
13	6.5	0.35		0.273		
14	7.0	0.35		0.030		
15	7.5	0.2		0.062		
16	8.0	0.2		0.008		
17	8.5	0.2		0.036		
18	9.0	0.25		0.007		
19	9.5	0.15		-0.004		
20	10.0	0.1		0.002		
21	10'2"	0		0		WATER EDGE
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: PTC-01_20260216

SAMPLE TIME: 14:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 2-9-2026

PERSONNEL: ERL & EJV

OBSERVERS:

SAMPLE LOCATION: SBD-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 36°F, Overcast

PHOTO TAKEN? (Y) N

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT: NA

MONITORING EQUIPMENT: Horiba U-52

pH: 6.78

CONDUCTIVITY: 0.248 mS/cm

TEMPERATURE: 0.416 °C

ORP: -22 mV

DO: 2.94 mg/l

TURBIDITY: 51.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: SBD-01_20260209 & FBLL

SAMPLE TIME: 15:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Ice thickness: 2"

Strong Sulphur smell

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SBW-01

DATE: 2-9-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 34°F, overcast

GAUGE READING START:

GAUGE READING END:

AVERAGE GAUGE HEIGHT: NA

MONITORING EQUIPMENT: Horiba U-52

pH	6.65		ORP	111	mV	
CONDUCTIVITY	0.423	mS/cm	DO	3.29	mg/l	
TEMPERATURE	1.29	°C	TURBIDITY	15.9	NTU	

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO GAUGING

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: SBW-01_20260209 & FBLC

SAMPLE TIME: 1345

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

Ice thickness: 2"

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: TBN-01

DATE: 2-10-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: EJV / ERC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: WINDY, OVERCAST

GAUGE READING START:

pH: 7.56

ORP: 101 mV

GAUGE READING END:

CONDUCTIVITY: .377 mS/cm

DO: 3.81 mg/l

AVERAGE GAUGE HEIGHT: NA

TEMPERATURE: .14° °C

TURBIDITY: 999 NTU

MONITORING EQUIPMENT: MARIBA U52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9				NO GAUGING		
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: TBN-01_20260210 & FBLL

SAMPLE TIME: 1730

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: TBS-01

DATE: 2-10-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: ERC/ESV

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: WINDY, 32° OVERCAST

GAUGE READING START: —

pH: 7.19

ORP: -10 mV

GAUGE READING END: —

CONDUCTIVITY: 1.18 mS/cm

DO: 2.45 mg/l

AVERAGE GAUGE HEIGHT: NA

TEMPERATURE: .54 °C

TURBIDITY: 8.7 NTU

MONITORING EQUIPMENT: HARIBA U52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7			—			
8			NO	GAUGING		
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): [ ]

TOTAL WIDTH (ft): [ ]

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: TBS-01_20260210 & FBLL

SAMPLE TIME: 1615

APPENDIX B
PHOTOGRAPH LOG



Photo 1: ARC-01 facing southeast (02-09-2026)



Photo 2: ARC-02 facing west (02-23-2026). Beaver dam in the background.



Photo 3: ARC-03 facing south (02-16-2026)



Photo 4: BNC-01 facing northeast (02-11-2026)



Photo 5: BNW-01 facing north (02-12-2026)



Photo 6: CBR-01 facing northeast (02-17-2026).



Photo 7: CBR-02 facing east (02-16-2026)



Photo 8: DKC-01 facing east (02-12-2026)



Photo 9: DKC-02 facing southwest (02-17-2026)



Photo 10: DKC-03 facing northwest (02-09-2026)



Photo 11: LKS-01 facing west (02-23-2026)



Photo 12: LKS-02 facing west (02-24-2026)



Photo 13: MLC-01 facing northwest (02-19-2026)



Photo 14: MLR-01 facing south (02-10-2026)



Photo 15: MLR-02 facing south (02-24-2026)



Photo 16: MLR-03 facing southwest (02-17-2026)



Photo 17: NTC-01 facing south (02-17-2026)



Photo 18: PNC-01 facing northwest (02-10-2026)



Photo 19: PNC-02 facing south (02-09-2026)



Photo 20: PNC-03 facing east (02-12-2026)



Photo 21: PNC-04 facing south (02-16-2026)



Photo 22: PRC-01 facing east (02-10-2026)



Photo 23: PRC-02 facing northwest (02-17-2026)



Photo 24: PTC-01 facing northwest (02-16-2026)



Photo 25: SBD-01 facing south (02-09-2026)



Photo 26: SBW-01 facing south (02-09-2026)



Photo 27: TBN-01 facing south (02-10-2026)



Photo 28: TBS-01 facing southwest (02-10-2026)

Groundwater and Surface Water Sampling Field Results

Mannik & Smith Group, Inc.

April & May 2026

May 22, 2026

Ms. Amanda Zeidler
White Pine Copper LLC.
105 Maple Street
White Pine, MI 49971

RE: Groundwater and Surface Water Baseline Sampling Field Results for April/May 2026

Dear Ms. Zeidler,

The Mannik & Smith Group, Inc. (MSG) has prepared this Groundwater and Surface Water Sampling Letter Report to summarize activities conducted in April and May 2026 for the White Pine North Baseline Monitoring Project (Baseline Monitoring Project) in accordance with the MSG's January 5, 2026 proposal for *White Pine North 2026 Baseline Monitoring*. The work was conducted at the White Pine North Project Location in Carp Lake Township, Ontonagon County, Michigan (Site). **Figure 1**, *Groundwater Monitoring Locations* and **Figure 2**, *Surface Water Monitoring Locations*, both provided by White Pine Copper LLC (WPC), depict the groundwater and surface water sampling locations, respectively.

BACKGROUND

The Baseline Monitoring Project is located at the White Pine North Site within the historical Copper Range district of the Upper Peninsula of Michigan. An underground mine is proposed targeting a mineralized area previously undeveloped by the former White Pine Mine. The project will expand the northern part of the tailings basin and will locate and develop a new mine portal and associated processing infrastructure. Collecting a robust and representative baseline regarding water chemistry is critical to meeting permitting requirements, specifically two years of baseline analytical data, for forecasting potential impacts and for characterizing and contextualizing any future changes on site (e.g., operational monitoring). Quarterly sampling of water quality, water levels, and flows at the monitoring wells and surface water locations will satisfy two primary objectives:

- Measure natural variations in water chemistry over time; and,
- Provide an additional line of evidence using groundwater geochemistry to infer flow paths and, by extension, areas of groundwater recharge and discharge.

GROUNDWATER SAMPLING

Between April 20th and May 4th, 2026, MSG conducted groundwater gauging and sampling at the Site. Groundwater samples were collected from existing monitoring wells (**Figure 1**) using low-flow sampling procedures with a peristaltic, bladder, or down-hole centrifugal pump depending on the depth to groundwater and location. Geochemical field parameters were monitored with a Horiba U-52 water quality meter and sample collection information was recorded on field sheets. In certain cases, samples were collected prior to reaching stability of geochemical parameters due to the level of groundwater drawdown in the monitoring wells, limited water column available for sampling, and prior experience at certain locations. Unfiltered samples were collected by directly filling the laboratory-supplied containers. Filtered samples were collected using a 0.45 micrometer (um) in-line filter. Collected samples were placed on ice and shipped to the laboratory under chain of custody control. A summary of groundwater field parameters is provided in ***Table 1****, Groundwater Field Parameter Summary*. Copies of the field sheets are provided in ***Appendix A****, Field Sheets*.

Low level mercury and methyl mercury samples were collected using "clean hands, dirty hands" procedures with a field blank for low level mercury included in each sample set. Filtering for dissolved low level mercury and dissolved methyl mercury samples was conducted at a controlled location within WPC's White Pine office using FlipMate™ 50 Filtration System 0.45 um filters. A field blank for low level mercury (FB-02_20260428_FBLL) was also collected at the filtering

location. The filters were manufacturer certified for background metals to be less than 0.0005 micrograms per liter (ug/L) mercury.

Trace Analytical Laboratories, Inc. (Trace) previously provided acid washing and low level mercury confirmation analysis for the Teflon, Teflon lined, and Masterflex tubing that was re-used between sampling events for sample collection. The tubing used during sample collection was retained for reuse during subsequent sampling events and was stored within WPC's White Pine office between sampling events. Existing poly tubing encountered in many of the monitoring wells was temporarily removed, staged in plastic bags, and then re-installed in the monitoring wells following sample collection.

Pressure transducers encountered at four locations were temporarily removed from the monitoring wells to facilitate groundwater sampling, the data was downloaded, then were re-installed after sampling was completed. Upon arrival at MW-5SB and MW-43SB, the packer assembly was removed from the monitoring wells and MSG's crew allowed approximately 10 minutes for the wells to stabilize before gauging and purging. The pressure transducers removed from MW-5SB and MW-43SB in the fall of 2025 were re-installed in the wells after completion of sampling. The packer assemblies were returned to WPC's White Pine office for storage. Additionally, MSG downloaded the Vibrating Wire Piezometer (VWP) data from WP598, WP584, and WP585. All downloaded data was provided via email to Foth Infrastructure & Environment, LLC.

Calibration problems were encountered with the pH probe in one of the water quality meters used during the first week of monitoring well sampling, resulting in anomalously low pH values. Materials were obtained and the pH probe was repaired at the end of the week. To rectify the incorrect pH values, the affected sampling locations were re-purged and new pH values were recorded on field sheets. The revised pH values were used in **Table 1**.

MSG collected a total of 28 groundwater samples, plus one complete field blank, duplicate from MW-2A (DUP-01-GW_20260421), a matrix spike/matrix spike duplicate (MS/MSD) from MW-5A, and an equipment blank from the bladder pump. During this sampling event, MW-41 did not produce sufficient groundwater to collect a full sample set despite three attempts, and MW-2SB was gauged but not sampled.

SURFACE WATER GAUGING AND SAMPLING

Between April 20th and May 4th, 2026, MSG conducted stream gauging and surface water sampling at the Site. Stream flow gauging and surface water sample collection were completed at predetermined locations (**Figure 2**) provided by WPC. The stream gauging activities were completed following Foth Infrastructure & Environment, LLC Standard Operating Procedure (SOP) 2101 *Stream Flow Site Selection Criteria & Measurement with Velocity-Area Method*. MSG used the "Mid-Section Method" of flow calculation as described therein.

An OTT MF Pro Flow Meter with velocity sensor and USGS top-setting wading rod were used to collect the depth and flow measurements at most of the stream locations. Due to water velocity and/or water depths, PNC-02, PRC-01, and PRC-02 were sampled but deemed unsafe for wading to collect depth and velocity readings. The staff gauges at NTC-01 and PRC-02 were located and GPS coordinates were collected. Copies of the stream gauging field sheets are included in **Appendix A**. Calculated stream flows are summarized in ***Table 2****, Surface Water Field Parameter Summary*.

Surface water geochemical parameters were recorded by placing the Horiba U-52 water quality meter sonde directly into the water body prior to commencing sample collection. Water quality parameters are summarized in **Table 2**. Unfiltered surface water samples were then collected by directly dipping unpreserved sample containers into the water body to fill the remaining containers. Filtered samples were collected using a peristaltic pump to draw directly from the surface water body, or from a spare unpreserved bottle filled from the surface water body, and discharging through a 0.45 um in-line filter into the sampling containers.

Low level mercury and methyl mercury samples were collected using “clean hands, dirty hands” procedures with a field blank for low level mercury included in each sample set. Filtered low level and methyl mercury samples were processed at WPC’s White Pine office using FlipMate™ 50 Filtration System 0.45 um filters as described above.

MSG collected a total of 28 surface water samples. A duplicate sample from PTC-01 (DUP-01-SW_20260427), a MS/MSD from DKC-03, and a field blank were also collected. Following sample collection, samples were placed on ice and shipped to the laboratory under chain of custody control. Photographs of the stream gauging and sampling locations are provided in ***Appendix B****, Photograph Log.*

DISCUSSION AND RECOMMENDATIONS

As discussed in prior field results letters, MSG recommends that the stream sections associated with ARC-02, PNC-02, and PNC-03 be evaluated for beaver control and dam removal if possible. MSG has observed a continuous increase in beaver activity which has caused a noticeable change in stream conditions since the initial sampling event.

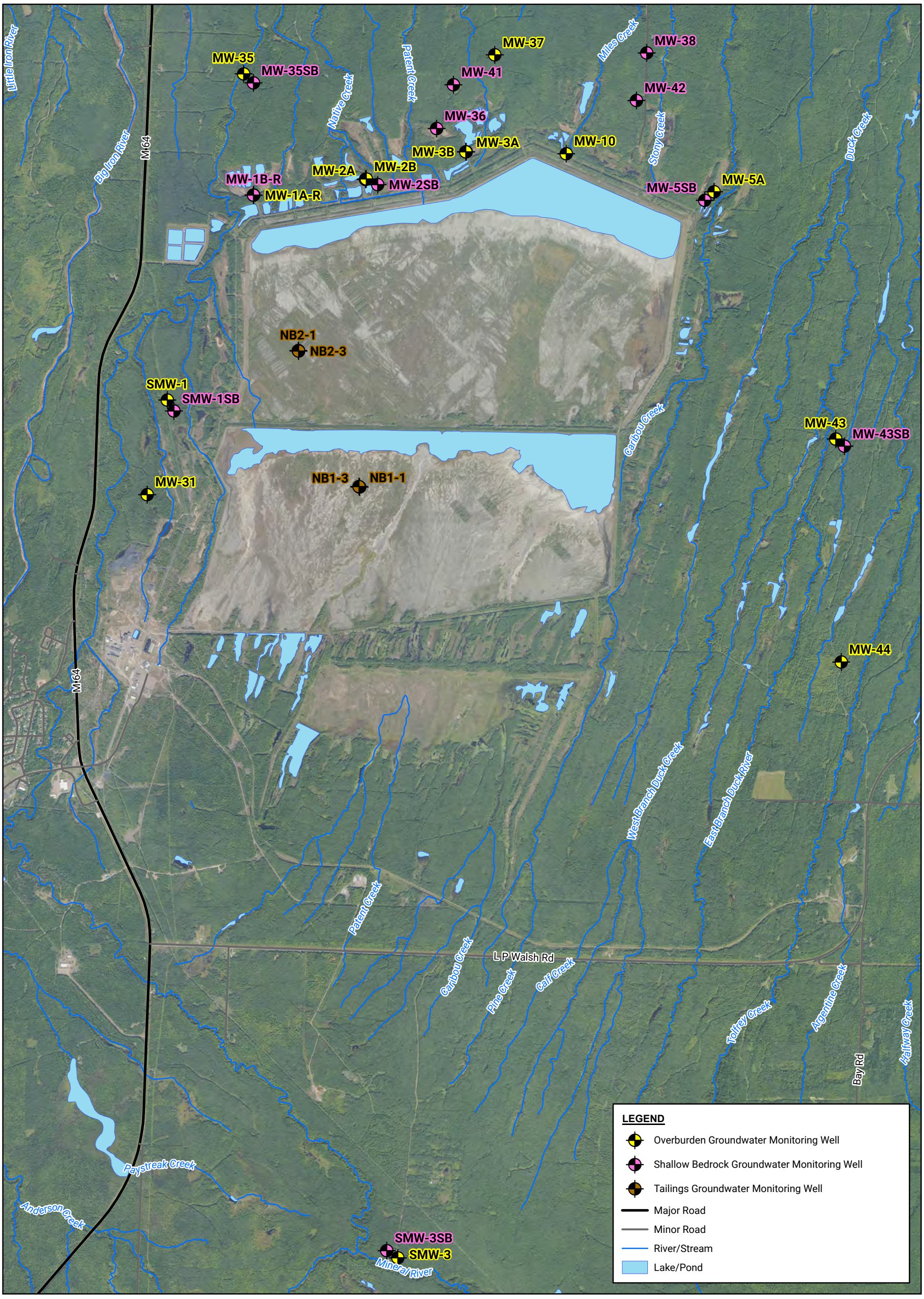
MSG crews observed bent or missing staff gauges at locations CBR-02, MLR-01, MLR-02, MLR-03, and PNC-03. MSG recommends reinstallation prior to future sampling activities if stream gauging continues. A pile of logs had been present up against the staff gauge for ARC-03. After completion of sampling, MSG cleared the log jam from this location.

MSG appreciates the opportunity to provide these groundwater and surface water sampling services, and looks forward to continuing our support of WPC.

Sincerely,

Jed Chrestensen, P.E.
Project Manager

FIGURES



NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 1,500 3,000 Feet

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

WHITE PINE COPPER LLC

FIGURE 1

GROUNDWATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:		
Drawn By: BJW1	Checked By: JMW3	Project: 24W005	

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Lake Superior
LKS-01
LKS-02
PTC-01
NTC-01
MLC-01
PNC-04
DKC-03
CBR-02
M 64
MLR-03
PRC-02
Native Creek
Patent Creek
Miles Creek
Stony Creek
Duck Creek
ARC-03
BNC-01
Little Iron River
Mineral River
Perch Creek
Ash Creek
PNC-03
DKC-02
PRC-01
BNW-01
TBN-01
Townline Rd
L P Walsh Rd
Floodwood River
MLR-02
Big Iron River
TBS-01
Caribou Creek
ARC-02
PNC-02
Little Cranberry River
SBD-01
SBW-01
West Branch Duck Creek
East Branch Duck River
Argentine Creek
Halfway Creek
Town Line Creek
Cranberry River
Potato Farm Rd
PNC-01
DKC-01
ARC-01
CBR-01
MLR-01
Patent Creek
Caribou Creek
Pine Creek
Calf Creek
Tolfrey Creek
Paystreak Creek
Federal Forest Road 630
Cranberry River
Old M 64
Anderson Creek
Mineral River
Sandy'll Creek
Bush Creek
Sleepy Creek

LEGEND

- Water Quality Sampling Location
- Water Quality and Flow Monitoring Station
- Water Quality and Continuous Flow Monitoring Station
- Major Road
- Minor Road
- River/Stream
- Lake/Pond

NOTES:

1. Base air photo from the USDA.
2. Horizontal coordinate system is NAD1983 UTM Zone, 16N, units in meters.
3. Hydrographic data from the USGS.
4. Road and boundary data from Michigan GIS Open Data and the USFS.

Foth

N

0 2,500 5,000 Feet

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WHITE PINE COPPER LLC

FIGURE 2

SURFACE WATER MONITORING LOCATIONS
WHITE PINE NORTH
ONTONAGON COUNTY, MICHIGAN

Date: MAY 2024	Revision Date:	
Drawn By: BJW1	Checked By: JMW3	Project: 23W200

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TABLES

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-1AR	7/31/2024	9.51	16.98	8.05	136	0.659	1.7	0.42	100
	9/30/2024	10.92	12.99	7.24	157	0.729	6.3	0.00	200
	12/5/2024	11.73	8.07	8.26	175	0.706	8.6	12.19	200
	2/24/2025	10.97	7.61	7.91	136	0.777	29.1	4.87	200
	5/6/2025	9.97	10.06	7.76	176	0.685	31.1	3.27	200
	8/6/2025	9.59	18.03	7.94	105	0.498	0.3	0.80	200
	10/20/2025	11.14	11.93	8.00	110	0.659	0.0	5.11	200
	2/17/2026	11.36	7.48	8.16	188	0.666	2.6	9.36	200
	4/20/2026	10.42	9.78	7.81	197	0.625	9.1	1.99	200
MW-1BR	7/31/2024	9.56	20.90	7.85	-124	0.707	23.7	0.00	100
	9/30/2024	10.78	12.94	7.71	-57	0.859	3.9	0.00	200
	12/5/2024	11.94	6.20	8.06	32	0.796	0.0	11.78	200
	2/24/2025	11.11	8.01	7.77	94	0.888	1.5	0.92	200
	5/6/2025	10.56	11.31	7.89	149	0.704	20.9	8.95	200
	8/6/2025	9.66	15.39	7.86	28	0.591	0.0	0.23	200
	10/20/2025	11.16	11.04	7.83	56	0.767	0.0	0.40	200
	2/18/2026	11.42	7.83	7.95	182	0.786	2.1	0.66	200
	4/20/2026	10.70	9.77	7.74	204	0.749	0.0	9.23	200
MW-2A	8/1/2024	10.59	14.18	7.30	-189	1.230	72.8	0.24	200
	10/1/2024	10.75	13.15	7.42	-162	1.350	0.0	0.00	200
	12/10/2024	6.24	6.88	7.76	-68	1.36	9.5	0.00	200
	2/25/2025	5.81	6.56	7.27	66	1.44	5.7	0.83	200
	5/5/2025	5.62	16.72	6.76	-78	1.14	1.0	0.81	100
	8/5/2025	9.31	17.97	7.19	-142	0.927	8.0	0.29	200
	10/20/2025	9.64	14.62	7.10	-174	1.11	0.0	0.34	200
	2/19/2026	5.88	7.76	7.51	23	1.14	0.0	1.27	200
	4/21/2026	5.42	9.19	6.96	56	1.15	0.0	2.75	200
MW-2B	8/1/2024	11.21	15.70	7.15	-3	0.937	6.8	0.33	200
	10/1/2024	10.73	15.34	7.24	22	1.170	16.2	4.39	200
	12/10/2024	6.40	8.59	7.86	118	1.09	9.3	0.66	200
	2/25/2025	6.32	6.27	7.25	131	1.09	11.8	1.87	200
	5/5/2025	6.08	15.99	6.90	103	0.82	4.0	0.50	200
	8/5/2025	9.39	18.39	7.18	-74	0.703	49.0	0.27	200
	10/29/2025	7.26	12.85	7.20	-88	1.04	0.0	0.39	200
	2/18/2026	5.54	3.87	7.45	120	1.00	16.8	1.66	200
	4/21/2026	6.15	14.92	7.07	-36	0.757	0.0	0.31	200
MW-2SB	12/17/2024	85.72	--	--	--	--	--	--	--
	2/25/2025	84.18	--	--	--	--	--	--	--
	5/5/2025	83.89	--	--	--	--	--	--	--
	8/5/2025	83.55	--	--	--	--	--	--	--
	10/20/2025	83.34	--	--	--	--	--	--	--
	2/23/2026	83.06	--	--	--	--	--	--	--
	4/21/2026	83.45	--	--	--	--	--	--	--
MW-3A	7/30/2024	10.94	21.99	7.13	-46	1.580	103	0.20	200
	10/1/2024	12.69	15.82	7.14	-87	2.080	19.2	0.00	200
	12/10/2024	8.54	8.01	7.65	-42	2.49	1.8	0.00	200
	2/26/2025	5.58	6.68	7.14	-58	2.51	3.1	1.16	200
	4/28/2025	5.12	10.21	7.05	4	2.36	14.8	0.67	200
	8/4/2025	9.62	15.38	7.09	-97	1.88	0.8	0.58	200
	10/29/2025	10.09	10.36	7.08	-107	2.55	0	0.31	200
	2/23/2026	6.22	6.47	7.25	14	2.21	103	1.27	200
	4/22/2026	5.15	10.95	6.83	-50	2.24	12.9	0.5	200
MW-3B	7/30/2024	10.74	13.46	7.19	-216	0.903	0.0	0.19	200
	10/1/2024	12.18	15.83	7.20	-60	1.58	0.0	0.55	200
	12/10/2024	7.99	5.43	8.00	102	0.969	0.0	5.68	200
	2/26/2025	5.03	5.87	7.30	162	1.02	2.9	3.01	200
	5/5/2025	4.64	9.20	7.28	176	0.818	3.0	0.69	200
	8/5/2025	9.25	15.12	7.06	159	0.774	2.4	1.21	200
	10/29/2025	9.48	11.52	7.05	64	1.9	0.0	0.37	200
	2/23/2026	5.60	1.84	7.44	162	0.845	12.6	4.61	200
	4/21/2026	4.68	8.46	7.05	25	0.832	76.4	1.17	200
MW-5A	7/30/2024	11.84	18.60	7.36	72	1.34	0.0	1.66	200
	10/2/2024	9.19	14.38	7.21	46	1.65	1.9	0.00	200
	12/9/2024	3.55	10.57	7.98	27	1.48	0.0	10.45	200
	2/26/2025	3.39	5.11	7.29	168	1.66	4.3	2.86	200
	5/7/2025	3.84	9.52	7.30	200	1.36	6.1	0.38	200
	8/4/2025	8.54	15.04	7.29	-161	1.12	4.7	0.29	200
	10/21/2025	8.10	12.37	7.27	-73	1.53	0.0	0.39	200
	2/11/2026	3.91	6.93	7.36	29	1.48	0.0	2.95	200
	4/22/2026	3.47	12.73	7.03	19	1.37	0.0	0.62	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-5SB	9/30/2024	0.05	23.30	8.55	-35	2.06	190.0	2.10	200
	12/9/2024	0.00	8.27	9.33	-87	1.27	9.0	0.00	200
	3/10/2025	0.00	12.24	8.96	-106	1.42	96	0.86	200
	5/7/2025	0.00	10.51	8.73	-82	2.14	128	7.57	200
	8/4/2025	0.00	15.17	8.38	-159	1.98	3.4	0.48	200
	10/21/2025	0.00	11.37	8.86	-131	1.57	0.0	0.81	200
	2/11/2026	Frozen	--	--	--	--	--	--	--
	4/28/2026	0.00	10.48	8.89	-20	0.963	0.0	0.62	200
MW-10	8/6/2024	5.82	14.77	6.10	-24	2.33	0.4	0.00	150
	9/30/2024	5.81	18.64	6.43	-54	2.49	3.6	0.00	200
	12/3/2024	4.90	7.71	7.02	-78	2.59	7.9	0.00	200
	2/25/2025	4.76	7.57	6.62	-35	2.63	7.1	0.82	200
	5/7/2025	4.45	11.17	6.71	-93	2.32	38.4	0.52	200
	8/4/2025	5.78	16.08	6.60	-150	1.89	9.8	0.48	200
	10/29/2025	5.72	12.04	6.68	-59	2.40	0.0	0.43	200
	2/11/2026	5.30	6.14	6.71	-188	2.55	14.1	0.39	200
	4/22/2026	4.02	14.16	6.46	-128	2.28	47.9	2.06	200
MW-31	7/30/2024	50.71	12.47	8.10	51	0.359	>1000	0.00	200
	10/7/2024	49.50	10.26	8.97	-30	0.397	278	0.50	200
	12/9/2024	48.67	6.10	8.10	37	0.347	>1000	1.23	200
	3/11/2025	51.37	4.30	8.36	83	0.450	102	2.89	200
	4/29/2025	50.12	7.00	8.31	206	0.384	>1000	6.99	200
	8/12/2025	51.45	15.63	8.33	-65	0.376	>1000	7.86	200
	10/27/2025	49.75	10.74	8.47	126	0.384	805	11.70	200
	2/16/2026	50.93	7.94	8.35	137	0.371	>1000	1.39	200
	4/27/2026	49.35	13.43	8.28	90	0.331	258	2.37	200
MW-35	7/28/2024	16.63	--	--	--	--	--	--	--
	9/30/2024	19.78	9.46	9.40	152	0.612	28.3	3.19	100
	12/3/2024	20.13	5.41	8.09	154	0.462	180	9.96	100
	3/10/2025	17.25	7.85	10.19	321	0.413	163	5.66	100
	4/30/2025	16.14	19.46	7.45	77	0.341	123	0.72	100
	8/12/2025	16.92	20.52	7.55	133	0.376	671	1.39	100
	10/27/2025	19.39	11.46	6.15	98	0.403	115	8.58	100
	2/16/2026	17.76	7.84	7.60	170	0.397	196	6.07	100
	4/22/2026	15.90	11.20	7.27	99	0.386	94.2	3.80	100
MW-35SB	12/17/2024	26.59	5.58	8.84	168	0.554	>1000	9.58	100
	3/10/2025	21.09	7.65	8.67	-215	0.617	>1000	0.89	500
	5/7/2025	18.18	9.53	7.63	143	0.503	>1000	7.82	200
	8/11/2025	19.06	14.61	8.75	90	0.394	657	1.38	400
	10/22/2025	22.98	9.07	8.90	94	0.470	561	1.86	500
	2/17/2026	19.40	7.75	8.83	90	0.530	535	0.68	500
	4/23/2026	17.15	10.35	8.45	86	0.546	1000	1.46	500
MW-36	7/28/2024	6.83	19.53	7.17	-207	0.668	261	0.58	200
	9/30/2024	5.94	20.43	8.10	-155	0.667	49.9	0.68	200
	12/3/2024	2.93	6.78	8.11	126	0.587	12.5	0.25	200
	3/4/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.15	17.67	7.00	-105	0.592	4.8	0.23	200
	8/11/2025	4.54	22.12	7.17	-99	0.682	14.8	1.81	200
	10/23/2025	3.39	13.58	7.12	-100	0.668	20.4	0.81	200
	2/23/2026	Frozen	--	--	--	--	--	--	--
	4/22/2026	2.42	9.66	6.90	-66	0.593	0	0.88	200
MW-37	7/28/2024	14.11	24.22	7.34	-69	0.438	89.8	0.85	200
	10/2/2024	16.81	11.55	8.03	-11	0.534	24.7	1.83	200
	12/3/2024	16.94	8.88	8.53	145	0.413	13.6	10.54	200
	3/4/2025	11.62	3.58	11.59	356	0.473	27.0	9.81	200
	5/1/2025	8.78	10.50	7.31	179	0.402	3.4	5.42	200
	8/11/2025	14.91	14.00	7.51	114	0.529	48.1	4.40	100
	10/21/2025	16.89	10.96	7.57	154	0.481	>1000	6.11	100
	2/23/2026	Inaccessible	--	--	--	--	--	--	--
	4/22/2026	9.54	21.33	7.23	149	0.228	80.7	4.11	100
MW-38	7/28/2024	12.31	11.70	7.66	115	0.525	0.0	0.94	200
	10/7/2024	15.95	10.22	7.32	142	0.570	3.9	0.00	200
	12/3/2024	16.11	7.01	8.65	192	0.597	4.3	2.47	200
	3/4/2025	9.97	6.40	8.65	269	0.614	15.1	4.03	200
	5/7/2025	6.42	8.80	7.69	147	0.446	4.9	4.81	200
	8/6/2025	11.25	15.31	7.66	136	0.324	0.0	0.58	200
	10/23/2025	15.38	9.91	7.90	203	0.460	0.0	1.73	200
	2/18/2026	9.07	6.24	8.06	187	0.520	6.1	3.74	200
	4/28/2026	5.99	8.18	7.56	212	0.510	0.0	2.41	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
MW-41	7/24/2024	7.90	14.99	7.40	164	0.539	78.1	9.10	200
	9/30/2024	28.33	14.70	8.43	172	0.610	172	5.89	100
	12/3/2024	28.64	--	--	--	--	--	--	--
	3/4/2025	25.94	2.33	10.42	329	0.582	35.8	8.51	100
	5/1/2025	24.38	13.87	7.84	110	0.406	92.2	7.00	100
	8/11/2025	25.85	20.60	7.86	159	0.610	107	5.73	100
	10/21/2025	27.94	10.41	7.73	157	0.637	65.6	8.60	100
	2/23/2026	25.70	2.28	8.02	54	0.617	79	2.54	100
	4/22/2026	27.39	17.00	7.65	65	0.505	12	9.51	100
MW-42	7/28/2024	5.62	16.37	8.50	51	0.354	0.0	3.45	200
	10/7/2024	8.42	12.70	8.71	106	0.316	35.8	0.56	200
	12/3/2024	6.95	5.74	8.91	174	0.315	11.9	2.16	200
	3/4/2025	3.94	5.66	9.76	255	0.332	148	4.91	200
	5/7/2025	3.59	11.70	9.11	113	0.276	18.7	3.20	200
	8/6/2025	5.14	16.96	9.06	68	0.222	116	2.22	200
	10/23/2025	7.67	9.97	9.02	141	0.288	0	1.48	200
	2/18/2026	4.94	5.53	9.00	155	0.300	42	5.33	200
	4/28/2026	3.55	7.62	8.95	192	0.290	4.1	6.70	200
MW-43	7/31/2024	13.61	18.32	8.02	-33	0.419	274	0.40	200
	9/25/2024	17.31	11.93	7.98	167	0.501	17.7	0.00	200
	12/4/2024	15.54	7.43	8.21	134	0.452	38.1	0.00	200
	2/26/2025	10.47	6.69	8.87	323	0.511	50.3	0.00	200
	5/6/2025	8.78	11.00	7.96	112	0.447	61.0	0.76	200
	8/5/2025	12.31	12.37	8.03	204	0.506	30.1	0.87	200
	10/22/2025	16.01	9.30	8.02	35	0.522	108.0	0.86	200
	2/11/2026	10.34	2.62	8.10	92	0.487	36.8	1.99	200
	5/4/2026	8.30	7.83	7.87	130	0.428	38.4	1.47	200
MW-43SB	10/1/2024	3.65	12.23	8.51	17	4.520	1.7	1.51	150
	12/16/2024	Frozen	--	--	--	--	--	--	--
	2/27/2025	8.38	6.53	7.24	73	4.74	33.5	1.26	200
	5/6/2025	17.74	15.02	7.18	60	4.17	14.3	5.8	200
	8/5/2025	0.43	16.30	7.14	94	4.33	3.4	1.16	200
	10/22/2025	0.75	9.43	7.09	-82	4.08	6.9	1.11	200
	2/11/2026	7.43	5.96	7.24	0	4.44	27.5	1.17	200
	5/4/2026	7.67	11.06	7.15	6	3.64	226	0.95	200
MW-44	7/31/2024	15.10	13.58	7.69	-194	0.614	50.6	0.06	200
	9/25/2024	17.89	13.72	8.38	-141	0.809	89.4	0.00	200
	12/4/2024	17.21	8.74	8.33	-61	0.633	15.0	0.00	200
	2/26/2025	14.63	6.00	8.76	285	0.800	18.4	0.00	200
	5/6/2025	13.44	13.06	8.20	140	0.690	48.1	1.74	200
	8/5/2025	14.85	14.20	7.93	-107	0.738	8.2	0.83	200
	10/22/2025	17.03	9.24	8.16	-34	0.769	12.7	0.81	200
	2/11/2026	14.28	5.07	8.22	58	0.725	22.9	1.42	200
	5/4/2026	13.34	8.68	7.71	139	0.599	0.0	1.12	200
NB1-1	7/24/2024	5.61	13.20	6.86	-128	1.290	0.0	0.16	200
	10/2/2024	5.78	16.04	7.74	-228	1.080	29.0	0.00	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.59	6.01	8.08	-85	1.19	25.1	0.00	200
	5/5/2025	2.70	13.64	8.23	-262	1.05	18.1	0.37	200
	8/7/2025	5.62	18.63	7.82	-280	0.972	6.3	0.54	200
	10/28/2025	4.97	10.77	7.85	-181	1.09	41.2	0.63	200
	2/10/2026	2.50	7.18	7.94	-152	1.11	28	0.88	200
	4/29/2026	2.72	8.63	7.83	-140	1.00	3.1	0.52	200
NB1-3	7/24/2024	6.21	13.64	7.89	-273	1.000	54.2	0.31	200
	10/2/2024	6.47	14.05	7.82	-175	1.000	22.3	0.37	200
	12/17/2024	Inaccessible	--	--	--	--	--	--	--
	3/3/2025	2.93	7.07	7.97	86	1.03	46.3	0.00	200
	5/5/2025	2.94	16.79	7.50	-125	0.846	17.6	0.22	200
	8/7/2025	5.85	21.78	7.37	-156	0.88	8.5	1.45	200
	10/28/2025	5.40	10.59	7.45	-140	1.03	9.9	1.14	200
	2/10/2026	2.72	7.46	6.81	50	0.812	18.4	0.82	200
	4/29/2026	3.00	8.38	7.57	-105	0.840	7.3	0.66	200
NB2-1	7/24/2024	6.45	17.91	6.93	-166	2.260	62.4	0.32	200
	9/30/2024	6.21	25.97	7.21	-124	2.020	0.0	0.10	100
	12/2/2024	2.66	7.19	8.10	-177	1.10	13.7	0.00	200
	3/3/2025	Frozen	--	--	--	--	--	--	--
	4/30/2025	2.56	10.23	7.41	-255	0.974	4.9	0.49	200
	8/12/2025	6.33	19.10	6.93	-62	2.24	40.4	0.82	200
	10/28/2025	2.77	15.36	7.11	-93	1.48	7.4	0.55	200
	2/10/2026	Frozen	--	--	--	--	--	--	--
	4/21/2026	2.65	8.31	7.23	-148	0.913	0	0.56	200

TABLE 1
GROUNDWATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	DEPTH TO WATER LEVEL (feet below top of casing)	TEMPERATURE (°Celcius)	Ph	ORP (millivolts)	CONDUCTIVITY (mS/cm)	TURBIDITY (NTU)	DO (mg/L)	PUMP RATE (ml/min)
NB2-3	7/24/2024	6.25	13.99	6.54	-42	1.110	0.0	0.00	200
	9/30/2024	5.80	26.73	7.88	-189	0.889	0.0	0.01	200
	12/2/2024	2.96	8.18	8.40	-78	1.03	14.9	13.01	200
	3/3/2025	2.57	7.87	8.45	14	1.12	20.3	0.00	200
	4/30/2025	2.69	13.72	7.54	-119	1.03	9.1	1.20	200
	8/12/2025	5.74	17.22	7.44	-76	1.10	80.4	3.59	200
	10/28/2025	3.28	13.47	7.87	-80	1.09	0.0	0.81	200
	2/10/2026	Frozen	--	--	--	--	--	--	--
	4/21/2026	2.61	9.46	7.44	-100	0.947	8.2	0.73	200
SMW-1	7/25/2024	23.52	9.22	8.21	-84	0.403	73.0	14.06	200
	10/2/2024	23.90	10.08	8.12	-106	0.463	212.0	0.00	200
	12/9/2024	24.79	8.17	8.32	107	0.337	71.9	0.00	200
	3/3/2025	24.25	8.32	8.85	82	0.388	119	1.94	200
	4/29/2025	23.70	6.64	8.20	178	0.371	794	9.18	200
	8/13/2025	23.71	11.12	7.85	155	0.401	9.4	1.80	200
	10/27/2025	24.50	9.44	7.99	38	0.386	20.8	5.59	200
	2/16/2026	25.98	7.84	8.20	129	0.357	28.5	11.09	200
	4/29/2026	24.40	8.28	7.84	192	0.338	16.6	4.57	200
SMW-1SB	12/9/2024	25.15	5.58	8.99	134	0.362	73.2	15.83	200
	3/3/2025	25.35	9.08	9.60	158	0.399	108	7.95	200
	4/30/2025	21.37	8.01	8.39	37	0.195	16.9	8.59	200
	8/13/2025	23.43	12.74	9.01	-49	0.368	6.1	7.14	200
	10/27/2025	26.00	13.25	8.97	-47	0.345	18.5	2.15	200
	2/16/2026	26.95	7.51	8.96	91	0.358	6.8	10.34	200
	4/29/2026	26.03	8.33	8.79	131	0.325	0.0	5.80	200
SMW-3	8/6/2024	27.68	10.84	8.14	88	0.262	11.1	5.41	200
	10/2/2024	27.66	12.52	8.58	-125	0.249	14.7	0.00	200
	12/4/2024	27.18	7.36	8.39	-60	0.272	8.7	10.74	200
	3/6/2025	26.85	8.65	8.38	69	0.265	21.6	0.00	200
	5/8/2025	27.02	14.14	8.19	-64	0.212	5.8	4.13	100
	8/7/2025	27.40	13.71	8.69	-164	0.191	3.7	2.70	200
	10/22/2025	27.18	8.78	8.29	-18	0.258	0.0	8.12	200
	2/18/2026	26.65	8.55	8.75	-95	0.249	9.0	1.00	200
	4/27/2026	26.54	9.27	8.51	-110	0.230	0.0	6.89	200
SMW-3SB	12/4/2024	22.98	--	--	--	--	--	--	--
	3/6/2025	22.69	7.27	9.05	255	0.556	36.9	0.00	200
	5/8/2025	22.84	9.77	9.27	54	0.510	13.9	1.14	200
	8/7/2025	23.14	15.54	9.12	-32	0.400	0.9	0.94	200
	10/22/2025	22.89	8.99	9.1	-63	0.513	0	0.97	200
	2/18/2026	22.47	7.32	9.16	19	0.519	21.9	0.99	200
	4/27/2026	24.93	9.70	8.87	-43	0.467	49.4	1.35	200

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
ARC-01	7/31/2024	6.89	0.129	20.68	122	2.80	8.0	0.008	1.4	--
	9/25/2024	6.79	0.223	11.67	194	2.61	2.4	0.017	4.7	0.84
	12/5/2024	8.22	0.098	1.26	178	11.75	0.0	0.058	3.5	1.00
	3/11/2025	9.26	0.116	0.38	237	10.30	4.4	4.110	19.8	2.98
	4/28/2025	7.09	0.070	10.57	227	10.28	5.6	0.496	6.1	1.20
	8/4/2025	6.46	0.192	16.67	285	5.70	6.8	-0.043	5.4	1.00
	10/20/2025	6.37	0.225	7.75	46	2.20	51.0	-0.121	6.33	1.00
	2/9/2026	6.36	0.095	0.47	211	12.07	252	-0.061	6.0	1.34
	4/20/2026	6.53	0.051	3.43	233	10.60	15.9	0.381	6.25	1.32
ARC-02	7/31/2024	7.72	0.153	19.32	120	1.93	25.8	0.125	11.5	--
	9/25/2024	7.40	0.129	14.76	159	5.05	12.6	0.229	20.0	--
	12/4/2024	8.52	0.158	0.32	158	6.56	733	0.427	34.0	--
	2/27/2005	8.77	0.064	1.19	280	7.56	40.8	2.310	61.0	--
	5/6/2025	6.53	0.080	15.00	209	5.29	26.7	Unsafe Conditions		--
	8/5/2025	6.48	0.138	18.06	137	1.65	37.1	-0.040	8.25	--
	10/22/2025	6.56	0.117	9.99	70	3.11	42.5	-0.266	10.25	--
	2/23/2026	7.88	0.100	0.95	128	11.99	53.3	0.296	9.0	--
	5/4/2026	6.40	0.080	14.16	96	6.40	184	-0.127	9.75	--
ARC-03	8/6/2024	--	--	--	--	--	--	Dry		--
	9/26/2024	8.04	0.255	11.59	91	7.98	28.3	0.030	8.0	0.62
	12/11/2024	8.15	0.093	0.07	199	16.25	32.6	2.162	14.2	1.50
	3/6/2025	7.55	0.082	1.87	150	10.42	11.7	14.180	13.0	2.78
	4/28/2025	7.06	0.066	11.19	282	10.65	7.5	3.239	10.7	Bent
	8/13/2025	7.57	0.202	18.34	149	5.71	2.0	0.018	8.0	0.72
	10/27/2025	7.51	0.132	8.54	167	12.58	0.0	0.541	9.0	0.95
	2/16/2026	7.50	0.111	0.80	191	13.74	0.5	2.871	7.53	1.65
	4/27/2026	7.15	0.073	10.65	147	10.39	4.9	3.318	11.92	1.20
BNC-01	8/6/2024	7.39	0.179	22.83	115	8.21	0.0	No Stream Gauging		--
	10/8/2024	8.79	0.158	14.53	45	6.90	0.0	No Stream Gauging		--
	12/11/2024	8.12	0.143	0.00	161	4.2	700	No Stream Gauging		--
	3/11/2025	7.14	0.143	1.56	-5	4.04	0.0	No Stream Gauging		--
	5/6/2025	7.09	0.120	21.95	124	7.41	5.1	No Stream Gauging		--
	8/6/2025	7.12	0.143	24.56	271	5.6	2.9	No Stream Gauging		--
	10/29/2025	7.55	0.129	9.08	146	6.82	0.0	No Stream Gauging		--
	2/11/2026	7.80	0.138	1.52	-19	1.83	0.0	No Stream Gauging		--
	4/21/2026	7.13	0.106	13.76	78	8.56	3.6	No Stream Gauging		
BNW-01	7/31/2024	7.12	0.184	28.77	111	7.80	2.1	No Stream Gauging		--
	10/8/2024	8.15	0.223	13.65	41	8.37	211	No Stream Gauging		--
	12/11/2024	8.42	0.152	1.49	211	15.75	25.6	No Stream Gauging		--
	2/25/2025	7.49	0.219	2.53	156	9.11	0.0	No Stream Gauging		--
	5/5/2025	7.88	0.218	18.32	156	9.81	11.9	No Stream Gauging		--
	8/6/2025	8.91	0.152	25.41	208	5.60	2.7	No Stream Gauging		--
	10/20/2025	8.32	0.218	16.51	114	11.58	0.0	No Stream Gauging		--
	2/12/2026	7.39	0.312	1.64	90	2.00	9.7	No Stream Gauging		--
	4/27/2026	7.75	0.205	14.42	184	8.12	3.7	No Stream Gauging		--
CBR-01	7/29/2024	8.16	0.242	24.54	177	8.90	0.0	No Stream Gauging		--
	9/25/2024	7.77	0.295	12.08	175	6.96	1.2	No Stream Gauging		--
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	2/27/2025	8.74	0.092	0.07	348	11.27	32.8	No Stream Gauging		--
	5/6/2025	6.86	0.068	16.47	200	8.75	13.6	No Stream Gauging		--
	8/5/2025	8.53	0.201	23.39	185	6.53	9.8	No Stream Gauging		--
	10/22/2025	7.48	0.091	8.81	154	10.16	102	No Stream Gauging		--
	2/17/2026	7.50	0.107	0.23	187	13.48	11.4	No Stream Gauging		--
	5/4/2026	7.36	0.074	14.08	155	9.81	18.6	No Stream Gauging		--
CBR-02	8/6/2024	7.97	0.246	26.38	92	6.70	0.0	No Stream Gauging		--
	10/3/2024	8.10	0.261	13.84	106	7.32	12.2	No Stream Gauging		3.55
	12/17/2024	8.30	0.118	0.75	229	10.09	39.2	No Stream Gauging		3.20
	3/4/2025	7.42	0.119	1.04	130	11.02	43.9	No Stream Gauging		3.70
	5/6/2025	7.38	0.074	12.26	68	11.60	4.2	No Stream Gauging		Bent
	8/11/2025	7.41	0.163	23.42	114	3.82	0.0	No Stream Gauging		3.56
	10/27/2025	7.76	0.097	7.18	151	11.28	0.0	No Stream Gauging		3.31
	2/16/2026	7.80	0.126	1.44	127	10.75	0.0	No Stream Gauging		3.83
	4/27/2026	7.17	0.069	9.15	219	10.85	14.5	No Stream Gauging		Missing

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
DKC-01	7/29/2024	--	--	--	--	--	--	Dry		--
	9/23/2024	--	--	--	--	--	--	Dry		--
	12/5/2024	7.83	0.159	0.59	250	14.81	0.0	0.131	6.8	--
	3/11/2025	7.99	0.160	-0.02	325	12.12	0.9	9.990	12.0	--
	4/28/2025	7.25	0.060	8.22	208	12.06	37.5	6.028	8.8	--
	8/4/2025	7.57	0.167	16.20	331	7.44	0.6	-0.004	4.1	--
	10/20/2025	7.10	0.193	7.78	123	5.19	26.5	-0.042	4.5	--
	2/12/2026	7.2	0.102	0.33	188	13.5	11.8	0.356	7.5	--
	4/23/2026	6.77	0.036	8.26	154	11.24	40.0	5.009	8.75	--
DKC-02	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	7.65	0.152	18.34	168	9.39	2.5	0.081	16.0	--
	12/17/2024	7.30	0.081	0.06	189	16.12	24.7	11.557	22.5	--
	2/26/2025	8.26	0.075	0.03	298	11.02	16.5	7.040	24.8	--
	5/7/2025	6.63	0.065	11.43	191	10.88	10.2	3.737	21.5	--
	8/13/2025	7.67	0.126	19.46	154	6.18	2.3	0.020	8.17	--
	10/27/2025	7.74	0.135	5.45	146	12.13	0.0	0.724	19.33	--
	2/17/2026	7.31	0.092	0.2	145	13.56	10.0	6.868	20.0	--
	4/28/2026	7.04	0.047	9.63	170	11.61	31.1	29.580	21.75	--
DKC-03	8/6/2024	7.52	0.213	25.28	151	5.21	0.0	No Stream Gauging		--
	9/26/2024	7.83	0.163	14.36	151	6.67	8.7	No Stream Gauging		--
	12/16/2024	7.50	0.087	1.63	237	13.76	47.7	No Stream Gauging		--
	3/3/2025	7.46	0.077	1.31	136	12.06	6.5	No Stream Gauging		--
	4/29/2025	7.31	0.050	8.40	271	11.11	34.5	No Stream Gauging		--
	8/12/2025	7.43	0.108	24.53	110	5.02	1.2	No Stream Gauging		--
	10/27/2025	7.70	0.139	9.28	154	9.94	0.0	No Stream Gauging		--
	2/9/2026	5.77	0.109	1.30	223	12.46	14.7	No Stream Gauging		--
	4/29/2026	7.34	0.052	8.32	155	12.18	6.8	No Stream Gauging		--
LKS-01	7/28/2024	8.34	0.116	20.87	191	11.12	0.1	No Stream Gauging		--
	10/7/2024	8.91	0.111	13.68	112	9.56	12.4	No Stream Gauging		--
	12/16/2024	7.56	0.212	0.30	236	13.74	37.8	No Stream Gauging		--
	3/4/2025	7.17	0.389	1.22	193	54.3	10.6	No Stream Gauging		--
	4/30/2025	6.88	0.085	10.95	167	11.30	13.2	No Stream Gauging		--
	8/12/2025	8.30	0.082	21.78	85	10.98	10.9	No Stream Gauging		--
	10/28/2025	8.18	0.100	9.04	121	12.26	9.6	No Stream Gauging		--
	2/23/2026	7.57	0.333	0.35	159	13.95	38.1	No Stream Gauging		--
	4/29/2026	7.45	0.101	8.11	237	15.27	52.4	No Stream Gauging		--
LKS-02	7/28/2024	7.69	0.112	21.91	172	11.11	0.0	No Stream Gauging		--
	10/7/2024	9.23	0.108	13.49	42	10.06	1.2	No Stream Gauging		--
	12/16/2024	8.11	0.115	0.70	62	10.79	17.6	No Stream Gauging		--
	3/3/2025	7.50	0.171	0.93	91	11.58	3.1	No Stream Gauging		--
	5/1/2025	6.64	0.054	6.67	170	11.53	13.5	No Stream Gauging		--
	8/12/2025	8.13	0.080	20.94	104	9.37	0.0	No Stream Gauging		--
	10/28/2025	8.03	0.099	9.42	29	11.3	40.0	No Stream Gauging		--
	2/24/2026	7.20	0.111	1.57	202	14.15	0.0	No Stream Gauging		--
	4/30/2026	7.37	0.087	5.53	135	13.28	26.7	No Stream Gauging		--
MLC-01	8/6/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/2/2024	12.12	0.275	3.76	-43	14.59	16.3	0.027	2.5	--
	3/3/2025	7.27	0.218	0.49	173	12.23	9.8	0.170	4.3	--
	4/29/2025	7.23	0.133	8.04	261	10.87	19.5	0.768	4.0	--
	8/6/2025	--	--	--	--	--	--	Dry		--
	10/28/2025	--	--	--	--	--	--	Dry		--
	2/17/2026	7.15	0.207	0.46	216	10.85	38.6	0.074	5.83	--
	4/29/2026	7.02	0.151	9.61	163	12.71	2.3	0.527	5.50	--
MLR-01	7/25/2024	7.72	0.148	15.35	150	7.52	0.1	0.311	16.3	--
	9/23/2024	7.95	0.177	16.42	141	9.50	7.7	No Stream Gauging		1.29
	12/16/2024	7.58	0.088	0.36	199	15.08	32.2	No Stream Gauging		2.05
	3/10/2025	8.64	0.071	0.32	361	11.51	43.4	No Stream Gauging		3.71
	4/28/2025	6.81	0.050	8.35	223	12.17	22.4	No Stream Gauging		2.10
	8/13/2025	7.81	0.112	21.31	130	7.03	0.0	0.051	13.9	1.27
	10/28/2025	7.15	0.085	6.49	165	11.25	0.0	No Stream Gauging		1.60
	2/10/2026	6.08	0.097	0.68	236	12.57	7.2	No Stream Gauging		Missing
	4/30/2026	7.22	0.053	6.74	227	12.32	18.5	No Stream Gauging		Missing
MLR-02	7/25/2024	7.41	0.247	19.59	114	7.46	7.4	0.489	28.2	--
	9/24/2024	8.15	0.265	15.97	116	13.09	1.5	0.086	21.0	0.08
	12/16/2024	7.82	0.140	0.31	234	14.4	57.1	2.504	37.5	1.15
	3/11/2025	7.73	0.180	0.00	145	13.67	18	No Stream Gauging		2.65
	5/5/2025	7.11	0.092	10.50	202	10.38	33.6	15.758	35.5	Bent
	8/4/2025	7.72	0.190	20.85	292	6.22	19.6	0.083	25.0	0.15
	10/20/2025	7.70	0.204	10.53	171	7.36	48.2	-0.074	24.83	0.12
	2/24/2026	7.74	0.153	0.19	154	13.29	13.4	15.641	37.5	1.58
	4/23/2026	6.77	0.056	9.40	175	10.92	82.1	40.539	38.25	Bent
MLR-03	7/25/2024	7.79	0.245	15.87	186	9.27	0.0	0.468	28.2	--
	9/23/2024	8.64	0.283	14.30	31	10.02	1.6	No Stream Gauging		0.71
	12/2/2024	9.17	0.168	0.05	192	21.09	17.5	No Stream Gauging		1.30
	2/25/2025	7.88	0.241	-0.10	299	2.29	23.6	No Stream Gauging		1.26
	4/30/2025	7.13	0.067	9.20	164	11.09	15.8	No Stream Gauging		Bent
	8/6/2025	8.01	0.195	18.55	223	7.68	1.9	No Stream Gauging		Missing
	10/21/2025	7.55	0.204	9.48	145	7.15	30.3	No Stream Gauging		Missing
	2/17/2026	7.37	0.176	0.31	183	14.58	17.7	No Stream Gauging		Missing
	4/28/2026	7.47	0.107	9.38	160	11.92	96.4	No Stream Gauging		Missing

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

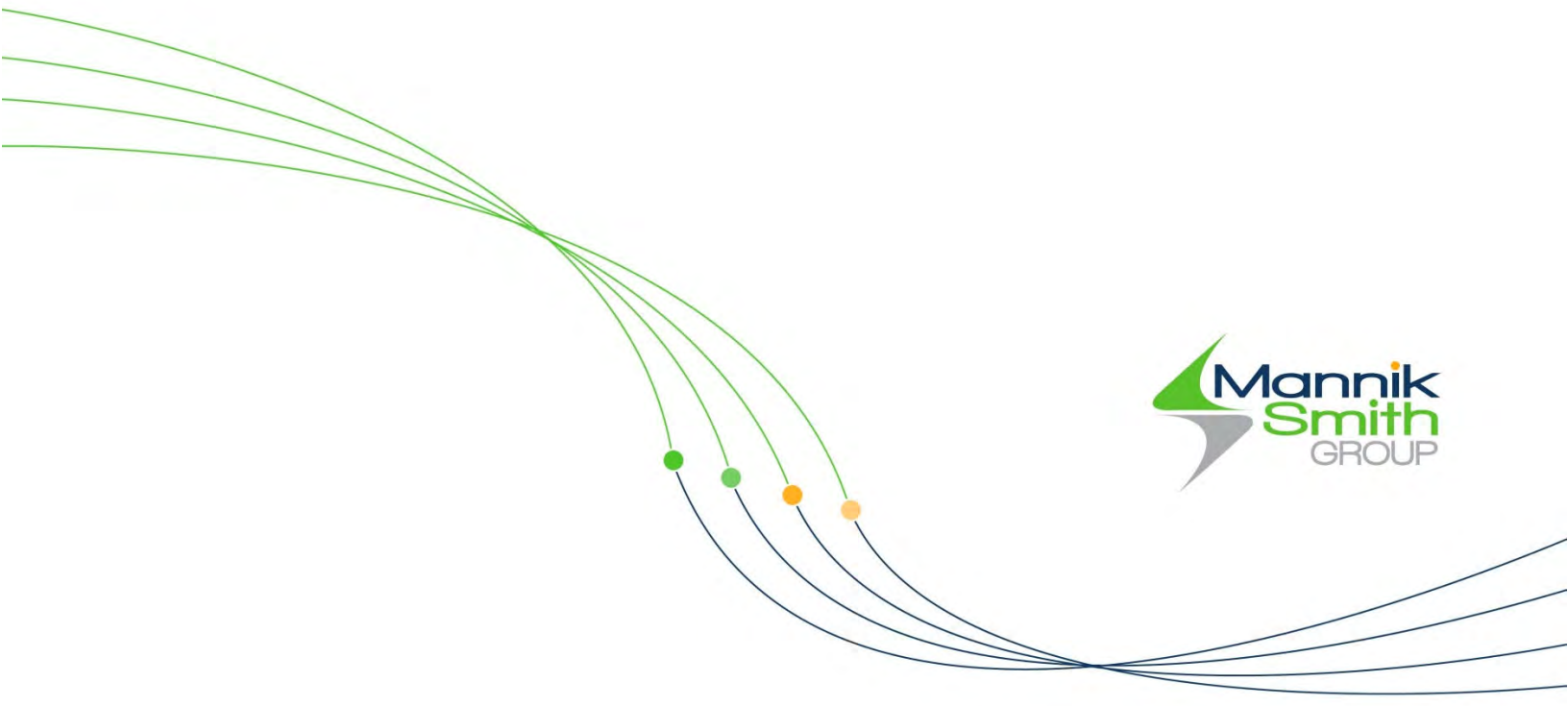
SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
NTC-01	7/22/2024	7.85	0.208	17.79	39	9.55	34.7	0.074	4.8	--
	9/23/2024	7.56	0.225	15.34	-19	2.17	171	0.021	4.0	--
	12/2/2024	9.87	0.252	1.76	56	14.1	12.7	0.016	5.3	--
	2/25/2025	7.93	0.233	0.53	254	8.92	15.6	0.630	7.5	--
	4/30/2025	6.65	0.105	14.11	175	2.20	2.2	0.583	7.0	--
	8/6/2025	7.40	0.143	19.93	234	4.94	2.9	0.001	5.3	--
	10/21/2025	6.82	0.229	10.79	-70	1.55	167	-0.028	4.6	--
	2/17/2026	7.44	0.219	0.33	167	10.72	19.4	0.118	5.5	--
	4/28/2026	7.08	0.075	10.5	139	9.40	4.8	0.849	5.5	1.41
PNC-01	7/29/2024	6.53	0.119	21.62	171	2.13	1.2	0.008	2.2	--
	9/23/2024	7.33	0.285	16.70	175	1.51	21.6	0.015	2.3	0.83
	12/5/2024	7.22	0.085	0.93	131	10.99	55.1	0.015	1.3	1.00
	3/11/2025	8.91	0.041	0.02	293	12.69	51.7	5.730	4.0	1.90
	4/28/2025	6.83	0.047	9.87	198	10.13	9.2	0.906	3.2	1.32
	8/13/2025	6.84	0.095	20.81	147	0.085	6.6	0.008	2.3	0.83
	10/29/2025	6.76	0.108	9.22	95	5.73	2.0	-0.042	2.8	0.88
	2/10/2026	6.56	0.056	0.94	182	11.40	3.1	-0.014	7.0	1.12
	4/20/2026	5.95	0.026	4.67	218	11.70	14.4	1.206	3.2	1.30
PNC-02	7/29/2024	7.29	0.293	27.19	72	4.63	41.0	0.068	10.8	--
	9/24/2024	7.73	0.343	17.27	136	12.59	7.9	0.213	53.3	1.22
	12/10/2024	--	--	--	--	--	--	Not Accessible		--
	3/10/2025	9.29	0.129	-0.05	289	9.63	230	7.120	55.0	2.09
	5/5/2025	6.95	135	17.87	0.1	7.76	670	1.774	56.0	1.90
	8/4/2025	7.52	0.281	22.14	308	5.16	19.9	Not Accessible		--
	10/20/2025	7.36	0.334	10.98	119	5.06	277	Not Accessible		--
	2/9/2026	7.37	0.209	0.70	158	9.64	16.1	Not Accessible		--
	4/20/2026	7	0.067	7.26	188	11.05	35.6	Not Accessible		--
PNC-03	8/1/2024	7.79	0.453	20.11	105	4.62	0.0	0.023	4.0	--
	9/24/2024	7.84	0.395	15.97	138	10.22	6.4	0.053	6.3	0.43
	12/9/2024	8.92	0.274	1.72	168	10.26	10.0	3.440	18.9	1.31
	3/10/2025	7.60	0.173	0.42	143	12.94	8.0	17.770	21.0	2.3
	5/7/2025	7.86	0.124	12.94	170	9.16	26.4	3.366	20.5	1.22
	8/6/2025	7.88	0.315	20.16	247	6.67	1.5	-0.032	20.0	0.78
	10/29/2025	7.52	0.346	6.71	136	6.97	0.0	-0.800	20.08	1.36
	2/12/2026	7.53	0.217	0.26	159	13.68	19.4	2.111	19.5	2.90
	4/22/2026	6.77	0.086	7.54	133	10.08	28.3	7.386	19.5	Bent
PNC-04	8/7/2024	7.35	0.481	17.08	157	9.73	0.0	0.011	5.3	--
	9/26/2024	7.82	0.412	13.69	138	7.89	2.6	0.082	7.0	0.58
	12/17/2024	8.27	0.241	0.06	276	15.12	19.9	10.975	15.5	1.70
	3/4/2025	7.47	0.179	0.00	136	13.72	11.6	3.330	15.7	--
	5/1/2025	6.85	0.099	9.79	204	11.09	5.6	7.990	21.8	Bent
	8/11/2025	7.90	0.267	20.01	75	8.62	0.0	0.060	4.9	Missing
	10/27/2025	7.70	0.349	5.86	132	11.79	0.0	0.469	6.34	0.24
	2/16/2026	7.65	0.227	0.48	138	14.16	0.0	3.074	12.3	2.60
	4/27/2026	7.03	0.102	9.2	224	13.24	10.4	9.682	14.4	1.62
PRC-01	7/22/2024	8.22	0.972	24.40	110	9.33	47.9	1.011	6.2	--
	9/24/2024	7.37	0.481	18.86	114	7.68	3.3	0.072	7.0	0.20
	12/11/2024	8.11	0.938	0.56	192	13.84	21.1	11.443	16.0	0.75
	3/4/2025	7.54	0.914	0.28	195	13.14	6.8	5.500	15.5	--
	5/7/2025	8.00	0.429	16.32	112	9.34	20.5	16.628	16.0	0.75
	8/6/2025	7.94	0.689	24.25	191	7.86	16.7	0.299	11.0	0.18
	10/29/2025	7.93	0.982	8.42	1	10.82	10.1	1.177	15.0	0.25
	2/10/2026	7.50	1.20	1.05	111	12.34	0.0	2.909	9.5	0.30
	4/30/2026	7.74	0.368	9.69	255	13.14	148.0	Unsafe Conditions		1.05
PRC-02	7/22/2024	8.05	0.984	19.87	132	11.13	10.6	0.805	5.2	--
	9/23/2024	7.91	1.030	13.89	112	7.33	0.3	0.050	5.0	--
	12/2/2024	8.95	0.821	0.13	-109	19.4	25.6	5.142	6.7	--
	2/25/2025	7.99	0.745	0.13	420	12.63	7.6	1.930	8.0	--
	4/30/2025	6.83	0.381	11.35	162	10.72	14.0	Unsafe Conditions		--
	8/6/2025	7.92	0.701	19.81	240	6.00	2.4	0.153	5.7	--
	10/21/2025	7.71	0.941	9.64	174	7.65	12.0	0.271	6.0	--
	2/17/2026	7.50	0.001	0.23	196	15.78	21.4	Unsafe Conditions		--
	4/28/2026	7.59	0.313	11.1	170	11.21	66.1	Unsafe Conditions		1.96
PTC-01	8/7/2024	--	--	--	--	--	--	Dry		--
	9/25/2024	--	--	--	--	--	--	Dry		--
	12/11/2024	8.03	0.215	-0.07	231	14.47	2.7	0.271	9.0	--
	3/6/2025	7.45	0.224	0.83	114	12.02	7.3	0.920	7.3	--
	4/29/2025	7.44	0.12	7.86	258	4.88	4.7	0.579	6.6	--
	8/11/2025	7.73	0.196	19.29	126	6.07	0.0	0.017	7.0	--
	10/27/2025	--	--	--	--	--	--	Dry		--
	2/16/2026	7.8	0.224	3.57	190	12.75	0	0.113	9.58	--
	4/27/2026	7.28	0.113	11.74	183	11.86	0	0.693	6.67	--

TABLE 2
SURFACE WATER FIELD PARAMETER SUMMARY
White Pine North Baseline Monitoring Project
White Pine, Michigan

SAMPLE LOCATION	SAMPLING DATE	pH	CONDUCTIVITY (mS/cm)	TEMPERATURE (°Celcius)	ORP (millivolts)	DO (mg/L)	TURBIDITY (NTU)	STREAM FLOW (cubic feet per second)	STREAM WIDTH (feet)	STAFF GAUGE HEIGHT (feet)
SBD-01	7/29/2024	7.65	0.224	28.82	123	5.98	89.5	No Stream Gauging		--
	9/24/2024	7.71	0.246	16.34	33	3.86	132.0	No Stream Gauging		--
	12/10/2024	7.67	0.235	3.89	199	6.18	57.7	No Stream Gauging		--
	2/24/2025	7.31	0.260	1.08	101	0.46	147	No Stream Gauging		--
	4/29/2025	7.28	0.109	10.45	219	6.35	9.5	No Stream Gauging		--
	8/4/2025	6.82	0.159	21.37	251	2.42	7.8	No Stream Gauging		--
	10/20/2025	7.07	0.176	11.47	153	4.06	31.0	No Stream Gauging		--
	2/9/2026	6.78	0.248	0.46	-22	2.94	51.8	No Stream Gauging		--
	4/20/2026	6.84	0.09	8.63	204	7.89	9.9	No Stream Gauging		--
SBW-01	7/29/2024	8.17	0.152	26.48	138	5.96	0.0	No Stream Gauging		--
	9/24/2024	7.92	0.191	13.78	121	7.36	10.3	No Stream Gauging		--
	12/10/2024	7.55	0.181	0.46	206	6.64	63.0	No Stream Gauging		--
	2/24/2025	7.32	0.428	0.35	164	7.69	40.5	No Stream Gauging		--
	4/29/2025	7.45	0.21	8.90	298	5.84	5.4	No Stream Gauging		--
	8/4/2025	6.99	0.138	25.17	339	3.44	242	No Stream Gauging		--
	10/20/2025	7.55	0.201	9.04	156	7.00	18.0	No Stream Gauging		--
	2/9/2026	6.65	0.423	1.29	111	3.29	15.9	No Stream Gauging		--
	4/20/2026	6.9	0.175	7.13	208	5.19	15.5	No Stream Gauging		--
TBN-01	7/31/2024	7.13	0.866	25.82	108	8.52	4.4	No Stream Gauging		--
	10/7/2024	7.85	1.030	13.31	143	10.92	29.9	No Stream Gauging		--
	12/11/2024	8.02	0.618	0.19	198	13.83	52.1	No Stream Gauging		--
	2/24/2025	7.46	0.601	0.80	321	4.70	2.8	No Stream Gauging		--
	5/1/2025	8.25	0.376	11.62	165	11.57	47.2	No Stream Gauging		--
	8/6/2025	9.30	0.607	23.61	179	8.13	3.3	No Stream Gauging		--
	10/29/2025	8.17	0.943	10.03	131	7.90	12.2	No Stream Gauging		--
	2/10/2026	7.56	0.877	0.14	101	3.31	999	No Stream Gauging		--
	4/21/2026	7.56	0.308	8.76	21	10.79	126	No Stream Gauging		--
TBS-01	7/28/2024	7.55	0.754	28.43	120	10.25	0.0	No Stream Gauging		--
	10/8/2024	8.47	1.040	8.60	116	12.87	7.8	No Stream Gauging		--
	12/11/2024	8.30	0.396	4.94	178	11.19	170	No Stream Gauging		--
	2/24/2025	7.46	0.484	0.61	426	6.02	11.1	No Stream Gauging		--
	5/1/2025	8.05	0.601	12.44	164	11.35	14.8	No Stream Gauging		--
	8/13/2025	9.03	2.28	24.71	55	4.29	1.2	No Stream Gauging		--
	10/20/2025	8.26	2.32	11.34	139	10.54	17.8	No Stream Gauging		--
	2/10/2026	7.19	1.18	0.54	-10	2.45	8.7	No Stream Gauging		--
	4/20/2026	7.3	0.249	9.22	131	10.99	126	No Stream Gauging		--

Notes:
-- = Not Collected
mg/L = Milligrams per liter
ml/min = Milliliters per minute
mS/cm = Millisiemens per centimeter
NTU = Nephelometric Turbidity Units

APPENDIX A
FIELD SHEETS



LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4/20/26

PERSONNEL: SPG

OBSERVERS:

SAMPLE LOCATION: MW-1A-R

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 50°F

DEPTH OF WELL: –

SCREEN LENGTH: –

TUBING TYPE: 1/4" teflon

MONITORING EQUIPMENT: Horiba, Peristaltic Pump

DEPTH TO WATER LEVEL: 10.42'

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 1320

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1325		10.72	5.83	251	0.646	15.5	4.91	0.25	200	
1330		9.86	6.49	228	0.640	16.8	4.78	0.50		
1335		9.35	7.12	205	0.643	23.6	4.93	0.75		
1340		9.18	6.80	216	0.645	26.4	4.80	1.00		
1345	17.35'	9.18	6.91	208	0.638	17.8	4.17	1.25		
1350	17.64	9.49	6.98	202	0.633	13.9	3.67	1.50		
1355		9.67	6.93	204	0.628	13.6	3.41	1.75		
1400	18.24	9.76	6.92	203	0.628	13.1	2.98	2.00		
1405	18.56	9.90	6.93	200	0.624	10.1	2.32	2.25		
1410		9.78	6.94	197	0.625	9.1	1.99	2.50	↓	

SAMPLE ID: MW-1AR20260420 & FBLL

SAMPLE DATE: 4-20-2026

SAMPLE TIME: 14:05

Notes: Went back at later date to re-purge pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1A-R

DATE: 4/29/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: —

DEPTH TO WATER LEVEL: 10.45

PURGE START TIME: 1601

SCREEN LENGTH: —

WELL DIAMETER: 2"

TUBING TYPE: 1/4" polytethon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba, peristaltic pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1604	11.65	7.50	7.63	184	0.702	4.6	5.21			
1607	12.60	7.33	7.78	183	0.703	0.0	4.87			
1610	13.54	7.30	7.80	188	0.704	0.0	4.77			
1613	14.49	7.16	7.81	192	0.704	0.0	4.66			

SAMPLE ID: N/A

SAMPLE DATE:

SAMPLE TIME:

Notes: RC-Purge for pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4/20/26

PERSONNEL: SPG

OBSERVERS:

SAMPLE LOCATION: MW-1B-R

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 50°F

DEPTH OF WELL: –

SCREEN LENGTH: –

TUBING TYPE: 1/4" polytefion

MONITORING EQUIPMENT: Horiba, Peristaltic Pump

DEPTH TO WATER LEVEL: 10.70'

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 1523

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1528	11.35	11.21	5.86	230	0.698	0.0	12.28	0.25		
1533	11.55	10.32	5.97	221	0.715	0.0	11.69	0.50		
1538	11.67	9.86	6.05	215	0.714	0.0	11.01	0.75		
1543	11.75	9.82	6.07	211	0.756	0.0	10.52	1.00		
1548	11.85	9.75	6.09	207	0.756	0.0	10.00	1.25		
1553	12.03	9.56	6.11	205	0.755	0.0	9.45	1.50		
1558	12.10	9.74	6.11	204	0.749	0.0	9.25	1.75		
1603	12.19	9.77	6.12	204	0.749	0.0	9.23	2.00	↓	

SAMPLE ID: MW-1BR20260420 & FBLL

SAMPLE DATE: 4/20/26

SAMPLE TIME: 1605

Notes: went back at a later date to re-purge pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-1B-R

DATE: 4/29/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: —

DEPTH TO WATER LEVEL: —

PURGE START TIME: 1618

SCREEN LENGTH: —

WELL DIAMETER: —

TUBING TYPE: —

CASING TYPE: —

MONITORING EQUIPMENT: Horiba, peristaltic pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1621	10.8	8.63	7.76	163	0.718	0.0	2.16			
1624	11.02	8.67	7.74	169	0.720	0.0	1.61			
1627	11.15	8.67	7.74	171	0.721	0.0	1.53			

SAMPLE ID: N/A

SAMPLE DATE:

SAMPLE TIME:

Notes: pH reporge

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2A

DATE: 4/21/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: -

DEPTH TO WATER LEVEL: 5.42'

PURGE START TIME: 903

SCREEN LENGTH: -

WELL DIAMETER: 3"

TUBING TYPE: 1/4" polytefion

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52, peristaltic pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
0908	6.49	9.06	6.26	109	1.14	0.0	8.70	0.25	200	
0913	6.95	8.89	6.15	35	1.15	0.0	7.56	0.50		
0918	7.53	8.82	5.70	52	1.15	0.0	6.64	0.75		
0923		8.86	5.43	61	1.15	0.0	6.00	1.00		
0928	8.60	8.86	5.13	67	1.15	0.0	5.56	1.25		
0933		8.88	4.49	85	1.15	0.0	5.15	1.50		
0938	9.69	8.83	3.99	103	1.15	0.0	4.76	1.75		
0943	10.12	9.03	3.83	105	1.15	0.0	4.30	2.00		
0948	10.63	9.00	3.76	97	1.15	0.0	3.90	2.25		
0953	11.08	9.19	3.68	90	1.15	0.0	3.61	2.50		
0958	11.40	9.26	3.63	80	1.15	0.0	3.34	2.75		
1003		9.24	3.58	74	1.15	0.0	3.05	3.00		
1008		9.13	3.57	64	1.15	0.0	2.90	3.25		
1013	12.48	9.79	3.63	56	1.15	0.0	2.75	3.50	↓	

SAMPLE ID: MW-2A_20260421 (Dup-01-GW_20260421)

SAMPLE DATE: 4/21/26

SAMPLE TIME: 1015

Notes: MW-2A_20260421_FBLL (Dup-01-GW_20260421_FBLL)

Went back at a later date to repurge pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-2A

DATE: 4/29/26

PROJECT #: 401.2400718.000

PERSONNEL: SPG

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

DEPTH OF WELL: —

DEPTH TO WATER LEVEL: 5.39

PURGE START TIME: 1651

SCREEN LENGTH: —

WELL DIAMETER: 3"

TUBING TYPE: 1/4" Polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba, Peristaltic Pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1654	6.02	8.79	7.02	57	1.15	0.0	1.36			
1657	6.49	8.69	6.97	40	1.16	0.0	0.92			
1700	7.00	8.61	6.96	34	1.16	0.0	0.82			

SAMPLE ID: N/A

SAMPLE DATE:

SAMPLE TIME:

Notes: Re-purged for pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4/21/26

PERSONNEL: SPG

OBSERVERS:

SAMPLE LOCATION: MW-23

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

DEPTH OF WELL: -

SCREEN LENGTH: -

TUBING TYPE: 1/4" polyteflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 6.15'

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 1357

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1400	6.48	17.63	7.68	-8	0.726	6.9	1.21	0.25	200	
1403	6.80	16.95	6.78	-34	0.730	0.0	0.61	0.50		
1406	7.05	16.29	6.37	-30	0.738	0.0	0.49	0.75		
1409	7.31	15.81	6.11	-29	0.744	0.0	0.43	1.00		
1412	7.53	15.28	5.96	-30	0.751	0.0	0.35	1.25		
1415	7.78	15.02	5.80	-34	0.754	0.0	0.31	1.50		
1418	7.89	14.92	5.73	-36	0.757	0.0	0.31	1.75	↓	

SAMPLE ID: MW-23_20260421 (MW-23_20260421_FBLL)

SAMPLE DATE: 4/21/26

SAMPLE TIME: 1530

Notes: Well MW-25B @ 83.45'

Went back at a later date to re-purge pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-23

DATE: 4/29/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: ~

DEPTH TO WATER LEVEL: 5.17

PURGE START TIME: 1707

SCREEN LENGTH: ~

WELL DIAMETER: 3"

TUBING TYPE: ~

CASING TYPE: pvc

MONITORING EQUIPMENT: Horiba, peristaltic pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1710	5.84	7.13	7.13	65	0.934	1000	1.09			
1713	6.27	7.00	7.08	33	0.936	238	0.66			
1716	6.67	6.95	7.07	20	0.957	21.2	0.57			

SAMPLE ID: N/A

SAMPLE DATE: ↓

SAMPLE TIME: ↓

Notes: Re-purge for pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-3A

DATE: 4/22/26

PROJECT #: 401.2400718.000

PERSONNEL: SDG

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

DEPTH OF WELL: 32.30

DEPTH TO WATER LEVEL: 5.15'

PURGE START TIME: 939

SCREEN LENGTH: -

WELL DIAMETER: 3"

TUBING TYPE: 1/4" polyteflon

CASING TYPE: pvc

MONITORING EQUIPMENT: Horiba, Peristaltic Pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0942	5.62	10.80	6.05	-51	2.24	0.3	2.65	0.25	200	
0945		10.07	5.99	-55	2.29	0.0	1.50	0.50		
0948	6.15	9.94	5.97	-55	2.30	2.4	1.32	0.75		
0951	6.35	9.77	5.93	-55	2.31	5.0	1.09	1.00		
0954		10.65	5.90	-52	2.25	10.4	0.71	1.25		
0957	6.72	10.87	5.86	-52	2.24	11.8	0.56	1.50		
1000	6.91	10.93	5.84	-51	2.23	12.6	0.52	1.75		
1003	7.10	10.95	5.81	-50	2.24	12.9	0.50	2.00	↓	

SAMPLE ID: MW-3A-20240422 (MW-3A-20240422-FB1)

SAMPLE DATE: 4/22/26

SAMPLE TIME: ~~1045~~ 1045

Notes:

Went back at a later date to resample pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-3A

DATE: 4/30/26

PROJECT #: 401.2400718.000

PERSONNEL: SQB

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

DEPTH OF WELL: –

DEPTH TO WATER LEVEL: –

PURGE START TIME: 1149

SCREEN LENGTH: –

WELL DIAMETER: –

TUBING TYPE: –

CASING TYPE: –

MONITORING EQUIPMENT: Horiba U-52, peri-pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1152		6.20	7.04	4	2.33	2.8	6.78			
1155		6.36	6.84	-21	2.38	0.0	2.42			
1158		6.46	6.83	-26	2.40	0.0	3.66			

SAMPLE ID: N/A

SAMPLE DATE:

SAMPLE TIME:

Notes: pH Re-purge

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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SAMPLE LOCATION: MW-3B

DATE: 4/21/26

PROJECT #: 401.2400718.000

PERSONNEL: SPG

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

DEPTH OF WELL: 16.60

DEPTH TO WATER LEVEL: 4.68

PURGE START TIME: 1605

SCREEN LENGTH: -

WELL DIAMETER: 3"

TUBING TYPE: 1/4" polytefion

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1608	5.1	12.85	6.84	51	0.752	14.3	2.96	0.25	200	
1611	5.53	11.06	6.84	41	0.777	6.2	2.29	0.50		
1614	5.9	9.93	6.84	34	0.798	24.5	1.57	0.75		
1619		9.32	6.80	16	0.809	65.8	1.68	1.00		
1624	6.65	9.04	6.64	13	0.813	76.3	1.41	1.25		
1629	6.83	8.75	6.51	19	0.821	73.3	1.30	1.50		
1634	7.03	8.56	6.43	22	0.827	72.2	1.16	1.75		
1639		8.46	6.37	25	0.832	76.4	1.17	2.00	↓	

SAMPLE ID: MW-3B_20260421 (MW-3B_20260421_FBLL)

SAMPLE DATE: 4/21/26

SAMPLE TIME: 1725

Notes:

Went back at a later date to repurge for pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

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DATE: 4/30/24

PERSONNEL: SPG

OBSERVERS: —

SAMPLE LOCATION: MW-3B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: —

DEPTH OF WELL: —

SCREEN LENGTH: —

TUBING TYPE: —

DEPTH TO WATER LEVEL: —

WELL DIAMETER: —

CASING TYPE: —

PURGE START TIME: 1104

MONITORING EQUIPMENT: Horiba U-52, peri-pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1107		7.12	7.12	45	1.07	0.0	2.99			
1110		7.10	7.06	72	0.970	0.0	2.28			
1113		7.07	7.05	94	0.945	0.0	1.96			

SAMPLE ID: —

SAMPLE DATE: —

SAMPLE TIME: —

Notes: pH re-purged

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-5A

DATE: 4/22/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL:

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: —

DEPTH TO WATER LEVEL: 3.47'

PURGE START TIME: 1235

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba, Peristaltic

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1240	4.25	13.77	8.72	60	1.39	0.0	55	0.25	200	
1245	4.50	12.71	8.70	59	1.42	0.0	1.66	0.50		
1250	4.69	12.18	8.67	56	1.44	0.0	1.48	0.75		
1255	4.78	11.96	8.53	41	1.46	0.0	1.23	1.00		
1300	4.85	11.92	8.12	-6	1.47	0.0	1.05	1.25		
1305	4.90	12.12	7.48	-24	1.45	0.0	1.07	1.50		
1310	4.93	12.18	6.92	-8	1.44	0.0	0.84	1.75		
1315	4.67	13.21	6.46	10	1.40	0.0	0.84	2.00		
1320	4.78	12.65	6.24	16	1.39	0.0	0.67	2.25		
1505	4.84	12.73	6.12	19	1.37	0.0	0.62	2.50	↓	

SAMPLE ID: MW-5A_20260422 (MW-5A_20260422-FTSLL)

SAMPLE DATE: 4/22/26

SAMPLE TIME: 1400

Notes: pH probe not functioning correctly, returned at later date to repurge for pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4/29/26

PERSONNEL: SG

OBSERVERS:

SAMPLE LOCATION: MW-5A

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

DEPTH OF WELL:

SCREEN LENGTH:

TUBING TYPE:

MONITORING EQUIPMENT: Horiba, peristaltic pump

DEPTH TO WATER LEVEL: 3.19

WELL DIAMETER:

CASING TYPE:

PURGE START TIME: 1742

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1745	3.64	7.56	7.12	177	1.37	0.0	1.31			
1748	3.93	7.41	7.04	172	1.39	0.0	0.71			
1751	4.15	7.32	7.03	168	1.39	0.0	0.60			
1754	4.31	7.24	7.03	166	1.39	0.0	0.56			

SAMPLE ID: N/A

SAMPLE DATE:

SAMPLE TIME:

Notes: Re-purge for pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-55B

DATE: 4/28/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: —

DEPTH TO WATER LEVEL: 0.0'

PURGE START TIME: 1423

SCREEN LENGTH: —

WELL DIAMETER: 2"

TUBING TYPE: 1/4" polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba, peristaltic pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1428	0.0	10.56	8.88	130	0.989	0.0	3.77	0.25	200	
1431	0.0	10.52	8.88	106	0.984	0.0	3.32	0.50		
1434	0.0	10.49	8.89	83	0.984	0.0	2.56	0.75		
1437	0.0	10.45	8.89	66	0.981	0.0	2.06	1.00		
1440	0.0	10.42	8.89	53	0.982	0.0	1.85	1.25		
1443	0.0	10.43	8.89	42	0.981	0.0	1.68	1.50		
1446	0.0	10.43	8.89	34	0.983	0.0	1.57	1.75		
1449	0.0	10.56	8.89	27	0.986	0.0	1.49	2.00		
1452	0.0	10.69	8.89	22	0.980	0.0	1.44	2.25		
1455	0.0	10.63	8.89	12	0.970	0.0	1.40	2.50		
1458	0.0	10.49	8.89	1	0.990	0.0	1.36	2.75		
1501	0.1	10.61	8.89	-10	0.965	0.0	1.31	3.00		
1504	0.1	10.53	8.89	-16	0.963	0.0	1.28	3.25		
1507	0.1	10.49	8.89	-20	0.963	1.2	0.61	3.50		
1510	0.1	10.51	8.89	-21	0.963	0.9	0.60	3.75		
1513	0.2	10.48	8.89	-20	0.963	0.0	0.62	4.00		

SAMPLE ID: MW-55B_20260428 (MW-55B_20260428_FBLL)

SAMPLE DATE: 4/28/26

SAMPLE TIME: 1530

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-10

DATE: 4/22/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: -

DEPTH TO WATER LEVEL: 4.02

PURGE START TIME: 1558

SCREEN LENGTH: -

WELL DIAMETER: 1.5"

TUBING TYPE: 1/4" polytetfon

CASING TYPE: pvc

MONITORING EQUIPMENT: Horiba, peristaltic Pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1601	4.9	16.55	5.79	-99	1.96	3.9	2.84	0.25	200	
1604	5.1	15.95	5.36	-113	2.14	1.4	2.09	0.50		
1607	5.3	15.23	6.23	-119	2.20	12.2	2.17	0.75		
1610	5.37	14.85	5.18	-121	2.23	31.8	2.19	1.00		
1613	5.38	14.56	5.16	-124	2.25	42.6	2.11	1.25		
1616	5.42	14.38	5.14	-126	2.27	46.1	2.07	1.50		
1619	5.45	14.16	5.13	-128	2.28	47.9	2.06	1.75	↓	

SAMPLE ID: MW-10_20260422 (MW-10_20260422-FIELD)

SAMPLE DATE: 4/22/26

SAMPLE TIME: 1722

Notes: lost pH probe not working returned at later date to repurge for pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-10

DATE: 4/30/26

PROJECT #: 401.2400718.000

PERSONNEL: SPG

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL:

DEPTH TO WATER LEVEL:

PURGE START TIME: 1228

SCREEN LENGTH:

WELL DIAMETER:

TUBING TYPE:

CASING TYPE:

MONITORING EQUIPMENT: Horiba U-52, peri-pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1231		7.09	6.52	-37	2.23	26.5	1.53			
1234		7.12	6.46	-50	2.43	13.6	0.70			
1237		7.17	6.46	-55	2.46	10.0	0.67			

SAMPLE ID: N/A

SAMPLE DATE:

SAMPLE TIME:

Notes: pH re-purge

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-31

DATE: 4-27-2026

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: ERC + EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: 72.16

DEPTH TO WATER LEVEL: 49.35

PURGE START TIME: 12:40

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: polytefloon

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
12:53	49.45	14.04	8.28	104	0.328	233	5.93	0.25	200	
12:56	49.55	13.10	8.29	102	0.325	164	3.54	0.50		
12:59	49.56	12.48	8.28	100	0.328	165	2.80	0.75		
13:02	49.57	12.39	8.29	97	0.329	187	2.60	1.00		
13:05	49.58	13.10	8.28	93	0.330	239	2.38	1.25		
13:08	49.59	13.34	8.27	92	0.331	255	2.36	1.50		
13:11	49.56	13.43	8.28	96	0.331	258	2.37	1.75	↓	

SAMPLE ID: MW-31_20260427 & FBL

SAMPLE DATE: 4-27-2026

SAMPLE TIME: 13:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-35

DATE: 4/22/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EJV 3 ERC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 67°F Sunny & clear

DEPTH OF WELL: 22.00

DEPTH TO WATER LEVEL: 15.90

PURGE START TIME: 1501

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: Vinyl PE

CASING TYPE: PVC

MONITORING EQUIPMENT: HORIBA U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
1504	16.55	12.96	7.32	93	0.391	90.3	4.66	0.12	100	
1507	17.14	11.20	7.27	99	0.386	94.2	3.80	0.24	100	

SAMPLE ID: MW-35-20260422

SAMPLE DATE: 4/22/26

SAMPLE TIME: 15:15

Notes: * Sampled before stabilization due to low water level

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-355B

DATE: 4/23/26

PROJECT #: 401.2400718.000

PERSONNEL: SPG

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS:

DEPTH OF WELL: -

DEPTH TO WATER LEVEL: 17.15'

PURGE START TIME: 858

SCREEN LENGTH: -

WELL DIAMETER: 2"

TUBING TYPE: 1/2" PE

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba, Hurricane Pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED ~~(Gallons)~~ Liters	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
0901	21.58	13.54	5.67	202	0.516	47.3	0.02	0	500	
0903	26.40	12.87	5.72	200	0.510	357	1.44	2.5		
0907	29.15	10.69	5.75	199	0.541	272	2.50	5		
0910	31.95	10.38	5.80	179	0.547	232	2.26	7.5		
0913	33.9	10.40	5.84	132	0.547	414	1.93	10		
0916		10.33	5.92	90	0.547	961	1.52	12.5		
0919	38.01	10.36	5.92	88	0.549	1000	1.96	15		
0922	39.05	10.35	5.95	86	0.546	1000	1.46	17.5	↓	

SAMPLE ID: MW-355B_20260423 (MW-355B-20260423-FBLL)

SAMPLE DATE: 4/23/26

SAMPLE TIME: 0925

Notes:

returned at a later date to repurge for pH

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-3553

DATE: 5/5/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: -

DEPTH TO WATER LEVEL: -

PURGE START TIME: 818

SCREEN LENGTH: -

WELL DIAMETER: -

TUBING TYPE: -

CASING TYPE: -

MONITORING EQUIPMENT: Horiba U-52, peri-pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
821		8.17	8.49	131	0.568	3.3	11.59			
824		7.99	8.46	132	0.560	2.1	9.88			
827		7.75	8.45	137	0.561	3.6	F.55			
830		7.68	8.45	141	0.559	3.8	7.72			

SAMPLE ID: N/A

SAMPLE DATE:

SAMPLE TIME:

Notes: pH Re-Purge

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4/22/26

PERSONNEL: ERC & EJV

OBSERVERS: —

SAMPLE LOCATION: MW-36

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 50° CLEAR SUNNY

DEPTH OF WELL: 19.96

SCREEN LENGTH:

TUBING TYPE: 1/4" PE

DEPTH TO WATER LEVEL: 2.42

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 10:30

MONITORING EQUIPMENT: HORIBA U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:33	3.62	9.41	6.91	-38	0.615	0.0	5.22	0.25	200	
10:36	4.91	9.15	6.85	-57	0.608	0.0	2.17	0.50		
10:39	5.02	9.09	6.85	-60	0.607	0.0	1.71	0.75		
10:42	6.13	9.07	6.86	-63	0.605	0.0	1.44	1.00		
10:45	6.89	9.23	6.86	-65	0.602	0.0	1.26	1.25		
10:48	7.48	9.29	6.86	-67	0.602	0.0	1.08	1.50		
10:51	8.38	9.39	6.89	-68	0.600	0.0	0.93	1.75		
10:54	9.04	9.53	6.89	-68	0.598	0.0	0.88	2.00		
10:57	9.45	9.66	6.90	-66	0.593	0.0	0.88	2.25	↓	

SAMPLE ID: MW-36-20260422 & FBLL

SAMPLE DATE: 04/22/26

SAMPLE TIME: 1120

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

SAMPLE LOCATION: MW-37

DATE: 4-22-2026
PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
PERSONNEL: ERC + EJV
SITE ADDRESS: White Pine, MI
OBSERVERS:
SITE CONDITIONS: 68°F, Sunny

DEPTH OF WELL: 21.20
DEPTH TO WATER LEVEL: 9.54
PURGE START TIME: 16:08
SCREEN LENGTH:
WELL DIAMETER: 2"
TUBING TYPE: 1/4 poly teflon
CASING TYPE: PVC
MONITORING EQUIPMENT: Horiba U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
16:13	9.88	23.25	7.56	108	0.286	115	7.46	0.12	100	
16:16	10.39	22.89	7.62	118	0.284	108	5.16	0.24	↓	
16:19	10.44	22.38	7.58	126	0.281	103	4.52	0.36	↓	
16:22	10.49	22.03	7.50	132	0.278	100	4.23	0.48	↓	
16:25	10.53	21.64	7.37	140	0.261	98	4.02	0.60	↓	
16:28	10.55	21.43	7.27	146	0.241	83.2	3.95	0.72	↓	
16:30	10.57	21.33	7.23	149	0.228	80.7	4.11	0.84		

SAMPLE ID: MW-37-20260422 & FBLL
SAMPLE DATE: 4-22-26
SAMPLE TIME: 16:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-38

DATE: 4/28/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: 30.45

DEPTH TO WATER LEVEL: 5.99

PURGE START TIME: 855

SCREEN LENGTH: —

WELL DIAMETER: 2"

TUBING TYPE: 1/4" PE

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba, peristaltic pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
858	7.38	10.73	7.53	192	0.469	0.0	4.81	0.25	200	
901	8.00	9.67	7.58	197	0.484	0.0	4.38	0.50		
904	8.55	9.00	7.58	200	0.495	0.0	4.05	0.75		
907	9.02	8.70	7.58	202	0.498	0.0	3.76	1.00		
910	9.65	8.45	7.58	204	0.503	0.0	3.40	1.25		
913	10.08	8.39	7.57	206	0.504	0.0	3.18	1.50		
916	10.59	8.26	7.57	207	0.506	0.0	2.97	1.75		
919	11.00	8.28	7.57	209	0.506	0.0	2.79	2.00		
922	11.38	8.10	7.56	210	0.509	0.0	2.64	2.25		
925	11.77	8.10	7.56	212	0.511	0.0	2.47	2.50		
928	12.07	8.18	7.56	212	0.510	0.0	2.41	2.75	↓	

SAMPLE ID: MW-38_20260428 (MW-38_20260428_FIELD)

SAMPLE DATE: 4/28/26

SAMPLE TIME: 1000

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4-22-2026

PERSONNEL: ERC + EJV

OBSERVERS:

SAMPLE LOCATION: MW-41

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 50°F, Sunny

DEPTH OF WELL: 29.60

SCREEN LENGTH:

TUBING TYPE: 1/4" PE

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 27.39

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 11:47

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
11:50	28.04	17.00	7.65	65	0.555	12.0	9.51	0.12	100	

SAMPLE ID: MW-41_20260422 & FBLL

SAMPLE DATE: 4-22-2026

SAMPLE TIME: 12:00

Notes: *Sampled before stabilization due to low water level, returned on 4/28/26 and 5/4/26 to collect additional water for lab analysis

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-42

DATE: 4/28/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS:

DEPTH OF WELL: —

DEPTH TO WATER LEVEL: 3.55

PURGE START TIME: 1103

SCREEN LENGTH: —

WELL DIAMETER: 2"

TUBING TYPE: 1/4" polyteflon

CASING TYPE: PVC

MONITORING EQUIPMENT: Peristaltic Pump, Horiba

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
1106	5.95	7.76	8.94	191	0.292	12.0	12.38	0.25	200	
1109	6.90	7.74	8.95	191	0.292	7.3	11.53	0.50		
1112	7.69	7.70	8.95	191	0.291	7.1	10.81	0.75		
1115	8.55	7.63	8.95	191	0.291	6.1	10.12	1.00		
1118	9.43	7.66	8.95	191	0.291	5.0	9.45	1.25		
1121	10.29	7.67	8.96	191	0.291	4.3	8.88	1.50		
1124	11.10	7.65	8.96	191	0.291	4.2	8.44	1.75		
1127	11.91	7.62	8.96	191	0.291	4.3	8.00	2.00		
1130	12.87	7.62	8.96	191	0.290	4.2	7.57	2.25		
1133	13.52	7.59	8.96	191	0.290	4.2	7.21	2.50		
1136	14.38	7.63	8.94	191	0.290	4.3	6.87	2.75		
1139	15.02	7.62	8.95	192	0.290	4.1	6.70	3.00	↓	

SAMPLE ID: MW-42_20260428 (MW-42_20260428_FBLL)

SAMPLE DATE: 4/28/26

SAMPLE TIME: 1200

Notes: Replace tubing for next event

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MW-43

DATE: 5/4/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: SPG, ERC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: Overcast, 60°F

DEPTH OF WELL: 27.80

DEPTH TO WATER LEVEL: 8.30'

PURGE START TIME: 09:27

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4 polyethlyn

CASING TYPE: PVC

MONITORING EQUIPMENT: Horiba, peristalic pump

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
09:39	9.01	8.29	7.97	125	0.431	35.4	2.03	0.25	200	
09:42	10.03	8.02	7.93	127	0.428	55.1	1.75	0.50		
09:45	10.93	7.99	7.92	127	0.428	52.9	1.68	0.75		
09:48	11.50	7.98	7.90	129	0.425	50.3	1.60	1.00		
09:51	11.93	7.85	7.89	130	0.425	47.7	1.54	1.25		
09:54	12.26	7.83	7.87	130	0.428	38.4	1.47	1.50	↓	

SAMPLE ID: MW-43_20260504 (MW-43_20260504_FBLL)

SAMPLE DATE: 5/4/26

SAMPLE TIME: 1015

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 5/4/26

PERSONNEL: SPG, ERC

OBSERVERS:

SAMPLE LOCATION: MW-433B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 55°F, Cloudy

DEPTH OF WELL: >100

SCREEN LENGTH:

TUBING TYPE: polytefion

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 7.67

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 1305

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
13:08	7.99	11.05	7.60	60	3.73	38.7	1.86	0.25	200	
13:11	8.47	11.27	7.25	23	3.87	22.9	1.35	0.50		
13:14	9.03	10.97	7.18	20	3.85	23.8	1.27	0.75		
13:17	9.58	10.62	7.15	18	3.80	100.2	1.14	1.00		
13:20	10.01	10.84	7.14	14	3.69	181	1.06	1.25		
13:23	10.49	10.98	7.14	12	3.65	222	1.03	1.50		
13:26	10.92	11.35	7.16	9	3.60	230	0.97	1.75		
13:29	11.36	11.06	7.15	6	3.64	226	0.95	2.00	↓	

SAMPLE ID: MW-433B_20260504 (MW-433B_20260504_FBLL)

SAMPLE DATE: 5.4.2026

SAMPLE TIME: 13:45

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 5-4-2026

PERSONNEL: ERC + SPJ

OBSERVERS:

SAMPLE LOCATION: MW-44

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 50°F, cloudy

DEPTH OF WELL: 38.60

SCREEN LENGTH:

TUBING TYPE: polytefion

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 13.34

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 11:05

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
11:08	13.46	8.57	8.14	147	0.678	33.6	2.85	0.25	200	
11:11	13.58	8.54	7.96	147	0.641	13.0	1.78	0.50	↓	
11:14	13.86	8.56	7.85	148	0.628	8.4	1.60	0.75	↓	
11:17	13.90	8.64	7.79	148	0.624	5.0	1.46	1.00	↓	
11:20	13.94	8.66	7.77	147	0.615	1.9	1.36	1.25	↓	
11:23	13.99	8.67	7.74	146	0.610	1.1	1.29	1.50	↓	
11:26	14.04	8.64	7.72	144	0.606	0.0	1.21	1.75	↓	
11:29	14.10	8.68	7.71	139	0.599	0.0	1.12	2.00	↓	

SAMPLE ID: MW-44_20260504 & FBLL

SAMPLE DATE: 5-4-2026

SAMPLE TIME: 11:45

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

DATE: 4-29-2026
PERSONNEL: ERC + EJV
OBSERVERS:

SAMPLE LOCATION: NB1-1
PROJECT #: 401.2400718.000
SITE NAME: White Pine Copper
SITE ADDRESS: White Pine, MI
SITE CONDITIONS: 42°F, cloudy/rainy

DEPTH OF WELL: 24.60
SCREEN LENGTH:
TUBING TYPE: polyteflon
MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 2.72
WELL DIAMETER: 2"
CASING TYPE: PVC

PURGE START TIME: 14:12

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
14:15	3.01	8.37	7.74	-61	1.02	17.3	1.81	0.25	200	
14:18	3.44	8.44	7.76	-76	1.01	22.9	1.53	0.50		
14:21	3.47	8.51	7.77	-88	1.01	18.3	1.04	0.75		
14:24	3.49	8.66	7.78	-99	1.01	13.0	0.72	1.00		
14:27	3.55	8.81	7.79	-107	1.01	10.7	0.67	1.25		
14:30	3.61	8.94	7.80	-115	1.01	10.3	0.55	1.50		
14:33	3.63	8.77	7.80	-123	1.01	10.3	0.48	1.75		
14:36	3.65	8.69	7.81	-131	1.00	8.4	0.54	2.00		
14:39	3.66	8.63	7.82	-136	1.00	4.2	0.56	2.25		
14:42	3.67	8.63	7.83	-140	1.00	3.1	0.52	2.50	↓	

SAMPLE ID: NB1-3-20260429 & FBLL
SAMPLE DATE: 4-29-2026
SAMPLE TIME: 14:45
Notes: * Odor present

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4-29-26

PERSONNEL: ESV 3 ERC

OBSERVERS: —

SAMPLE LOCATION: NB1-3

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: cloudy, 41° wind

DEPTH OF WELL: 34.53"

SCREEN LENGTH:

TUBING TYPE: 1/4" PE

DEPTH TO WATER LEVEL: 3.00"

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 1315

MONITORING EQUIPMENT: MORIBA U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C) +/- 3%	Ph +/- 0.1	ORP (mV) +/- 10 mV	COND. (mS/cm) +/- 3%	TURB. (NTU)[2] +/- 10%	DO (mg/L)[1] +/- 10%	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
13:18	4.12	8.91	7.76	-3	0.832	18.7	2.02	0.25	200	
13:21	5.25	8.71	7.55	-80	0.842	13.7	1.00	0.50		
13:24	5.92	8.70	7.53	-88	0.843	14.1	0.87	0.75		
13:27	6.57	8.58	7.53	-96	0.830	11.1	0.75	1.00		
13:30	6.97	8.50	7.53	-98	0.838	12.2	0.73	1.25		
13:33	7.38	8.46	7.55	-101	0.840	8.1	0.69	1.50		
13:36	7.81	8.38	7.57	-105	0.840	7.3	0.66	1.75	↓	

SAMPLE ID: NB1-3_20260429 & FBLL

SAMPLE DATE: 04-29-26

SAMPLE TIME: 13:45

Notes: * Odor present

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4-21-2026

PERSONNEL: ERC + EJV

OBSERVERS:

SAMPLE LOCATION: NB2-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 58° F, Sunny

DEPTH OF WELL: 12.20

SCREEN LENGTH:

TUBING TYPE: Poly + eflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 2.65

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 13:04

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
13:07	3.01	9.38	7.33	-96	0.837	7.8	1.55	0.25	200	
13:10	3.42	8.97	7.24	-110	0.842	3.3	0.93	0.50		
13:13	3.43	8.72	7.27	-117	0.846	2.7	0.82	0.75		
13:16	3.44	8.73	7.27	-126	0.863	1.8	0.70	1.00		
13:19	3.45	8.52	7.26	-131	0.876	1.5	0.67	1.25		
13:22	3.45	8.41	7.26	-136	0.888	1.2	0.61	1.50		
13:25	3.46	8.34	7.24	-143	0.901	0.1	0.57	1.75		
13:28	3.46	8.31	7.24	-145	0.907	0.0	0.57	2.00		
13:31	3.47	8.31	7.23	-148	0.913	0.0	0.56	2.25	↓	

SAMPLE ID: NB2-1_20260421 & FBLL

SAMPLE DATE: 4-21-2026

SAMPLE TIME: 13:40

Notes: *Sulphur odor

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: NB2-3

DATE: 4/21/26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EJV 3 ERC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: SUNNY CLEAR 51°F

DEPTH OF WELL: 30.10

DEPTH TO WATER LEVEL: 2.61

PURGE START TIME: 12:01

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" PE

CASING TYPE: PVC

MONITORING EQUIPMENT: HORIBA U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
12:04	3.68	11.30	7.43	-21	1.02	12.4	3.85	0.25	200	
12:07	4.27	10.06	7.52	-85	0.993	7.7	1.81	0.50		
12:10	5.07	9.69	7.51	-98	0.981	6.7	1.21	0.75		
12:13	5.45	9.64	7.49	-100	0.979	6.1	1.10	1.00		
12:16	5.98	9.46	7.48	-103	0.973	7.6	0.98	1.25		
12:19	6.49	9.43	7.47	-103	0.965	6.4	0.86	1.50		
12:22	7.00	9.45	7.45	-103	0.959	7.2	0.80	1.75		
12:25	7.41	9.44	7.45	-102	0.952	8.1	0.75	2.00		
12:28	7.82	9.46	7.44	-100	0.947	8.2	0.73	2.25	↓	

SAMPLE ID: NB2-3_20260421

SAMPLE DATE: 04/21/26

SAMPLE TIME: 12:30

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4/21/26 & 4/29/26

PERSONNEL: ERC & EJV

OBSERVERS: —

SAMPLE LOCATION: SMW-1

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 42° sunny, clear / 42°F, cloudy

DEPTH OF WELL: NA

DEPTH TO WATER LEVEL: 24.46 / 24.40

PURGE START TIME: 09:15

SCREEN LENGTH:

WELL DIAMETER: 3"

TUBING TYPE: poly-teflon

CASING TYPE: PVC

MONITORING EQUIPMENT: HORIBA U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
09:21	25.01	8.46	7.84	196	0.335	22.6	8.04	0.25	200	
09:24	25.86	8.35	7.83	197	0.335	19.6	5.43	0.50		
09:27	26.48	8.31	7.82	197	0.334	20.4	5.04	0.75		
09:30	27.28	8.30	7.83	196	0.334	19.4	4.82	1.00		
09:33	27.54	8.29	7.80	197	0.335	15.0	4.68	1.25		
09:36	27.99	8.30	7.84	193	0.336	16.3	4.65	1.50		
09:39	28.31	8.28	7.84	192	0.338	16.6	4.57	1.75	↓	

SAMPLE ID: SMW-01-20260421 & FBLL

SAMPLE DATE: ~~04/21/26~~ EC 09/29/2026

SAMPLE TIME: 10:00

Notes: 4/21/26 * @8:43 REMOVED BAROTROLL *

* Bladder pump failure, unable to purge. Must return at a later date (4/21/26)

4-29-26: Returned to well. Removed barotroll at 9:07, Re-installed at 10:02

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

9:27 - Removed barotroll background from tree

9:29 - Re-installed barotroll to tree

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: SMW-1SB

DATE: 4-29-26

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

PERSONNEL: EJV & ERC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 42°F, cloudy

DEPTH OF WELL: >100

DEPTH TO WATER LEVEL: 26.03

PURGE START TIME: 10:15

SCREEN LENGTH:

WELL DIAMETER: 2"

TUBING TYPE: 1/4" PE

CASING TYPE: PVC

MONITORING EQUIPMENT: HORIBA U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:19	26.99	8.57	8.64	150	0.323	0.0	10.81	0.25	200	
10:22	27.68	8.55	8.68	148	0.324	0.0	9.61	0.50		
10:25	28.45	8.58	8.70	145	0.323	0.0	8.98	0.75		
10:28	29.06	8.60	8.70	143	0.323	0.0	8.49	1.00		
10:31	29.49	8.62	8.70	142	0.323	0.0	8.24	1.25		
10:34	29.80	8.65	8.72	140	0.323	0.0	8.03	1.50		
10:37	30.02	8.63	8.71	139	0.323	0.0	7.70	1.75		
10:40	30.29	8.56	8.72	138	0.323	0.0	7.51	2.00		
10:43	30.55	8.50	8.71	138	0.323	0.0	7.26	2.25		
10:46	30.64	8.46	8.72	137	0.323	0.0	6.85	2.50		
10:49	30.78	8.43	8.72	136	0.323	0.0	6.61	2.75		
10:52	30.92	8.40	8.75	135	0.323	0.0	6.35	3.00		
10:55	31.01	8.39	8.76	135	0.324	0.0	6.11	3.25		
10:58	31.09	8.33	8.79	131	0.325	0.0	5.80	3.50		

SAMPLE ID: SMW-1SB-20260429

SAMPLE DATE: 04-29-26

SAMPLE TIME: 11:00

Notes: 9:53 - Removed baratroll for download/sampling

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4/27/26

PERSONNEL: ESV 3 ERC

OBSERVERS: —

SAMPLE LOCATION: SMW-3

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: OVERCAST 49° SLIGHT WIND

DEPTH OF WELL: > 54.66

SCREEN LENGTH:

TUBING TYPE: 1/4" PE

DEPTH TO WATER LEVEL: 26.54

WELL DIAMETER: 3"

CASING TYPE: PVC

PURGE START TIME: 09:30

MONITORING EQUIPMENT: HORIBA U-52

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
09:40	27.01	9.62	8.40	-5	0.221	0.0	11.03	0.25	200	
09:43	27.49	9.51	8.36	-36	0.222	0.0	10.00	0.50		
09:46	27.62	9.50	8.43	-64	0.225	0.0	9.15	0.75		
09:49	27.76	9.45	8.45	-71	0.227	0.0	8.86	1.00		
09:52	27.82	9.38	8.48	-83	0.228	0.0	8.53	1.25		
09:55	27.89	9.37	8.49	-89	0.229	0.0	7.85	1.50		
09:58	27.94	9.34	8.47	-95	0.229	0.0	7.30	1.75		
10:01	27.96	9.28	8.51	-105	0.230	0.0	6.79	2.00		
10:04	28.01	9.27	8.51	-110	0.230	0.0	6.89	2.25	↓	

SAMPLE ID: SMW-3-20260427 & FBLL

SAMPLE DATE: 04-27-26

SAMPLE TIME: 10:15

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

LOW FLOW GROUND WATER SAMPLING FORM

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

DATE: 4-27-2026

PERSONNEL: ERL + EJV

OBSERVERS:

SAMPLE LOCATION: SMW-35B

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 49° F, cloudy

DEPTH OF WELL: >100

SCREEN LENGTH:

TUBING TYPE: Polyteflon

MONITORING EQUIPMENT: Horiba U-52

DEPTH TO WATER LEVEL: 24.93

WELL DIAMETER: 2"

CASING TYPE: PVC

PURGE START TIME: 10:17

TIME	WATER LEVEL (<0.3 feet once stabilized)	TEMP. (°F/°C)	Ph	ORP (mV)	COND. (mS/cm)	TURB. (NTU)[2]	DO (mg/L)[1]	VOLUME PURGED (Gallons)	PUMP RATE (ml/min)	NOTES
		+/- 3%	+/- 0.1	+/- 10 mV	+/- 3%	+/- 10%	+/- 10%			
10:20	23.01	9.55	8.86	-24	0.466	15.7	11.94	0.25	200	
10:23	23.88	9.32	8.86	-28	0.467	18.7	11.27	0.50		
10:26	24.02	9.30	8.85	-30	0.467	28.5	10.38	0.75		
10:29	24.12	9.35	8.85	-32	0.467	31.0	9.86	1.00		
10:32	24.22	9.39	8.85	-36	0.467	51.7	8.33	1.25		
10:35	24.34	9.59	8.86	-39	0.467	48.4	1.40	1.50		
10:38	24.39	9.62	8.86	-41	0.467	48.0	1.31	1.75		
10:41	24.46	9.70	8.87	-43	0.467	49.4	1.35	2.00	↓	

SAMPLE ID: SMW-35B-20260427 & FBLL

SAMPLE DATE: 4-27-2026

SAMPLE TIME: 11:05

Notes:

[1] - 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized

[2] - 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-01

DATE: 4/20/26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: E+E

SITE ADDRESS: White Pine, MI

OBSERVERS: SPG

SITE CONDITIONS: 30°F Sunny

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: 1.32

pH: 6.53

CONDUCTIVITY: 0.051 mS/cm

TEMPERATURE: 3.43 °C

ORP: 233 mV

DO: 10.60 mg/l

TURBIDITY: 15.9 NTU

MONITORING EQUIPMENT: Horiba U-52, OTT MF pro

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	5	0				
2	5.25	0.7	-0.015			Brush
3	5.75	0.9	-0.051			Brush
4	6.25	0.85	0.011			
5	6.75	1.0	0.032			
6	7.25	1.1	0.253			
7	7.75	1.2	0.210			
8	8.25	1.1	0.263			
9	8.75	1.0	0.030			
10	9.25	0.9	-0.025			Dirt mound
11	9.75	0.5	-0.050			" "
12	10.25	0.5	-0.025			" "
13	10.75	0.4	-0.036			" "
14	11.25	edge of water				
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: ARC-01_20260420 & FBLL

SAMPLE TIME: 0900

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

3.5
12.75

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-02

DATE: 5-4-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 60°F, Sunny

GAUGE READING START: NA

GAUGE READING END: ~

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: Horiba U-52, OTT MF pro

pH	6.40		ORP	96	mV
CONDUCTIVITY	0.080	mS/cm	DO	6.48	mg/l
TEMPERATURE	14.16	°C	TURBIDITY	184	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	3.00	0				
2	3.5	1.7	-	-0.028	-0.015	
3	4.5	2.0		-0.028	-0.015	
4	5.5	2.1		0.016	-0.024	
5	6.5	1.75		0.028	-0.011	
6	7.5	1.35	-0.011			
7	8.5	1.0	-0.020			
8	9.5	0.8	-0.025			
9	10.5	0.7	-0.020			
10	11.5	0.4	0.012			
11	12.5	0.1	0.018			
12	12.75	0				edge
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: ARC-02_20260504 & FBLL

SAMPLE TIME: 15:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

*Stream flow changed with wind

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: ARC-03

DATE: 4/27/26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SPG, JC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: CLOUDY, ~ 50°F, E. BREEZE

GAUGE READING START: 1.2

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: MS6 Horiba U-52, OTT MF PRO

pH	7.15	ORP	147 mV
CONDUCTIVITY	0.073 mS/cm	DO	10.39 mg/l
TEMPERATURE	10.65 °C	TURBIDITY	4.9 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)	5'10"	0	0			
2	6'10"	0.35	-0.044			
3	7'10"	0.4	0.690			
4	8'10"	0.4	0.737			
5	9'10"	0.6	0.693			
6	10'10"	0.6	0.784			
7	11'10"	0.7	0.822			
8	12'10"	0.8	0.644			
9	13'10"	0.75	0.972			
10	14'10"	0.7	0.255			
11	15'10"	0.7	-0.078			
12	16'10"	0.5	-0.140			
13	17'9"	0	0			
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): [ ]

TOTAL WIDTH (ft): [ ]

SAMPLE ID: ARC-03_20260427 + FBLL

SAMPLE TIME: 1230

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: BNC-01

DATE: 4-21-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + EJU

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 60°F, Sunny

GAUGE READING START: NA

GAUGE READING END: ~

AVERAGE GAUGE HEIGHT: —

pH: 7.13

CONDUCTIVITY: 0.106 mS/cm

TEMPERATURE: 13.76 °C

ORP: 78 mV

DO: 8.56 mg/l

TURBIDITY: 3.6 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: BNC-01_20260421 + FBLL

SAMPLE TIME: 16:05

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: BNW-01

DATE: 4-27-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 55°F, cloudy

GAUGE READING START: NA

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

pH: 7.75

CONDUCTIVITY: 0.205 mS/cm

TEMPERATURE: 14.42 °C

ORP: 184 mV

DO: 8.12 mg/l

TURBIDITY: 3.7 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: BNW-01_20260427 & FBLL

SAMPLE TIME: 14:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: CBR-01

DATE: 5-4-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

PERSONNEL: ERL + SPG

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 60°F, Sunny

GAUGE READING START: NA

GAUGE READING END:

AVERAGE GAUGE HEIGHT: -

MONITORING EQUIPMENT:

pH: 7.36

CONDUCTIVITY: 0.074 mS/cm

TEMPERATURE: 14.08 °C

Horiba U-52

ORP: 155 mV

DO: 9.81 mg/l

TURBIDITY: 18.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO FLOWING

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: CBR-01_20260504 & FBLC

SAMPLE TIME: 17:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: CBR-02

DATE: 4/27/26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SPG, JC

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 50°F, cloudy

GAUGE READING START: Bent/Gone

pH: 7.17

ORP: 219 mV

GAUGE READING END: —

CONDUCTIVITY: 0.069 mS/cm

DO: 10.85 mg/l

AVERAGE GAUGE HEIGHT: —

TEMPERATURE: 9.15 °C

TURBIDITY: 14.5 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						Staff Gage Gone
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9			NO Gauging			
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: CBR-02_20260427 (CBR-02_20260427_FBLL)

SAMPLE TIME: 1130

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-01

DATE: 4-23-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + EJU

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: OVERCAST 57°

GAUGE READING START: NA

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: Horiba U-52, OTT MF pro

pH: 6.77

CONDUCTIVITY: 0.036 mS/cm

TEMPERATURE: 8.26 °C

ORP: 154 mV

DO: 11.24 mg/l

TURBIDITY: 40.0 NTU

10.25

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	1.5	0				
2	2	1.0	0.343			
3	2.5	1.0	0.636			
4	3	0.9	0.674			
5	3.5	1.0	0.173			
6	4	1.0	0.733			
7	4.5	1.0	0.615			
8	5	0.85	1.163			
9	5.5	0.8	1.645			
10	6	0.65	1.748			
11	6.5	0.6	1.527			
12	7	0.5	1.550			
13	7.5	0.5	1.415			
14	8	0.45	1.210			
15	8.5	0.4	0.759			
16	9	0.35	0.530			
17	9.5	0.25	0.155			
18	10	0.1	0.00			
19	10.25	0				
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft): 8.75

SAMPLE ID: DKC-01_20260423 & FB2L

SAMPLE TIME: 10:45

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-02

DATE: 4-28-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 46°F, cloudy, windy

GAUGE READING START: NA

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

pH: 7.04

CONDUCTIVITY: 0.047 mS/cm

TEMPERATURE: 9.163 °C

ORP: 170 mV

DO: 11.61 mg/l

TURBIDITY: 36.1 NTU

MONITORING EQUIPMENT: Horiba U-52, OTT MF pro

24.75

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	3.0	0				
2	3.5	0.4	0.973			
3	5.5	1.1	1.687			
4	7.5	0.95	1.609			
5	9.5	0.6	1.920			ON TOP OF ROCK
6	11.5	0.8	2.839			ON TOP OF ROCK
7	13.5	0.95	2.889			" "
8	15.5	0.9	1.642			" "
9	17.5	0.95	1.543			" "
10	19.5	0.8	1.462			
11	21.5	0.6	1.262			
12	23.5	0.4	0.382			
13	24.75	0				
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft): 21.75

SAMPLE ID: DKC-02_20260428 & FBLL

SAMPLE TIME: 12:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: DKC-03

DATE: 4/29/26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

PERSONNEL: SPG

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 42° F

GAUGE READING START: NA

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: Horiba U-52

pH: 7.34

CONDUCTIVITY: 0.052 mS/cm

TEMPERATURE: 8.32 °C

ORP: 155 mV

DO: 12.18 mg/l

TURBIDITY: 6.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: DKC-03_20260429 & FBLL

SAMPLE TIME: 920

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-01

DATE: 4/29/26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

PERSONNEL: SPG

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 50°F

GAUGE READING START: NA

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

pH: 7.45

CONDUCTIVITY: 0.101 mS/cm

TEMPERATURE: 8.11 °C

ORP: 237 mV

DO: 15.27 mg/l

TURBIDITY: 52.4 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: LKS-01-20260429 & FOLL

SAMPLE TIME: 1210

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: LKS-02

DATE: 4-30-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

ICE THICKNESS = NA inches

PERSONNEL: ERC & EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 37°F, Cloudy

GAUGE READING START: NA

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: Horiba U-52

pH	7.37	ORP	135	mV
CONDUCTIVITY	0.087 mS/cm	DO	13.28	mg/l
TEMPERATURE	5.53 °C	TURBIDITY	26.7	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: LKS-02_20260430 & FBLL

SAMPLE TIME: 09:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLC-01

DATE: 4/29/26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

PERSONNEL: SPG

SITE NAME: White Pine Copper

OBSERVERS:

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: Sunny, 50°F

GAUGE READING START: NA

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: Flow Meter, Horiba

pH	7.02		ORP	163	mV
CONDUCTIVITY	0.151	mS/cm	DO	12.71	mg/l
TEMPERATURE	9.61	°C	TURBIDITY	2.3	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	3.0	0.0				
1 (at water edge)	3.5	0.1	-0.035			
2	4.0	0.4	0.047			
3	4.5	0.55	0.708			
4	5.0	0.55	0.500			
5	5.5	0.4	0.492			
6	6.0	0.25	0.157			
7	6.5	0.1	0.259			
8	7.0	0.1	0.683			
9	7.5	0.1	0.321			
10	8.0	0.05	0.131			
11	8.5	0				
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: MLC-01-20260429 & FBLL

SAMPLE TIME: 1500 ish

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

No staff gage

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: MLR-01

DATE: 4/30/24

PERSONNEL: SPG

OBSERVERS:

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 37°F, Cloudy

PHOTO TAKEN? (Y) N

GAUGE READING START: NA

GAUGE READING END: —

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.22	ORP	227	mV
CONDUCTIVITY	0.053 mS/cm	DO	12.28	mg/l
TEMPERATURE	6.74 °C	TURBIDITY	18.5	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7			NO	Gauging		
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: MLR-01-20240430 & FBLL

SAMPLE TIME: 09:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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DATE: 04-23-26

PERSONNEL: ESV & ERC

OBSERVERS: —

SAMPLE LOCATION: MLR-02

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: OVERCAST 55°

PHOTO TAKEN? (Y) N

GAUGE READING START: 0852

GAUGE READING END:

AVERAGE GAUGE HEIGHT: 3OTT (3FT 4IN)

MONITORING EQUIPMENT: HORIBA U-52, OTT MF pro

pH: 6.77

CONDUCTIVITY: 0056 mS/cm

TEMPERATURE: 9.40 °C

ORP: 175 mV

DO: 10.92 mg/l

TURBIDITY: 82.1 NTU

44.66

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	6.41	0				
2	6.5	0.3	0.127			
3	9.5	0.7	1.501			
4	12.5	0.7	1.568			
5	15.5	1.4	1.217			
6	18.5	1.45	1.066			
7	21.5	1.6		0.405	1.378	
8	24.5	1.9		0.310	1.065	
9	27.5	2.3		0.660	1.159	
10	30.5	2.1		-0.096	0.460	ROCK
11	33.5	2.15		0.307	0.990	
12	36.5	1.75		-0.071	1.096	ROCK
13	39.5	1.4	0.388			
14	42.5	0.3	0.211			
15	44.66	0				
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft): 38.25

SAMPLE ID: MLR-02-20260423 & FBLL

SAMPLE TIME: 0920

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: MLR-03

DATE: 4-28-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SRC & BJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 40° F, cloudy, windy

GAUGE READING START: N/A

GAUGE READING END: —

AVERAGE GAUGE HEIGHT:

MONITORING EQUIPMENT: Horiba U-52

pH	7.47		ORP	160	mV
CONDUCTIVITY	0.107	mS/cm	DO	11.92	mg/l
TEMPERATURE	9.38	°C	TURBIDITY	96.4	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: MLR-03-20260428 & FBLL

SAMPLE TIME: 09:15

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: NTC-01

DATE: 4-28-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC & EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 42° F, Cloudy, windy

GPS Collected

GAUGE READING START: 1.41

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: Horiba U-52 / OTT MF Pro

pH: 7.08

CONDUCTIVITY: 0.075 mS/cm

TEMPERATURE: 10.50 °C

ORP: 139 mV

DO: 9.40 mg/l

TURBIDITY: 4.8 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	2.0	0.0				
2	2.25	0.3	0.242			
3	2.75	0.3	0.572			
4	3.25	0.4	0.398			
5	3.75	0.5	0.592			
6	4.25	0.4	0.613			
7	4.75	0.45	0.455			
8	5.25	0.4	0.549			
9	5.75	0.4	0.364			
10	6.25	0.4	0.399			
11	6.75	0.3	0.128			
12	7.25	0.2	0.018			
13	7.50	0	0			
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: NTC-01_20260428 & FBLL

SAMPLE TIME: 10:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-01

DATE: 04/20/26

PROJECT #: 401.2400718.000

PHOTO TAKEN? Y N

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS: EJV / ERC

SITE CONDITIONS: 38° sunny

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: 1.30 FT

pH: 5.95

CONDUCTIVITY: 0.026 mS/cm

TEMPERATURE: 4.67 °c

ORP: 218 mV

DO: 11.70 mg/l

TURBIDITY: 14.4 NTU

MONITORING EQUIPMENT: HORIBA, OTT MF pro

0.2.5" INTERVAL

6.75

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)	0	0				
1 (at water edge)	3.66	0				
2	3.75	1.15	0.035			
3	4.00	1.15	0.312			
4	4.25	1.15	0.428			
5	4.5	1.15	0.358			
6	4.75	1.20	0.397			
7	5	1.20	0.507			
8	5.25	1.15	0.604			
9	5.5	1.10	0.540			
10	5.75	1.10	0.417			
11	6	1.10	0.194			
12	6.25	1.05	0.157			
13	6.5	1.00	0.190			
14	6.75	0.9	0.222			
15	6.83	0				
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: PNC-01_20260420 & FBLL

SAMPLE TIME: 10:45

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: PNC-02

DATE: 4-20-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERL + EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 40°F, Sunny

GAUGE READING START: NA

GAUGE READING END: -

AVERAGE GAUGE HEIGHT: -

MONITORING EQUIPMENT: Horiba U-52

pH: 7.00

CONDUCTIVITY: 0.067 mS/cm

TEMPERATURE: 7.26 °C

ORP: 188 mV

DO: 11.05 mg/l

TURBIDITY: 35.6 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No gauging

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: PNC-02_20260420 & FBLC

SAMPLE TIME: 15:30

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-03

DATE: 4-22-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERL + EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: SUNNY CLEAR 48°

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: Bent

MONITORING EQUIPMENT: Horiba U-52, DTT MF pro

pH: 6.77

CONDUCTIVITY: 0.086 mS/cm

TEMPERATURE: 7.54 °C

ORP: 133 mV

DO: 10.08 mg/l

TURBIDITY: 28.3 NTU

3.75FT

23.25FT

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)	0	0				
1 (at water edge)	3.75	0				
2	4	0.35	-0.113			LOG
3	5.5	0.9	0.454			
4	7	1.2	0.240			
5	8.5	1.5	0.189			
6	10	1.7		0.024	0.045	
7	11.5	1.2	0.199			
8	13	0.75	1.016			
9	14.5	0.7	1.168			
10	16	0.7	1.338			
11	17.5	0.5	0.637			
12	19	0.5	1.034			
13	20.5	0.55	0.556			
14	22	0.6	0.022			
15	23.25	0				
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft): 19.5

SAMPLE ID: PNC-03_20260422 & FBLL

SAMPLE TIME: 09:45

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PNC-04

DATE: 4-27-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SPG, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: Cloudy, ~45°F

GAUGE READING START: 1.62

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

pH: 7.03

CONDUCTIVITY: 0.102 mS/cm

TEMPERATURE: 9.20 °C

ORP: 224 mV

DO: 13.24 mg/l

TURBIDITY: 10.4 NTU

MONITORING EQUIPMENT: MSG Horiba U-52, OTT MF Pro

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	3'4"	0	0			
2	4'4"	0.4	0.016			
3	5'4"	0.6	0.511			
4	6'4"	0.8	1.053			
5	7'4"	0.9	1.297			
6	8'4"	0.85	1.125			
7	9'4"	0.9	1.168			
8	10'4"	0.95	1.202			
9	11'4"	1.05	1.052			
10	12'4"	1.2	0.755			
11	13'4"	1.0	0.651			
12	14'4"	1.0	0.735			
13	15'4"	1.0	0.611			
14	16'4"	1.0	0.225			
15	17'4"	0.85	-0.038			
16	17'9"	0	0			BANK
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs): [ ]

TOTAL WIDTH (ft): [ ]

SAMPLE ID: PNC-04_20260427_d, FBLL

SAMPLE TIME: 09:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith Group — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-01

DATE: 4/30/26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SPG

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 40°F, cloudy

GAUGE READING START: ~1.05'

pH 7.74

ORP 255 mV

GAUGE READING END: —

CONDUCTIVITY 0.3608 mS/cm

DO 13.14 mg/l

AVERAGE GAUGE HEIGHT: —

TEMPERATURE 9.69 °C

TURBIDITY 148 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: PRC-01_20260430 & FBLC

SAMPLE TIME: 10:30

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: PRC-02

DATE: 4-28-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 42°F, cloudy, windy

GPS collected

GAUGE READING START: 1.96

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

pH: 7.59

CONDUCTIVITY: 0.313 mS/cm

TEMPERATURE: 11.10 °C

ORP: 170 mV

DO: 11.21 mg/l

TURBIDITY: 66.1 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Did not gauge due to fast Stream Flow and high water level

STREAM FLOW (cfs): NA

TOTAL WIDTH (ft): NA

SAMPLE ID: PRC-02-20260428 & PBLC

SAMPLE TIME: 10:05

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: PTC-01

DATE: 4-27-26

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: SPG, JBC

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: P. SUN, BREEZY, ~50°F

GAUGE READING START: NONE

pH: 7.28

ORP: 183 mV

GAUGE READING END: —

CONDUCTIVITY: 0.113 mS/cm

DO: 11.86 mg/l

AVERAGE GAUGE HEIGHT: —

TEMPERATURE: 11.74 °C

TURBIDITY: 0.0 NTU

MONITORING EQUIPMENT: MSG Horiba U-52, OTT MF PRO

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)	3'11"	0	0			
2	5'	0.1	0.344			
3	5.5'	0.3	0.065			
4	6'	0.3	0.109			
5	6.5'	0.4	0.359			
6	7'	0.45	0.509			
7	7.5'	0.35	0.910			
8	8'	0.35	-0.058			BEHIND ROCK
9	8.5'	0.35	0.764			
10	9'	0.25	0.726			
11	9.5'	0.2	0.557			
12	10'	0.1	0.447			
13	10'7"	0	0			BANK
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

STREAM FLOW (cfs):

TOTAL WIDTH (ft):

SAMPLE ID: PTC-01_20260427 & DUP-01-SW_20260427 & FBLL

SAMPLE TIME: 13:45

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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SAMPLE LOCATION: SBD-01

DATE: 4-20-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + EJV

SITE ADDRESS: White Pine, MI

OBSERVERS: —

SITE CONDITIONS: 40°F, Sunny

GAUGE READING START: —

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: NA

MONITORING EQUIPMENT: Horiba U-52

pH: 6.84

CONDUCTIVITY: 0.090 mS/cm

TEMPERATURE: 8.63 °C

ORP: 204 mV

DO: 7.89 mg/l

TURBIDITY: 9.9 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No Gauging

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: SBD-01_20260420 & FBLL

SAMPLE TIME: 13:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

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DATE: 4-20-2026

PERSONNEL: ERC + EJV

OBSERVERS:

SAMPLE LOCATION: SBW-01

PROJECT #: 401.2400718.000

SITE NAME: White Pine Copper

SITE ADDRESS: White Pine, MI

SITE CONDITIONS: 40°F, Sunny

PHOTO TAKEN? (Y) N

GAUGE READING START: —

GAUGE READING END:

AVERAGE GAUGE HEIGHT: NA

MONITORING EQUIPMENT: Horiba U-52

pH: 6.90

CONDUCTIVITY: 0.175 mS/cm

TEMPERATURE: 7.13 °C

ORP: 208 mV

DO: 5.19 mg/l

TURBIDITY: 15.5 NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25	—					

No Gauging

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

SAMPLE ID: SBW-01_20260420 + FBLL

SAMPLE TIME: 13:45

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: TBN-01

DATE: 4-21-2026

PROJECT #: 401.2400718.000

PHOTO TAKEN? (Y) N

SITE NAME: White Pine Copper

PERSONNEL: ERC + EJV

SITE ADDRESS: White Pine, MI

OBSERVERS:

SITE CONDITIONS: 60°F, Sunny

GAUGE READING START: NA

GAUGE READING END: —

AVERAGE GAUGE HEIGHT: —

MONITORING EQUIPMENT: Horiba U-52

pH	7.56		ORP	21	mV
CONDUCTIVITY	0.308	mS/cm	DO	10.79	mg/l
TEMPERATURE	8.76	°C	TURBIDITY	126	NTU

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0)	STATION DEPTH	0.6d VELOCITY	0.2d VELOCITY	0.8d VELOCITY	NOTES
	ft	ft	ft/s	ft/s	ft/s	
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

NO Gauging

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: TBN-01_20260421 & FBLL

SAMPLE TIME: 15:15

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

STREAM FLOW MEASUREMENT FIELD FORM - CURRENT METER

Mannik Smith GROUP — TECHNICAL SKILL. CREATIVE SPIRIT. — www.MannikSmithGroup.com

SAMPLE LOCATION: TBS-01

DATE: 4-20-26 | PROJECT #: 401.2400718.000 | PHOTO TAKEN? N

SITE NAME: White Pine Copper

PERSONNEL: ERC + EJV | SITE ADDRESS: White Pine, MI

OBSERVERS: | SITE CONDITIONS: 40°F Sunny

GAUGE READING START: N/A | pH: 7.30 | ORP: 131 mV

GAUGE READING END: | CONDUCTIVITY: 0.249 mS/cm | DO: 10.99 mg/l

AVERAGE GAUGE HEIGHT: — | TEMPERATURE: 9.22 °C | TURBIDITY: 126 NTU

MONITORING EQUIPMENT: Horiba U-52

STATION NUMBER	STATION DISTANCE (FROM STAKE/STATION 0) ft	STATION DEPTH ft	0.6d VELOCITY ft/s	0.2d VELOCITY ft/s	0.8d VELOCITY ft/s	NOTES
0 (at stake)						
1 (at water edge)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

No gauging

STREAM FLOW (cfs): —

TOTAL WIDTH (ft): —

SAMPLE ID: TBS-01-20260420 & FBLL

SAMPLE TIME: 16:00

*If the water is >1.5 ft deep, use the two point method (0.2d and 0.8d)

APPENDIX B
PHOTOGRAPH LOG



Photo 1: ARC-01 facing east (04-20-2026)



Photo 2: ARC-02 facing north (05-04-2026).



Photo 3: ARC-03 facing south (04-27-2026)



Photo 4: BNC-01 facing northeast (04-21-2026)



Photo 5: BNW-01 facing northwest (04-27-2026)



Photo 6: CBR-01 facing east (05-04-2026).



Photo 7: CBR-02 facing southeast (04-27-2026)



Photo 8: DKC-01 facing southeast (04-23-2026)



Photo 9: DKC-02 facing southwest (04-28-2026)



Photo 10: DKC-03 facing southwest (04-29-2026)



Photo 11: LKS-01 facing north (04-21-2026)



Photo 12: LKS-02 facing northwest (04-30-2026)



Photo 13: MLC-01 facing west (04-29-2026)



Photo 14: MLR-01 facing west (04-30-2026)



Photo 15: MLR-02 facing southwest (04-23-2026)



Photo 16: MLR-03 facing west (04-28-2026)



Photo 17: NTC-01 facing southwest (04-28-2026)



Photo 18: PNC-01 facing northwest (04-20-2026)



Photo 19: PNC-02 facing west (04-20-2026)



Photo 20: PNC-03 facing southeast (04-22-2026)



Photo 21: PNC-04 facing southeast (04-27-2026)



Photo 22: PRC-01 facing east (04-30-2026)



Photo 23: PRC-02 facing west (04-28-2026)



Photo 24: PTC-01 facing south (04-27-2026)



Photo 25: SBD-01 facing southwest (04-20-2026)



Photo 26: SBW-01 facing south (04-20-2026)



Photo 27: TBN-01 facing south (04-21-2026)



Photo 28: TBS-01 facing west (04-20-2026)



Photo 29: ARC-03 prior to removal of log jam (04-27-2026)



Photo 30: CBR-02 at prior location of stream gauge (04-27-2026).



Photo 31: Stream gauge located for NTC-01, facing south (04-28-2026)



Photo 32: Stream gauge located for PRC-02, facing south (04-28-2026)

Groundwater and Surface Water Analytical Reports

Eurofins Chicago

August 2024

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 10:02:12 AM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254112-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

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Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



Generated
8/21/2024 10:02:12 AM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job ID: 500-254112-1 — Eurofins Chicago

Job Narrative
500-254112-1

Receipt
The samples were received on 7/26/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.0º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Client Sample ID: MLR-02_20240725 — Lab Sample ID: 500-254112-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	1.2		0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	0.97		0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	0.31		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.30		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	460		100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.77	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	50		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	51	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	30000		200	44	ug/L	1		6020B	Total Recoverable
Copper	51		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	1100		100	47	ug/L	1		6020B	Total Recoverable
Lead	0.22	J	0.50	0.19	ug/L	1		6020B	Total Recoverable
Magnesium	6600		200	49	ug/L	1		6020B	Total Recoverable
Manganese	170		2.5	0.79	ug/L	1		6020B	Total Recoverable
Nickel	0.87	J	2.0	0.63	ug/L	1		6020B	Total Recoverable
Potassium	1400		500	110	ug/L	1		6020B	Total Recoverable
Sodium	11000	B	200	77	ug/L	1		6020B	Total Recoverable
Strontium	78		4.0	0.64	ug/L	1		6020B	Total Recoverable
Arsenic	0.68	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	44		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	47	J B	50	13	ug/L	1		6020B	Dissolved
Calcium	30000		200	44	ug/L	1		6020B	Dissolved
Copper	43		2.0	0.50	ug/L	1		6020B	Dissolved
Iron	350		100	47	ug/L	1		6020B	Dissolved
Magnesium	6400		200	49	ug/L	1		6020B	Dissolved
Manganese	61		2.5	0.79	ug/L	1		6020B	Dissolved
Potassium	1300		500	110	ug/L	1		6020B	Dissolved
Sodium	11000	B	200	77	ug/L	1		6020B	Dissolved
Strontium	77		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	100		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Chloride	15		1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.22	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	1.2		1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	99		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	99		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	100		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	15		5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	13		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	13		1.0	0.47	mg/L	1		SM 5310C	Dissolved

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Client Sample ID: MLR-02_20240725_FBLL

Lab Sample ID: 500-254112-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254112-1	MLR-02_20240725	Water	07/25/24 07:50	07/26/24 09:50
500-254112-2	MLR-02_20240725_FBLL	Water	07/25/24 07:50	07/26/24 09:50

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Client Sample ID: MLR-02_20240725

Date Collected: 07/25/24 07:50
Date Received: 07/26/24 09:50

Lab Sample ID: 500-254112-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 18:48	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 18:58	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.2**		0.50	0.20	ng/L			08/02/24 19:50	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.97**		0.50	0.20	ng/L			08/02/24 19:54	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.31**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:29	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.30**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:33	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**460**		100	25	ug/L		08/13/24 14:48	08/15/24 12:20	1
Antimony	<1.3		3.0	1.3	ug/L		08/13/24 14:48	08/15/24 12:20	1
Arsenic	**0.77**	**J**	1.0	0.23	ug/L		08/13/24 14:48	08/15/24 12:20	1
Barium	**50**		2.5	0.73	ug/L		08/13/24 14:48	08/15/24 12:20	1
Beryllium	<0.53		1.0	0.53	ug/L		08/13/24 14:48	08/15/24 12:20	1
Boron	**51**	**B**	50	13	ug/L		08/13/24 14:48	08/15/24 12:20	1
Cadmium	<0.17		0.50	0.17	ug/L		08/13/24 14:48	08/15/24 12:20	1
Calcium	**30000**		200	44	ug/L		08/13/24 14:48	08/15/24 12:20	1
Chromium	<1.1		5.0	1.1	ug/L		08/13/24 14:48	08/15/24 12:20	1
Cobalt	<0.40		1.0	0.40	ug/L		08/13/24 14:48	08/15/24 12:20	1
Copper	**51**		2.0	0.50	ug/L		08/13/24 14:48	08/15/24 12:20	1
Iron	**1100**		100	47	ug/L		08/13/24 14:48	08/15/24 12:20	1
Lead	**0.22**	**J**	0.50	0.19	ug/L		08/13/24 14:48	08/15/24 12:20	1
Lithium	<2.5		10	2.5	ug/L		08/13/24 14:48	08/15/24 12:20	1
Magnesium	**6600**		200	49	ug/L		08/13/24 14:48	08/15/24 12:20	1
Manganese	**170**		2.5	0.79	ug/L		08/13/24 14:48	08/15/24 12:20	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/13/24 14:48	08/15/24 12:20	1
Nickel	**0.87**	**J**	2.0	0.63	ug/L		08/13/24 14:48	08/15/24 12:20	1
Potassium	**1400**		500	110	ug/L		08/13/24 14:48	08/15/24 12:20	1
Selenium	<0.98		2.5	0.98	ug/L		08/13/24 14:48	08/15/24 12:20	1
Silver	<0.12		0.50	0.12	ug/L		08/13/24 14:48	08/15/24 12:20	1
Sodium	**11000**	**B**	200	77	ug/L		08/13/24 14:48	08/15/24 12:20	1
Strontium	**78**		4.0	0.64	ug/L		08/13/24 14:48	08/15/24 12:20	1
Thallium	<0.57		2.0	0.57	ug/L		08/13/24 14:48	08/15/24 12:20	1
Tin	<1.3		5.0	1.3	ug/L		08/13/24 14:48	08/15/24 12:20	1
Vanadium	<2.2		5.0	2.2	ug/L		08/13/24 14:48	08/15/24 12:20	1
Zinc	<6.9		20	6.9	ug/L		08/13/24 14:48	08/15/24 12:20	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Client Sample ID: MLR-02_20240725

Date Collected: 07/25/24 07:50
Date Received: 07/26/24 09:50

Lab Sample ID: 500-254112-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/13/24 14:48	08/15/24 12:22	1
Antimony	<1.3		3.0	1.3	ug/L		08/13/24 14:48	08/15/24 12:22	1
Arsenic	**0.68**	**J**	1.0	0.23	ug/L		08/13/24 14:48	08/15/24 12:22	1
Barium	**44**		2.5	0.73	ug/L		08/13/24 14:48	08/15/24 12:22	1
Beryllium	<0.53		1.0	0.53	ug/L		08/13/24 14:48	08/15/24 12:22	1
Boron	**47**	**J B**	50	13	ug/L		08/13/24 14:48	08/15/24 12:22	1
Cadmium	<0.17		0.50	0.17	ug/L		08/13/24 14:48	08/15/24 12:22	1
Calcium	**30000**		200	44	ug/L		08/13/24 14:48	08/15/24 12:22	1
Chromium	<1.1		5.0	1.1	ug/L		08/13/24 14:48	08/15/24 12:22	1
Cobalt	<0.40		1.0	0.40	ug/L		08/13/24 14:48	08/15/24 12:22	1
Copper	**43**		2.0	0.50	ug/L		08/13/24 14:48	08/15/24 12:22	1
Iron	**350**		100	47	ug/L		08/13/24 14:48	08/15/24 12:22	1
Lead	<0.19		0.50	0.19	ug/L		08/13/24 14:48	08/15/24 12:22	1
Lithium	<2.5		10	2.5	ug/L		08/13/24 14:48	08/15/24 12:22	1
Magnesium	**6400**		200	49	ug/L		08/13/24 14:48	08/15/24 12:22	1
Manganese	**61**		2.5	0.79	ug/L		08/13/24 14:48	08/15/24 12:22	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/13/24 14:48	08/15/24 12:22	1
Nickel	<0.63		2.0	0.63	ug/L		08/13/24 14:48	08/15/24 12:22	1
Potassium	**1300**		500	110	ug/L		08/13/24 14:48	08/15/24 12:22	1
Selenium	<0.98		2.5	0.98	ug/L		08/13/24 14:48	08/15/24 12:22	1
Silver	<0.12		0.50	0.12	ug/L		08/13/24 14:48	08/15/24 12:22	1
Sodium	**11000**	**B**	200	77	ug/L		08/13/24 14:48	08/15/24 12:22	1
Strontium	**77**		4.0	0.64	ug/L		08/13/24 14:48	08/15/24 12:22	1
Thallium	<0.57		2.0	0.57	ug/L		08/13/24 14:48	08/15/24 12:22	1
Tin	<1.3		5.0	1.3	ug/L		08/13/24 14:48	08/15/24 12:22	1
Vanadium	<2.2		5.0	2.2	ug/L		08/13/24 14:48	08/15/24 12:22	1
Zinc	<6.9		20	6.9	ug/L		08/13/24 14:48	08/15/24 12:22	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**100**		0.91	0.46	mg/L		08/13/24 14:48	08/15/24 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			07/26/24 14:02	1
Nitrate as N (EPA 300.0)	<0.043		1.0	0.043	mg/L			07/26/24 14:02	1
Chloride (EPA 300.0)	**15**		1.0	0.12	mg/L			07/26/24 14:02	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/26/24 14:02	1
Fluoride (EPA 300.0)	**0.22**	**J**	1.0	0.19	mg/L			07/26/24 14:02	1
Nitrate Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/26/24 14:02	1
Sulfate (EPA 300.0)	**1.2**		1.0	0.21	mg/L			07/26/24 14:02	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/06/24 11:24	08/07/24 13:38	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/14/24 15:14	08/15/24 17:37	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1
Alkalinity (SM 2320B)	**99**		5.0	3.7	mg/L			08/07/24 00:22	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**99**		5.0	3.7	mg/L			08/07/24 00:22	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 00:22	1
Salinity (SM 2520B)	<0.33		0.33	0.33	psu			07/29/24 15:27	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Client Sample ID: MLR-02_20240725
Date Collected: 07/25/24 07:50
Date Received: 07/26/24 09:50

Lab Sample ID: 500-254112-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	100		10	4.3	mg/L			07/31/24 02:42	1
Total Suspended Solids (SM 2540D)	15		5.0	1.9	mg/L			08/01/24 16:00	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			07/31/24 22:56	1
Total Organic Carbon (SM 5310C)	13		1.0	0.47	mg/L			08/09/24 01:05	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	13		1.0	0.47	mg/L			07/29/24 05:31	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Client Sample ID: MLR-02_20240725_FBLL
Date Collected: 07/25/24 07:50
Date Received: 07/26/24 09:50

Lab Sample ID: 500-254112-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:58	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Qualifiers

Metals

Qualifier	Qualifier Description
^-	Continuing Calibration Verification (CCV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Dissolved	Water	1630	
500-254112-1	MLR-02_20240725	Total/NA	Water	1630	
MB 350-2490/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2490/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2490/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2490/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2490/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Prep Batch: 2495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Dissolved	Water	1638	
500-254112-1	MLR-02_20240725	Total Recoverable	Water	1638	
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Dissolved	Water	1631E	
500-254112-1	MLR-02_20240725	Total/NA	Water	1631E	
500-254112-2	MLR-02_20240725_FBLL	Total/NA	Water	1631E	
MB 350-2500/55	Method Blank	Total/NA	Water	1631E	
MB 350-2500/56	Method Blank	Total/NA	Water	1631E	
MB 350-2500/59	Method Blank	Total/NA	Water	1631E	
LCS 350-2500/60	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2500/61	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Dissolved	Water	1638	2495
500-254112-1	MLR-02_20240725	Total Recoverable	Water	1638	2495
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	2495
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	2495
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	2495
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2495

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Dissolved	Water	1630	2490
500-254112-1	MLR-02_20240725	Total/NA	Water	1630	2490
MB 350-2490/1-A	Method Blank	Total/NA	Water	1630	2490
MB 350-2490/2-A	Method Blank	Total/NA	Water	1630	2490
MB 350-2490/3-A	Method Blank	Total/NA	Water	1630	2490
LCS 350-2490/4-A	Lab Control Sample	Total/NA	Water	1630	2490
LCSD 350-2490/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2490

Prep Batch: 781186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Dissolved	Water	3005A	
500-254112-1	MLR-02_20240725	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 781186 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-781186/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781186/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Dissolved	Water	6020B	781186
500-254112-1	MLR-02_20240725	Total Recoverable	Water	6020B	781186
MB 500-781186/1-A	Method Blank	Total Recoverable	Water	6020B	781186
LCS 500-781186/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781186

Analysis Batch: 781705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total Recoverable	Water	SM 2340B	781186

General Chemistry

Analysis Batch: 778596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	300.0	
MB 500-778596/3	Method Blank	Total/NA	Water	300.0	
LCS 500-778596/4	Lab Control Sample	Total/NA	Water	300.0	
500-254112-1 MS	MLR-02_20240725	Total/NA	Water	300.0	
500-254112-1 MSD	MLR-02_20240725	Total/NA	Water	300.0	

Analysis Batch: 778597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	300.0	
MB 500-778597/3	Method Blank	Total/NA	Water	300.0	
LCS 500-778597/4	Lab Control Sample	Total/NA	Water	300.0	
500-254112-1 MS	MLR-02_20240725	Total/NA	Water	300.0	
500-254112-1 MSD	MLR-02_20240725	Total/NA	Water	300.0	

Analysis Batch: 778742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Dissolved	Water	SM 5310C	
MB 500-778742/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-778742/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 779153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	SM 2540C	
MB 500-779153/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779153/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	SM 4500 S2 F	
MB 500-779429/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779429/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

General Chemistry

Analysis Batch: 779504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	SM 2520B	

Analysis Batch: 779603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	SM 2540D	
MB 500-779603/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779603/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Prep Batch: 780092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	Distill/CN	
MB 500-780092/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780092/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 780323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	335.4	780092
MB 500-780092/1-A	Method Blank	Total/NA	Water	335.4	780092
LCS 500-780092/2-A	Lab Control Sample	Total/NA	Water	335.4	780092

Analysis Batch: 780802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	SM 5310C	
MB 500-780802/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-780802/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Prep Batch: 781418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	Distill/Ammonia	
MB 500-781418/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781418/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

General Chemistry

Analysis Batch: 781794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254112-1	MLR-02_20240725	Total/NA	Water	350.1	781418
MB 500-781418/1-A	Method Blank	Total/NA	Water	350.1	781418
LCS 500-781418/2-A	Lab Control Sample	Total/NA	Water	350.1	781418

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2490/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:12	1

Lab Sample ID: MB 350-2490/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:22	1

Lab Sample ID: MB 350-2490/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:32	1

Lab Sample ID: LCS 350-2490/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.920		ng/L		92	65 - 135

Lab Sample ID: LCSD 350-2490/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2490

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	1.00		ng/L		100	65 - 135	8	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2500/55
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 14:18	1

Lab Sample ID: MB 350-2500/56
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 14:22	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2500/59
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 14:35	1

Lab Sample ID: LCS 350-2500/60
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.51		ng/L		90	77 - 123

Lab Sample ID: LCSD 350-2500/61
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.55		ng/L		91	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2495/1-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:41	1

Lab Sample ID: MB 350-2495/2-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:44	1

Lab Sample ID: LCS 350-2495/3-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	24.0		ug/L		96	85 - 115

Lab Sample ID: LCSD 350-2495/4-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.8		ug/L		91	85 - 115	5	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781186/1-A
Matrix: Water
Analysis Batch: 781683

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781186

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/13/24 14:48	08/15/24 11:53	1
Antimony	<1.3		3.0	1.3	ug/L		08/13/24 14:48	08/15/24 11:53	1
Arsenic	<0.23		1.0	0.23	ug/L		08/13/24 14:48	08/15/24 11:53	1
Barium	<0.73		2.5	0.73	ug/L		08/13/24 14:48	08/15/24 11:53	1
Beryllium	<0.53		1.0	0.53	ug/L		08/13/24 14:48	08/15/24 11:53	1
Boron	38.9	J ^-	50	13	ug/L		08/13/24 14:48	08/15/24 11:53	1
Cadmium	<0.17		0.50	0.17	ug/L		08/13/24 14:48	08/15/24 11:53	1
Calcium	<44		200	44	ug/L		08/13/24 14:48	08/15/24 11:53	1
Chromium	<1.1		5.0	1.1	ug/L		08/13/24 14:48	08/15/24 11:53	1
Cobalt	<0.40		1.0	0.40	ug/L		08/13/24 14:48	08/15/24 11:53	1
Copper	<0.50		2.0	0.50	ug/L		08/13/24 14:48	08/15/24 11:53	1
Iron	<47		100	47	ug/L		08/13/24 14:48	08/15/24 11:53	1
Lead	<0.19		0.50	0.19	ug/L		08/13/24 14:48	08/15/24 11:53	1
Lithium	<2.5		10	2.5	ug/L		08/13/24 14:48	08/15/24 11:53	1
Magnesium	<49		200	49	ug/L		08/13/24 14:48	08/15/24 11:53	1
Manganese	<0.79		2.5	0.79	ug/L		08/13/24 14:48	08/15/24 11:53	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/13/24 14:48	08/15/24 11:53	1
Nickel	<0.63		2.0	0.63	ug/L		08/13/24 14:48	08/15/24 11:53	1
Potassium	<110		500	110	ug/L		08/13/24 14:48	08/15/24 11:53	1
Selenium	<0.98		2.5	0.98	ug/L		08/13/24 14:48	08/15/24 11:53	1
Silver	<0.12		0.50	0.12	ug/L		08/13/24 14:48	08/15/24 11:53	1
Sodium	159	J	200	77	ug/L		08/13/24 14:48	08/15/24 11:53	1
Strontium	<0.64		4.0	0.64	ug/L		08/13/24 14:48	08/15/24 11:53	1
Thallium	<0.57		2.0	0.57	ug/L		08/13/24 14:48	08/15/24 11:53	1
Tin	<1.3		5.0	1.3	ug/L		08/13/24 14:48	08/15/24 11:53	1
Vanadium	<2.2		5.0	2.2	ug/L		08/13/24 14:48	08/15/24 11:53	1
Zinc	<6.9		20	6.9	ug/L		08/13/24 14:48	08/15/24 11:53	1

Lab Sample ID: LCS 500-781186/2-A
Matrix: Water
Analysis Batch: 781683

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781186

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1860		ug/L		93	80 - 120
Antimony	500	467		ug/L		93	80 - 120
Arsenic	100	91.8		ug/L		92	80 - 120
Barium	500	480		ug/L		96	80 - 120
Beryllium	50.0	46.8		ug/L		94	80 - 120
Boron	1000	988	^-	ug/L		99	80 - 120
Cadmium	50.0	46.7		ug/L		93	80 - 120
Calcium	10000	8480		ug/L		85	80 - 120
Chromium	200	197		ug/L		98	80 - 120
Cobalt	500	478		ug/L		96	80 - 120
Copper	250	239		ug/L		96	80 - 120
Iron	1000	991		ug/L		99	80 - 120
Lead	100	95.7		ug/L		96	80 - 120
Lithium	100	97.8		ug/L		98	80 - 120
Magnesium	10000	9770		ug/L		98	80 - 120
Manganese	500	492		ug/L		98	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781186/2-A
Matrix: Water
Analysis Batch: 781683

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781186

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	913		ug/L		91	80 - 120
Nickel	500	481		ug/L		96	80 - 120
Potassium	10000	9920		ug/L		99	80 - 120
Selenium	100	93.2		ug/L		93	80 - 120
Silver	50.0	46.7		ug/L		93	80 - 120
Sodium	10000	9820		ug/L		98	80 - 120
Strontium	1000	926		ug/L		93	80 - 120
Thallium	100	99.4		ug/L		99	80 - 120
Tin	1000	929		ug/L		93	80 - 120
Vanadium	500	483		ug/L		97	80 - 120
Zinc	500	461		ug/L		92	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-778596/3
Matrix: Water
Analysis Batch: 778596

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/26/24 11:57	1
Chloride	<0.12		1.0	0.12	mg/L			07/26/24 11:57	1
Fluoride	<0.19		1.0	0.19	mg/L			07/26/24 11:57	1
Sulfate	<0.21		1.0	0.21	mg/L			07/26/24 11:57	1

Lab Sample ID: LCS 500-778596/4
Matrix: Water
Analysis Batch: 778596

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	19.9		mg/L		99	90 - 110
Chloride	20.0	21.0		mg/L		105	90 - 110
Fluoride	20.0	21.1		mg/L		105	90 - 110
Sulfate	20.0	21.5		mg/L		108	90 - 110

Lab Sample ID: 500-254112-1 MS
Matrix: Water
Analysis Batch: 778596

Client Sample ID: MLR-02_20240725
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	<0.18		10.0	9.25		mg/L		93	80 - 120
Chloride	15		10.0	25.0		mg/L		100	80 - 120
Fluoride	0.22	J	10.0	10.3		mg/L		101	80 - 120
Sulfate	1.2		10.0	11.7		mg/L		104	80 - 120

Lab Sample ID: 500-254112-1 MSD
Matrix: Water
Analysis Batch: 778596

Client Sample ID: MLR-02_20240725
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	<0.18		10.0	9.32		mg/L		93	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 500-254112-1 MSD
Matrix: Water
Analysis Batch: 778596

Client Sample ID: MLR-02_20240725
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	15		10.0	25.0		mg/L		100	80 - 120	0	20
Fluoride	0.22	J	10.0	10.3		mg/L		101	80 - 120	0	20
Sulfate	1.2		10.0	11.7		mg/L		104	80 - 120	0	20

Lab Sample ID: MB 500-778597/3
Matrix: Water
Analysis Batch: 778597

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/26/24 11:57	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/26/24 11:57	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/26/24 11:57	1

Lab Sample ID: LCS 500-778597/4
Matrix: Water
Analysis Batch: 778597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.4		mg/L		97	90 - 110
Nitrite as N	20.0	21.2		mg/L		106	90 - 110
Nitrate Nitrite as N	40.0	40.6		mg/L		101	90 - 110

Lab Sample ID: 500-254112-1 MS
Matrix: Water
Analysis Batch: 778597

Client Sample ID: MLR-02_20240725
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	<0.043		10.0	9.16		mg/L		92	80 - 120
Nitrite as N	<0.070		10.0	10.2		mg/L		102	80 - 120
Nitrate Nitrite as N	<0.070		20.0	19.3		mg/L		97	80 - 120

Lab Sample ID: 500-254112-1 MSD
Matrix: Water
Analysis Batch: 778597

Client Sample ID: MLR-02_20240725
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	<0.043		10.0	9.17		mg/L		92	80 - 120	0	20
Nitrite as N	<0.070		10.0	10.2		mg/L		102	80 - 120	0	20
Nitrate Nitrite as N	<0.070		20.0	19.4		mg/L		97	80 - 120	0	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780092/1-A
Matrix: Water
Analysis Batch: 780323

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780092

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/06/24 11:24	08/07/24 13:06	1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 500-780092/2-A
Matrix: Water
Analysis Batch: 780323

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780092

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.102		mg/L		102	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781418/1-A
Matrix: Water
Analysis Batch: 781794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/14/24 15:14	08/15/24 17:26	1

Lab Sample ID: LCS 500-781418/2-A
Matrix: Water
Analysis Batch: 781794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.97		mg/L		99	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779153/1
Matrix: Water
Analysis Batch: 779153

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			07/31/24 02:17	1

Lab Sample ID: LCS 500-779153/2
Matrix: Water
Analysis Batch: 779153

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	246		mg/L		98	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779603/1
Matrix: Water
Analysis Batch: 779603

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/01/24 15:30	1

Lab Sample ID: LCS 500-779603/2
Matrix: Water
Analysis Batch: 779603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	186		mg/L		93	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779429/1
Matrix: Water
Analysis Batch: 779429

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			07/31/24 22:15	1

Lab Sample ID: LCS 500-779429/2
Matrix: Water
Analysis Batch: 779429

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.42		mg/L		94	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-780802/31
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/09/24 00:09	1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: LCS 500-780802/32
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-778742/7
Matrix: Water
Analysis Batch: 778742

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			07/28/24 18:19	1

Lab Sample ID: LCS 500-778742/8
Matrix: Water
Analysis Batch: 778742

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Client Sample ID: MLR-02_20240725

Date Collected: 07/25/24 07:50
Date Received: 07/26/24 09:50

Lab Sample ID: 500-254112-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2490	AJD	EET SSM	08/01/24 10:43
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/02/24 18:58
Total/NA	Prep	1630			2490	AJD	EET SSM	08/01/24 10:43
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 18:48
Dissolved	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 19:54
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 19:50
Dissolved	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Dissolved	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:33
Total Recoverable	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Total Recoverable	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:29
Dissolved	Prep	3005A			781186	S1Z	EET CHI	08/13/24 14:48 - 08/13/24 20:48 [1]
Dissolved	Analysis	6020B		1	781683	RN	EET CHI	08/15/24 12:22
Total Recoverable	Prep	3005A			781186	S1Z	EET CHI	08/13/24 14:48 - 08/13/24 20:48 [1]
Total Recoverable	Analysis	6020B		1	781683	RN	EET CHI	08/15/24 12:20
Total Recoverable	Prep	3005A			781186	S1Z	EET CHI	08/13/24 14:48 - 08/13/24 20:48 [1]
Total Recoverable	Analysis	SM 2340B		1	781705	DAJ	EET CHI	08/15/24 15:36
Total/NA	Analysis	300.0		1	778596	W1T	EET CHI	07/26/24 14:02
Total/NA	Analysis	300.0		1	778597	W1T	EET CHI	07/26/24 14:02
Total/NA	Prep	Distill/CN			780092	AC	EET CHI	08/06/24 11:24 - 08/06/24 11:54 [1]
Total/NA	Analysis	335.4		1	780323	AC	EET CHI	08/07/24 13:38
Total/NA	Prep	Distill/Ammonia			781418	EB	EET CHI	08/14/24 15:14 - 08/14/24 16:14 [1]
Total/NA	Analysis	350.1		1	781794	KF	EET CHI	08/15/24 17:37
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:04
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 00:22
Total/NA	Analysis	SM 2520B		1	779504	TR	EET CHI	07/29/24 15:27
Total/NA	Analysis	SM 2540C		1	779153	CLB	EET CHI	07/31/24 02:42
Total/NA	Analysis	SM 2540D		1	779603	SO	EET CHI	08/01/24 16:00 - 08/01/24 16:02 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779429	CLB	EET CHI	07/31/24 22:56 - 07/31/24 22:59 [1]
Dissolved	Analysis	SM 5310C		1	778742	TR	EET CHI	07/29/24 05:31
Total/NA	Analysis	SM 5310C		1	780802	TR	EET CHI	08/09/24 01:05

Client Sample ID: MLR-02_20240725_FBLL

Date Collected: 07/25/24 07:50
Date Received: 07/26/24 09:50

Lab Sample ID: 500-254112-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 19:58

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200
EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254112-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 2169	COC No: 500-126351-50241 33
Client Contact: Amanda Zeidler	Phone: 517 513 2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254112
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL

500-254112 COC

Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOC SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~3500_CR_B~~, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~3500_CR_B - Dissolved Chromium; Hex (field filtered)~~	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
				Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1	MLR-02_20240725	07-25 24	0750	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18	
2	MLR-02_20240725_FBLL	07-25 24	0150	G	Water										✓						2	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, [II], III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ellen Coppernoll	7/25/24 1200	MSG		7/25/24 1200	MSG
2		7/25/24 1600	MSG	4051 7962 2169	7/25/24 1600	Fedex
3				Stephanie Hermond	7/26/24 0952	EETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks: 2.1+2.0

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Copperno/	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 2169	COC No: 500-126351-50241 34
Client Contact: Amanda Zeidler	Phone: 517 513 7249	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254117
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N None; CB ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
1 MLR-02_20241025	07-25-24	0750	G	Water			✓	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/25/24 1200	MSG		7/25/24 1200	MSG
2		7/25/24 1600	MSG	4051 7962 2169	7/25/24 1600	Fedex
3				Stephanie Hernandez	7/26/24 0900	ELLA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks:

D CHRESTENSEN
E MANNIK & SMITH GROUP
6 SHELDEN AVE
ITE 210
OUGHTON, MI 49931
NITED STATES US

ACTWGT: 25.00 LB MAN
CAD: 0780307/CAFE3808

SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.

20

UNIVERSITY PARK IL 60484
(708) 534-5200 REF:
INV:
PO: DEPT:

MA.

FedEx Express

J241028112201uv

TRK# 0221 4051 7962 2169

RETURNS MON-SAT
PRIORITY OVERNIGHT

FedEx

TRK# 0221 4051 7962 2169

FRI - 26 JUL AA
PRIORITY OVERNIGHT

XP JOTA

60484
IL-US
ORD

3732349 25Jul2024 CNXA 581G9/F0F4/C0B8

500-254112 Waybi

48at

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-190993.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254112-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/15/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MLR-02_20240725 (500-254112-1)	7/25/24	07:50 Eastern		Water			X	X	X	X	X	X	8	
MLR-02_20240725_FBLL (500-254112-2)	7/25/24	07:50 Eastern		Water				X					2	

Med Blue

Therm. ID: SC02 Cust. Seal: (Y) / N
Uncorr./Corr. Temp 2.0 / 2.0 °C
Delivery: UPS / FedEx / Other
Ice Type: Blue / Dry / Wet / None
Label Ver. 12 Packing: B

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded u accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided. Any changes to accred immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago.

Possible Hazard Identification: Unconfirmed 7051 7620 4617	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	7/29/24 0830		[signature]	7/31/24 9:45	ESS
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254112-1

Login Number: 254112
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254112-1

Login Number: 254112
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/31/24 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254112 Field Sheet

Date:	7/31/2024
End Time:	15:04
pH Paper Lot:	HC234723
Analyst:	

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254112-F-1	<2				
500-254112-E-1	<2				
500-254112-K-1	<2				
500-254112-J-1	<2				

7/31/24

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 1:27:45 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254222-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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8/21/2024 1:27:45 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job ID: 500-254222-1 — Eurofins Chicago

Job Narrative
500-254222-1

Receipt
The samples were received on 7/30/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.7º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779012 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method SM 5310C: Field filtered Dissolved Organic Carbon results are slightly greater than Total Organic Carbon results.MW-38_20240728 (500-254222-1)

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Client Sample ID: MW-38_20240728

Lab Sample ID: 500-254222-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.46	J	0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	0.26	J	0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	6.9		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	7.5		0.030	0.0098	ug/L	1		1638	Dissolved
Arsenic	0.77	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	78		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	320	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	33000		200	44	ug/L	1		6020B	Total Recoverable
Copper	2.4		2.0	0.50	ug/L	1		6020B	Total Recoverable
Lithium	28		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	2700		200	49	ug/L	1		6020B	Total Recoverable
Manganese	130		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	17		5.0	2.5	ug/L	1		6020B	Total Recoverable
Potassium	860		500	110	ug/L	1		6020B	Total Recoverable
Sodium	87000		200	77	ug/L	1		6020B	Total Recoverable
Strontium	530		4.0	0.64	ug/L	1		6020B	Total Recoverable
Vanadium	8.3		5.0	2.2	ug/L	1		6020B	Total Recoverable
Arsenic	0.67	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	76		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	320	B	50	13	ug/L	1		6020B	Dissolved
Calcium	35000		200	44	ug/L	1		6020B	Dissolved
Copper	1.6	J	2.0	0.50	ug/L	1		6020B	Dissolved
Lithium	29		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	3000		200	49	ug/L	1		6020B	Dissolved
Manganese	13		2.5	0.79	ug/L	1		6020B	Dissolved
Molybdenum	16		5.0	2.5	ug/L	1		6020B	Dissolved
Potassium	880		500	110	ug/L	1		6020B	Dissolved
Sodium	86000		200	77	ug/L	1		6020B	Dissolved
Strontium	560		4.0	0.64	ug/L	1		6020B	Dissolved
Vanadium	7.5		5.0	2.2	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	93		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	0.34	J	1.0	0.18	mg/L	1		300.0	Total/NA
Nitrate as N	0.44	J	1.0	0.043	mg/L	1		300.0	Total/NA
Chloride	25	B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.69	J	1.0	0.19	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.44	J	1.0	0.070	mg/L	1		300.0	Total/NA
Sulfate	31		1.0	0.21	mg/L	1		300.0	Total/NA
Ammonia	0.61		0.20	0.10	mg/L	1		350.1	Total/NA
Alkalinity	210		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	210		5.0	3.7	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-38_20240728 (Continued) — Lab Sample ID: 500-254222-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	310		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Organic Carbon	2.4		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	3.7		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: MW-38_20240728_FBLL — Lab Sample ID: 500-254222-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254222-1	MW-38_20240728	Water	07/28/24 13:30	07/30/24 09:45
500-254222-2	MW-38_20240728_FBLL	Water	07/28/24 13:30	07/30/24 09:45

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Client Sample ID: MW-38_20240728

Date Collected: 07/28/24 13:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254222-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 19:08	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 19:18	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.46**	**J**	0.50	0.20	ng/L			08/02/24 20:02	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.26**	**J**	0.50	0.20	ng/L			08/02/24 20:06	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**6.9**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:36	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**7.5**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:40	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 19:13	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:13	1
Arsenic	**0.77**	**J**	1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:13	1
Barium	**78**		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:13	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:13	1
Boron	**320**	**B**	50	13	ug/L		08/14/24 08:42	08/15/24 19:13	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:13	1
Calcium	**33000**		200	44	ug/L		08/14/24 08:42	08/15/24 19:13	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:13	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:13	1
Copper	**2.4**		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:13	1
Iron	<47		100	47	ug/L		08/14/24 08:42	08/15/24 19:13	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:13	1
Lithium	**28**		10	2.5	ug/L		08/14/24 08:42	08/15/24 19:13	1
Magnesium	**2700**		200	49	ug/L		08/14/24 08:42	08/15/24 19:13	1
Manganese	**130**		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:13	1
Molybdenum	**17**		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:13	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:13	1
Potassium	**860**		500	110	ug/L		08/14/24 08:42	08/15/24 19:13	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:13	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:13	1
Sodium	**87000**		200	77	ug/L		08/14/24 08:42	08/15/24 19:13	1
Strontium	**530**		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:13	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:13	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:13	1
Vanadium	**8.3**		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:13	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 19:13	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Client Sample ID: MW-38_20240728
Date Collected: 07/28/24 13:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254222-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 19:15	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:15	1
Arsenic	**0.67**	**J**	1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:15	1
Barium	**76**		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:15	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:15	1
Boron	**320**	**B**	50	13	ug/L		08/14/24 08:42	08/15/24 19:15	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:15	1
Calcium	**35000**		200	44	ug/L		08/14/24 08:42	08/15/24 19:15	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:15	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:15	1
Copper	**1.6**	**J**	2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:15	1
Iron	<47		100	47	ug/L		08/14/24 08:42	08/15/24 19:15	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:15	1
Lithium	**29**		10	2.5	ug/L		08/14/24 08:42	08/15/24 19:15	1
Magnesium	**3000**		200	49	ug/L		08/14/24 08:42	08/15/24 19:15	1
Manganese	**13**		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:15	1
Molybdenum	**16**		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:15	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:15	1
Potassium	**880**		500	110	ug/L		08/14/24 08:42	08/15/24 19:15	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:15	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:15	1
Sodium	**86000**		200	77	ug/L		08/14/24 08:42	08/15/24 19:15	1
Strontium	**560**		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:15	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:15	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:15	1
Vanadium	**7.5**		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:15	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 19:15	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**93**		0.91	0.46	mg/L		08/14/24 08:42	08/16/24 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**0.34**	**J**	1.0	0.18	mg/L			07/30/24 11:52	1
Nitrate as N (EPA 300.0)	**0.44**	**J**	1.0	0.043	mg/L			07/30/24 11:52	1
Chloride (EPA 300.0)	**25**	**B**	1.0	0.12	mg/L			07/30/24 11:52	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/30/24 11:52	1
Fluoride (EPA 300.0)	**0.69**	**J**	1.0	0.19	mg/L			07/30/24 11:52	1
Nitrate Nitrite as N (EPA 300.0)	**0.44**	**J**	1.0	0.070	mg/L			07/30/24 11:52	1
Sulfate (EPA 300.0)	**31**		1.0	0.21	mg/L			07/30/24 11:52	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/06/24 11:24	08/07/24 13:47	1
Ammonia (EPA 350.1)	**0.61**		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:27	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:05	1
Alkalinity (SM 2320B)	**210**		5.0	3.7	mg/L			08/07/24 00:31	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**210**		5.0	3.7	mg/L			08/07/24 00:31	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 00:31	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Client Sample ID: MW-38_20240728
Date Collected: 07/28/24 13:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254222-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**310**		10	4.3	mg/L			08/01/24 01:08	1
Total Suspended Solids (SM 2540D)	<1.9		5.0	1.9	mg/L			08/02/24 16:25	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:11	1
Total Organic Carbon (SM 5310C)	**2.4**		1.0	0.47	mg/L			08/09/24 01:33	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	**3.7**		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Client Sample ID: MW-38_20240728_FBLL

Date Collected: 07/28/24 13:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254222-2

Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 20:11	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Dissolved	Water	1630	
500-254222-1	MW-38_20240728	Total/NA	Water	1630	
MB 350-2490/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2490/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2490/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2490/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2490/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Prep Batch: 2495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Dissolved	Water	1638	
500-254222-1	MW-38_20240728	Total Recoverable	Water	1638	
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Dissolved	Water	1631E	
500-254222-1	MW-38_20240728	Total/NA	Water	1631E	
500-254222-2	MW-38_20240728_FBLL	Total/NA	Water	1631E	
MB 350-2500/55	Method Blank	Total/NA	Water	1631E	
MB 350-2500/56	Method Blank	Total/NA	Water	1631E	
MB 350-2500/59	Method Blank	Total/NA	Water	1631E	
LCS 350-2500/60	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2500/61	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Dissolved	Water	1638	2495
500-254222-1	MW-38_20240728	Total Recoverable	Water	1638	2495
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	2495
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	2495
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	2495
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2495

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Dissolved	Water	1630	2490
500-254222-1	MW-38_20240728	Total/NA	Water	1630	2490
MB 350-2490/1-A	Method Blank	Total/NA	Water	1630	2490
MB 350-2490/2-A	Method Blank	Total/NA	Water	1630	2490
MB 350-2490/3-A	Method Blank	Total/NA	Water	1630	2490
LCS 350-2490/4-A	Lab Control Sample	Total/NA	Water	1630	2490
LCSD 350-2490/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2490

Prep Batch: 781334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Dissolved	Water	3005A	
500-254222-1	MW-38_20240728	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 781334 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Dissolved	Water	6020B	781334
500-254222-1	MW-38_20240728	Total Recoverable	Water	6020B	781334
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	6020B	781334
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781334

Analysis Batch: 781906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total Recoverable	Water	SM 2340B	781334

General Chemistry

Analysis Batch: 779012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	300.0	
MB 500-779012/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779012/4	Lab Control Sample	Total/NA	Water	300.0	
500-254222-1 MS	MW-38_20240728	Total/NA	Water	300.0	
500-254222-1 MSD	MW-38_20240728	Total/NA	Water	300.0	

Analysis Batch: 779013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	300.0	
MB 500-779013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779013/4	Lab Control Sample	Total/NA	Water	300.0	
500-254222-1 MS	MW-38_20240728	Total/NA	Water	300.0	
500-254222-1 MSD	MW-38_20240728	Total/NA	Water	300.0	

Analysis Batch: 779369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	SM 2540C	
MB 500-779369/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779369/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	SM 2540D	
MB 500-779749/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779749/2	Lab Control Sample	Total/NA	Water	SM 2540D	

General Chemistry

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	SM 2520B	

Prep Batch: 780092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	Distill/CN	
MB 500-780092/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780092/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
500-254222-1 MS	MW-38_20240728	Total/NA	Water	Distill/CN	
500-254222-1 MSD	MW-38_20240728	Total/NA	Water	Distill/CN	

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	
500-254222-1 DU	MW-38_20240728	Total/NA	Water	SM 2320B	

Analysis Batch: 780323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	335.4	780092
MB 500-780092/1-A	Method Blank	Total/NA	Water	335.4	780092
LCS 500-780092/2-A	Lab Control Sample	Total/NA	Water	335.4	780092
500-254222-1 MS	MW-38_20240728	Total/NA	Water	335.4	780092
500-254222-1 MSD	MW-38_20240728	Total/NA	Water	335.4	780092

Analysis Batch: 780802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	SM 5310C	
MB 500-780802/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-780802/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

General Chemistry

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254222-1	MW-38_20240728	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2490/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:12	1

Lab Sample ID: MB 350-2490/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:22	1

Lab Sample ID: MB 350-2490/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:32	1

Lab Sample ID: LCS 350-2490/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.920		ng/L		92	65 - 135

Lab Sample ID: LCSD 350-2490/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2490

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	1.00		ng/L		100	65 - 135	8	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2500/55
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 14:18	1

Lab Sample ID: MB 350-2500/56
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 14:22	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2500/59
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 14:35	1

Lab Sample ID: LCS 350-2500/60
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.51		ng/L		90	77 - 123

Lab Sample ID: LCSD 350-2500/61
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.55		ng/L		91	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2495/1-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:41	1

Lab Sample ID: MB 350-2495/2-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:44	1

Lab Sample ID: LCS 350-2495/3-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	24.0		ug/L		96	85 - 115

Lab Sample ID: LCSD 350-2495/4-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.8		ug/L		91	85 - 115	5	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781334/1-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 18:45	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 18:45	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 18:45	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 18:45	1
Boron	37.3	J	50	13	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 18:45	1
Calcium	<44		200	44	ug/L		08/14/24 08:42	08/15/24 18:45	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 18:45	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 18:45	1
Iron	<47		100	47	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Magnesium	<49		200	49	ug/L		08/14/24 08:42	08/15/24 18:45	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 18:45	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 18:45	1
Potassium	<110		500	110	ug/L		08/14/24 08:42	08/15/24 18:45	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 18:45	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 18:45	1
Sodium	<77		200	77	ug/L		08/14/24 08:42	08/15/24 18:45	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 18:45	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 18:45	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 18:45	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 18:45	1

Lab Sample ID: LCS 500-781334/2-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1950		ug/L		98	80 - 120
Antimony	500	497		ug/L		99	80 - 120
Arsenic	100	98.8		ug/L		99	80 - 120
Barium	500	506		ug/L		101	80 - 120
Beryllium	50.0	50.5		ug/L		101	80 - 120
Boron	1000	1020		ug/L		102	80 - 120
Cadmium	50.0	50.9		ug/L		102	80 - 120
Calcium	10000	8680		ug/L		87	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	534		ug/L		107	80 - 120
Copper	250	255		ug/L		102	80 - 120
Iron	1000	1050		ug/L		105	80 - 120
Lead	100	101		ug/L		101	80 - 120
Lithium	100	104		ug/L		104	80 - 120
Magnesium	10000	10400		ug/L		104	80 - 120
Manganese	500	516		ug/L		103	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781334/2-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	978		ug/L		98	80 - 120
Nickel	500	509		ug/L		102	80 - 120
Potassium	10000	10300		ug/L		103	80 - 120
Selenium	100	98.9		ug/L		99	80 - 120
Silver	50.0	50.8		ug/L		102	80 - 120
Sodium	10000	10200		ug/L		102	80 - 120
Strontium	1000	976		ug/L		98	80 - 120
Thallium	100	103		ug/L		103	80 - 120
Tin	1000	989		ug/L		99	80 - 120
Vanadium	500	507		ug/L		101	80 - 120
Zinc	500	508		ug/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/30/24 10:50	1
Chloride	0.163	J	1.0	0.12	mg/L			07/30/24 10:50	1
Fluoride	<0.19		1.0	0.19	mg/L			07/30/24 10:50	1
Sulfate	<0.21		1.0	0.21	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779012/4
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.9		mg/L		94	90 - 110
Chloride	20.0	20.4		mg/L		102	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.2		mg/L		106	90 - 110

Lab Sample ID: 500-254222-1 MS
Matrix: Water
Analysis Batch: 779012

Client Sample ID: MW-38_20240728
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.34	J	10.0	9.41		mg/L		91	80 - 120
Chloride	25	B	10.0	34.5		mg/L		98	80 - 120
Fluoride	0.69	J	10.0	10.6		mg/L		99	80 - 120
Sulfate	31		10.0	40.3		mg/L		93	80 - 120

Lab Sample ID: 500-254222-1 MSD
Matrix: Water
Analysis Batch: 779012

Client Sample ID: MW-38_20240728
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	0.34	J	10.0	9.36		mg/L		90	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 500-254222-1 MSD — **Client Sample ID: MW-38_20240728**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 779012

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25	B	10.0	34.4		mg/L		97	80 - 120	0	20
Fluoride	0.69	J	10.0	10.6		mg/L		99	80 - 120	0	20
Sulfate	31		10.0	40.3		mg/L		93	80 - 120	0	20

Lab Sample ID: MB 500-779013/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 779013

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/30/24 10:50	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779013/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 779013

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	20.9		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.5		mg/L		101	90 - 110

Lab Sample ID: 500-254222-1 MS — **Client Sample ID: MW-38_20240728**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 779013

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.44	J	10.0	9.18		mg/L		87	80 - 120
Nitrite as N	<0.070		10.0	10.2		mg/L		102	80 - 120
Nitrate Nitrite as N	0.44	J	20.0	19.4		mg/L		95	80 - 120

Lab Sample ID: 500-254222-1 MSD — **Client Sample ID: MW-38_20240728**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 779013

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	0.44	J	10.0	9.19		mg/L		88	80 - 120	0	20
Nitrite as N	<0.070		10.0	10.1		mg/L		101	80 - 120	0	20
Nitrate Nitrite as N	0.44	J	20.0	19.3		mg/L		94	80 - 120	0	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780092/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 780323 — **Prep Batch: 780092**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/06/24 11:24	08/07/24 13:06	1

Method: 335.4 - Cyanide, Total (Continued)

Lab Sample ID: LCS 500-780092/2-A
Matrix: Water
Analysis Batch: 780323

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780092

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.102		mg/L		102	90 - 110

Lab Sample ID: 500-254222-1 MS
Matrix: Water
Analysis Batch: 780323

Client Sample ID: MW-38_20240728
Prep Type: Total/NA
Prep Batch: 780092

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	<0.0036		0.100	0.106		mg/L		106	90 - 110

Lab Sample ID: 500-254222-1 MSD
Matrix: Water
Analysis Batch: 780323

Client Sample ID: MW-38_20240728
Prep Type: Total/NA
Prep Batch: 780092

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Total	<0.0036		0.100	0.0985		mg/L		99	90 - 110	7	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Lab Sample ID: 500-254222-1 DU
Matrix: Water
Analysis Batch: 780255

Client Sample ID: MW-38_20240728
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	210		207		mg/L		0.3	20
Bicarbonate Alkalinity as CaCO3	210		207		mg/L		0.3	20
Carbonate Alkalinity as CaCO3	<3.7		<3.7		mg/L		NC	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779369/1
Matrix: Water
Analysis Batch: 779369

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/01/24 00:14	1

Lab Sample ID: LCS 500-779369/2
Matrix: Water
Analysis Batch: 779369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	272		mg/L		109	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779749/1
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/02/24 15:55	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 500-779749/2
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-780802/31
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/09/24 00:09	1

Lab Sample ID: LCS 500-780802/32
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Client Sample ID: MW-38_20240728

Lab Sample ID: 500-254222-1

Date Collected: 07/28/24 13:30

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2490	AJD	EET SSM	08/01/24 10:43
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/02/24 19:18
Total/NA	Prep	1630			2490	AJD	EET SSM	08/01/24 10:43
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 19:08
Dissolved	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:06
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:02
Dissolved	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Dissolved	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:40
Total Recoverable	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Total Recoverable	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:36
Dissolved	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Dissolved	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:15
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:13
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	SM 2340B		1	781906	S1Z	EET CHI	08/16/24 14:31
Total/NA	Analysis	300.0		1	779012	W1T	EET CHI	07/30/24 11:52
Total/NA	Analysis	300.0		1	779013	W1T	EET CHI	07/30/24 11:52
Total/NA	Prep	Distill/CN			780092	AC	EET CHI	08/06/24 11:24 - 08/06/24 11:54 [1]
Total/NA	Analysis	335.4		1	780323	AC	EET CHI	08/07/24 13:47
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:27
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:05
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 00:31
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779369	CLB	EET CHI	08/01/24 01:08
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:25 - 08/02/24 16:28 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:11 - 08/01/24 22:15 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	780802	TR	EET CHI	08/09/24 01:33

Client Sample ID: MW-38_20240728_FBLL

Lab Sample ID: 500-254222-2

Date Collected: 07/28/24 13:30

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:11

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254222-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	500-254222 COC	Carrier Tracking No(s): 4051 7962 1313	COC No.: 500-126351-50241 35
Client Contact: Amanda Zeidler	Phone: 517 513 2249	E-Mail: Sandra Fredrick@et eurofinsus com		State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:				Job #: 500-254222
Address: 35503 Mall Circle Drive	Due Date Requested:				
City: White Pine	TAT Requested (days): 10 days				
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No				
Phone: 906-204-6500	PO #: Purchase Order not required				
Email: AZeidler@whitepinecu com	WO #:				
Project Name: White Pine, MI	Project #: 50023455				
Site:	SSOW#:				

Analysis Requested

Preservation Codes:
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TDC SM 5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~4500_CR_B~~, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~3500_CR_B - Dissolved Chromium, Hex (field filtered)~~ MS	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
MW-38_20240728	7.28.24	13:30	G	Water			X	X	X	X	X	X	X	X	X	X	X	X	X	18	
MW-38_20240728_FBLL	7.28.24	13:30	G	Water										X				MS		2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ellen	7/29/24 800	MSG		7/29/24 800	MSG
2		7/29/24 1600	MSG	4051 7962 1313	7/29/24 1600	Fedex
3		Date/Time:	Company	Received by:	~~7/30/24 0945~~	~~Company~~

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.8 -> 2.7

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ella Cappernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1313	COC No: 500-126351-50241 36
Client Contact: Amanda Zeidler	Phone: 517 513 2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254222
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A - HCL
Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	A		
1 MW-38_20240728	7.28.24	13:30	G	Water			X	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ella	7/29/24 800	MSG		7/29/24 800	MSG
2		7/29/24 1600	MSG	4051 7962 1313	7/29/24 1600	Fedex
3		Date/Time	Company		7/30/24 0945	EETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks.





500-254222 Waybi

Testing

48at

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254222-1

Login Number: 254222
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254222-1

Login Number: 254222
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/31/24 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254222 Field Sheet

Date:	7/31/2024
End Time:	15:04
pH Paper Lot:	HC234723
Analyst:	CL

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254222-E-1	≤2				
500-254222-F-1	≤2			CL 7/31/24	
500-254222-J-1	≤2				
500-254222-K-1	≤2				

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 1:29:52 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254223-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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8/21/2024 1:29:52 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job ID: 500-254223-1 — Eurofins Chicago

Job Narrative
500-254223-1

Receipt
The samples were received on 7/30/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.7º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779012 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method SM 5310C: Field filtered Dissolved Organic Carbon results are slightly greater than Total Organic Carbon results. MW-37_20240728 (500-254223-1)

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Client Sample ID: MW-37_20240728

Lab Sample ID: 500-254223-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	1.0		0.50	0.20	ng/L	1		1631E	Total/NA
Uranium	1.9		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	1.6		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	200		100	25	ug/L	1		6020B	Total Recoverable
Arsenic	1.2		1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	210		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	43	J B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	77000		200	44	ug/L	1		6020B	Total Recoverable
Chromium	1.6	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Copper	2.0		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	290		100	47	ug/L	1		6020B	Total Recoverable
Lead	0.21	J	0.50	0.19	ug/L	1		6020B	Total Recoverable
Lithium	12		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	14000		200	49	ug/L	1		6020B	Total Recoverable
Manganese	60		2.5	0.79	ug/L	1		6020B	Total Recoverable
Nickel	0.63	J	2.0	0.63	ug/L	1		6020B	Total Recoverable
Potassium	830		500	110	ug/L	1		6020B	Total Recoverable
Sodium	9200		200	77	ug/L	1		6020B	Total Recoverable
Strontium	320		4.0	0.64	ug/L	1		6020B	Total Recoverable
Vanadium	6.4		5.0	2.2	ug/L	1		6020B	Total Recoverable
Arsenic	0.75	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	240		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	24	J B	50	13	ug/L	1		6020B	Dissolved
Calcium	77000		200	44	ug/L	1		6020B	Dissolved
Chromium	1.2	J	5.0	1.1	ug/L	1		6020B	Dissolved
Copper	1.0	J	2.0	0.50	ug/L	1		6020B	Dissolved
Lithium	12		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	14000		200	49	ug/L	1		6020B	Dissolved
Manganese	1.7	J	2.5	0.79	ug/L	1		6020B	Dissolved
Potassium	690		500	110	ug/L	1		6020B	Dissolved
Sodium	8900		200	77	ug/L	1		6020B	Dissolved
Strontium	270		4.0	0.64	ug/L	1		6020B	Dissolved
Vanadium	5.1		5.0	2.2	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	250		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	0.29	J	1.0	0.18	mg/L	1		300.0	Total/NA
Nitrate as N	0.53	J	1.0	0.043	mg/L	1		300.0	Total/NA
Chloride	23	B	1.0	0.12	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Client Sample ID: MW-37_20240728 (Continued) — Lab Sample ID: 500-254223-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.35	J	1.0	0.19	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.53	J	1.0	0.070	mg/L	1		300.0	Total/NA
Sulfate	2.0		1.0	0.21	mg/L	1		300.0	Total/NA
Ammonia	0.12	J	0.20	0.10	mg/L	1		350.1	Total/NA
Phosphorus as P	0.083	^1- *-	0.050	0.024	mg/L	1		365.1	Total/NA
Alkalinity	220		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	340		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	13		5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	1.5		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	1.8		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: MW-37_20240728_FBLL — Lab Sample ID: 500-254223-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254223-1	MW-37_20240728	Water	07/28/24 16:10	07/30/24 09:45
500-254223-2	MW-37_20240728_FBLL	Water	07/28/24 16:10	07/30/24 09:45

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Client Sample ID: MW-37_20240728

Date Collected: 07/28/24 16:10
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254223-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 19:28	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 19:39	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.0**		0.50	0.20	ng/L			08/02/24 20:23	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 20:27	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**1.9**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:44	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**1.6**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:47	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**200**		100	25	ug/L		08/14/24 08:42	08/15/24 19:17	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:17	1
Arsenic	**1.2**		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:17	1
Barium	**210**		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:17	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:17	1
Boron	**43**	**J B**	50	13	ug/L		08/14/24 08:42	08/15/24 19:17	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:17	1
Calcium	**77000**		200	44	ug/L		08/14/24 08:42	08/15/24 19:17	1
Chromium	**1.6**	**J**	5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:17	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:17	1
Copper	**2.0**		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:17	1
Iron	**290**		100	47	ug/L		08/14/24 08:42	08/15/24 19:17	1
Lead	**0.21**	**J**	0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:17	1
Lithium	**12**		10	2.5	ug/L		08/14/24 08:42	08/15/24 19:17	1
Magnesium	**14000**		200	49	ug/L		08/14/24 08:42	08/15/24 19:17	1
Manganese	**60**		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:17	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:17	1
Nickel	**0.63**	**J**	2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:17	1
Potassium	**830**		500	110	ug/L		08/14/24 08:42	08/15/24 19:17	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:17	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:17	1
Sodium	**9200**		200	77	ug/L		08/14/24 08:42	08/15/24 19:17	1
Strontium	**320**		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:17	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:17	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:17	1
Vanadium	**6.4**		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:17	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 19:17	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Client Sample ID: MW-37_20240728

Date Collected: 07/28/24 16:10
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254223-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 19:24	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:24	1
Arsenic	**0.75**	**J**	1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:24	1
Barium	**240**		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:24	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:24	1
Boron	**24**	**J B**	50	13	ug/L		08/14/24 08:42	08/15/24 19:24	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:24	1
Calcium	**77000**		200	44	ug/L		08/14/24 08:42	08/15/24 19:24	1
Chromium	**1.2**	**J**	5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:24	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:24	1
Copper	**1.0**	**J**	2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:24	1
Iron	<47		100	47	ug/L		08/14/24 08:42	08/15/24 19:24	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:24	1
Lithium	**12**		10	2.5	ug/L		08/14/24 08:42	08/15/24 19:24	1
Magnesium	**14000**		200	49	ug/L		08/14/24 08:42	08/15/24 19:24	1
Manganese	**1.7**	**J**	2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:24	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:24	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:24	1
Potassium	**690**		500	110	ug/L		08/14/24 08:42	08/15/24 19:24	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:24	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:24	1
Sodium	**8900**		200	77	ug/L		08/14/24 08:42	08/15/24 19:24	1
Strontium	**270**		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:24	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:24	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:24	1
Vanadium	**5.1**		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:24	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 19:24	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**250**		0.91	0.46	mg/L		08/14/24 08:42	08/16/24 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**0.29**	**J**	1.0	0.18	mg/L			07/30/24 14:13	1
Nitrate as N (EPA 300.0)	**0.53**	**J**	1.0	0.043	mg/L			07/30/24 14:13	1
Chloride (EPA 300.0)	**23**	**B**	1.0	0.12	mg/L			07/30/24 14:13	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/30/24 14:13	1
Fluoride (EPA 300.0)	**0.35**	**J**	1.0	0.19	mg/L			07/30/24 14:13	1
Nitrate Nitrite as N (EPA 300.0)	**0.53**	**J**	1.0	0.070	mg/L			07/30/24 14:13	1
Sulfate (EPA 300.0)	**2.0**		1.0	0.21	mg/L			07/30/24 14:13	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:29	1
Ammonia (EPA 350.1)	**0.12**	**J**	0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:28	1
Phosphorus as P (EPA 365.1)	**0.083**	**^1- *-**	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:05	1
Alkalinity (SM 2320B)	**220**		5.0	3.7	mg/L			08/07/24 00:49	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**220**		5.0	3.7	mg/L			08/07/24 00:49	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 00:49	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Client Sample ID: MW-37_20240728
Date Collected: 07/28/24 16:10
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254223-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	340		10	4.3	mg/L			08/01/24 01:10	1
Total Suspended Solids (SM 2540D)	13		5.0	1.9	mg/L			08/02/24 16:28	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:15	1
Total Organic Carbon (SM 5310C)	1.5		1.0	0.47	mg/L			08/09/24 02:01	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	1.8		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Client Sample ID: MW-37_20240728_FBLL
Date Collected: 07/28/24 16:10
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254223-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 20:36	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Dissolved	Water	1630	
500-254223-1	MW-37_20240728	Total/NA	Water	1630	
MB 350-2490/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2490/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2490/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2490/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2490/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Prep Batch: 2495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Dissolved	Water	1638	
500-254223-1	MW-37_20240728	Total Recoverable	Water	1638	
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Dissolved	Water	1631E	
500-254223-1	MW-37_20240728	Total/NA	Water	1631E	
500-254223-2	MW-37_20240728_FBLL	Total/NA	Water	1631E	
MB 350-2500/55	Method Blank	Total/NA	Water	1631E	
MB 350-2500/56	Method Blank	Total/NA	Water	1631E	
MB 350-2500/59	Method Blank	Total/NA	Water	1631E	
MB 350-2500/66	Method Blank	Total/NA	Water	1631E	
MB 350-2500/67	Method Blank	Total/NA	Water	1631E	
MB 350-2500/68	Method Blank	Total/NA	Water	1631E	
LCS 350-2500/60	Lab Control Sample	Total/NA	Water	1631E	
LCS 350-2500/71	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2500/61	Lab Control Sample Dup	Total/NA	Water	1631E	
LCSD 350-2500/72	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Dissolved	Water	1638	2495
500-254223-1	MW-37_20240728	Total Recoverable	Water	1638	2495
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	2495
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	2495
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	2495
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2495

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Dissolved	Water	1630	2490
500-254223-1	MW-37_20240728	Total/NA	Water	1630	2490
MB 350-2490/1-A	Method Blank	Total/NA	Water	1630	2490
MB 350-2490/2-A	Method Blank	Total/NA	Water	1630	2490
MB 350-2490/3-A	Method Blank	Total/NA	Water	1630	2490
LCS 350-2490/4-A	Lab Control Sample	Total/NA	Water	1630	2490
LCSD 350-2490/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2490

Metals

Prep Batch: 781334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Dissolved	Water	3005A	
500-254223-1	MW-37_20240728	Total Recoverable	Water	3005A	
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Dissolved	Water	6020B	781334
500-254223-1	MW-37_20240728	Total Recoverable	Water	6020B	781334
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	6020B	781334
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781334

Analysis Batch: 781907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total Recoverable	Water	SM 2340B	781334

General Chemistry

Analysis Batch: 779012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	300.0	
MB 500-779012/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779012/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	300.0	
MB 500-779013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779013/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	SM 2540C	
MB 500-779369/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779369/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	SM 2540D	
MB 500-779749/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779749/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	SM 2520B	

General Chemistry

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	Distill/CN	
MB 500-780716/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	335.4	780716
MB 500-780716/1-A	Method Blank	Total/NA	Water	335.4	780716
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	335.4	780716

Analysis Batch: 780802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	SM 5310C	
MB 500-780802/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-780802/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254223-1	MW-37_20240728	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2490/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:12	1

Lab Sample ID: MB 350-2490/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:22	1

Lab Sample ID: MB 350-2490/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:32	1

Lab Sample ID: LCS 350-2490/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.920		ng/L		92	65 - 135

Lab Sample ID: LCSD 350-2490/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2490

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	1.00		ng/L		100	65 - 135	8	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2500/55
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 14:18	1

Lab Sample ID: MB 350-2500/56
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 14:22	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2500/59
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 14:35	1

Lab Sample ID: MB 350-2500/66
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:04	1

Lab Sample ID: MB 350-2500/67
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:08	1

Lab Sample ID: MB 350-2500/68
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:12	1

Lab Sample ID: LCS 350-2500/60
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.51		ng/L		90	77 - 123		

Lab Sample ID: LCS 350-2500/71
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.40		ng/L		88	77 - 123		

Lab Sample ID: LCSD 350-2500/61
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.55		ng/L		91	77 - 123	1	24

Lab Sample ID: LCSD 350-2500/72
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.46		ng/L		89	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2495/1-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:41	1

Lab Sample ID: MB 350-2495/2-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:44	1

Lab Sample ID: LCS 350-2495/3-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	24.0		ug/L		96	85 - 115

Lab Sample ID: LCSD 350-2495/4-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.8		ug/L		91	85 - 115	5	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781334/1-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 18:45	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 18:45	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 18:45	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 18:45	1
Boron	37.3	J	50	13	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 18:45	1
Calcium	<44		200	44	ug/L		08/14/24 08:42	08/15/24 18:45	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 18:45	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 18:45	1
Iron	<47		100	47	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Magnesium	<49		200	49	ug/L		08/14/24 08:42	08/15/24 18:45	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 18:45	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 18:45	1
Potassium	<110		500	110	ug/L		08/14/24 08:42	08/15/24 18:45	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 18:45	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-781334/1-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 18:45	1
Sodium	<77		200	77	ug/L		08/14/24 08:42	08/15/24 18:45	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 18:45	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 18:45	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 18:45	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 18:45	1

Lab Sample ID: LCS 500-781334/2-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1950		ug/L		98	80 - 120
Antimony	500	497		ug/L		99	80 - 120
Arsenic	100	98.8		ug/L		99	80 - 120
Barium	500	506		ug/L		101	80 - 120
Beryllium	50.0	50.5		ug/L		101	80 - 120
Boron	1000	1020		ug/L		102	80 - 120
Cadmium	50.0	50.9		ug/L		102	80 - 120
Calcium	10000	8680		ug/L		87	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	534		ug/L		107	80 - 120
Copper	250	255		ug/L		102	80 - 120
Iron	1000	1050		ug/L		105	80 - 120
Lead	100	101		ug/L		101	80 - 120
Lithium	100	104		ug/L		104	80 - 120
Magnesium	10000	10400		ug/L		104	80 - 120
Manganese	500	516		ug/L		103	80 - 120
Molybdenum	1000	978		ug/L		98	80 - 120
Nickel	500	509		ug/L		102	80 - 120
Potassium	10000	10300		ug/L		103	80 - 120
Selenium	100	98.9		ug/L		99	80 - 120
Silver	50.0	50.8		ug/L		102	80 - 120
Sodium	10000	10200		ug/L		102	80 - 120
Strontium	1000	976		ug/L		98	80 - 120
Thallium	100	103		ug/L		103	80 - 120
Tin	1000	989		ug/L		99	80 - 120
Vanadium	500	507		ug/L		101	80 - 120
Zinc	500	508		ug/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/30/24 10:50	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.163	J	1.0	0.12	mg/L			07/30/24 10:50	1
Fluoride	<0.19		1.0	0.19	mg/L			07/30/24 10:50	1
Sulfate	<0.21		1.0	0.21	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779012/4
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.9		mg/L		94	90 - 110
Chloride	20.0	20.4		mg/L		102	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.2		mg/L		106	90 - 110

Lab Sample ID: MB 500-779013/3
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/30/24 10:50	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	20.9		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.5		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780716/1-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:09	1

Lab Sample ID: LCS 500-780716/2-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0962		mg/L		96	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779369/1
Matrix: Water
Analysis Batch: 779369

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/01/24 00:14	1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: LCS 500-779369/2
Matrix: Water
Analysis Batch: 779369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	272		mg/L		109	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779749/1
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/02/24 15:55	1

Lab Sample ID: LCS 500-779749/2
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-780802/31
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/09/24 00:09	1

Lab Sample ID: LCS 500-780802/32
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			10.0	9.89		mg/L		99	86 - 116		

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Client Sample ID: MW-37_20240728

Lab Sample ID: 500-254223-1

Date Collected: 07/28/24 16:10

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2490	AJD	EET SSM	08/01/24 10:43
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/02/24 19:39
Total/NA	Prep	1630			2490	AJD	EET SSM	08/01/24 10:43
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 19:28
Dissolved	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:27
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:23
Dissolved	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Dissolved	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:47
Total Recoverable	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Total Recoverable	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:44
Dissolved	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Dissolved	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:24
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:17
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	SM 2340B		1	781907	S1Z	EET CHI	08/16/24 14:31
Total/NA	Analysis	300.0		1	779012	W1T	EET CHI	07/30/24 14:13
Total/NA	Analysis	300.0		1	779013	W1T	EET CHI	07/30/24 14:13
Total/NA	Prep	Distill/CN			780716	AC	EET CHI	08/09/24 11:42 - 08/09/24 12:12 [1]
Total/NA	Analysis	335.4		1	780798	KF	EET CHI	08/10/24 10:29
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:28
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:05
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 00:49
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779369	CLB	EET CHI	08/01/24 01:10
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:28 - 08/02/24 16:30 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:15 - 08/01/24 22:19 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	780802	TR	EET CHI	08/09/24 02:01

Client Sample ID: MW-37_20240728_FBLL

Lab Sample ID: 500-254223-2

Date Collected: 07/28/24 16:10

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:36

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254223-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

500-254223 COC

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1298	COC No.: 500-126351-50241 71
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254223
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOC SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~300_GR_B~~ SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~2500_CR_B - Dissolved Chromium, Hex (field filtered)~~	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 MW-37_20240728	07-28-24	1610	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18	
2 MW-37_20240728_FBLL	07-28-24	1610	G	Water										✓						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight				
Relinquished by:	Date/Time: 7/29/24 800	Company: MSG	Received by:	Date/Time: 7/29/24 800	Company: MSG
Relinquished by:	Date/Time: 7/29/24 1600	Company: MSG	Received by: 4051 7962 1298	Date/Time: 7/29/24 1600	Company: Fedex
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 7/30/24 0945	Company: EAT

Custody Seals Intact Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 2.8-2.7

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 405 7962 1298	COC No: 500-126351-50241 72
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254223
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N None; CB - ZnAcetate/NaOH; B - NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
1 MW-37 - 20240728	07-28-24	1610	G	Water			✓	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: fedex Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ellen	7/29/24 800	MSG		7/29/24 800	MSG
2		7/29/24 1600	MSG	405 7962 1298	7/29/24 1600	Fedex
3		Date/Time	Company		7/30/24 0945	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks.

JED CHRESTENSEN
THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US

ACTWGT: 25.0 LB MAN
CAD: 07803[illegible]/CAFE3808

Part # 159469-434 MTW EXP 01/25

TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484

(708) 534-6200 REF:
INV:
PO: DEPT:

RMA.

FedEx Express

J24102311220lUV

FedEx
TRK# 0221 4051 7962 1298

RETURNS MON-SAT
TUE - 30 JUL AA
PRIORITY OVERNIGHT

XP JOTA

60484
IL-US
ORD

5878720 29Jul2024 CMXA 581G6/A12D/C0B8

500-254223 Waybi

Page 29 of 34

8/21/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191063.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254223-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/19/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-37_20240728 (500-254223-1)	7/28/24	16:10 Eastern		Water			X	X	X	X	X	X	8	
MW-37_20240728_FBLL (500-254223-2)	7/28/24	16:10 Eastern		Water				X					2	

Other:

Lvy Blue

Therm. ID: SC02 Cust. Seal: (Y) / N
Uncorr./Corr. Temp: 6.3 / 6.3 °C
Delivery: UPS / FedEx / Other
Ice Type: Blue / Dry / Wet / None
Label Ver. _____ Packing: B

Therm. ID: SC02 Cust. Seal: (Y) / N
Uncorr./Corr. Temp: 1.5 / 1.5 °C
Delivery: UPS / FedEx / Other
Ice Type: Blue / Dry / Wet / None
Label Ver. TL Packing: B

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification: Unconfirmed 7051 7620 4753	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment			
Relinquished by	Date/Time: 07/30/24 1530	Company: EETA	Received by	Date/Time: 7/31/24 9:45	Company: EETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191062.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254222-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/19/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-38_20240728 (500-254222-1)	7/28/24	13:30 Eastern		Water			X	X	X	X	X	X	8	
MW-38_20240728_FBLL (500-254222-2)	7/28/24	13:30 Eastern		Water				X					2	
										Lg		Blu		Lg Blue

Therm. ID: SC01 Cust. Seal: Y / N
Uncorr./Corr. Temp 5.3/0.3 °C
Delivery: UPS / FedEx / Other
Ice Type: Blue / Dry / Wet / None
Label Ver. Packing: B

Therm. ID: SC02 Cust. Seal: Y / N
Uncorr./Corr. Temp 4.5/1.5 °C
Delivery: UPS / FedEx / Other
Ice Type: Blue / Dry / Wet / None
Label Ver. Packing: B

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided Any changes to accreditatio immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

brought to Eurofins Chicago attention

Possible Hazard Identification: Unconfirmed 7051 7620 4753	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	07/30/24 1530	EETA		7/31/24 9:45	
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: △ Yes △ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254223-1

Login Number: 254223
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254223-1

Login Number: 254223
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/31/24 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254223 Field Sheet

Date:	7/31/2024
End Time:	15:04
pH Paper Lot:	HC234723
Analyst:	JL

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254223-F-1	2				
500-254223-E-1	2			2	
500-254223-J-1	2			7/31/24	
500-254223-K-1	2				

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 1:31:39 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254224-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



Generated
8/21/2024 1:31:39 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job ID: 500-254224-1 — Eurofins Chicago

Job Narrative
500-254224-1

Receipt
The samples were received on 7/30/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.7º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779012 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method SM 5310C: Field filtered Dissolved Organic Carbon results are slightly greater than Total Organic Carbon results. MW-36_20240728 (500-254224-1)

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Client Sample ID: MW-36_20240728

Lab Sample ID: 500-254224-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl Mercury	0.025	J	0.050	0.022	ng/L	1		1630	Total/NA
Methyl Mercury	0.034	J	0.050	0.022	ng/L	1		1630	Dissolved
Mercury	0.32	J	0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	0.20	J	0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	0.11		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.086		0.030	0.0098	ug/L	1		1638	Dissolved
Arsenic	1.2		1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	240		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	77	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	83000		200	44	ug/L	1		6020B	Total Recoverable
Copper	1.0	J	2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	1200		100	47	ug/L	1		6020B	Total Recoverable
Lead	0.20	J	0.50	0.19	ug/L	1		6020B	Total Recoverable
Lithium	16		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	11000		200	49	ug/L	1		6020B	Total Recoverable
Manganese	710		2.5	0.79	ug/L	1		6020B	Total Recoverable
Potassium	340	J	500	110	ug/L	1		6020B	Total Recoverable
Sodium	29000		200	77	ug/L	1		6020B	Total Recoverable
Strontium	990		4.0	0.64	ug/L	1		6020B	Total Recoverable
Vanadium	2.3	J	5.0	2.2	ug/L	1		6020B	Total Recoverable
Arsenic	1.5		1.0	0.23	ug/L	1		6020B	Dissolved
Barium	270		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	81	B	50	13	ug/L	1		6020B	Dissolved
Calcium	91000		200	44	ug/L	1		6020B	Dissolved
Iron	1900		100	47	ug/L	1		6020B	Dissolved
Lithium	18		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	12000		200	49	ug/L	1		6020B	Dissolved
Manganese	910		2.5	0.79	ug/L	1		6020B	Dissolved
Potassium	410	J	500	110	ug/L	1		6020B	Dissolved
Sodium	31000		200	77	ug/L	1		6020B	Dissolved
Strontium	1100		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	250		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	0.47	J	1.0	0.18	mg/L	1		300.0	Total/NA
Nitrate as N	0.43	J	1.0	0.043	mg/L	1		300.0	Total/NA
Chloride	41	B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.25	J	1.0	0.19	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.43	J	1.0	0.070	mg/L	1		300.0	Total/NA
Sulfate	0.40	J	1.0	0.21	mg/L	1		300.0	Total/NA
Ammonia	0.36		0.20	0.10	mg/L	1		350.1	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-36_20240728 (Continued)

Lab Sample ID: 500-254224-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	280		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	280		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	380		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	4.2	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	6.8		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	7.8		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: MW-36_20240728_FBLL

Lab Sample ID: 500-254224-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254224-1	MW-36_20240728	Water	07/28/24 17:30	07/30/24 09:45
500-254224-2	MW-36_20240728_FBLL	Water	07/28/24 17:30	07/30/24 09:45

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Client Sample ID: MW-36_20240728
Date Collected: 07/28/24 17:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254224-1
Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	0.025	J	0.050	0.022	ng/L		08/01/24 10:43	08/02/24 15:34	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	0.034	J	0.050	0.022	ng/L		08/02/24 11:02	08/02/24 21:10	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.32	J	0.50	0.20	ng/L			08/02/24 20:40	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	J	0.50	0.20	ng/L			08/02/24 20:44	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	0.11		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:51	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	0.086		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:54	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 19:26	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:26	1
Arsenic	1.2		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:26	1
Barium	240		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:26	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:26	1
Boron	77	B	50	13	ug/L		08/14/24 08:42	08/15/24 19:26	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:26	1
Calcium	83000		200	44	ug/L		08/14/24 08:42	08/15/24 19:26	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:26	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:26	1
Copper	1.0	J	2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:26	1
Iron	1200		100	47	ug/L		08/14/24 08:42	08/15/24 19:26	1
Lead	0.20	J	0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:26	1
Lithium	16		10	2.5	ug/L		08/14/24 08:42	08/15/24 19:26	1
Magnesium	11000		200	49	ug/L		08/14/24 08:42	08/15/24 19:26	1
Manganese	710		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:26	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:26	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:26	1
Potassium	340	J	500	110	ug/L		08/14/24 08:42	08/15/24 19:26	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:26	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:26	1
Sodium	29000		200	77	ug/L		08/14/24 08:42	08/15/24 19:26	1
Strontium	990		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:26	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:26	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:26	1
Vanadium	2.3	J	5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:26	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 19:26	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Client Sample ID: MW-36_20240728

Date Collected: 07/28/24 17:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254224-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 19:28	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:28	1
Arsenic	**1.5**		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:28	1
Barium	**270**		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:28	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:28	1
Boron	**81**	**B**	50	13	ug/L		08/14/24 08:42	08/15/24 19:28	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:28	1
Calcium	**91000**		200	44	ug/L		08/14/24 08:42	08/15/24 19:28	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:28	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:28	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:28	1
Iron	**1900**		100	47	ug/L		08/14/24 08:42	08/15/24 19:28	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:28	1
Lithium	**18**		10	2.5	ug/L		08/14/24 08:42	08/15/24 19:28	1
Magnesium	**12000**		200	49	ug/L		08/14/24 08:42	08/15/24 19:28	1
Manganese	**910**		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:28	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:28	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:28	1
Potassium	**410**	**J**	500	110	ug/L		08/14/24 08:42	08/15/24 19:28	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:28	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:28	1
Sodium	**31000**		200	77	ug/L		08/14/24 08:42	08/15/24 19:28	1
Strontium	**1100**		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:28	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:28	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:28	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:28	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 19:28	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**250**		0.91	0.46	mg/L		08/14/24 08:42	08/16/24 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**0.47**	**J**	1.0	0.18	mg/L			07/30/24 12:55	1
Nitrate as N (EPA 300.0)	**0.43**	**J**	1.0	0.043	mg/L			07/30/24 12:55	1
Chloride (EPA 300.0)	**41**	**B**	1.0	0.12	mg/L			07/30/24 12:55	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/30/24 12:55	1
Fluoride (EPA 300.0)	**0.25**	**J**	1.0	0.19	mg/L			07/30/24 12:55	1
Nitrate Nitrite as N (EPA 300.0)	**0.43**	**J**	1.0	0.070	mg/L			07/30/24 12:55	1
Sulfate (EPA 300.0)	**0.40**	**J**	1.0	0.21	mg/L			07/30/24 12:55	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:31	1
Ammonia (EPA 350.1)	**0.36**		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:28	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:06	1
Alkalinity (SM 2320B)	**280**		5.0	3.7	mg/L			08/07/24 00:59	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**280**		5.0	3.7	mg/L			08/07/24 00:59	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 00:59	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Client Sample ID: MW-36_20240728
Date Collected: 07/28/24 17:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254224-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	380		10	4.3	mg/L			08/01/24 01:13	1
Total Suspended Solids (SM 2540D)	4.2	J	5.0	1.9	mg/L			08/02/24 16:30	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:19	1
Total Organic Carbon (SM 5310C)	6.8		1.0	0.47	mg/L			08/09/24 02:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	7.8		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Client Sample ID: MW-36_20240728_FBLL

Date Collected: 07/28/24 17:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254224-2

Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 20:48	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	1630	
MB 350-2490/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2490/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2490/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2490/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2490/5-A	Lab Control Sample Dup	Total/NA	Water	1630	
500-254224-1 MS	MW-36_20240728	Total/NA	Water	1630	
500-254224-1 MSD	MW-36_20240728	Total/NA	Water	1630	

Prep Batch: 2495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Dissolved	Water	1638	
500-254224-1	MW-36_20240728	Total Recoverable	Water	1638	
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Prep Batch: 2496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Dissolved	Water	1630	
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	
500-254224-1 MS	MW-36_20240728	Dissolved	Water	1630	
500-254224-1 MSD	MW-36_20240728	Dissolved	Water	1630	

Analysis Batch: 2500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Dissolved	Water	1631E	
500-254224-1	MW-36_20240728	Total/NA	Water	1631E	
500-254224-2	MW-36_20240728_FBLL	Total/NA	Water	1631E	
MB 350-2500/66	Method Blank	Total/NA	Water	1631E	
MB 350-2500/67	Method Blank	Total/NA	Water	1631E	
MB 350-2500/68	Method Blank	Total/NA	Water	1631E	
LCS 350-2500/71	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2500/72	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Dissolved	Water	1638	2495
500-254224-1	MW-36_20240728	Total Recoverable	Water	1638	2495
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	2495
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	2495
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	2495
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2495

Metals

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Dissolved	Water	1630	2496
500-254224-1	MW-36_20240728	Total/NA	Water	1630	2490
MB 350-2490/1-A	Method Blank	Total/NA	Water	1630	2490
MB 350-2490/2-A	Method Blank	Total/NA	Water	1630	2490
MB 350-2490/3-A	Method Blank	Total/NA	Water	1630	2490
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	2496
LCS 350-2490/4-A	Lab Control Sample	Total/NA	Water	1630	2490
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	2496
LCSD 350-2490/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2490
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2496
500-254224-1 MS	MW-36_20240728	Dissolved	Water	1630	2496
500-254224-1 MS	MW-36_20240728	Total/NA	Water	1630	2490
500-254224-1 MSD	MW-36_20240728	Dissolved	Water	1630	2496
500-254224-1 MSD	MW-36_20240728	Total/NA	Water	1630	2490

Prep Batch: 781334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Dissolved	Water	3005A	
500-254224-1	MW-36_20240728	Total Recoverable	Water	3005A	
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Dissolved	Water	6020B	781334
500-254224-1	MW-36_20240728	Total Recoverable	Water	6020B	781334
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	6020B	781334
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781334

Analysis Batch: 781908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total Recoverable	Water	SM 2340B	781334

General Chemistry

Analysis Batch: 779012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	300.0	
MB 500-779012/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779012/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	300.0	
MB 500-779013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779013/4	Lab Control Sample	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 779369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	SM 2540C	
MB 500-779369/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779369/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	SM 2540D	
MB 500-779749/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779749/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	SM 2520B	

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	Distill/CN	
MB 500-780716/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	335.4	780716
MB 500-780716/1-A	Method Blank	Total/NA	Water	335.4	780716
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	335.4	780716

Analysis Batch: 780802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	SM 5310C	
MB 500-780802/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-780802/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

General Chemistry

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254224-1	MW-36_20240728	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2490/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:12	1

Lab Sample ID: MB 350-2490/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:22	1

Lab Sample ID: MB 350-2490/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/01/24 10:43	08/02/24 14:32	1

Lab Sample ID: LCS 350-2490/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2490

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methyl Mercury			1.00	0.920		ng/L		92	65 - 135		

Lab Sample ID: LCSD 350-2490/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2490

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury			1.00	1.00		ng/L		100	65 - 135	8	35

Lab Sample ID: 500-254224-1 MS
Matrix: Water
Analysis Batch: 2513

Client Sample ID: MW-36_20240728
Prep Type: Total/NA
Prep Batch: 2490

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Methyl Mercury	0.025	J	1.00	1.08		ng/L		105	65 - 135		

Lab Sample ID: 500-254224-1 MSD
Matrix: Water
Analysis Batch: 2513

Client Sample ID: MW-36_20240728
Prep Type: Total/NA
Prep Batch: 2490

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	0.025	J	1.00	0.963		ng/L		94	65 - 135	11	35

Lab Sample ID: MB 350-2496/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:19	1

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2496/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:30	1

Lab Sample ID: MB 350-2496/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:40	1

Lab Sample ID: LCS 350-2496/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2496

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methyl Mercury			1.00	1.04		ng/L		104	65 - 135		

Lab Sample ID: LCSD 350-2496/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2496

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury			1.00	0.997		ng/L		100	65 - 135	4	35

Lab Sample ID: 500-254224-1 MS
Matrix: Water
Analysis Batch: 2513

Client Sample ID: MW-36_20240728
Prep Type: Dissolved
Prep Batch: 2496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Methyl Mercury	0.034	J	1.00	1.02		ng/L		99	65 - 135		

Lab Sample ID: 500-254224-1 MSD
Matrix: Water
Analysis Batch: 2513

Client Sample ID: MW-36_20240728
Prep Type: Dissolved
Prep Batch: 2496

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	0.034	J	1.00	1.01		ng/L		98	65 - 135	1	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2500/66
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:04	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2500/67
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:08	1

Lab Sample ID: MB 350-2500/68
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:12	1

Lab Sample ID: LCS 350-2500/71
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.40		ng/L		88	77 - 123

Lab Sample ID: LCSD 350-2500/72
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.46		ng/L		89	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2495/1-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:41	1

Lab Sample ID: MB 350-2495/2-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:44	1

Lab Sample ID: LCS 350-2495/3-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	24.0		ug/L		96	85 - 115

Method: 1638 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 350-2495/4-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium			25.0	22.8		ug/L		91	85 - 115	5	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781334/1-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 18:45	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 18:45	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 18:45	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 18:45	1
Boron	37.3	J	50	13	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 18:45	1
Calcium	<44		200	44	ug/L		08/14/24 08:42	08/15/24 18:45	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 18:45	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 18:45	1
Iron	<47		100	47	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Magnesium	<49		200	49	ug/L		08/14/24 08:42	08/15/24 18:45	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 18:45	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 18:45	1
Potassium	<110		500	110	ug/L		08/14/24 08:42	08/15/24 18:45	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 18:45	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 18:45	1
Sodium	<77		200	77	ug/L		08/14/24 08:42	08/15/24 18:45	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 18:45	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 18:45	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 18:45	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 18:45	1

Lab Sample ID: LCS 500-781334/2-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum			2000	1950		ug/L		98	80 - 120
Antimony			500	497		ug/L		99	80 - 120
Arsenic			100	98.8		ug/L		99	80 - 120
Barium			500	506		ug/L		101	80 - 120
Beryllium			50.0	50.5		ug/L		101	80 - 120
Boron			1000	1020		ug/L		102	80 - 120
Cadmium			50.0	50.9		ug/L		102	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781334/2-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	10000	8680		ug/L		87	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	534		ug/L		107	80 - 120
Copper	250	255		ug/L		102	80 - 120
Iron	1000	1050		ug/L		105	80 - 120
Lead	100	101		ug/L		101	80 - 120
Lithium	100	104		ug/L		104	80 - 120
Magnesium	10000	10400		ug/L		104	80 - 120
Manganese	500	516		ug/L		103	80 - 120
Molybdenum	1000	978		ug/L		98	80 - 120
Nickel	500	509		ug/L		102	80 - 120
Potassium	10000	10300		ug/L		103	80 - 120
Selenium	100	98.9		ug/L		99	80 - 120
Silver	50.0	50.8		ug/L		102	80 - 120
Sodium	10000	10200		ug/L		102	80 - 120
Strontium	1000	976		ug/L		98	80 - 120
Thallium	100	103		ug/L		103	80 - 120
Tin	1000	989		ug/L		99	80 - 120
Vanadium	500	507		ug/L		101	80 - 120
Zinc	500	508		ug/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/30/24 10:50	1
Chloride	0.163	J	1.0	0.12	mg/L			07/30/24 10:50	1
Fluoride	<0.19		1.0	0.19	mg/L			07/30/24 10:50	1
Sulfate	<0.21		1.0	0.21	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779012/4
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.9		mg/L		94	90 - 110
Chloride	20.0	20.4		mg/L		102	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.2		mg/L		106	90 - 110

Lab Sample ID: MB 500-779013/3
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/30/24 10:50	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-779013/3
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	20.9		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.5		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780716/1-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:09	1

Lab Sample ID: LCS 500-780716/2-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0962		mg/L		96	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Method: 365.1 - Phosphorus, Total

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779369/1
Matrix: Water
Analysis Batch: 779369

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/01/24 00:14	1

Lab Sample ID: LCS 500-779369/2
Matrix: Water
Analysis Batch: 779369

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	272		mg/L		109	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779749/1
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/02/24 15:55	1

Lab Sample ID: LCS 500-779749/2
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-780802/31
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/09/24 00:09	1

Lab Sample ID: LCS 500-780802/32
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Client Sample ID: MW-36_20240728

Date Collected: 07/28/24 17:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254224-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/02/24 21:10
Total/NA	Prep	1630			2490	AJD	EET SSM	08/01/24 10:43
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 15:34
Dissolved	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:44
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:40
Dissolved	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Dissolved	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:54
Total Recoverable	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Total Recoverable	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:51
Dissolved	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Dissolved	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:28
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:26
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	SM 2340B		1	781908	S1Z	EET CHI	08/16/24 14:31
Total/NA	Analysis	300.0		1	779012	W1T	EET CHI	07/30/24 12:55
Total/NA	Analysis	300.0		1	779013	W1T	EET CHI	07/30/24 12:55
Total/NA	Prep	Distill/CN			780716	AC	EET CHI	08/09/24 11:42 - 08/09/24 12:12 [1]
Total/NA	Analysis	335.4		1	780798	KF	EET CHI	08/10/24 10:31
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:28
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:06
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 00:59
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779369	CLB	EET CHI	08/01/24 01:13
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:30 - 08/02/24 16:32 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:19 - 08/01/24 22:23 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	780802	TR	EET CHI	08/09/24 02:29

Client Sample ID: MW-36_20240728_FBLL

Date Collected: 07/28/24 17:30
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254224-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:48

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254224-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

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Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	500-254224 COC	Carrier Tracking No(s): 4051 7962 1287	COC No: 500-126351-50241 85
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com		State of Origin: Michigan	Page: Page 1 of 1
Company: White Pine Copper	PWSID:				Job #: 500-254224
Address: 35503 Mall Circle Drive	Due Date Requested:				
City: White Pine	TAT Requested (days): 10 days				
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No				
Phone: 906-204-6500	PO #: Purchase Order not required				
Email: AZeidler@whitepinecu com	WO #:				
Project Name: White Pine, MI	Project #: 50023455				
Site	SSOW#:				

Analysis Requested

Preservation Codes:
S - H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A - HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC) and Organic Carbon Total (TOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	A		
1 MW-36_20240728	07-28-24	1730	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	19	
2 MW-36_20240728_FBLL	07-28-24	1730	G	Water										✓						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

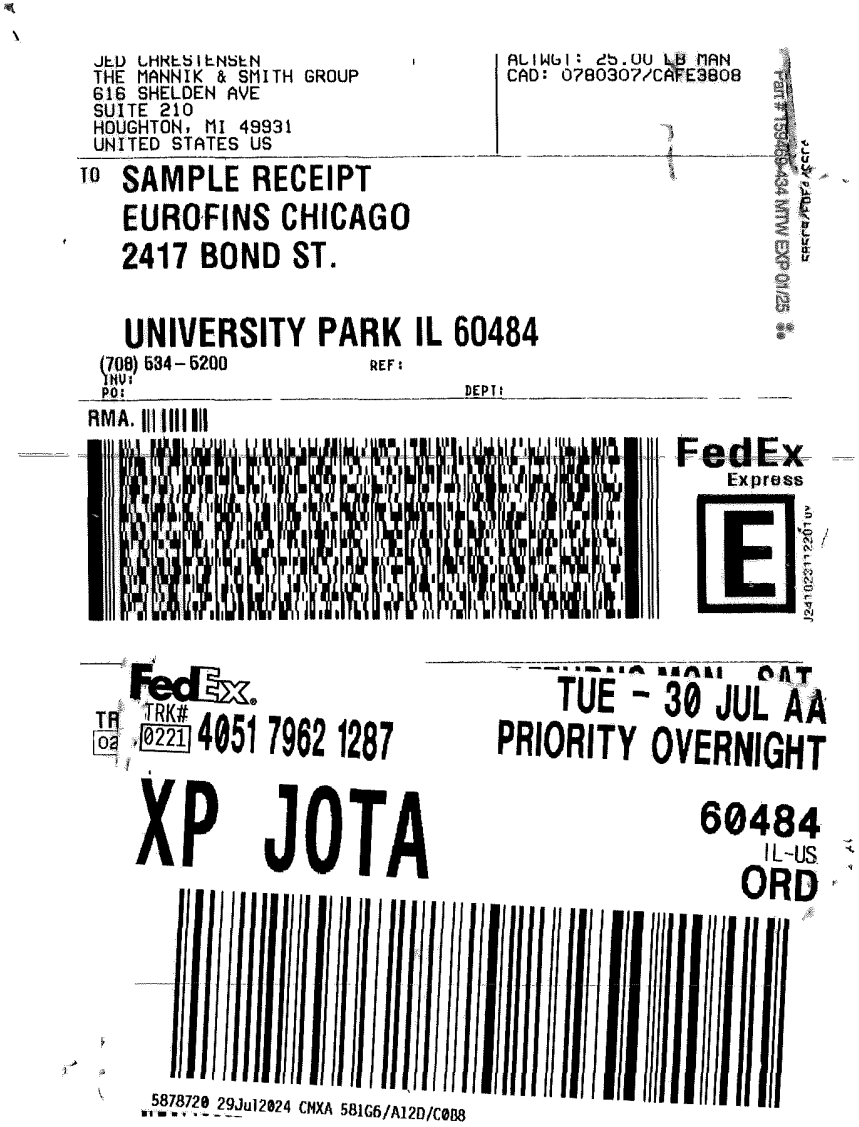
Special Instructions/QC Requirements MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: fedex Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/29/24 800	MSG		7/29/24 800	MSG
2		7/29/24 1600	MSG	4051 7962 1287	7/29/24 1600	fedex
3					7/30/24 0945	EET

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: 1.8 -> 1.7



500-254224 Waybi

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191064.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254224-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/19/2024			Preservation Codes: -
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
Preservation Code:														
MW-36_20240728 (500-254224-1)	7/28/24	17:30 Eastern		Water			X	X	X	X	X	X	8	
MW-36_20240728_FBLL (500-254224-2)	7/28/24	17:30 Eastern		Water				X					2	

4 Blue

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicag immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicag

Therm. ID: SC0 2 **Cust. Seal:** (Y) / N
Uncorr./Corr. Temp: 0.3 / 0.3 °C
Delivery: UPS / FedEx / Other: _____
Ice Type: Blue / Dry / Wet / None
Label Ver.: 2 **Packing:** B

Therm. ID: SC0 2 **Cust. Seal:** (Y) / N
Uncorr./Corr. Temp: 1.5 / 1.5 °C
Delivery: UPS / FedEx / Other: _____
Ice Type: Blue / Dry / Wet / None
Label Ver.: 2 **Packing:** B

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed 7051 7620 4753	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	02/30/24 1530	EETA		7/30/24 9:45	EETS
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254224-1

Login Number: 254224
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254224-1

Login Number: 254224
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/31/24 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254224 Field Sheet

Date:	7/31/2024
End Time:	1530
pH Paper Lot:	HC234723
Analyst:	VL

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254224-F-1	<2				
500-254224-E-1	<2			VL 7/31/24	
500-254224-J-1	<2				
500-254224-K-1	<2				

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 1:41:41 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254225-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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8/21/2024 1:41:41 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254225-1

Receipt
The samples were received on 7/30/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.7º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779012 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method SM 4500 S2 F: The maximum volume of titrant (10mL) has been reached without a color change. The result is reported as <1.0mg/L. Matrix interference is suspected.MW-35_20240728 (500-254225-1)

Method SM 5310C: Field filtered Dissolved Organic Carbon results are slightly greater than Total Organic Carbon results. MW-35_20240728 (500-254225-1)

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Client Sample ID: MW-35_20240728

Lab Sample ID: 500-254225-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	19		2.5	1.0	ng/L	5		1631E	Total/NA
Mercury	0.91		0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	2.1		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	1.9		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	430		100	25	ug/L	1		6020B	Total Recoverable
Arsenic	11		1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	3400		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	45	J B	50	13	ug/L	1		6020B	Total Recoverable
Cadmium	2.5		0.50	0.17	ug/L	1		6020B	Total Recoverable
Calcium	79000		200	44	ug/L	1		6020B	Total Recoverable
Cobalt	0.96	J	1.0	0.40	ug/L	1		6020B	Total Recoverable
Copper	140		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	550		100	47	ug/L	1		6020B	Total Recoverable
Lead	0.59		0.50	0.19	ug/L	1		6020B	Total Recoverable
Lithium	13		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	12000		200	49	ug/L	1		6020B	Total Recoverable
Manganese	55000		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	3.2	J	5.0	2.5	ug/L	1		6020B	Total Recoverable
Nickel	12		2.0	0.63	ug/L	1		6020B	Total Recoverable
Potassium	1300		500	110	ug/L	1		6020B	Total Recoverable
Sodium	7500		200	77	ug/L	1		6020B	Total Recoverable
Strontium	210		4.0	0.64	ug/L	1		6020B	Total Recoverable
Vanadium	97		5.0	2.2	ug/L	1		6020B	Total Recoverable
Zinc	16	J	20	6.9	ug/L	1		6020B	Total Recoverable
Arsenic	1.4		1.0	0.23	ug/L	1		6020B	Dissolved
Barium	400		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	36	J B	50	13	ug/L	1		6020B	Dissolved
Calcium	73000		200	44	ug/L	1		6020B	Dissolved
Copper	1.2	J	2.0	0.50	ug/L	1		6020B	Dissolved
Lithium	10		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	11000		200	49	ug/L	1		6020B	Dissolved
Manganese	4.2		2.5	0.79	ug/L	1		6020B	Dissolved
Potassium	1100		500	110	ug/L	1		6020B	Dissolved
Sodium	7300		200	77	ug/L	1		6020B	Dissolved
Strontium	190		4.0	0.64	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-35_20240728 (Continued) — Lab Sample ID: 500-254225-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	2.3	J	5.0	2.2	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	250		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Chloride	0.96	J B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.26	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	7.5		1.0	0.21	mg/L	1		300.0	Total/NA
Ammonia	1.6		0.20	0.10	mg/L	1		350.1	Total/NA
Alkalinity	220		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	190		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	180		50	19	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	1.8		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	3.4		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: MW-35_20240728_FBLL — Lab Sample ID: 500-254225-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254225-1	MW-35_20240728	Water	07/28/24 18:45	07/30/24 09:45
500-254225-2	MW-35_20240728_FBLL	Water	07/28/24 18:45	07/30/24 09:45

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Client Sample ID: MW-35_20240728

Date Collected: 07/28/24 18:45
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254225-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 22:32	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 22:42	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**19**		2.5	1.0	ng/L			08/02/24 12:10	5

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.91**		0.50	0.20	ng/L			08/02/24 20:52	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**2.1**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:58	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**1.9**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 17:02	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**430**		100	25	ug/L		08/14/24 08:42	08/15/24 19:31	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:31	1
Arsenic	**11**		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:31	1
Barium	**3400**		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:31	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:31	1
Boron	**45**	**J B**	50	13	ug/L		08/14/24 08:42	08/15/24 19:31	1
Cadmium	**2.5**		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:31	1
Calcium	**79000**		200	44	ug/L		08/14/24 08:42	08/15/24 19:31	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:31	1
Cobalt	**0.96**	**J**	1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:31	1
Copper	**140**		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:31	1
Iron	**550**		100	47	ug/L		08/14/24 08:42	08/15/24 19:31	1
Lead	**0.59**		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:31	1
Lithium	**13**		10	2.5	ug/L		08/14/24 08:42	08/15/24 19:31	1
Magnesium	**12000**		200	49	ug/L		08/14/24 08:42	08/15/24 19:31	1
Manganese	**55000**		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:31	1
Molybdenum	**3.2**	**J**	5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:31	1
Nickel	**12**		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:31	1
Potassium	**1300**		500	110	ug/L		08/14/24 08:42	08/15/24 19:31	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:31	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:31	1
Sodium	**7500**		200	77	ug/L		08/14/24 08:42	08/15/24 19:31	1
Strontium	**210**		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:31	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:31	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:31	1
Vanadium	**97**		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:31	1
Zinc	**16**	**J**	20	6.9	ug/L		08/14/24 08:42	08/15/24 19:31	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Client Sample ID: MW-35_20240728

Date Collected: 07/28/24 18:45
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254225-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 19:33	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:33	1
Arsenic	**1.4**		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:33	1
Barium	**400**		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:33	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:33	1
Boron	**36**	**J B**	50	13	ug/L		08/14/24 08:42	08/15/24 19:33	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:33	1
Calcium	**73000**		200	44	ug/L		08/14/24 08:42	08/15/24 19:33	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:33	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:33	1
Copper	**1.2**	**J**	2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:33	1
Iron	<47		100	47	ug/L		08/14/24 08:42	08/15/24 19:33	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:33	1
Lithium	**10**		10	2.5	ug/L		08/14/24 08:42	08/15/24 19:33	1
Magnesium	**11000**		200	49	ug/L		08/14/24 08:42	08/15/24 19:33	1
Manganese	**4.2**		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:33	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:33	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:33	1
Potassium	**1100**		500	110	ug/L		08/14/24 08:42	08/15/24 19:33	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:33	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:33	1
Sodium	**7300**		200	77	ug/L		08/14/24 08:42	08/15/24 19:33	1
Strontium	**190**		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:33	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:33	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:33	1
Vanadium	**2.3**	**J**	5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:33	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 19:33	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**250**		0.91	0.46	mg/L		08/14/24 08:42	08/16/24 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			07/30/24 13:11	1
Nitrate as N (EPA 300.0)	<0.043		1.0	0.043	mg/L			07/30/24 13:11	1
Chloride (EPA 300.0)	**0.96**	**J B**	1.0	0.12	mg/L			07/30/24 13:11	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/30/24 13:11	1
Fluoride (EPA 300.0)	**0.26**	**J**	1.0	0.19	mg/L			07/30/24 13:11	1
Nitrate Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/30/24 13:11	1
Sulfate (EPA 300.0)	**7.5**		1.0	0.21	mg/L			07/30/24 13:11	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:32	1
Ammonia (EPA 350.1)	**1.6**		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:28	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:06	1
Alkalinity (SM 2320B)	**220**		5.0	3.7	mg/L			08/07/24 01:09	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**220**		5.0	3.7	mg/L			08/07/24 01:09	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 01:09	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Client Sample ID: MW-35_20240728
Date Collected: 07/28/24 18:45
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254225-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	190		10	4.3	mg/L			08/01/24 02:33	1
Total Suspended Solids (SM 2540D)	180		50	19	mg/L			08/02/24 16:32	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:23	1
Total Organic Carbon (SM 5310C)	1.8		1.0	0.47	mg/L			08/09/24 02:57	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	3.4		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Client Sample ID: MW-35_20240728_FBLL

Date Collected: 07/28/24 18:45
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254225-2

Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 20:56	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Dissolved	Water	1638	
500-254225-1	MW-35_20240728	Total Recoverable	Water	1638	
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Prep Batch: 2496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Dissolved	Water	1630	
500-254225-1	MW-35_20240728	Total/NA	Water	1630	
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Dissolved	Water	1631E	
500-254225-1	MW-35_20240728	Total/NA	Water	1631E	
500-254225-2	MW-35_20240728_FBLL	Total/NA	Water	1631E	
MB 350-2500/66	Method Blank	Total/NA	Water	1631E	
MB 350-2500/67	Method Blank	Total/NA	Water	1631E	
MB 350-2500/68	Method Blank	Total/NA	Water	1631E	
LCS 350-2500/71	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2500/72	Lab Control Sample Dup	Total/NA	Water	1631E	
500-254225-1 MS	MW-35_20240728	Total/NA	Water	1631E	
500-254225-1 MSD	MW-35_20240728	Total/NA	Water	1631E	

Analysis Batch: 2503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Dissolved	Water	1638	2495
500-254225-1	MW-35_20240728	Total Recoverable	Water	1638	2495
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	2495
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	2495
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	2495
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2495

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Dissolved	Water	1630	2496
500-254225-1	MW-35_20240728	Total/NA	Water	1630	2496
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	2496
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	2496
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2496

Metals

Prep Batch: 781334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Dissolved	Water	3005A	
500-254225-1	MW-35_20240728	Total Recoverable	Water	3005A	
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Dissolved	Water	6020B	781334
500-254225-1	MW-35_20240728	Total Recoverable	Water	6020B	781334
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	6020B	781334
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781334

Analysis Batch: 781909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total Recoverable	Water	SM 2340B	781334

General Chemistry

Analysis Batch: 779012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	300.0	
MB 500-779012/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779012/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	300.0	
MB 500-779013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779013/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	SM 2540C	
MB 500-779370/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779370/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	SM 2540D	
MB 500-779749/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779749/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	SM 2520B	

General Chemistry

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	Distill/CN	
MB 500-780716/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	335.4	780716
MB 500-780716/1-A	Method Blank	Total/NA	Water	335.4	780716
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	335.4	780716

Analysis Batch: 780802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	SM 5310C	
MB 500-780802/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-780802/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254225-1	MW-35_20240728	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2496/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:19	1

Lab Sample ID: MB 350-2496/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:30	1

Lab Sample ID: MB 350-2496/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:40	1

Lab Sample ID: LCS 350-2496/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	1.04		ng/L		104	65 - 135

Lab Sample ID: LCSD 350-2496/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.997		ng/L		100	65 - 135	4	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2500/66
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:04	1

Lab Sample ID: MB 350-2500/67
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:08	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2500/68
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:12	1

Lab Sample ID: LCS 350-2500/71
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.40		ng/L		88	77 - 123		

Lab Sample ID: LCSD 350-2500/72
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.46		ng/L		89	77 - 123	1	24

Lab Sample ID: 500-254225-1 MS
Matrix: Water
Analysis Batch: 2500

Client Sample ID: MW-35_20240728
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	19		25.0	41.5		ng/L		91	71 - 125		

Lab Sample ID: 500-254225-1 MSD
Matrix: Water
Analysis Batch: 2500

Client Sample ID: MW-35_20240728
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	19		25.0	40.0		ng/L		86	71 - 125	4	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2495/1-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:41	1

Lab Sample ID: MB 350-2495/2-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:44	1

Method: 1638 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 350-2495/3-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	24.0		ug/L		96	85 - 115

Lab Sample ID: LCSD 350-2495/4-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.8		ug/L		91	85 - 115	5	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781334/1-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 18:45	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 18:45	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 18:45	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 18:45	1
Boron	37.3	J	50	13	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 18:45	1
Calcium	<44		200	44	ug/L		08/14/24 08:42	08/15/24 18:45	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 18:45	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 18:45	1
Iron	<47		100	47	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Magnesium	<49		200	49	ug/L		08/14/24 08:42	08/15/24 18:45	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 18:45	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 18:45	1
Potassium	<110		500	110	ug/L		08/14/24 08:42	08/15/24 18:45	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 18:45	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 18:45	1
Sodium	<77		200	77	ug/L		08/14/24 08:42	08/15/24 18:45	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 18:45	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 18:45	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 18:45	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 18:45	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781334/2-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1950		ug/L		98	80 - 120
Antimony	500	497		ug/L		99	80 - 120
Arsenic	100	98.8		ug/L		99	80 - 120
Barium	500	506		ug/L		101	80 - 120
Beryllium	50.0	50.5		ug/L		101	80 - 120
Boron	1000	1020		ug/L		102	80 - 120
Cadmium	50.0	50.9		ug/L		102	80 - 120
Calcium	10000	8680		ug/L		87	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	534		ug/L		107	80 - 120
Copper	250	255		ug/L		102	80 - 120
Iron	1000	1050		ug/L		105	80 - 120
Lead	100	101		ug/L		101	80 - 120
Lithium	100	104		ug/L		104	80 - 120
Magnesium	10000	10400		ug/L		104	80 - 120
Manganese	500	516		ug/L		103	80 - 120
Molybdenum	1000	978		ug/L		98	80 - 120
Nickel	500	509		ug/L		102	80 - 120
Potassium	10000	10300		ug/L		103	80 - 120
Selenium	100	98.9		ug/L		99	80 - 120
Silver	50.0	50.8		ug/L		102	80 - 120
Sodium	10000	10200		ug/L		102	80 - 120
Strontium	1000	976		ug/L		98	80 - 120
Thallium	100	103		ug/L		103	80 - 120
Tin	1000	989		ug/L		99	80 - 120
Vanadium	500	507		ug/L		101	80 - 120
Zinc	500	508		ug/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/30/24 10:50	1
Chloride	0.163	J	1.0	0.12	mg/L			07/30/24 10:50	1
Fluoride	<0.19		1.0	0.19	mg/L			07/30/24 10:50	1
Sulfate	<0.21		1.0	0.21	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779012/4
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.9		mg/L		94	90 - 110
Chloride	20.0	20.4		mg/L		102	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.2		mg/L		106	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-779013/3
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/30/24 10:50	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	20.9		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.5		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780716/1-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:09	1

Lab Sample ID: LCS 500-780716/2-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0962		mg/L		96	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779370/1
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/01/24 02:28	1

Lab Sample ID: LCS 500-779370/2
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	264		mg/L		106	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779749/1
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/02/24 15:55	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: LCS 500-779749/2
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-780802/31
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/09/24 00:09	1

Lab Sample ID: LCS 500-780802/32
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Client Sample ID: MW-35_20240728

Date Collected: 07/28/24 18:45
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254225-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/02/24 22:42
Total/NA	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 22:32
Dissolved	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:52
Total/NA	Analysis	1631E		5	2500	AJD	EET SSM	08/02/24 12:10
Dissolved	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Dissolved	Analysis	1638		1	2503	COW	EET SSM	08/02/24 17:02
Total Recoverable	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Total Recoverable	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:58
Dissolved	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Dissolved	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:33
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:31
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	SM 2340B		1	781909	S1Z	EET CHI	08/16/24 14:31
Total/NA	Analysis	300.0		1	779012	W1T	EET CHI	07/30/24 13:11
Total/NA	Analysis	300.0		1	779013	W1T	EET CHI	07/30/24 13:11
Total/NA	Prep	Distill/CN			780716	AC	EET CHI	08/09/24 11:42 - 08/09/24 12:12 [1]
Total/NA	Analysis	335.4		1	780798	KF	EET CHI	08/10/24 10:32
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:28
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:06
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 01:09
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779370	CLB	EET CHI	08/01/24 02:33
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:32 - 08/02/24 16:34 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:23 - 08/01/24 22:27 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	780802	TR	EET CHI	08/09/24 02:57

Client Sample ID: MW-35_20240728_FBLL

Date Collected: 07/28/24 18:45
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254225-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 20:56

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254225-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

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Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	500-254225 COC	Carrier Tracking No(s): 4051 7962 1302	COC No: 500-126351-50241 57
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com		State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:				Job #: 500-254225
Address: 35503 Mall Circle Drive	Due Date Requested:				
City: White Pine	TAT Requested (days): 10 days				
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No				
Phone: 906-204-6500	PO #: Purchase Order not required				
Email: AZeidler@whitepinecu com	WO #:				
Project Name: White Pine, MI	Project #: 50023455				
Site:	SSOW#:				

Analysis Requested

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOC SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~4500_CR_B~~ SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~3500_CR_B - Dissolved Chromium, Hex (field filtered)~~	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 MW-35_20240728	07-28-24	1845	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18	
2 MW-35_20240728_FBLL	07-28-24	1845	G	Water										✓						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ellen	7/29/24 800	MSG		7/29/24 800	MSG
2		7/29/24 1600	MSG	4051 7962 1302	7/29/24 1600	Fedex
3		Date/Time:	Company		7/30/24 0945	EEST

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: 1.8-1.7

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1302	COC No: 500-126351-50241 58
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254225
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N None; CB ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			Other

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
				Preservation Code:				A		
1	MW-35_20240728	07-28-24	1845	G	Water			✓	1	
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ellen	7/29/24 800	MSG		7/29/24 800	MSG
2		7/29/24 1600	MSG	4051 7962 1302	7/29/24 1600	Fedex
3		Date/Time	Company		7/30/24 0945	EETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks:

JED CHRESTENSEN
THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US

ACTWGT: 25.00 LB MAN
CAD: 0780307/CAFE3808

TO **SAMPLE RECEIPT**
EUROFINS CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484
(708) 634-6200 REF
INV:
PO: DEPT:

RMA

FedEx Express

DELIVERY MON - SAT

TRK# 0221 4 FedEx TRK# 0221 4051 7962 1302

TUE - 30 JUL AA
PRIORITY OVERNIGHT

XP JOTA

60484
IL-US
ORD

5878720 29Jul2024 CMXA 581G6/A12D/C0B8

Part # 156469-004 MTW EXP 01/25

J24102311229

nment Testing
nerica

22

500-254225 Waybi

48qt

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254225-1

Login Number: 254225
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254225-1

Login Number: 254225
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/31/24 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254225 Field Sheet

Date:	7/31/2024
End Time:	15:04
pH Paper Lot:	HC234723
Analyst:	VL

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254225-F-1	≤2				
500-254225-E-1	≤2			VL	
500-254225-J-1	≤2			7/31/24	
500-254225-K-1	≤2				

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 1:43:44 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254226-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



Generated
8/21/2024 1:43:44 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254226-1

Receipt
The samples were received on 7/30/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.9º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779012 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300.0: The following sample was analyzed outside of analytical holding time MW-42_20240728 (500-254226-1).

Method SM 5310C: Field filtered Dissolved Organic Carbon results are slightly greater than Total Organic Carbon results. MW-42_20240728 (500-254226-1)

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Client Sample ID: MW-42_20240728

Lab Sample ID: 500-254226-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	5.0		0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	1.8		0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	7.4		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	7.3		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	470		100	25	ug/L	1		6020B	Total Recoverable
Arsenic	5.3		1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	10		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	600	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	3200		200	44	ug/L	1		6020B	Total Recoverable
Chromium	2.1	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Copper	3.2		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	420		100	47	ug/L	1		6020B	Total Recoverable
Lead	0.22	J	0.50	0.19	ug/L	1		6020B	Total Recoverable
Lithium	9.0	J	10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	220		200	49	ug/L	1		6020B	Total Recoverable
Manganese	14		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	17		5.0	2.5	ug/L	1		6020B	Total Recoverable
Potassium	320	J	500	110	ug/L	1		6020B	Total Recoverable
Selenium	1.2	J	2.5	0.98	ug/L	1		6020B	Total Recoverable
Sodium	82000		200	77	ug/L	1		6020B	Total Recoverable
Strontium	44		4.0	0.64	ug/L	1		6020B	Total Recoverable
Vanadium	15		5.0	2.2	ug/L	1		6020B	Total Recoverable
Aluminum	540		100	25	ug/L	1		6020B	Dissolved
Arsenic	5.2		1.0	0.23	ug/L	1		6020B	Dissolved
Barium	10		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	610	B	50	13	ug/L	1		6020B	Dissolved
Calcium	3400		200	44	ug/L	1		6020B	Dissolved
Chromium	1.9	J	5.0	1.1	ug/L	1		6020B	Dissolved
Copper	3.4		2.0	0.50	ug/L	1		6020B	Dissolved
Iron	480		100	47	ug/L	1		6020B	Dissolved
Lead	0.34	J	0.50	0.19	ug/L	1		6020B	Dissolved
Lithium	8.4	J	10	2.5	ug/L	1		6020B	Dissolved
Magnesium	270		200	49	ug/L	1		6020B	Dissolved
Manganese	17		2.5	0.79	ug/L	1		6020B	Dissolved
Molybdenum	17		5.0	2.5	ug/L	1		6020B	Dissolved
Nickel	0.86	J	2.0	0.63	ug/L	1		6020B	Dissolved
Potassium	380	J	500	110	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-42_20240728 (Continued) — Lab Sample ID: 500-254226-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	83000		200	77	ug/L	1		6020B	Dissolved
Strontium	47		4.0	0.64	ug/L	1		6020B	Dissolved
Vanadium	14		5.0	2.2	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	9.0		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Nitrate as N	0.78	J H	1.0	0.043	mg/L	1		300.0	Total/NA
Chloride	1.3	B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	1.6		1.0	0.19	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.78	J H	1.0	0.070	mg/L	1		300.0	Total/NA
Sulfate	17		1.0	0.21	mg/L	1		300.0	Total/NA
Ammonia	0.13	J	0.20	0.10	mg/L	1		350.1	Total/NA
Phosphorus as P	0.56	^1- *-	0.050	0.024	mg/L	1		365.1	Total/NA
Alkalinity	150		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	150		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	190		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	4.0	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	2.9		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	3.7		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: MW-42_20240728_FBLL — Lab Sample ID: 500-254226-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254226-1	MW-42_20240728	Water	07/28/24 12:00	07/30/24 09:45
500-254226-2	MW-42_20240728_FBLL	Water	07/28/24 12:00	07/30/24 09:45

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Client Sample ID: MW-42_20240728

Date Collected: 07/28/24 12:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254226-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 22:52	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 23:03	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**5.0**		0.50	0.20	ng/L			08/02/24 21:00	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.8**		0.50	0.20	ng/L			08/02/24 21:13	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**7.4**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 16:04	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**7.3**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 17:13	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**470**		100	25	ug/L		08/14/24 08:42	08/15/24 19:35	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:35	1
Arsenic	**5.3**		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:35	1
Barium	**10**		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:35	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:35	1
Boron	**600**	**B**	50	13	ug/L		08/14/24 08:42	08/15/24 19:35	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:35	1
Calcium	**3200**		200	44	ug/L		08/14/24 08:42	08/15/24 19:35	1
Chromium	**2.1**	**J**	5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:35	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:35	1
Copper	**3.2**		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:35	1
Iron	**420**		100	47	ug/L		08/14/24 08:42	08/15/24 19:35	1
Lead	**0.22**	**J**	0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:35	1
Lithium	**9.0**	**J**	10	2.5	ug/L		08/14/24 08:42	08/15/24 19:35	1
Magnesium	**220**		200	49	ug/L		08/14/24 08:42	08/15/24 19:35	1
Manganese	**14**		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:35	1
Molybdenum	**17**		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:35	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:35	1
Potassium	**320**	**J**	500	110	ug/L		08/14/24 08:42	08/15/24 19:35	1
Selenium	**1.2**	**J**	2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:35	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:35	1
Sodium	**82000**		200	77	ug/L		08/14/24 08:42	08/15/24 19:35	1
Strontium	**44**		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:35	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:35	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:35	1
Vanadium	**15**		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:35	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 19:35	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Client Sample ID: MW-42_20240728

Date Collected: 07/28/24 12:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254226-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**540**		100	25	ug/L		08/14/24 08:42	08/15/24 19:37	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:37	1
Arsenic	**5.2**		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 19:37	1
Barium	**10**		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 19:37	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 19:37	1
Boron	**610**	**B**	50	13	ug/L		08/14/24 08:42	08/15/24 19:37	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 19:37	1
Calcium	**3400**		200	44	ug/L		08/14/24 08:42	08/15/24 19:37	1
Chromium	**1.9**	**J**	5.0	1.1	ug/L		08/14/24 08:42	08/15/24 19:37	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 19:37	1
Copper	**3.4**		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 19:37	1
Iron	**480**		100	47	ug/L		08/14/24 08:42	08/15/24 19:37	1
Lead	**0.34**	**J**	0.50	0.19	ug/L		08/14/24 08:42	08/15/24 19:37	1
Lithium	**8.4**	**J**	10	2.5	ug/L		08/14/24 08:42	08/15/24 19:37	1
Magnesium	**270**		200	49	ug/L		08/14/24 08:42	08/15/24 19:37	1
Manganese	**17**		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 19:37	1
Molybdenum	**17**		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 19:37	1
Nickel	**0.86**	**J**	2.0	0.63	ug/L		08/14/24 08:42	08/15/24 19:37	1
Potassium	**380**	**J**	500	110	ug/L		08/14/24 08:42	08/15/24 19:37	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 19:37	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 19:37	1
Sodium	**83000**		200	77	ug/L		08/14/24 08:42	08/15/24 19:37	1
Strontium	**47**		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 19:37	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 19:37	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 19:37	1
Vanadium	**14**		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 19:37	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 19:37	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**9.0**		0.91	0.46	mg/L		08/14/24 08:42	08/16/24 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			07/30/24 11:37	1
Nitrate as N (EPA 300.0)	**0.78**	**J H**	1.0	0.043	mg/L			07/30/24 11:37	1
Chloride (EPA 300.0)	**1.3**	**B**	1.0	0.12	mg/L			07/30/24 11:37	1
Nitrite as N (EPA 300.0)	<0.070	H	1.0	0.070	mg/L			07/30/24 11:37	1
Fluoride (EPA 300.0)	**1.6**		1.0	0.19	mg/L			07/30/24 11:37	1
Nitrate Nitrite as N (EPA 300.0)	**0.78**	**J H**	1.0	0.070	mg/L			07/30/24 11:37	1
Sulfate (EPA 300.0)	**17**		1.0	0.21	mg/L			07/30/24 11:37	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:34	1
Ammonia (EPA 350.1)	**0.13**	**J**	0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:29	1
Phosphorus as P (EPA 365.1)	**0.56**	**^1- *-**	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:07	1
Alkalinity (SM 2320B)	**150**		5.0	3.7	mg/L			08/07/24 01:18	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**150**		5.0	3.7	mg/L			08/07/24 01:18	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 01:18	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Client Sample ID: MW-42_20240728
Date Collected: 07/28/24 12:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254226-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	190		10	4.3	mg/L			08/01/24 02:35	1
Total Suspended Solids (SM 2540D)	4.0	J	5.0	1.9	mg/L			08/02/24 16:34	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:27	1
Total Organic Carbon (SM 5310C)	2.9		1.0	0.47	mg/L			08/09/24 03:25	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	3.7		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Client Sample ID: MW-42_20240728_FBLL
Date Collected: 07/28/24 12:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254226-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 21:17	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Dissolved	Water	1638	
500-254226-1	MW-42_20240728	Total Recoverable	Water	1638	
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	
500-254226-1 MS	MW-42_20240728	Total Recoverable	Water	1638	
500-254226-1 MSD	MW-42_20240728	Total Recoverable	Water	1638	

Prep Batch: 2496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Dissolved	Water	1630	
500-254226-1	MW-42_20240728	Total/NA	Water	1630	
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Dissolved	Water	1631E	
500-254226-1	MW-42_20240728	Total/NA	Water	1631E	
500-254226-2	MW-42_20240728_FBLL	Total/NA	Water	1631E	
MB 350-2500/66	Method Blank	Total/NA	Water	1631E	
MB 350-2500/67	Method Blank	Total/NA	Water	1631E	
MB 350-2500/68	Method Blank	Total/NA	Water	1631E	
LCS 350-2500/71	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2500/72	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Dissolved	Water	1638	2495
500-254226-1	MW-42_20240728	Total Recoverable	Water	1638	2495
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	2495
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	2495
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	2495
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2495
500-254226-1 MS	MW-42_20240728	Total Recoverable	Water	1638	2495
500-254226-1 MSD	MW-42_20240728	Total Recoverable	Water	1638	2495

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Dissolved	Water	1630	2496
500-254226-1	MW-42_20240728	Total/NA	Water	1630	2496
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	2496
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	2496
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2496

Metals

Prep Batch: 781334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Dissolved	Water	3005A	
500-254226-1	MW-42_20240728	Total Recoverable	Water	3005A	
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Dissolved	Water	6020B	781334
500-254226-1	MW-42_20240728	Total Recoverable	Water	6020B	781334
MB 500-781334/1-A	Method Blank	Total Recoverable	Water	6020B	781334
LCS 500-781334/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781334

Analysis Batch: 781910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total Recoverable	Water	SM 2340B	781334

General Chemistry

Analysis Batch: 779012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	300.0	
MB 500-779012/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779012/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	300.0	
MB 500-779013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779013/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	SM 2540C	
MB 500-779370/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779370/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	SM 2540D	
MB 500-779749/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779749/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	SM 2520B	

General Chemistry

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	Distill/CN	
MB 500-780716/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	335.4	780716
MB 500-780716/1-A	Method Blank	Total/NA	Water	335.4	780716
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	335.4	780716

Analysis Batch: 780802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	SM 5310C	
MB 500-780802/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-780802/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254226-1	MW-42_20240728	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2496/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:19	1

Lab Sample ID: MB 350-2496/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:30	1

Lab Sample ID: MB 350-2496/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:40	1

Lab Sample ID: LCS 350-2496/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	1.04		ng/L		104	65 - 135

Lab Sample ID: LCSD 350-2496/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.997		ng/L		100	65 - 135	4	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2500/66
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:04	1

Lab Sample ID: MB 350-2500/67
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:08	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2500/68
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:12	1

Lab Sample ID: LCS 350-2500/71
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.40		ng/L		88	77 - 123

Lab Sample ID: LCSD 350-2500/72
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.46		ng/L		89	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2495/1-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:41	1

Lab Sample ID: MB 350-2495/2-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:44	1

Lab Sample ID: LCS 350-2495/3-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	24.0		ug/L		96	85 - 115

Lab Sample ID: LCSD 350-2495/4-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.8		ug/L		91	85 - 115	5	20

Method: 1638 - Metals (ICP/MS) (Continued)

Lab Sample ID: 500-254226-1 MS
Matrix: Water
Analysis Batch: 2503

Client Sample ID: MW-42_20240728
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	7.4		25.0	31.6		ug/L		97	70 - 130

Lab Sample ID: 500-254226-1 MSD
Matrix: Water
Analysis Batch: 2503

Client Sample ID: MW-42_20240728
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	7.4		25.0	31.9		ug/L		98	70 - 130	1	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781334/1-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:42	08/15/24 18:45	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:42	08/15/24 18:45	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:42	08/15/24 18:45	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:42	08/15/24 18:45	1
Boron	37.3	J	50	13	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:42	08/15/24 18:45	1
Calcium	<44		200	44	ug/L		08/14/24 08:42	08/15/24 18:45	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:42	08/15/24 18:45	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:42	08/15/24 18:45	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:42	08/15/24 18:45	1
Iron	<47		100	47	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:42	08/15/24 18:45	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Magnesium	<49		200	49	ug/L		08/14/24 08:42	08/15/24 18:45	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:42	08/15/24 18:45	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:42	08/15/24 18:45	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:42	08/15/24 18:45	1
Potassium	<110		500	110	ug/L		08/14/24 08:42	08/15/24 18:45	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:42	08/15/24 18:45	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:42	08/15/24 18:45	1
Sodium	<77		200	77	ug/L		08/14/24 08:42	08/15/24 18:45	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:42	08/15/24 18:45	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:42	08/15/24 18:45	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:42	08/15/24 18:45	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:42	08/15/24 18:45	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:42	08/15/24 18:45	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781334/2-A
Matrix: Water
Analysis Batch: 781795

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1950		ug/L		98	80 - 120
Antimony	500	497		ug/L		99	80 - 120
Arsenic	100	98.8		ug/L		99	80 - 120
Barium	500	506		ug/L		101	80 - 120
Beryllium	50.0	50.5		ug/L		101	80 - 120
Boron	1000	1020		ug/L		102	80 - 120
Cadmium	50.0	50.9		ug/L		102	80 - 120
Calcium	10000	8680		ug/L		87	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	534		ug/L		107	80 - 120
Copper	250	255		ug/L		102	80 - 120
Iron	1000	1050		ug/L		105	80 - 120
Lead	100	101		ug/L		101	80 - 120
Lithium	100	104		ug/L		104	80 - 120
Magnesium	10000	10400		ug/L		104	80 - 120
Manganese	500	516		ug/L		103	80 - 120
Molybdenum	1000	978		ug/L		98	80 - 120
Nickel	500	509		ug/L		102	80 - 120
Potassium	10000	10300		ug/L		103	80 - 120
Selenium	100	98.9		ug/L		99	80 - 120
Silver	50.0	50.8		ug/L		102	80 - 120
Sodium	10000	10200		ug/L		102	80 - 120
Strontium	1000	976		ug/L		98	80 - 120
Thallium	100	103		ug/L		103	80 - 120
Tin	1000	989		ug/L		99	80 - 120
Vanadium	500	507		ug/L		101	80 - 120
Zinc	500	508		ug/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/30/24 10:50	1
Chloride	0.163	J	1.0	0.12	mg/L			07/30/24 10:50	1
Fluoride	<0.19		1.0	0.19	mg/L			07/30/24 10:50	1
Sulfate	<0.21		1.0	0.21	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779012/4
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.9		mg/L		94	90 - 110
Chloride	20.0	20.4		mg/L		102	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.2		mg/L		106	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-779013/3
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/30/24 10:50	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	20.9		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.5		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780716/1-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:09	1

Lab Sample ID: LCS 500-780716/2-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0962		mg/L		96	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779370/1
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/01/24 02:28	1

Lab Sample ID: LCS 500-779370/2
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	264		mg/L		106	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779749/1
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/02/24 15:55	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: LCS 500-779749/2
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-780802/31
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/09/24 00:09	1

Lab Sample ID: LCS 500-780802/32
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Client Sample ID: MW-42_20240728

Date Collected: 07/28/24 12:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254226-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/02/24 23:03
Total/NA	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 22:52
Dissolved	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:13
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:00
Dissolved	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Dissolved	Analysis	1638		1	2503	COW	EET SSM	08/02/24 17:13
Total Recoverable	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Total Recoverable	Analysis	1638		1	2503	COW	EET SSM	08/02/24 16:04
Dissolved	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Dissolved	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:37
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	6020B		1	781795	RN	EET CHI	08/15/24 19:35
Total Recoverable	Prep	3005A			781334	BDE	EET CHI	08/14/24 08:42 - 08/14/24 14:42 [1]
Total Recoverable	Analysis	SM 2340B		1	781910	S1Z	EET CHI	08/16/24 14:31
Total/NA	Analysis	300.0		1	779012	W1T	EET CHI	07/30/24 11:37
Total/NA	Analysis	300.0		1	779013	W1T	EET CHI	07/30/24 11:37
Total/NA	Prep	Distill/CN			780716	AC	EET CHI	08/09/24 11:42 - 08/09/24 12:12 [1]
Total/NA	Analysis	335.4		1	780798	KF	EET CHI	08/10/24 10:34
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:29
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:07
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 01:18
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779370	CLB	EET CHI	08/01/24 02:35
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:34 - 08/02/24 16:36 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:27 - 08/01/24 22:31 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	780802	TR	EET CHI	08/09/24 03:25

Client Sample ID: MW-42_20240728_FBLL

Date Collected: 07/28/24 12:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254226-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:17

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200
EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254226-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	500-254226 COC	Carrier Tracking No(s): 4051 7962 1346	COC No: 500-126351-50241 1
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com		State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:				Job #: 500-254226
Address: 35503 Mall Circle Drive	Due Date Requested:				
City: White Pine	TAT Requested (days): 10 days				
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No				
Phone: 906-204-6500	PO #: Purchase Order not required				
Email: AZeidler@whitepinecu com	WO #:				
Project Name: White Pine, MI	Project #: 50023455				
Site:	SSOW#:				

Analysis Requested

Preservation Codes: S H2SO4; N None; CB ZnAcetate/NaOH; B NaOH; D HNO3; A HCL; Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOCSM 5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, 3500_CR_B, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	3500_CR_B - Dissolved Chromium, Hex (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
~~42EC~~			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
MW-~~38~~-42EC_20240728	07-28-24	1200	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18	
MW-~~38~~-42EC_20240728_FBLL	07-28-24	1200	G	Water										✓						2	
42			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ellen	7/29/24 800	MSG		7/29/24 800	MSG
2		7/29/24 1600	MSG	4051 7962 1346	7/29/24 1600	Fedex
3					7/30/24 0945	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks: 4.0-3.9

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1346	COC No: 500-126351-50241 2
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254226
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
S H2SO4
N None
CB ZnAcetate/NaOH
B - NaOH
D HNO3
A HCL
Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
1 MW-35 20240728 42	07-28-24	1200	G	Water			✓	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/29/24 800	MSG		7/29/24 800	MSG
2		7/29/24 1600	MSG	4051 7962 1346	7/29/24 1600	Fedex
3					7/30/24 0945	EETD

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks.



500-254226 Waybi

48at

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254226-1

Login Number: 254226
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254226-1

Login Number: 254226
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/31/24 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254226 Field Sheet

Date:	7/31/2024
End Time:	15:09
pH Paper Lot:	HC234723
Analyst:	CL

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254226-E-1	CL				
500-254226-F-1	CL				
500-254226-J-1	CL				
500-254226-K-1	CL				

7/31/24

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 1:45:19 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254227-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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8/21/2024 1:45:19 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254227-1

Receipt
The samples were received on 7/30/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.8º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779012 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300.0: The following sample was analyzed outside of analytical holding time LKS-01_20240728 (500-254227-1).

Method SM 5310C: Field filtered Dissolved Organic Carbon results are slightly greater than Total Organic Carbon results. LKS-01_20240728 (500-254227-1)

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Client Sample ID: LKS-01_20240728 — Lab Sample ID: 500-254227-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Uranium	0.060		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.052		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	180		100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.39	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	13		2.5	0.73	ug/L	1		6020B	Total Recoverable
Calcium	14000		200	44	ug/L	1		6020B	Total Recoverable
Copper	1.1	J	2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	250		100	47	ug/L	1		6020B	Total Recoverable
Magnesium	3100		200	49	ug/L	1		6020B	Total Recoverable
Manganese	6.1		2.5	0.79	ug/L	1		6020B	Total Recoverable
Potassium	660		500	110	ug/L	1		6020B	Total Recoverable
Sodium	1800		200	77	ug/L	1		6020B	Total Recoverable
Strontium	22		4.0	0.64	ug/L	1		6020B	Total Recoverable
Arsenic	0.36	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	12		2.5	0.73	ug/L	1		6020B	Dissolved
Calcium	14000		200	44	ug/L	1		6020B	Dissolved
Copper	2.3		2.0	0.50	ug/L	1		6020B	Dissolved
Magnesium	3100		200	49	ug/L	1		6020B	Dissolved
Potassium	550		500	110	ug/L	1		6020B	Dissolved
Sodium	1900		200	77	ug/L	1		6020B	Dissolved
Strontium	23		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	47		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Nitrate as N	0.64	J H	1.0	0.043	mg/L	1		300.0	Total/NA
Chloride	1.7	B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.21	J	1.0	0.19	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.64	J H	1.0	0.070	mg/L	1		300.0	Total/NA
Sulfate	3.7		1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	50		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	50		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	46		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	7.2		5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	1.6		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	2.2		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: LKS-01_20240728_FBLL — Lab Sample ID: 500-254227-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254227-1	LKS-01_20240728	Water	07/28/24 11:50	07/30/24 09:45
500-254227-2	LKS-01_20240728_FBLL	Water	07/28/24 11:50	07/30/24 09:45

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Client Sample ID: LKS-01_20240728

Date Collected: 07/28/24 11:50
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254227-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 23:13	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 23:23	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 21:21	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 21:25	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.060**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 17:16	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.052**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 17:20	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**180**		100	25	ug/L		08/14/24 08:44	08/16/24 12:52	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:52	1
Arsenic	**0.39**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 12:52	1
Barium	**13**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 12:52	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 12:52	1
Boron	<13		50	13	ug/L		08/14/24 08:44	08/16/24 12:52	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 12:52	1
Calcium	**14000**		200	44	ug/L		08/14/24 08:44	08/16/24 12:52	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 12:52	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 12:52	1
Copper	**1.1**	**J**	2.0	0.50	ug/L		08/14/24 08:44	08/16/24 12:52	1
Iron	**250**		100	47	ug/L		08/14/24 08:44	08/16/24 12:52	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 12:52	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:44	08/16/24 12:52	1
Magnesium	**3100**		200	49	ug/L		08/14/24 08:44	08/16/24 12:52	1
Manganese	**6.1**		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 12:52	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 12:52	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 12:52	1
Potassium	**660**		500	110	ug/L		08/14/24 08:44	08/16/24 12:52	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 12:52	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 12:52	1
Sodium	**1800**		200	77	ug/L		08/14/24 08:44	08/16/24 12:52	1
Strontium	**22**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 12:52	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 12:52	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:52	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 12:52	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 12:52	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Client Sample ID: LKS-01_20240728

Date Collected: 07/28/24 11:50
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254227-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 12:54	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:54	1
Arsenic	**0.36**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 12:54	1
Barium	**12**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 12:54	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 12:54	1
Boron	<13		50	13	ug/L		08/14/24 08:44	08/16/24 12:54	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 12:54	1
Calcium	**14000**		200	44	ug/L		08/14/24 08:44	08/16/24 12:54	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 12:54	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 12:54	1
Copper	**2.3**		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 12:54	1
Iron	<47		100	47	ug/L		08/14/24 08:44	08/16/24 12:54	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 12:54	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:44	08/16/24 12:54	1
Magnesium	**3100**		200	49	ug/L		08/14/24 08:44	08/16/24 12:54	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 12:54	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 12:54	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 12:54	1
Potassium	**550**		500	110	ug/L		08/14/24 08:44	08/16/24 12:54	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 12:54	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 12:54	1
Sodium	**1900**		200	77	ug/L		08/14/24 08:44	08/16/24 12:54	1
Strontium	**23**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 12:54	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 12:54	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:54	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 12:54	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 12:54	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**47**		0.91	0.46	mg/L		08/14/24 08:44	08/16/24 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			07/30/24 11:21	1
Nitrate as N (EPA 300.0)	**0.64**	**J H**	1.0	0.043	mg/L			07/30/24 11:21	1
Chloride (EPA 300.0)	**1.7**	**B**	1.0	0.12	mg/L			07/30/24 11:21	1
Nitrite as N (EPA 300.0)	<0.070	H	1.0	0.070	mg/L			07/30/24 11:21	1
Fluoride (EPA 300.0)	**0.21**	**J**	1.0	0.19	mg/L			07/30/24 11:21	1
Nitrate Nitrite as N (EPA 300.0)	**0.64**	**J H**	1.0	0.070	mg/L			07/30/24 11:21	1
Sulfate (EPA 300.0)	**3.7**		1.0	0.21	mg/L			07/30/24 11:21	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:36	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:29	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:08	1
Alkalinity (SM 2320B)	**50**		5.0	3.7	mg/L			08/07/24 01:30	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**50**		5.0	3.7	mg/L			08/07/24 01:30	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 01:30	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Client Sample ID: LKS-01_20240728
Date Collected: 07/28/24 11:50
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254227-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	46		10	4.3	mg/L			08/01/24 02:38	1
Total Suspended Solids (SM 2540D)	7.2		5.0	1.9	mg/L			08/02/24 16:36	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:31	1
Total Organic Carbon (SM 5310C)	1.6		1.0	0.47	mg/L			08/09/24 03:53	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	2.2		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Client Sample ID: LKS-01_20240728_FBLL
Date Collected: 07/28/24 11:50
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254227-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 21:29	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Dissolved	Water	1638	
500-254227-1	LKS-01_20240728	Total Recoverable	Water	1638	
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Prep Batch: 2496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Dissolved	Water	1630	
500-254227-1	LKS-01_20240728	Total/NA	Water	1630	
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Dissolved	Water	1631E	
500-254227-1	LKS-01_20240728	Total/NA	Water	1631E	
500-254227-2	LKS-01_20240728_FBLL	Total/NA	Water	1631E	
MB 350-2500/66	Method Blank	Total/NA	Water	1631E	
MB 350-2500/67	Method Blank	Total/NA	Water	1631E	
MB 350-2500/68	Method Blank	Total/NA	Water	1631E	
LCS 350-2500/71	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2500/72	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Dissolved	Water	1638	2495
500-254227-1	LKS-01_20240728	Total Recoverable	Water	1638	2495
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	2495
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	2495
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	2495
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2495

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Dissolved	Water	1630	2496
500-254227-1	LKS-01_20240728	Total/NA	Water	1630	2496
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	2496
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	2496
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2496

Prep Batch: 781335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Dissolved	Water	3005A	
500-254227-1	LKS-01_20240728	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 781335 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Dissolved	Water	6020B	781335
500-254227-1	LKS-01_20240728	Total Recoverable	Water	6020B	781335
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	6020B	781335
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781335

Analysis Batch: 781912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total Recoverable	Water	SM 2340B	781335

General Chemistry

Analysis Batch: 779012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	300.0	
MB 500-779012/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779012/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	300.0	
MB 500-779013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779013/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	SM 2540C	
MB 500-779370/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779370/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	SM 2540D	
MB 500-779749/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779749/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	SM 2520B	

General Chemistry

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	Distill/CN	
MB 500-780716/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	335.4	780716
MB 500-780716/1-A	Method Blank	Total/NA	Water	335.4	780716
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	335.4	780716

Analysis Batch: 780802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	SM 5310C	
MB 500-780802/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-780802/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254227-1	LKS-01_20240728	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2496/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:19	1

Lab Sample ID: MB 350-2496/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:30	1

Lab Sample ID: MB 350-2496/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:40	1

Lab Sample ID: LCS 350-2496/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	1.04		ng/L		104	65 - 135

Lab Sample ID: LCSD 350-2496/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.997		ng/L		100	65 - 135	4	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2500/66
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:04	1

Lab Sample ID: MB 350-2500/67
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:08	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2500/68
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:12	1

Lab Sample ID: LCS 350-2500/71
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.40		ng/L		88	77 - 123

Lab Sample ID: LCSD 350-2500/72
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.46		ng/L		89	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2495/1-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:41	1

Lab Sample ID: MB 350-2495/2-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:44	1

Lab Sample ID: LCS 350-2495/3-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	24.0		ug/L		96	85 - 115

Lab Sample ID: LCSD 350-2495/4-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.8		ug/L		91	85 - 115	5	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781335/1-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 12:15	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:44	08/16/24 12:15	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 12:15	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 12:15	1
Boron	27.6	J	50	13	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 12:15	1
Calcium	<44		200	44	ug/L		08/14/24 08:44	08/16/24 12:15	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 12:15	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 12:15	1
Iron	<47		100	47	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Magnesium	<49		200	49	ug/L		08/14/24 08:44	08/16/24 12:15	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 12:15	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 12:15	1
Potassium	<110		500	110	ug/L		08/14/24 08:44	08/16/24 12:15	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 12:15	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 12:15	1
Sodium	<77		200	77	ug/L		08/14/24 08:44	08/16/24 12:15	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 12:15	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 12:15	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 12:15	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 12:15	1

Lab Sample ID: LCS 500-781335/2-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1980		ug/L		99	80 - 120
Antimony	500	510		ug/L		102	80 - 120
Arsenic	100	101		ug/L		101	80 - 120
Barium	500	520		ug/L		104	80 - 120
Beryllium	50.0	52.7		ug/L		105	80 - 120
Boron	1000	1030		ug/L		103	80 - 120
Cadmium	50.0	51.9		ug/L		104	80 - 120
Calcium	10000	8920		ug/L		89	80 - 120
Chromium	200	214		ug/L		107	80 - 120
Cobalt	500	541		ug/L		108	80 - 120
Copper	250	264		ug/L		106	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	103		ug/L		103	80 - 120
Lithium	100	108		ug/L		108	80 - 120
Magnesium	10000	10600		ug/L		106	80 - 120
Manganese	500	528		ug/L		106	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781335/2-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	520		ug/L		104	80 - 120
Potassium	10000	10600		ug/L		106	80 - 120
Selenium	100	100		ug/L		100	80 - 120
Silver	50.0	51.1		ug/L		102	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120
Strontium	1000	999		ug/L		100	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1010		ug/L		101	80 - 120
Vanadium	500	520		ug/L		104	80 - 120
Zinc	500	517		ug/L		103	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/30/24 10:50	1
Chloride	0.163	J	1.0	0.12	mg/L			07/30/24 10:50	1
Fluoride	<0.19		1.0	0.19	mg/L			07/30/24 10:50	1
Sulfate	<0.21		1.0	0.21	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779012/4
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.9		mg/L		94	90 - 110
Chloride	20.0	20.4		mg/L		102	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.2		mg/L		106	90 - 110

Lab Sample ID: MB 500-779013/3
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/30/24 10:50	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	20.9		mg/L		104	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	40.0	40.5		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780716/1-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:09	1

Lab Sample ID: LCS 500-780716/2-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0962		mg/L		96	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779370/1
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/01/24 02:28	1

Lab Sample ID: LCS 500-779370/2
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	264		mg/L		106	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779749/1
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/02/24 15:55	1

Lab Sample ID: LCS 500-779749/2
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-780802/31
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/09/24 00:09	1

Lab Sample ID: LCS 500-780802/32
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Client Sample ID: LKS-01_20240728

Lab Sample ID: 500-254227-1

Date Collected: 07/28/24 11:50

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/02/24 23:23
Total/NA	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 23:13
Dissolved	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:25
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:21
Dissolved	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Dissolved	Analysis	1638		1	2503	COW	EET SSM	08/02/24 17:20
Total Recoverable	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Total Recoverable	Analysis	1638		1	2503	COW	EET SSM	08/02/24 17:16
Dissolved	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Dissolved	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 12:54
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 12:52
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	SM 2340B		1	781912	PFK	EET CHI	08/16/24 14:48
Total/NA	Analysis	300.0		1	779012	W1T	EET CHI	07/30/24 11:21
Total/NA	Analysis	300.0		1	779013	W1T	EET CHI	07/30/24 11:21
Total/NA	Prep	Distill/CN			780716	AC	EET CHI	08/09/24 11:42 - 08/09/24 12:12 [1]
Total/NA	Analysis	335.4		1	780798	KF	EET CHI	08/10/24 10:36
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:29
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:08
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 01:30
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779370	CLB	EET CHI	08/01/24 02:38
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:36 - 08/02/24 16:39 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:31 - 08/01/24 22:35 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	780802	TR	EET CHI	08/09/24 03:53

Client Sample ID: LKS-01_20240728_FBLL

Lab Sample ID: 500-254227-2

Date Collected: 07/28/24 11:50

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:29

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254227-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Maddy Strong	Lab PM: Fredrick, Sandie	500-254227 COC	Carrier Tracking No(s): 4051 7962 1335	COC No: 500-126351-50241 69
Client Contact: Amanda Zeidler	Phone: 715 587 4059	E-Mail: Sandra Fredrick@et eurofinsus com		State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID				Job #: 500-254227
Address: 35503 Mall Circle Drive	Due Date Requested				
City: White Pine	TAT Requested (days): 10 days				
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No				
Phone: 906-204-6500	PO #: Purchase Order not required				
Email: AZeidler@whitepinecu com	WO #:				
Project Name: White Pine, MI	Project #: 50023455				
Site:	SSOW#:				

Analysis Requested

Preservation Codes:
S - H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOC SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~3500_CR_B~~, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~3500_CR_B - Dissolved Chromium, Hex (field filtered)~~	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 LKS-01_20240728	7/28/24	1156	G	Water			X	X	X	X	X	X	X	X	X	X	X		X	18	
2 ~~LKS-01_20240728_FBLL~~	7/28/24	1150	G	Water										X						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: fedex Priority Overnight

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	7/29/24 1600	MSH	4051 7962 1335	7/29/24 1600	fedex
Relinquished by	Date/Time	Company	Received by: ~~4051 7962 1335~~	Date/Time: ~~7/29/24~~	Company
Relinquished by	Date/Time	Company	Received by	Date/Time: 7/30/24 0945	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 4.9 → 4.8

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Maddy Strong	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1335	COC No: 500-126351-50241 70
Client Contact: Amanda Zeidler	Phone: 715 587 4059	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254227
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N - None; CB - ZnAcetate/NaOH; B - NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			Other:
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
1 LKS-01_20240728	7/28/24	1156	G	Water			X	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
[X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown [ ] Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] Return To Client [X] Disposal By Lab [ ] Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	7/29/24 1600	MSG	4051 7962 1335	7/29/24 1600	Fedex
2				[signature]	7/30/24 0945	FEDEX
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks.

THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US

CAD: 0780307/CAFE3808

TO **SAMPLE RECEIPT**
EUROFINS CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484

(708) 534-5200 REF:
INV:
PO: DEPT:

RMA:

FedEx Express

RETURNS MON-SAT
TUE - 30 JUL AA
PRIORITY OVERNIGHT

FedEx.
TRK# 0221 **4051 7962 1335**

60484
IL-US
ORD

XP JOTA

5878720 29Jul2024 CMXA 581G6/A12D/C0B8

500-254227 Waybi

48at

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone. 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191067.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254227-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/19/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes:

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
LKS-01_20240728 (500-254227-1)	7/28/24	11:50 Eastern		Water			X	X	X	X	X	X	8	
LKS-01_20240728_FBLL (500-254227-2)	7/28/24	11:50 Eastern		Water				X					2	

L4 Blu

Therm. ID: SC02 **Cust. Seal:** (Y) / N
Uncorr./Corr. Temp: 0.3 / 0.3 °C
Delivery: UPS / FedEx / Other: ____
Ice Type: Blue / Dry / Wet / None
Label Ver.: 2 **Packing:** D

Therm. ID: SC02 **Cust. Seal:** (Y) / N
Uncorr./Corr. Temp: 1.5 / 1.5 °C
Delivery: UPS / FedEx / Other: ____
Ice Type: Blue / Dry / Wet / None
Label Ver.: 2 **Packing:** D

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago labor immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification: Unconfirmed 7051 7620 4753	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	07/30/24 1530	EETA		7/31/24 9:45	
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 04/02/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191066.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254226-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/19/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-42_20240728 (500-254226-1)	7/28/24	12:00 Eastern		Water			X	X	X	X	X	X	8	
MW-42_20240728_FBLL (500-254226-2)	7/28/24	12:00 Eastern		Water				X					2	

LS Blue

Therm. ID: SC02 **Cust. Seal:** (Y) / N
Uncorr./Corr. Temp: 0.3 / 0.3 °C
Delivery: UPS / FedEx / Other: ____
Ice Type: Blue / Dry / Wet / None
Label Ver.: RL **Packing:** B

Therm. ID: SC02 **Cust. Seal:** (Y) / N
Uncorr./Corr. Temp: 1.5 / 1.5 °C
Delivery: UPS / FedEx / Other: ____
Ice Type: Blue / Dry / Wet / None
Label Ver.: RL **Packing:** B

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance u accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification
Unconfirmed 7051 7620 9753

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	07/30/24 1030	EETA	[signature]	7/31/24 9:45	ESLS
2						
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

8/21/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone. 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins
Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191065.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254225-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/19/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-35_20240728 (500-254225-1)	7/28/24	18:45 Eastern		Water			X	X	X	X	X	X	8	
MW-35_20240728_FBLL (500-254225-2)	7/28/24	18:45 Eastern		Water				X					2	

4 Blue

Therm. ID: SC01 **Cust. Seal:** (Y) / N
Uncorr./Corr. Temp: 0.3 / 0.3 °C
Delivery: UPS / FedEx / Other: ____
Ice Type: Blue / Dry / Wet / None
Label Ver.: 1 **Packing:** B

Therm. ID: SC02 **Cust. Seal:** (Y) / N
Uncorr./Corr. Temp: 1.5 / 1.5 °C
Delivery: UPS / FedEx / Other: ____
Ice Type: Blue / Dry / Wet / None
Label Ver.: 1 **Packing:** B

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago labo immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification
Unconfirmed 7051 7620 4753

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	07/30/24 1530	EETA	[signature]	7/31/24 9:45	FEDEX
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254227-1

Login Number: 254227
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254227-1

Login Number: 254227
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/31/24 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254227 Field Sheet

Date:	7/31/2024
End Time:	15:04
pH Paper Lot:	HC234723
Analyst:	JL

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254227-F-1	<2				
500-254227-E-1	<2				
500-254227-K-1	<2				
500-254227-J-1	<2				

JL 7/31/24

8/21/2024

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

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JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254228-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job ID: 500-254228-1 — Eurofins Chicago

Job Narrative
500-254228-1

Receipt
The samples were received on 7/30/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.0º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779012 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Client Sample ID: LKS-02_20240728 — Lab Sample ID: 500-254228-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl Mercury	0.028	J	0.050	0.022	ng/L	1		1630	Total/NA
Mercury	0.23	J	0.50	0.20	ng/L	1		1631E	Total/NA
Uranium	0.050		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.060		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	71	J	100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.38	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	11		2.5	0.73	ug/L	1		6020B	Total Recoverable
Calcium	14000		200	44	ug/L	1		6020B	Total Recoverable
Copper	1.1	J	2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	71	J	100	47	ug/L	1		6020B	Total Recoverable
Magnesium	3200		200	49	ug/L	1		6020B	Total Recoverable
Manganese	3.2		2.5	0.79	ug/L	1		6020B	Total Recoverable
Potassium	590		500	110	ug/L	1		6020B	Total Recoverable
Sodium	1800		200	77	ug/L	1		6020B	Total Recoverable
Strontium	22		4.0	0.64	ug/L	1		6020B	Total Recoverable
Arsenic	0.38	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	10		2.5	0.73	ug/L	1		6020B	Dissolved
Calcium	14000		200	44	ug/L	1		6020B	Dissolved
Copper	0.91	J	2.0	0.50	ug/L	1		6020B	Dissolved
Magnesium	3100		200	49	ug/L	1		6020B	Dissolved
Manganese	1.1	J	2.5	0.79	ug/L	1		6020B	Dissolved
Potassium	550		500	110	ug/L	1		6020B	Dissolved
Sodium	1700		200	77	ug/L	1		6020B	Dissolved
Strontium	22		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	49		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Nitrate as N	0.96	J	1.0	0.043	mg/L	1		300.0	Total/NA
Chloride	1.6	B	1.0	0.12	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.96	J	1.0	0.070	mg/L	1		300.0	Total/NA
Sulfate	3.6		1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	46		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	46		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	44		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.4		5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	1.8		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	1.6		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: LKS-02_20240728_FBLL — Lab Sample ID: 500-254228-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254228-1	LKS-02_20240728	Water	07/28/24 14:00	07/30/24 09:45
500-254228-2	LKS-02_20240728_FBLL	Water	07/28/24 14:00	07/30/24 09:45

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Client Sample ID: LKS-02_20240728

Date Collected: 07/28/24 14:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254228-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.028**	**J**	0.050	0.022	ng/L		08/02/24 11:02	08/02/24 23:33	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 23:44	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.23**	**J**	0.50	0.20	ng/L			08/02/24 21:34	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 21:38	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.050**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 17:24	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.060**		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 17:27	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**71**	**J**	100	25	ug/L		08/14/24 08:44	08/16/24 12:56	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:56	1
Arsenic	**0.38**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 12:56	1
Barium	**11**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 12:56	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 12:56	1
Boron	<13		50	13	ug/L		08/14/24 08:44	08/16/24 12:56	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 12:56	1
Calcium	**14000**		200	44	ug/L		08/14/24 08:44	08/16/24 12:56	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 12:56	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 12:56	1
Copper	**1.1**	**J**	2.0	0.50	ug/L		08/14/24 08:44	08/16/24 12:56	1
Iron	**71**	**J**	100	47	ug/L		08/14/24 08:44	08/16/24 12:56	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 12:56	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:44	08/16/24 12:56	1
Magnesium	**3200**		200	49	ug/L		08/14/24 08:44	08/16/24 12:56	1
Manganese	**3.2**		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 12:56	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 12:56	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 12:56	1
Potassium	**590**		500	110	ug/L		08/14/24 08:44	08/16/24 12:56	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 12:56	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 12:56	1
Sodium	**1800**		200	77	ug/L		08/14/24 08:44	08/16/24 12:56	1
Strontium	**22**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 12:56	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 12:56	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:56	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 12:56	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 12:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Client Sample ID: LKS-02_20240728
Date Collected: 07/28/24 14:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254228-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 12:58	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:58	1
Arsenic	**0.38**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 12:58	1
Barium	**10**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 12:58	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 12:58	1
Boron	<13		50	13	ug/L		08/14/24 08:44	08/16/24 12:58	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 12:58	1
Calcium	**14000**		200	44	ug/L		08/14/24 08:44	08/16/24 12:58	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 12:58	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 12:58	1
Copper	**0.91**	**J**	2.0	0.50	ug/L		08/14/24 08:44	08/16/24 12:58	1
Iron	<47		100	47	ug/L		08/14/24 08:44	08/16/24 12:58	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 12:58	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:44	08/16/24 12:58	1
Magnesium	**3100**		200	49	ug/L		08/14/24 08:44	08/16/24 12:58	1
Manganese	**1.1**	**J**	2.5	0.79	ug/L		08/14/24 08:44	08/16/24 12:58	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 12:58	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 12:58	1
Potassium	**550**		500	110	ug/L		08/14/24 08:44	08/16/24 12:58	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 12:58	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 12:58	1
Sodium	**1700**		200	77	ug/L		08/14/24 08:44	08/16/24 12:58	1
Strontium	**22**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 12:58	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 12:58	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:58	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 12:58	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 12:58	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**49**		0.91	0.46	mg/L		08/14/24 08:44	08/16/24 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			07/30/24 12:39	1
Nitrate as N (EPA 300.0)	**0.96**	**J**	1.0	0.043	mg/L			07/30/24 12:39	1
Chloride (EPA 300.0)	**1.6**	**B**	1.0	0.12	mg/L			07/30/24 12:39	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/30/24 12:39	1
Fluoride (EPA 300.0)	<0.19		1.0	0.19	mg/L			07/30/24 12:39	1
Nitrate Nitrite as N (EPA 300.0)	**0.96**	**J**	1.0	0.070	mg/L			07/30/24 12:39	1
Sulfate (EPA 300.0)	**3.6**		1.0	0.21	mg/L			07/30/24 12:39	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:38	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:30	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:08	1
Alkalinity (SM 2320B)	**46**		5.0	3.7	mg/L			08/07/24 01:39	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**46**		5.0	3.7	mg/L			08/07/24 01:39	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 01:39	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Client Sample ID: LKS-02_20240728
Date Collected: 07/28/24 14:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254228-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	44		10	4.3	mg/L			08/01/24 02:40	1
Total Suspended Solids (SM 2540D)	9.4		5.0	1.9	mg/L			08/02/24 16:39	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:35	1
Total Organic Carbon (SM 5310C)	1.8		1.0	0.47	mg/L			08/13/24 01:58	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	1.6		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Client Sample ID: LKS-02_20240728_FBLL
Date Collected: 07/28/24 14:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254228-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 21:42	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Dissolved	Water	1638	
500-254228-1	LKS-02_20240728	Total Recoverable	Water	1638	
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Prep Batch: 2496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Dissolved	Water	1630	
500-254228-1	LKS-02_20240728	Total/NA	Water	1630	
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Dissolved	Water	1631E	
500-254228-1	LKS-02_20240728	Total/NA	Water	1631E	
500-254228-2	LKS-02_20240728_FBLL	Total/NA	Water	1631E	
MB 350-2500/66	Method Blank	Total/NA	Water	1631E	
MB 350-2500/67	Method Blank	Total/NA	Water	1631E	
MB 350-2500/68	Method Blank	Total/NA	Water	1631E	
LCS 350-2500/71	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2500/72	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Dissolved	Water	1638	2495
500-254228-1	LKS-02_20240728	Total Recoverable	Water	1638	2495
MB 350-2495/1-A	Method Blank	Total Recoverable	Water	1638	2495
MB 350-2495/2-A	Method Blank	Total Recoverable	Water	1638	2495
LCS 350-2495/3-A	Lab Control Sample	Total Recoverable	Water	1638	2495
LCSD 350-2495/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2495

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Dissolved	Water	1630	2496
500-254228-1	LKS-02_20240728	Total/NA	Water	1630	2496
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	2496
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	2496
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2496

Prep Batch: 781335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Dissolved	Water	3005A	
500-254228-1	LKS-02_20240728	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 781335 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Dissolved	Water	6020B	781335
500-254228-1	LKS-02_20240728	Total Recoverable	Water	6020B	781335
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	6020B	781335
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781335

Analysis Batch: 781913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total Recoverable	Water	SM 2340B	781335

General Chemistry

Analysis Batch: 779012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	300.0	
MB 500-779012/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779012/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	300.0	
MB 500-779013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779013/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	SM 2540C	
MB 500-779370/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779370/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	SM 2540D	
MB 500-779749/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779749/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	SM 2520B	

General Chemistry

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	Distill/CN	
MB 500-780716/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	335.4	780716
MB 500-780716/1-A	Method Blank	Total/NA	Water	335.4	780716
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	335.4	780716

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	SM 5310C	
MB 500-781064/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781064/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	
500-254228-1 MS	LKS-02_20240728	Dissolved	Water	SM 5310C	
500-254228-1 MSD	LKS-02_20240728	Dissolved	Water	SM 5310C	

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254228-1	LKS-02_20240728	Total/NA	Water	350.1	781617

General Chemistry (Continued)

Analysis Batch: 782356 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2496/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:19	1

Lab Sample ID: MB 350-2496/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:30	1

Lab Sample ID: MB 350-2496/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:40	1

Lab Sample ID: LCS 350-2496/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	1.04		ng/L		104	65 - 135

Lab Sample ID: LCSD 350-2496/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.997		ng/L		100	65 - 135	4	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2500/66
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:04	1

Lab Sample ID: MB 350-2500/67
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:08	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2500/68
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:12	1

Lab Sample ID: LCS 350-2500/71
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.40		ng/L		88	77 - 123

Lab Sample ID: LCSD 350-2500/72
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.46		ng/L		89	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2495/1-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:41	1

Lab Sample ID: MB 350-2495/2-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/01/24 17:00	08/02/24 13:44	1

Lab Sample ID: LCS 350-2495/3-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	24.0		ug/L		96	85 - 115

Lab Sample ID: LCSD 350-2495/4-A
Matrix: Water
Analysis Batch: 2503

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2495

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.8		ug/L		91	85 - 115	5	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781335/1-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 12:15	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:44	08/16/24 12:15	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 12:15	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 12:15	1
Boron	27.6	J	50	13	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 12:15	1
Calcium	<44		200	44	ug/L		08/14/24 08:44	08/16/24 12:15	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 12:15	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 12:15	1
Iron	<47		100	47	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Magnesium	<49		200	49	ug/L		08/14/24 08:44	08/16/24 12:15	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 12:15	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 12:15	1
Potassium	<110		500	110	ug/L		08/14/24 08:44	08/16/24 12:15	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 12:15	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 12:15	1
Sodium	<77		200	77	ug/L		08/14/24 08:44	08/16/24 12:15	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 12:15	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 12:15	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 12:15	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 12:15	1

Lab Sample ID: LCS 500-781335/2-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1980		ug/L		99	80 - 120
Antimony	500	510		ug/L		102	80 - 120
Arsenic	100	101		ug/L		101	80 - 120
Barium	500	520		ug/L		104	80 - 120
Beryllium	50.0	52.7		ug/L		105	80 - 120
Boron	1000	1030		ug/L		103	80 - 120
Cadmium	50.0	51.9		ug/L		104	80 - 120
Calcium	10000	8920		ug/L		89	80 - 120
Chromium	200	214		ug/L		107	80 - 120
Cobalt	500	541		ug/L		108	80 - 120
Copper	250	264		ug/L		106	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	103		ug/L		103	80 - 120
Lithium	100	108		ug/L		108	80 - 120
Magnesium	10000	10600		ug/L		106	80 - 120
Manganese	500	528		ug/L		106	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781335/2-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	520		ug/L		104	80 - 120
Potassium	10000	10600		ug/L		106	80 - 120
Selenium	100	100		ug/L		100	80 - 120
Silver	50.0	51.1		ug/L		102	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120
Strontium	1000	999		ug/L		100	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1010		ug/L		101	80 - 120
Vanadium	500	520		ug/L		104	80 - 120
Zinc	500	517		ug/L		103	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/30/24 10:50	1
Chloride	0.163	J	1.0	0.12	mg/L			07/30/24 10:50	1
Fluoride	<0.19		1.0	0.19	mg/L			07/30/24 10:50	1
Sulfate	<0.21		1.0	0.21	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779012/4
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.9		mg/L		94	90 - 110
Chloride	20.0	20.4		mg/L		102	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.2		mg/L		106	90 - 110

Lab Sample ID: MB 500-779013/3
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/30/24 10:50	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	20.9		mg/L		104	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	40.0	40.5		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780716/1-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:09	1

Lab Sample ID: LCS 500-780716/2-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0962		mg/L		96	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779370/1
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/01/24 02:28	1

Lab Sample ID: LCS 500-779370/2
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	264		mg/L		106	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779749/1
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/02/24 15:55	1

Lab Sample ID: LCS 500-779749/2
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781064/31
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 00:33	1

Lab Sample ID: LCS 500-781064/32
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.2		mg/L		102	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Sample ID: 500-254228-1 MS
Matrix: Water
Analysis Batch: 781098

Client Sample ID: LKS-02_20240728
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	1.6		10.0	12.6		mg/L		110	75 - 125

Lab Sample ID: 500-254228-1 MSD
Matrix: Water
Analysis Batch: 781098

Client Sample ID: LKS-02_20240728
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dissolved Organic Carbon	1.6		10.0	12.6		mg/L		110	75 - 125	0	20

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Client Sample ID: LKS-02_20240728

Lab Sample ID: 500-254228-1

Date Collected: 07/28/24 14:00

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/02/24 23:44
Total/NA	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 23:33
Dissolved	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:38
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:34
Dissolved	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Dissolved	Analysis	1638		1	2503	COW	EET SSM	08/02/24 17:27
Total Recoverable	Prep	1638			2495	COW	EET SSM	08/01/24 17:00
Total Recoverable	Analysis	1638		1	2503	COW	EET SSM	08/02/24 17:24
Dissolved	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Dissolved	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 12:58
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 12:56
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	SM 2340B		1	781913	PFK	EET CHI	08/16/24 14:48
Total/NA	Analysis	300.0		1	779012	W1T	EET CHI	07/30/24 12:39
Total/NA	Analysis	300.0		1	779013	W1T	EET CHI	07/30/24 12:39
Total/NA	Prep	Distill/CN			780716	AC	EET CHI	08/09/24 11:42 - 08/09/24 12:12 [1]
Total/NA	Analysis	335.4		1	780798	KF	EET CHI	08/10/24 10:38
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:30
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:08
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 01:39
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779370	CLB	EET CHI	08/01/24 02:40
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:39 - 08/02/24 16:41 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:35 - 08/01/24 22:39 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781064	TR	EET CHI	08/13/24 01:58

Client Sample ID: LKS-02_20240728_FBLL

Lab Sample ID: 500-254228-2

Date Collected: 07/28/24 14:00

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:42

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254228-1

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	08-07-24
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	08-07-24
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

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500-254228 COC

Client Information	Sampler: Maddy Strong	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1357	COC No: 500-126351-50241 67
Client Contact: Amanda Zeidler	Phone: 715 587 4059	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254228
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL
Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOC SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~300_CR_B~~, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~3500_CR_B - Dissolved Chromium, Hex (field filtered)~~	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 LKS-02_20240728	7/28/24	1400	G	Water			X	X	X	X	X	X	X	X	X	X	X		X	18	
2 LKS-02_20240728	7/28/24	1400	G	Water										X						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	7/29/24 1600	MSG	4051 7962 1357	7/29/24 1600	Fedex
2				[signature]	7/30/24 0945	EET
3						

Custody Seals Intact. Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks. 3.1-3.0

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Maddy Strong	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1357	COC No: 500-126351-50241 68
Client Contact: Amanda Zeidler	Phone: 715 587 4059	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254228
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N None; CB ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			Other
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
1 LVS-02_20240728	7/28/24	1400	G	Water			X	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

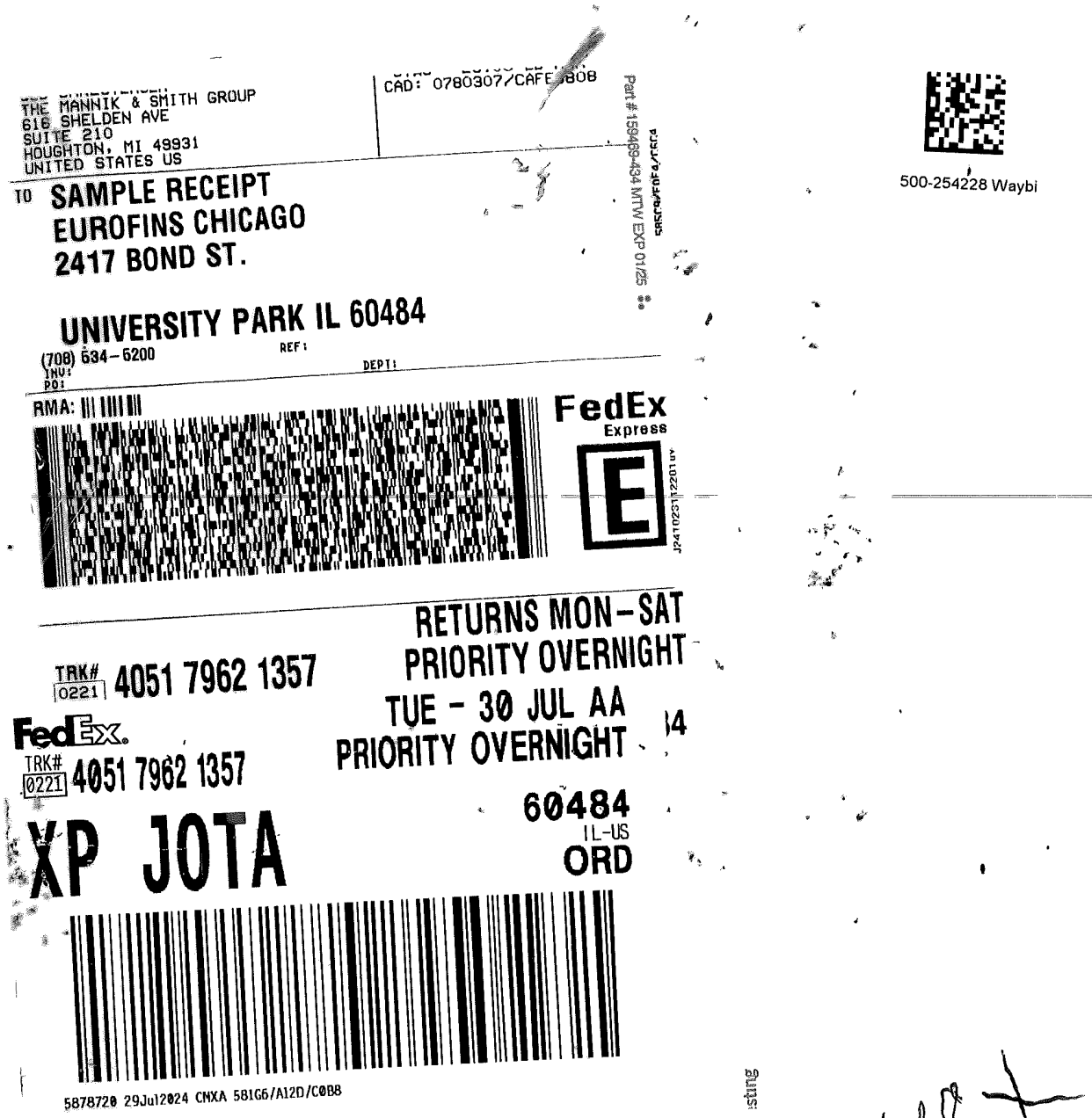
Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	7/29/24 1600	MSG	4051 7962 1357	7/29/24 1600	Fedex
2	Relinquished by:	Date/Time	Company	Received by: [signature]	7/30/24 0945	[illegible]
3	Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks


THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US
CAD: 0780307/CAFE 3808
Part # 159489-434 MTW EXP 01/25
TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.
UNIVERSITY PARK IL 60484
(708) 634-6200
REF:
INV:
PO:
DEPT:
RMA:
FedEx
Express
TRK# 0221 4051 7962 1357
RETURNS MON-SAT
PRIORITY OVERNIGHT
TUE - 30 JUL AA
PRIORITY OVERNIGHT
FedEx
TRK# 0221 4051 7962 1357
60484
IL-US
ORD
XP JOTA
5878720 29Jul2024 CMXA 581G6/A12D/C0B8
500-254228 Waybi
Sat

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191068.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254228-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/19/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
LKS-02_20240728 (500-254228-1)	7/28/24	14:00 Eastern		Water			X	X	X	X	X	X	8	
LKS-02_20240728_FBLL (500-254228-2)	7/28/24	14:00 Eastern		Water				X					2	

Other:

Therm. ID. SC02 Cust. Seal: Y / N
Uncorr./Corr. Temp 0.3 / 0.3 °C
Delivery: UPS / FedEx / Other: _____
Ice Type: Blue / Dry / Wet / None
Label Ver.: B Packing: B

Therm. ID: SC02 Cust. Seal: Y / N
Uncorr./Corr. Temp 1.5 / 1.5 °C
Delivery: UPS / FedEx / Other: _____
Ice Type: Blue / Dry / Wet / None
Label Ver.: B Packing: D

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago.

Possible Hazard Identification: Unconfirmed	7051 7620 4753	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		07/30/24 1530	EETA		7/31/24 9:45	
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254228-1

Login Number: 254228
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254228-1

Login Number: 254228
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/31/24 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254228 Field Sheet

Date:	7/31/2024
End Time:	1514
pH Paper Lot:	HC234723
Analyst:	n

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254228-E-1	<2				
500-254228-F-1	<2				
500-254228-K-1	<2				
500-254228-J-1	<2				

7/31/24

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

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JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254229-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254229-1

Receipt
The samples were received on 7/30/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.2º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Client Sample ID: TBS-01_20240728

Lab Sample ID: 500-254229-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.20	J	0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	0.080		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.086		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	35	J	100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.68	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	65		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	350	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	52000		200	44	ug/L	1		6020B	Total Recoverable
Copper	26		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	47	J	100	47	ug/L	1		6020B	Total Recoverable
Lithium	36		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	6900		200	49	ug/L	1		6020B	Total Recoverable
Manganese	5.0		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	5.0		5.0	2.5	ug/L	1		6020B	Total Recoverable
Potassium	1900		500	110	ug/L	1		6020B	Total Recoverable
Sodium	70000		200	77	ug/L	1		6020B	Total Recoverable
Strontium	880		4.0	0.64	ug/L	1		6020B	Total Recoverable
Arsenic	0.65	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	65		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	350	B	50	13	ug/L	1		6020B	Dissolved
Calcium	51000		200	44	ug/L	1		6020B	Dissolved
Copper	24		2.0	0.50	ug/L	1		6020B	Dissolved
Lithium	36		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	6800		200	49	ug/L	1		6020B	Dissolved
Manganese	2.3	J	2.5	0.79	ug/L	1		6020B	Dissolved
Molybdenum	5.0		5.0	2.5	ug/L	1		6020B	Dissolved
Potassium	1900		500	110	ug/L	1		6020B	Dissolved
Sodium	70000		200	77	ug/L	1		6020B	Dissolved
Strontium	880		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	160		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	1.4		1.0	0.18	mg/L	1		300.0	Total/NA
Chloride	150		10	1.2	mg/L	10		300.0	Total/NA
Fluoride	0.36	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	26		1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	33		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	19		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	14		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	400		10	4.3	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Client Sample ID: TBS-01_20240728 (Continued) — Lab Sample ID: 500-254229-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	2.4	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	6.9		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	6.8		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: TBS-01_20240728_FBLL — Lab Sample ID: 500-254229-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.25	J	0.50	0.20	ng/L	1		1631E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254229-1	TBS-01_20240728	Water	07/28/24 16:00	07/30/24 09:45
500-254229-2	TBS-01_20240728_FBLL	Water	07/28/24 16:00	07/30/24 09:45

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Client Sample ID: TBS-01_20240728

Date Collected: 07/28/24 16:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254229-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 23:54	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/03/24 00:24	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 21:46	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.20**	**J**	0.50	0.20	ng/L			08/02/24 18:36	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.080**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:37	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.086**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 20:17	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**35**	**J**	100	25	ug/L		08/14/24 08:44	08/16/24 13:01	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:01	1
Arsenic	**0.68**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 13:01	1
Barium	**65**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 13:01	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 13:01	1
Boron	**350**	**B**	50	13	ug/L		08/14/24 08:44	08/16/24 13:01	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 13:01	1
Calcium	**52000**		200	44	ug/L		08/14/24 08:44	08/16/24 13:01	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 13:01	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 13:01	1
Copper	**26**		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 13:01	1
Iron	**47**	**J**	100	47	ug/L		08/14/24 08:44	08/16/24 13:01	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 13:01	1
Lithium	**36**		10	2.5	ug/L		08/14/24 08:44	08/16/24 13:01	1
Magnesium	**6900**		200	49	ug/L		08/14/24 08:44	08/16/24 13:01	1
Manganese	**5.0**		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 13:01	1
Molybdenum	**5.0**		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 13:01	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 13:01	1
Potassium	**1900**		500	110	ug/L		08/14/24 08:44	08/16/24 13:01	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 13:01	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 13:01	1
Sodium	**70000**		200	77	ug/L		08/14/24 08:44	08/16/24 13:01	1
Strontium	**880**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 13:01	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 13:01	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:01	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 13:01	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 13:01	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Client Sample ID: TBS-01_20240728

Date Collected: 07/28/24 16:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254229-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 13:03	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:03	1
Arsenic	**0.65**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 13:03	1
Barium	**65**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 13:03	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 13:03	1
Boron	**350**	**B**	50	13	ug/L		08/14/24 08:44	08/16/24 13:03	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 13:03	1
Calcium	**51000**		200	44	ug/L		08/14/24 08:44	08/16/24 13:03	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 13:03	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 13:03	1
Copper	**24**		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 13:03	1
Iron	<47		100	47	ug/L		08/14/24 08:44	08/16/24 13:03	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 13:03	1
Lithium	**36**		10	2.5	ug/L		08/14/24 08:44	08/16/24 13:03	1
Magnesium	**6800**		200	49	ug/L		08/14/24 08:44	08/16/24 13:03	1
Manganese	**2.3**	**J**	2.5	0.79	ug/L		08/14/24 08:44	08/16/24 13:03	1
Molybdenum	**5.0**		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 13:03	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 13:03	1
Potassium	**1900**		500	110	ug/L		08/14/24 08:44	08/16/24 13:03	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 13:03	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 13:03	1
Sodium	**70000**		200	77	ug/L		08/14/24 08:44	08/16/24 13:03	1
Strontium	**880**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 13:03	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 13:03	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:03	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 13:03	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 13:03	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**160**		0.91	0.46	mg/L		08/14/24 08:44	08/16/24 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**1.4**		1.0	0.18	mg/L			07/30/24 13:58	1
Nitrate as N (EPA 300.0)	<0.043		1.0	0.043	mg/L			07/30/24 13:58	1
Chloride (EPA 300.0)	**150**		10	1.2	mg/L			08/13/24 17:46	10
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/30/24 13:58	1
Fluoride (EPA 300.0)	**0.36**	**J**	1.0	0.19	mg/L			07/30/24 13:58	1
Nitrate Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/30/24 13:58	1
Sulfate (EPA 300.0)	**26**		1.0	0.21	mg/L			07/30/24 13:58	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:40	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:30	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:09	1
Alkalinity (SM 2320B)	**33**		5.0	3.7	mg/L			08/07/24 01:47	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**19**		5.0	3.7	mg/L			08/07/24 01:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	**14**		5.0	3.7	mg/L			08/07/24 01:47	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Client Sample ID: TBS-01_20240728
Date Collected: 07/28/24 16:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254229-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	400		10	4.3	mg/L			08/01/24 02:43	1
Total Suspended Solids (SM 2540D)	2.4	J	5.0	1.9	mg/L			08/02/24 16:41	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:39	1
Total Organic Carbon (SM 5310C)	6.9		1.0	0.47	mg/L			08/13/24 02:26	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	6.8		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Client Sample ID: TBS-01_20240728_FBLL
Date Collected: 07/28/24 16:00
Date Received: 07/30/24 09:45

Lab Sample ID: 500-254229-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.25	J	0.50	0.20	ng/L			08/02/24 18:41	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Dissolved	Water	1630	
500-254229-1	TBS-01_20240728	Total/NA	Water	1630	
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	1631E	
MB 350-2500/66	Method Blank	Total/NA	Water	1631E	
MB 350-2500/67	Method Blank	Total/NA	Water	1631E	
MB 350-2500/68	Method Blank	Total/NA	Water	1631E	
LCS 350-2500/71	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2500/72	Lab Control Sample Dup	Total/NA	Water	1631E	

Prep Batch: 2504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Dissolved	Water	1638	
500-254229-1	TBS-01_20240728	Total Recoverable	Water	1638	
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Dissolved	Water	1631E	
500-254229-2	TBS-01_20240728_FBLL	Total/NA	Water	1631E	
MB 350-2505/15	Method Blank	Total/NA	Water	1631E	
MB 350-2505/16	Method Blank	Total/NA	Water	1631E	
MB 350-2505/17	Method Blank	Total/NA	Water	1631E	
LCS 350-2505/18	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2505/19	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Dissolved	Water	1630	2496
500-254229-1	TBS-01_20240728	Total/NA	Water	1630	2496
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	2496
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	2496
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2496

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Dissolved	Water	1638	2504
500-254229-1	TBS-01_20240728	Total Recoverable	Water	1638	2504
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	2504

Metals (Continued)

Analysis Batch: 2516 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	2504
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	2504
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2504

Prep Batch: 781335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Dissolved	Water	3005A	
500-254229-1	TBS-01_20240728	Total Recoverable	Water	3005A	
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Dissolved	Water	6020B	781335
500-254229-1	TBS-01_20240728	Total Recoverable	Water	6020B	781335
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	6020B	781335
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781335

Analysis Batch: 781914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total Recoverable	Water	SM 2340B	781335

General Chemistry

Analysis Batch: 779012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	300.0	
MB 500-779012/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779012/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	300.0	
MB 500-779013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779013/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	SM 2540C	
MB 500-779370/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779370/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	SM 2540D	

General Chemistry (Continued)

Analysis Batch: 779749 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-779749/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779749/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	SM 2520B	
500-254229-1 DU	TBS-01_20240728	Total/NA	Water	SM 2520B	

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	Distill/CN	
MB 500-780716/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	335.4	780716
MB 500-780716/1-A	Method Blank	Total/NA	Water	335.4	780716
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	335.4	780716

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	SM 5310C	
MB 500-781064/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781064/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 781160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	300.0	
MB 500-781160/3	Method Blank	Total/NA	Water	300.0	
LCS 500-781160/4	Lab Control Sample	Total/NA	Water	300.0	

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

General Chemistry

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254229-1	TBS-01_20240728	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2496/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:19	1

Lab Sample ID: MB 350-2496/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:30	1

Lab Sample ID: MB 350-2496/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:40	1

Lab Sample ID: LCS 350-2496/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	1.04		ng/L		104	65 - 135

Lab Sample ID: LCSD 350-2496/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.997		ng/L		100	65 - 135	4	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2500/66
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:04	1

Lab Sample ID: MB 350-2500/67
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:08	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2500/68
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 15:12	1

Lab Sample ID: LCS 350-2500/71
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.40		ng/L		88	77 - 123

Lab Sample ID: LCSD 350-2500/72
Matrix: Water
Analysis Batch: 2500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.46		ng/L		89	77 - 123	1	24

Lab Sample ID: MB 350-2505/15
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:30	1

Lab Sample ID: MB 350-2505/16
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:34	1

Lab Sample ID: MB 350-2505/17
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:38	1

Lab Sample ID: LCS 350-2505/18
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.63		ng/L		93	77 - 123

Lab Sample ID: LCSD 350-2505/19
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.64		ng/L		93	77 - 123	0	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2504/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:07	1

Lab Sample ID: MB 350-2504/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:10	1

Lab Sample ID: LCS 350-2504/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Uranium			25.0	22.6		ug/L		90	85 - 115		

Lab Sample ID: LCSD 350-2504/4-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium			25.0	22.6		ug/L		90	85 - 115	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781335/1-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 12:15	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:44	08/16/24 12:15	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 12:15	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 12:15	1
Boron	27.6	J	50	13	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 12:15	1
Calcium	<44		200	44	ug/L		08/14/24 08:44	08/16/24 12:15	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 12:15	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 12:15	1
Iron	<47		100	47	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Magnesium	<49		200	49	ug/L		08/14/24 08:44	08/16/24 12:15	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 12:15	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 12:15	1
Potassium	<110		500	110	ug/L		08/14/24 08:44	08/16/24 12:15	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 12:15	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-781335/1-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 12:15	1
Sodium	<77		200	77	ug/L		08/14/24 08:44	08/16/24 12:15	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 12:15	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 12:15	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 12:15	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 12:15	1

Lab Sample ID: LCS 500-781335/2-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1980		ug/L		99	80 - 120
Antimony	500	510		ug/L		102	80 - 120
Arsenic	100	101		ug/L		101	80 - 120
Barium	500	520		ug/L		104	80 - 120
Beryllium	50.0	52.7		ug/L		105	80 - 120
Boron	1000	1030		ug/L		103	80 - 120
Cadmium	50.0	51.9		ug/L		104	80 - 120
Calcium	10000	8920		ug/L		89	80 - 120
Chromium	200	214		ug/L		107	80 - 120
Cobalt	500	541		ug/L		108	80 - 120
Copper	250	264		ug/L		106	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	103		ug/L		103	80 - 120
Lithium	100	108		ug/L		108	80 - 120
Magnesium	10000	10600		ug/L		106	80 - 120
Manganese	500	528		ug/L		106	80 - 120
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	520		ug/L		104	80 - 120
Potassium	10000	10600		ug/L		106	80 - 120
Selenium	100	100		ug/L		100	80 - 120
Silver	50.0	51.1		ug/L		102	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120
Strontium	1000	999		ug/L		100	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1010		ug/L		101	80 - 120
Vanadium	500	520		ug/L		104	80 - 120
Zinc	500	517		ug/L		103	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/30/24 10:50	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.19		1.0	0.19	mg/L			07/30/24 10:50	1
Sulfate	<0.21		1.0	0.21	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779012/4
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.9		mg/L		94	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.2		mg/L		106	90 - 110

Lab Sample ID: MB 500-779013/3
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/30/24 10:50	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	20.9		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.5		mg/L		101	90 - 110

Lab Sample ID: MB 500-781160/3
Matrix: Water
Analysis Batch: 781160

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.12		1.0	0.12	mg/L			08/13/24 12:58	1

Lab Sample ID: LCS 500-781160/4
Matrix: Water
Analysis Batch: 781160

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.5		mg/L		98	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780716/1-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:09	1

Lab Sample ID: LCS 500-780716/2-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0962		mg/L		96	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Method: SM 2520B - Salinity

Lab Sample ID: 500-254229-1 DU
Matrix: Water
Analysis Batch: 779789

Client Sample ID: TBS-01_20240728
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Salinity	>0.33		>0.330		psu		NC	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779370/1
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/01/24 02:28	1

Lab Sample ID: LCS 500-779370/2
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	264		mg/L		106	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779749/1
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/02/24 15:55	1

Lab Sample ID: LCS 500-779749/2
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781064/31
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 00:33	1

Lab Sample ID: LCS 500-781064/32
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.2		mg/L		102	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Client Sample ID: TBS-01_20240728

Lab Sample ID: 500-254229-1

Date Collected: 07/28/24 16:00

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/03/24 00:24
Total/NA	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 23:54
Dissolved	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 18:36
Total/NA	Analysis	1631E		1	2500	AJD	EET SSM	08/02/24 21:46
Dissolved	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 20:17
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:37
Dissolved	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Dissolved	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 13:03
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 13:01
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	SM 2340B		1	781914	PFK	EET CHI	08/16/24 14:48
Total/NA	Analysis	300.0		10	781160	W1T	EET CHI	08/13/24 17:46
Total/NA	Analysis	300.0		1	779012	W1T	EET CHI	07/30/24 13:58
Total/NA	Analysis	300.0		1	779013	W1T	EET CHI	07/30/24 13:58
Total/NA	Prep	Distill/CN			780716	AC	EET CHI	08/09/24 11:42 - 08/09/24 12:12 [1]
Total/NA	Analysis	335.4		1	780798	KF	EET CHI	08/10/24 10:40
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:30
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:09
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 01:47
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779370	CLB	EET CHI	08/01/24 02:43
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:41 - 08/02/24 16:43 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:39 - 08/01/24 22:43 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781064	TR	EET CHI	08/13/24 02:26

Client Sample ID: TBS-01_20240728_FBLL

Lab Sample ID: 500-254229-2

Date Collected: 07/28/24 16:00

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 18:41

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254229-1

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	08-07-24
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	08-07-24
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Maddy Strong	Lab PM: Fredrick, Sandie	500-254229 COC	Carrier Tracking No(s): L10S1 7962 1324	COC No: 500-126351-50241 81
Client Contact: Amanda Zeidler	Phone: 715 587 4059	E-Mail: Sandra Fredrick@et.eurofinsus com		State of Origin: Michigan	Page: Page 1 of 1
Company: White Pine Copper	PWSID:				Job #: 500-254229
Address: 35503 Mall Circle Drive	Due Date Requested:				
City: White Pine	TAT Requested (days): 10 days				
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No				
Phone: 906-204-6500	PO #: Purchase Order not required				
Email: AZeidler@whitepinecu com	WO #:				
Project Name: White Pine, MI	Project #: 50023455				
Site	SSOW#:				

Analysis Requested

Preservation Codes
S H2SO4
N None
CB - ZnAcetate/NaOH
B NaOH
D HNO3
A HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC) and Organic Carbon Total (TOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	A		
1 TBS-01_20240728	7/28/24	1600	G	Water			X	X	X	X	X	X	X	X	X	X	X	X	X	19	
2 TBS-01_20240728_FBLL	7/28/24	1600	G	Water										X						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

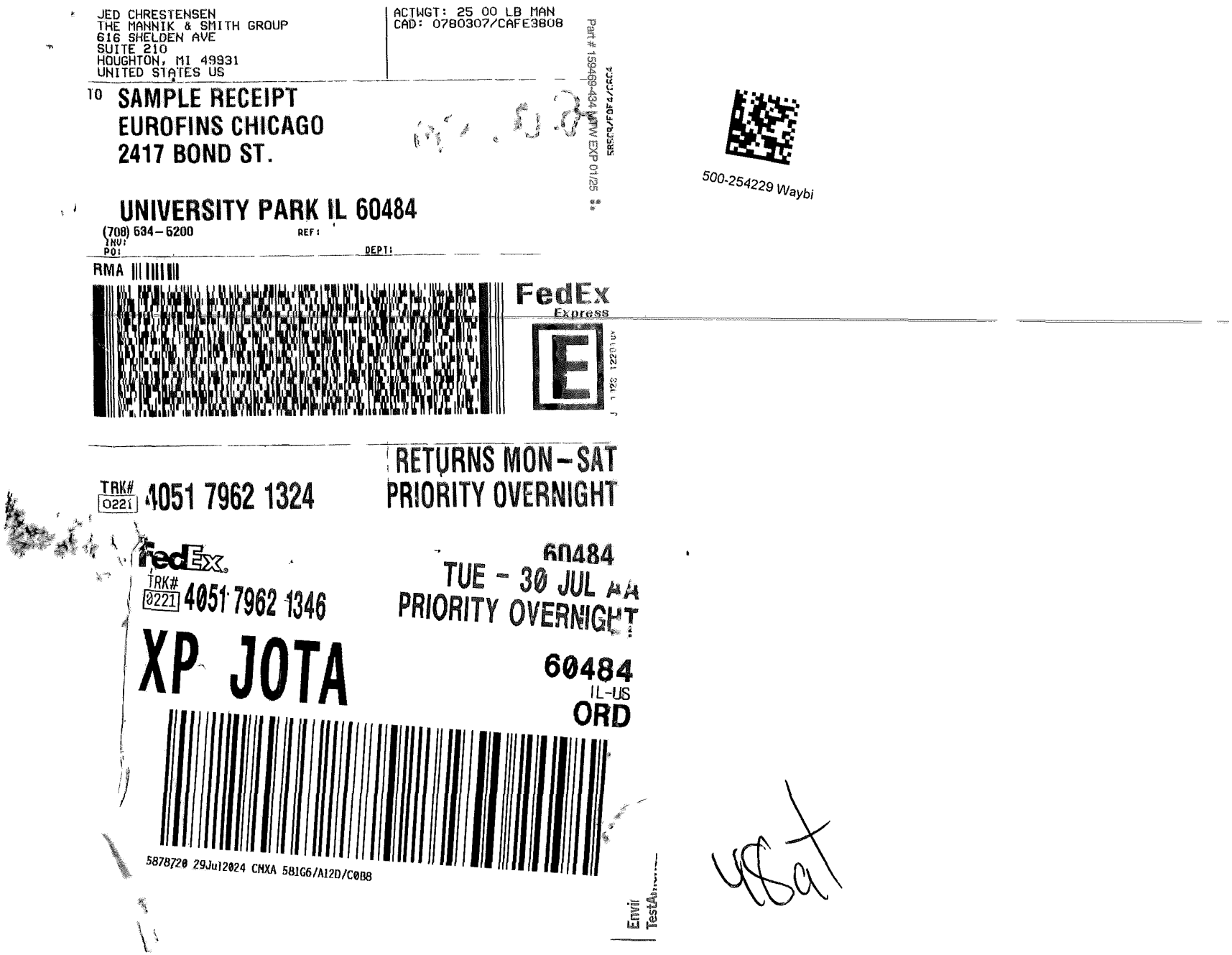
Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/29/24 1600	MSG	4095 7962 1324	7/29/24 1600	Fedex
2		Date/Time	Company	Received by	Date/Time 7/30/24 0945	Company EET
3		Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.
		0.3-0.2


JED CHRESTENSEN
THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US
ACTWGT: 25.00 LB MAN
CAD: 0780307/CAFE3808
Part # 158469-434 NRFW EXP 01/25
500-254229 Waybi
10 SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.
UNIVERSITY PARK IL 60484
(708) 634-5200
REF:
INV:
PO:
DEPT:
RMA
FedEx
Express
RETURNS MON-SAT
PRIORITY OVERNIGHT
TRK# 0221 4051 7962 1324
60484
TUE - 30 JUL AA
PRIORITY OVERNIGHT
FedEx
TRK# 0221 4051 7962 1346
XP JOTA
60484
IL-US
ORD
5878720 29Jul2024 CMXA 581G6/A12D/C0B8
Envi
TestA
USAT

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254229-1

Login Number: 254229
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254229-1

Login Number: 254229
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/31/24 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254229 Field Sheet

Date:	7/31/2024
End Time:	1510
pH Paper Lot:	HC234723
Analyst:	VL

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254229-E-1	<2				
500-254229-F-1	<2			VL 7/31/24	
500-254229-J-1	<2				
500-254229-K-1	<2				

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 2:09:58 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254277-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254277-1

Receipt
The samples were received on 7/31/2024 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.5º C.

Receipt Exceptions
Did not receive the DOC vial, client has it marked on the COC.

The following sample(s) was received outside of holding time for IC Anions.

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 500-782080 was above the upper control limit. The affected analytes are: Lead. Sample results were below the reporting limit, and have been reported as qualified data.

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-22908 (Incomplete Integration)
- CCB (Incomplete Integration)

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-23405 (Incomplete Integration)

Method 1631E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 350-2528 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779249 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300.0: The following sample was received outside of holding time: FB-01-SW_20240729 (500-254277-1).

Methods 335.4, 9012B: The initial calibration verification (ICV) associated with batch 500-780762 recovered above the upper control limit for Cyanide, Total. The samples associated with this ICV were rerun for for the affected analytes and only the batch MB and LCS are impacted; therefore, the data have been reported. The associated samples are impacted: (ICV 500-780478/27-A), (LCS 500-780478/2-A) and (MB 500-780478/1-A).

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254277-1

Client Sample ID: FB-01-SW_20240729 — Lab Sample ID: 500-254277-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.23	J	0.50	0.20	ng/L	1		1631E	Total/NA
Uranium	0.018	J	0.030	0.0098	ug/L	1		1638	Total Recoverable
Calcium	180	J	200	44	ug/L	1		6020B	Total Recoverable
Sodium	450	B	200	77	ug/L	1		6020B	Total Recoverable
Chloride	0.18	J B	1.0	0.12	mg/L	1		300.0	Total/NA
Alkalinity	5.1		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	5.1		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	12		10	4.3	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-01-SW_20240729_FBLL — Lab Sample ID: 500-254277-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254277-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200
EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254277-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254277-1	FB-01-SW_20240729	Water	07/29/24 11:00	07/31/24 10:20
500-254277-2	FB-01-SW_20240729_FBLL	Water	07/29/24 11:00	07/31/24 10:20

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254277-1

Client Sample ID: FB-01-SW_20240729

Date Collected: 07/29/24 11:00
Date Received: 07/31/24 10:20

Lab Sample ID: 500-254277-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 21:07	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.23**	**J**	0.50	0.20	ng/L			08/08/24 11:57	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.018**	**J**	0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:12	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:40	08/16/24 21:02	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:02	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:40	08/16/24 21:02	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 21:02	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 21:02	1
Boron	<13		50	13	ug/L		08/14/24 15:40	08/16/24 21:02	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 21:02	1
Calcium	**180**	**J**	200	44	ug/L		08/14/24 15:40	08/16/24 21:02	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 21:02	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 21:02	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 21:02	1
Iron	<47		100	47	ug/L		08/14/24 15:40	08/16/24 21:02	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 21:02	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:40	08/16/24 21:02	1
Magnesium	<49		200	49	ug/L		08/14/24 15:40	08/16/24 21:02	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 21:02	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 21:02	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 21:02	1
Potassium	<110		500	110	ug/L		08/14/24 15:40	08/16/24 21:02	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 21:02	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 21:02	1
Sodium	**450**	**B**	200	77	ug/L		08/14/24 15:40	08/16/24 21:02	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 21:02	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 21:02	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:02	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 21:02	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 21:02	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	<0.46		0.91	0.46	mg/L		08/14/24 15:40	08/19/24 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			07/31/24 14:06	1
Nitrate as N (EPA 300.0)	<0.043	H H3	1.0	0.043	mg/L			07/31/24 14:06	1
Chloride (EPA 300.0)	**0.18**	**J B**	1.0	0.12	mg/L			07/31/24 14:06	1
Nitrite as N (EPA 300.0)	<0.070	H H3	1.0	0.070	mg/L			07/31/24 14:06	1
Fluoride (EPA 300.0)	<0.19		1.0	0.19	mg/L			07/31/24 14:06	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254277-1

Client Sample ID: FB-01-SW_20240729
Date Collected: 07/29/24 11:00
Date Received: 07/31/24 10:20

Lab Sample ID: 500-254277-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 300.0)	<0.070	H H3	1.0	0.070	mg/L			07/31/24 14:06	1
Sulfate (EPA 300.0)	<0.21		1.0	0.21	mg/L			07/31/24 14:06	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/08/24 10:22	08/10/24 12:44	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:31	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:09	1
Alkalinity (SM 2320B)	**5.1**		5.0	3.7	mg/L			08/07/24 14:19	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**5.1**		5.0	3.7	mg/L			08/07/24 14:19	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 14:19	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1
Total Dissolved Solids (SM 2540C)	**12**		10	4.3	mg/L			08/02/24 03:22	1
Total Suspended Solids (SM 2540D)	<1.9		5.0	1.9	mg/L			08/05/24 15:53	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:51	1
Total Organic Carbon (SM 5310C)	<0.47		1.0	0.47	mg/L			08/13/24 02:54	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254277-1

Client Sample ID: FB-01-SW_20240729_FBLL
Date Collected: 07/29/24 11:00
Date Received: 07/31/24 10:20

Lab Sample ID: 500-254277-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 12:01	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254277-1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total Recoverable	Water	1638	
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total Recoverable	Water	1638	2504
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	2504
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	2504
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	2504
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2504

Analysis Batch: 2528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	1631E	
500-254277-2	FB-01-SW_20240729_FBLL	Total/NA	Water	1631E	
MB 350-2528/13	Method Blank	Total/NA	Water	1631E	
MB 350-2528/14	Method Blank	Total/NA	Water	1631E	
MB 350-2528/15	Method Blank	Total/NA	Water	1631E	
LCS 350-2528/16	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2528/17	Lab Control Sample Dup	Total/NA	Water	1631E	

Prep Batch: 2547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	1630	
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	1630	2547
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	2547
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	2547
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2547

Prep Batch: 781451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total Recoverable	Water	3005A	
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 782080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total Recoverable	Water	6020B	781451

Metals (Continued)

Analysis Batch: 782080 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	6020B	781451
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781451

Analysis Batch: 782138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total Recoverable	Water	SM 2340B	781451

General Chemistry

Analysis Batch: 779249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	300.0	
MB 500-779249/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779249/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	300.0	
MB 500-779250/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779250/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	SM 2540C	
MB 500-779571/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779571/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	SM 2520B	

Analysis Batch: 779949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	SM 2540D	
MB 500-779949/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779949/2	Lab Control Sample	Total/NA	Water	SM 2540D	
500-254277-1 DU	FB-01-SW_20240729	Total/NA	Water	SM 2540D	

Analysis Batch: 780451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	SM 2320B	
MB 500-780451/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780451/4	Lab Control Sample	Total/NA	Water	SM 2320B	

General Chemistry

Prep Batch: 780478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	Distill/CN	
MB 500-780478/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780478/1-A	Method Blank	Total/NA	Water	335.4	780478
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	335.4	780478

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	SM 5310C	
MB 500-781064/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781064/32	Lab Control Sample	Total/NA	Water	SM 5310C	
500-254277-1 MS	FB-01-SW_20240729	Total/NA	Water	SM 5310C	
500-254277-1 MSD	FB-01-SW_20240729	Total/NA	Water	SM 5310C	

Analysis Batch: 781207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	335.4	780478

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254277-1	FB-01-SW_20240729	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2547/1-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:14	1

Lab Sample ID: MB 350-2547/2-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:24	1

Lab Sample ID: MB 350-2547/3-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:34	1

Lab Sample ID: LCS 350-2547/4-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.984		ng/L		98	65 - 135

Lab Sample ID: LCSD 350-2547/5-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.971		ng/L		97	65 - 135	1	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2528/13
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 11:07	1

Lab Sample ID: MB 350-2528/14
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 11:11	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2528/15
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 11:16	1

Lab Sample ID: LCS 350-2528/16
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.51		ng/L		90	77 - 123

Lab Sample ID: LCSD 350-2528/17
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.57		ng/L		91	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2504/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:07	1

Lab Sample ID: MB 350-2504/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:10	1

Lab Sample ID: LCS 350-2504/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	22.6		ug/L		90	85 - 115

Lab Sample ID: LCSD 350-2504/4-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.6		ug/L		90	85 - 115	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781451/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:40	08/16/24 20:31	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:40	08/16/24 20:31	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 20:31	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 20:31	1
Boron	47.4	J	50	13	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 20:31	1
Calcium	<44		200	44	ug/L		08/14/24 15:40	08/16/24 20:31	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 20:31	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 20:31	1
Iron	<47		100	47	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Magnesium	<49		200	49	ug/L		08/14/24 15:40	08/16/24 20:31	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 20:31	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 20:31	1
Potassium	<110		500	110	ug/L		08/14/24 15:40	08/16/24 20:31	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 20:31	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 20:31	1
Sodium	192	J	200	77	ug/L		08/14/24 15:40	08/16/24 20:31	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 20:31	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 20:31	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 20:31	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 20:31	1

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2040		ug/L		102	80 - 120
Antimony	500	529		ug/L		106	80 - 120
Arsenic	100	103		ug/L		103	80 - 120
Barium	500	527		ug/L		105	80 - 120
Beryllium	50.0	50.2		ug/L		100	80 - 120
Boron	1000	1050		ug/L		105	80 - 120
Cadmium	50.0	51.8		ug/L		104	80 - 120
Calcium	10000	8710		ug/L		87	80 - 120
Chromium	200	212		ug/L		106	80 - 120
Cobalt	500	537		ug/L		107	80 - 120
Copper	250	261		ug/L		104	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	107	^1+	ug/L		107	80 - 120
Lithium	100	107		ug/L		107	80 - 120
Magnesium	10000	10800		ug/L		108	80 - 120
Manganese	500	522		ug/L		104	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	1000		ug/L		100	80 - 120
Nickel	500	518		ug/L		104	80 - 120
Potassium	10000	10700		ug/L		107	80 - 120
Selenium	100	104		ug/L		104	80 - 120
Silver	50.0	52.0		ug/L		104	80 - 120
Sodium	10000	10600		ug/L		106	80 - 120
Strontium	1000	1040		ug/L		104	80 - 120
Thallium	100	106		ug/L		106	80 - 120
Tin	1000	1030		ug/L		103	80 - 120
Vanadium	500	519		ug/L		104	80 - 120
Zinc	500	515		ug/L		103	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/31/24 12:01	1
Chloride	0.169	J	1.0	0.12	mg/L			07/31/24 12:01	1
Fluoride	<0.19		1.0	0.19	mg/L			07/31/24 12:01	1
Sulfate	<0.21		1.0	0.21	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779249/4
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.7		mg/L		94	90 - 110
Chloride	20.0	20.3		mg/L		102	90 - 110
Fluoride	20.0	20.5		mg/L		103	90 - 110
Sulfate	20.0	21.3		mg/L		106	90 - 110

Lab Sample ID: MB 500-779250/3
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/31/24 12:01	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779250/4
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.5		mg/L		98	90 - 110
Nitrite as N	20.0	20.8		mg/L		104	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-779250/4
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	40.0	40.3		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780478/1-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036	^1+	0.0050	0.0036	mg/L		08/08/24 10:22	08/09/24 13:04	1

Lab Sample ID: LCS 500-780478/2-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0898	^1+	mg/L		90	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780451/3
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1

Lab Sample ID: LCS 500-780451/4
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	99.5		mg/L		100	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779571/1
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/02/24 02:39	1

Lab Sample ID: LCS 500-779571/2
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	254		mg/L		102	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779949/1
Matrix: Water
Analysis Batch: 779949

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/05/24 14:14	1

Lab Sample ID: LCS 500-779949/2
Matrix: Water
Analysis Batch: 779949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	164		mg/L		82	80 - 120

Lab Sample ID: 500-254277-1 DU
Matrix: Water
Analysis Batch: 779949

Client Sample ID: FB-01-SW_20240729
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	<1.9		<1.9		mg/L		NC	5

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781064/31
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 00:33	1

Lab Sample ID: LCS 500-781064/32
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.2		mg/L		102	86 - 116

Lab Sample ID: 500-254277-1 MS
Matrix: Water
Analysis Batch: 781064

Client Sample ID: FB-01-SW_20240729
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	<0.47		10.0	10.8		mg/L		108	75 - 125

Lab Sample ID: 500-254277-1 MSD
Matrix: Water
Analysis Batch: 781064

Client Sample ID: FB-01-SW_20240729
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	<0.47		10.0	10.9		mg/L		109	75 - 125	1	20

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254277-1

Client Sample ID: FB-01-SW_20240729

Lab Sample ID: 500-254277-1

Date Collected: 07/29/24 11:00

Matrix: Water

Date Received: 07/31/24 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Total/NA	Analysis	1630		1	2565	CL	EET SSM	08/14/24 21:07
Total/NA	Analysis	1631E		1	2528	AJD	EET SSM	08/08/24 11:57
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:12
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 21:02
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	SM 2340B		1	782138	DAJ	EET CHI	08/19/24 09:57
Total/NA	Analysis	300.0		1	779249	W1T	EET CHI	07/31/24 14:06
Total/NA	Analysis	300.0		1	779250	W1T	EET CHI	07/31/24 14:06
Total/NA	Prep	Distill/CN			780478	AC	EET CHI	08/08/24 10:22 - 08/08/24 10:52 [1]
Total/NA	Analysis	335.4		1	781207	AC	EET CHI	08/10/24 12:44
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:31
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:09
Total/NA	Analysis	SM 2320B		1	780451	SO	EET CHI	08/07/24 14:19
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779571	CLB	EET CHI	08/02/24 03:22
Total/NA	Analysis	SM 2540D		1	779949	SO	EET CHI	08/05/24 15:53 - 08/05/24 15:59 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:51 - 08/01/24 22:55 [1]
Total/NA	Analysis	SM 5310C		1	781064	TR	EET CHI	08/13/24 02:54

Client Sample ID: FB-01-SW_20240729_FBLL

Lab Sample ID: 500-254277-2

Date Collected: 07/29/24 11:00

Matrix: Water

Date Received: 07/31/24 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2528	AJD	EET SSM	08/08/24 12:01

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254277-1

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	01-19-25
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	01-19-25
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

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Client Information	Sampler: Ellen Copperoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1368	COC No: 500-126351-50241 39
Client Contact: Amanda Zeidler	Phone: 517 513 2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2 1
Company: White Pine Copper	PWSID:			Job #: 500-254277

Address	Due Date Requested	Preservation Codes
35503 Mall Circle Drive	TAT Requested (days): 10 days	S H2SO4 N None CB ZnAcetate/NaOH B NaOH D HNO3 A HCL
City: White Pine	Compliance Project: Δ Yes Δ No	
State, Zip: MI, 49971	PO #: Purchase Order not required	
Phone: 906-204-6500	WO #:	
Email: AZeidler@whitepinecu com	Project #: 50023455	
Project Name: White Pine, MI	SSOW#:	Other:
Site		

500-254277 COC

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TDC SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~3500_CR_B~~ SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~3500_CR_B - Dissolved Chromium, Hex (field filtered)~~	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 FB-01-SW-~~[redacted]~~-20240729	7-29-24	11:00	G	Water			X	X	X	X	X	X	X	X	X	X	X	X	X	4	
2 FB-01-SW-~~[redacted]~~-20240729-FBLL	7-29-24	11:00	G	Water										X						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Ellen	7/30/24 1100	MSG		7/30/24 1100	MSG
	7/30/24 1600	MSG	4051 7962 1368	7/30/24 1600	Fedex
	Date/Time	Company		Date/Time: 7/31/24 0950	Company: EEA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 5.6→5.5


THE [illegible]NIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US

CAD: 0780307/CAFE3808

TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.
UNIVERSITY PARK IL 60484
(708) 534-6200

REF:
INV:
PO:
DEPT:
RMA:

Part # 159469-4940-1 EXP 01/25

FedEx Express

FedEx
TRK# 0221 4051 7962 1368

WED - 31 JUL AA
PRIORITY OVERNIGHT

XP JOTA

60484
IL-US
ORD

5053123 30Jul2024 CHXA 581G6/A12D/C0B8

5.6-5.5

49at

500-254277 Waybi

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254277-1

Login Number: 254277
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254277-1

Login Number: 254277
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/02/24 01:03 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254277 Field Sheet

Date:	8/2/2024
End Time:	13:17
pH Paper Lot:	HC234723
Analyst:	

Preservative ID	Preservative Type	Container ID
A	Nitric Acid	
A	Hydrochloric Acid	
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254277-J-1	<2				
500-254277-E-1	<2				

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 2:12:32 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254278-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254278-1

Receipt
The samples were received on 7/31/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.3º C.

Receipt Exceptions
The following sample(s) was received outside of holding time for IC Anions.

Metals
Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-22908 (Incomplete Integration)
- CCB (Incomplete Integration)

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-23405 (Incomplete Integration)

Method 1631E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 350-2528 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779249 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300.0: The following sample was analyzed outside of analytical holding time CBR-01_20240729 (500-254278-1).

Method SM 5310C: Field filtered Dissolved Organic Carbon results are slightly greater than Total Organic Carbon results. CBR-01_20240729 (500-254278-1)

Methods 335.4, 9012B: The initial calibration verification (ICV) associated with batch 500-780762 recovered above the upper control limit for Cyanide, Total. The samples associated with this ICV were rerun for for the affected analytes and only the batch MB and LCS are impacted; therefore, the data have been reported. The associated samples are impacted: (ICV 500-780478/27-A), (LCS 500-780478/2-A) and (MB 500-780478/1-A).

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Client Sample ID: CBR-01_20240729

Lab Sample ID: 500-254278-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl Mercury	0.078		0.050	0.022	ng/L	1		1630	Total/NA
Methyl Mercury	0.071		0.050	0.022	ng/L	1		1630	Dissolved
Mercury	0.99		0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	0.93		0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	0.31		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.30		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	160		100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.46	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	75		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	90	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	29000		200	44	ug/L	1		6020B	Total Recoverable
Copper	2.3		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	320		100	47	ug/L	1		6020B	Total Recoverable
Lithium	3.0	J	10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	7600		200	49	ug/L	1		6020B	Total Recoverable
Manganese	31		2.5	0.79	ug/L	1		6020B	Total Recoverable
Potassium	1400		500	110	ug/L	1		6020B	Total Recoverable
Sodium	9200		200	77	ug/L	1		6020B	Total Recoverable
Strontium	140		4.0	0.64	ug/L	1		6020B	Total Recoverable
Arsenic	0.42	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	71		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	88	B	50	13	ug/L	1		6020B	Dissolved
Calcium	29000		200	44	ug/L	1		6020B	Dissolved
Copper	2.1		2.0	0.50	ug/L	1		6020B	Dissolved
Iron	99	J	100	47	ug/L	1		6020B	Dissolved
Lithium	2.6	J	10	2.5	ug/L	1		6020B	Dissolved
Magnesium	7400		200	49	ug/L	1		6020B	Dissolved
Manganese	5.9		2.5	0.79	ug/L	1		6020B	Dissolved
Potassium	1300		500	110	ug/L	1		6020B	Dissolved
Sodium	9200		200	77	ug/L	1		6020B	Dissolved
Strontium	130		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	100		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	0.22	J	1.0	0.18	mg/L	1		300.0	Total/NA
Chloride	19	B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.26	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	1.4		1.0	0.21	mg/L	1		300.0	Total/NA
Ammonia	0.25		0.20	0.10	mg/L	1		350.1	Total/NA
Alkalinity	93		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	93		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Client Sample ID: CBR-01_20240729 (Continued) — Lab Sample ID: 500-254278-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	140		10	4.3	mg/L	1		SM 2540C	Total/NA
Sulfide	0.50	J	1.0	0.23	mg/L	1		SM 4500 S2 F	Total/NA
Total Organic Carbon	7.4		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	8.4		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: CBR-01_20240729_FBLL — Lab Sample ID: 500-254278-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254278-1	CBR-01_20240729	Water	07/29/24 11:20	07/31/24 09:50
500-254278-2	CBR-01_20240729_FBLL	Water	07/29/24 11:20	07/31/24 09:50

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Client Sample ID: CBR-01_20240729

Date Collected: 07/29/24 11:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254278-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.078**		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 21:17	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.071**		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 21:27	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.99**		0.50	0.20	ng/L			08/08/24 12:05	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.93**		0.50	0.20	ng/L			08/08/24 12:10	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.31**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:32	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.30**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:48	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**160**		100	25	ug/L		08/14/24 08:44	08/16/24 13:19	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:19	1
Arsenic	**0.46**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 13:19	1
Barium	**75**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 13:19	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 13:19	1
Boron	**90**	**B**	50	13	ug/L		08/14/24 08:44	08/16/24 13:19	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 13:19	1
Calcium	**29000**		200	44	ug/L		08/14/24 08:44	08/16/24 13:19	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 13:19	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 13:19	1
Copper	**2.3**		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 13:19	1
Iron	**320**		100	47	ug/L		08/14/24 08:44	08/16/24 13:19	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 13:19	1
Lithium	**3.0**	**J**	10	2.5	ug/L		08/14/24 08:44	08/16/24 13:19	1
Magnesium	**7600**		200	49	ug/L		08/14/24 08:44	08/16/24 13:19	1
Manganese	**31**		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 13:19	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 13:19	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 13:19	1
Potassium	**1400**		500	110	ug/L		08/14/24 08:44	08/16/24 13:19	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 13:19	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 13:19	1
Sodium	**9200**		200	77	ug/L		08/14/24 08:44	08/16/24 13:19	1
Strontium	**140**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 13:19	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 13:19	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:19	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 13:19	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 13:19	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Client Sample ID: CBR-01_20240729

Date Collected: 07/29/24 11:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254278-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 13:21	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:21	1
Arsenic	**0.42**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 13:21	1
Barium	**71**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 13:21	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 13:21	1
Boron	**88**	**B**	50	13	ug/L		08/14/24 08:44	08/16/24 13:21	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 13:21	1
Calcium	**29000**		200	44	ug/L		08/14/24 08:44	08/16/24 13:21	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 13:21	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 13:21	1
Copper	**2.1**		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 13:21	1
Iron	**99**	**J**	100	47	ug/L		08/14/24 08:44	08/16/24 13:21	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 13:21	1
Lithium	**2.6**	**J**	10	2.5	ug/L		08/14/24 08:44	08/16/24 13:21	1
Magnesium	**7400**		200	49	ug/L		08/14/24 08:44	08/16/24 13:21	1
Manganese	**5.9**		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 13:21	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 13:21	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 13:21	1
Potassium	**1300**		500	110	ug/L		08/14/24 08:44	08/16/24 13:21	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 13:21	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 13:21	1
Sodium	**9200**		200	77	ug/L		08/14/24 08:44	08/16/24 13:21	1
Strontium	**130**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 13:21	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 13:21	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:21	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 13:21	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 13:21	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**100**		0.91	0.46	mg/L		08/14/24 08:44	08/16/24 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**0.22**	**J**	1.0	0.18	mg/L			07/31/24 13:50	1
Nitrate as N (EPA 300.0)	<0.043	H	1.0	0.043	mg/L			07/31/24 13:50	1
Chloride (EPA 300.0)	**19**	**B**	1.0	0.12	mg/L			07/31/24 13:50	1
Nitrite as N (EPA 300.0)	<0.070	H	1.0	0.070	mg/L			07/31/24 13:50	1
Fluoride (EPA 300.0)	**0.26**	**J**	1.0	0.19	mg/L			07/31/24 13:50	1
Nitrate Nitrite as N (EPA 300.0)	<0.070	H	1.0	0.070	mg/L			07/31/24 13:50	1
Sulfate (EPA 300.0)	**1.4**		1.0	0.21	mg/L			07/31/24 13:50	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/08/24 10:22	08/10/24 12:46	1
Ammonia (EPA 350.1)	**0.25**		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:32	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:10	1
Alkalinity (SM 2320B)	**93**		5.0	3.7	mg/L			08/07/24 14:25	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**93**		5.0	3.7	mg/L			08/07/24 14:25	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 14:25	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Client Sample ID: CBR-01_20240729
Date Collected: 07/29/24 11:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254278-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**140**		10	4.3	mg/L			08/02/24 03:25	1
Total Suspended Solids (SM 2540D)	<1.9		5.0	1.9	mg/L			08/05/24 16:04	1
Sulfide (SM 4500 S2 F)	**0.50**	**J**	1.0	0.23	mg/L			08/01/24 22:55	1
Total Organic Carbon (SM 5310C)	**7.4**		1.0	0.47	mg/L			08/13/24 04:18	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	**8.4**		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Client Sample ID: CBR-01_20240729_FBLL

Date Collected: 07/29/24 11:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254278-2

Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 12:14	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Dissolved	Water	1638	
500-254278-1	CBR-01_20240729	Total Recoverable	Water	1638	
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	
500-254278-1 MS	CBR-01_20240729	Total Recoverable	Water	1638	
500-254278-1 MSD	CBR-01_20240729	Total Recoverable	Water	1638	

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Dissolved	Water	1638	2504
500-254278-1	CBR-01_20240729	Total Recoverable	Water	1638	2504
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	2504
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	2504
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	2504
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2504
500-254278-1 MS	CBR-01_20240729	Total Recoverable	Water	1638	2504
500-254278-1 MSD	CBR-01_20240729	Total Recoverable	Water	1638	2504

Analysis Batch: 2528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Dissolved	Water	1631E	
500-254278-1	CBR-01_20240729	Total/NA	Water	1631E	
500-254278-2	CBR-01_20240729_FBLL	Total/NA	Water	1631E	
MB 350-2528/13	Method Blank	Total/NA	Water	1631E	
MB 350-2528/14	Method Blank	Total/NA	Water	1631E	
MB 350-2528/15	Method Blank	Total/NA	Water	1631E	
LCS 350-2528/16	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2528/17	Lab Control Sample Dup	Total/NA	Water	1631E	

Prep Batch: 2547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Dissolved	Water	1630	
500-254278-1	CBR-01_20240729	Total/NA	Water	1630	
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Dissolved	Water	1630	2547
500-254278-1	CBR-01_20240729	Total/NA	Water	1630	2547
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	2547
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	2547
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2547

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Metals

Prep Batch: 781335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Dissolved	Water	3005A	
500-254278-1	CBR-01_20240729	Total Recoverable	Water	3005A	
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Dissolved	Water	6020B	781335
500-254278-1	CBR-01_20240729	Total Recoverable	Water	6020B	781335
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	6020B	781335
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781335

Analysis Batch: 781917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total Recoverable	Water	SM 2340B	781335

General Chemistry

Analysis Batch: 779249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	300.0	
MB 500-779249/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779249/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	300.0	
MB 500-779250/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779250/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	SM 2540C	
MB 500-779571/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779571/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	SM 2520B	

Analysis Batch: 779949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	SM 2540D	
MB 500-779949/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779949/2	Lab Control Sample	Total/NA	Water	SM 2540D	

General Chemistry (Continued)

Analysis Batch: 779949 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1 DU	CBR-01_20240729	Total/NA	Water	SM 2540D	

Analysis Batch: 780451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	SM 2320B	
MB 500-780451/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780451/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	Distill/CN	
MB 500-780478/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780478/1-A	Method Blank	Total/NA	Water	335.4	780478
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	335.4	780478

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	SM 5310C	
MB 500-781064/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781064/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 781207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	335.4	780478

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970

General Chemistry (Continued)

Analysis Batch: 781671 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254278-1	CBR-01_20240729	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2547/1-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:14	1

Lab Sample ID: MB 350-2547/2-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:24	1

Lab Sample ID: MB 350-2547/3-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:34	1

Lab Sample ID: LCS 350-2547/4-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.984		ng/L		98	65 - 135

Lab Sample ID: LCSD 350-2547/5-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.971		ng/L		97	65 - 135	1	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2528/13
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 11:07	1

Lab Sample ID: MB 350-2528/14
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 11:11	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2528/15
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 11:16	1

Lab Sample ID: LCS 350-2528/16
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.51		ng/L		90	77 - 123

Lab Sample ID: LCSD 350-2528/17
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.57		ng/L		91	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2504/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:07	1

Lab Sample ID: MB 350-2504/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:10	1

Lab Sample ID: LCS 350-2504/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	22.6		ug/L		90	85 - 115

Lab Sample ID: LCSD 350-2504/4-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.6		ug/L		90	85 - 115	0	20

Method: 1638 - Metals (ICP/MS) (Continued)

Lab Sample ID: 500-254278-1 MS
Matrix: Water
Analysis Batch: 2516

Client Sample ID: CBR-01_20240729
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	0.31		25.0	23.2		ug/L		92	70 - 130

Lab Sample ID: 500-254278-1 MSD
Matrix: Water
Analysis Batch: 2516

Client Sample ID: CBR-01_20240729
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	0.31		25.0	24.0		ug/L		95	70 - 130	3	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781335/1-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 12:15	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:44	08/16/24 12:15	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 12:15	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 12:15	1
Boron	27.6	J	50	13	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 12:15	1
Calcium	<44		200	44	ug/L		08/14/24 08:44	08/16/24 12:15	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 12:15	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 12:15	1
Iron	<47		100	47	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Magnesium	<49		200	49	ug/L		08/14/24 08:44	08/16/24 12:15	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 12:15	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 12:15	1
Potassium	<110		500	110	ug/L		08/14/24 08:44	08/16/24 12:15	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 12:15	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 12:15	1
Sodium	<77		200	77	ug/L		08/14/24 08:44	08/16/24 12:15	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 12:15	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 12:15	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 12:15	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 12:15	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781335/2-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1980		ug/L		99	80 - 120
Antimony	500	510		ug/L		102	80 - 120
Arsenic	100	101		ug/L		101	80 - 120
Barium	500	520		ug/L		104	80 - 120
Beryllium	50.0	52.7		ug/L		105	80 - 120
Boron	1000	1030		ug/L		103	80 - 120
Cadmium	50.0	51.9		ug/L		104	80 - 120
Calcium	10000	8920		ug/L		89	80 - 120
Chromium	200	214		ug/L		107	80 - 120
Cobalt	500	541		ug/L		108	80 - 120
Copper	250	264		ug/L		106	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	103		ug/L		103	80 - 120
Lithium	100	108		ug/L		108	80 - 120
Magnesium	10000	10600		ug/L		106	80 - 120
Manganese	500	528		ug/L		106	80 - 120
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	520		ug/L		104	80 - 120
Potassium	10000	10600		ug/L		106	80 - 120
Selenium	100	100		ug/L		100	80 - 120
Silver	50.0	51.1		ug/L		102	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120
Strontium	1000	999		ug/L		100	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1010		ug/L		101	80 - 120
Vanadium	500	520		ug/L		104	80 - 120
Zinc	500	517		ug/L		103	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/31/24 12:01	1
Chloride	0.169	J	1.0	0.12	mg/L			07/31/24 12:01	1
Fluoride	<0.19		1.0	0.19	mg/L			07/31/24 12:01	1
Sulfate	<0.21		1.0	0.21	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779249/4
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.7		mg/L		94	90 - 110
Chloride	20.0	20.3		mg/L		102	90 - 110
Fluoride	20.0	20.5		mg/L		103	90 - 110
Sulfate	20.0	21.3		mg/L		106	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-779250/3
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/31/24 12:01	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779250/4
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.5		mg/L		98	90 - 110
Nitrite as N	20.0	20.8		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.3		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780478/1-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036	^1+	0.0050	0.0036	mg/L		08/08/24 10:22	08/09/24 13:04	1

Lab Sample ID: LCS 500-780478/2-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0898	^1+	mg/L		90	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780451/3
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1

Lab Sample ID: LCS 500-780451/4
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	99.5		mg/L		100	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779571/1
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/02/24 02:39	1

Lab Sample ID: LCS 500-779571/2
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	254		mg/L		102	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779949/1
Matrix: Water
Analysis Batch: 779949

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/05/24 14:14	1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: LCS 500-779949/2
Matrix: Water
Analysis Batch: 779949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	164		mg/L		82	80 - 120

Lab Sample ID: 500-254278-1 DU
Matrix: Water
Analysis Batch: 779949

Client Sample ID: CBR-01_20240729
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	<1.9		<1.9		mg/L		NC	5

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781064/31
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 00:33	1

Lab Sample ID: LCS 500-781064/32
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.2		mg/L		102	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Method: SM 5310C - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Client Sample ID: CBR-01_20240729

Lab Sample ID: 500-254278-1

Date Collected: 07/29/24 11:20

Matrix: Water

Date Received: 07/31/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Dissolved	Analysis	1630		1	2565	CL	EET SSM	08/14/24 21:27
Total/NA	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Total/NA	Analysis	1630		1	2565	CL	EET SSM	08/14/24 21:17
Dissolved	Analysis	1631E		1	2528	AJD	EET SSM	08/08/24 12:10
Total/NA	Analysis	1631E		1	2528	AJD	EET SSM	08/08/24 12:05
Dissolved	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:48
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 18:32
Dissolved	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Dissolved	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 13:21
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 13:19
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	SM 2340B		1	781917	PFK	EET CHI	08/16/24 14:48
Total/NA	Analysis	300.0		1	779249	W1T	EET CHI	07/31/24 13:50
Total/NA	Analysis	300.0		1	779250	W1T	EET CHI	07/31/24 13:50
Total/NA	Prep	Distill/CN			780478	AC	EET CHI	08/08/24 10:22 - 08/08/24 10:52 [1]
Total/NA	Analysis	335.4		1	781207	AC	EET CHI	08/10/24 12:46
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:32
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:10
Total/NA	Analysis	SM 2320B		1	780451	SO	EET CHI	08/07/24 14:25
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779571	CLB	EET CHI	08/02/24 03:25
Total/NA	Analysis	SM 2540D		1	779949	SO	EET CHI	08/05/24 16:04 - 08/05/24 16:10 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:55 - 08/01/24 22:59 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781064	TR	EET CHI	08/13/24 04:18

Client Sample ID: CBR-01_20240729_FBLL

Lab Sample ID: 500-254278-2

Date Collected: 07/29/24 11:20

Matrix: Water

Date Received: 07/31/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2528	AJD	EET SSM	08/08/24 12:14

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254278-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1380	COC No: 500-126351-50241 63
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254278
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

500-254278 COC

Analysis Requested

Preservation Codes:
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos	2320B, 2540C, 2540D, 300.0 28D, 300_48HR_3500_CR_B, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	3500_CR_B - Dissolved Chromium, Hex (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
				Preservation Code:			S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 CBR-01_20240729	07-29-24	11:20	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18	
2 CBR-01_20240729_FBLC	07-29-24	11:20	G	Water										✓						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: Fedex Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/30/24 1100	MSG		7/30/24 1100	MSG
2		7/30/24 1100	MSG	4051 7962 1380	7/30/24 1600	Fedex
3					7/31/24 0950	EETT

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks: 3.4-3.3

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1380	COC No: 500-126351-50241 64
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:			Job#: 500-254278
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
S H2SO4
N None
CB ZnAcetate/NaOH
B - NaOH
D HNO3
A HCL
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
CBR-01-20240729	07-29-24	11:20	G	Water			✓	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: fedex priority overnight

	Date/Time	Company		Date/Time	Company
Relinquished by:	7/30/24 1100	MSG	Received by:	7/30/24 1100	MSG
Relinquished by:	7/30/24 1600	MSG	Received by: 4051 7962 1380	7/30/24 1600	fedex
Relinquished by:	Date/Time	Company	Received by:	7/31/24 0950	ERT

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks



500-254278 Waybi

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191125.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254278-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/20/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
CBR-01_20240729 (500-254278-1)	7/29/24	11:20 Eastern		Water			X	X	X	X	X	X	8	
CBR-01_20240729_FBLL (500-254278-2)	7/29/24	11:20 Eastern		Water				X					2	

Therm. ID: SC02 Cust. Seal: (Y) / N
Uncorr./Corr. Temp: 1.3 / 1.2 °C
Delivery: UPS / FedEx / Other: ___
Ice Type: Blue / Dry / Wet / None
Packing: ___
Label Ver.: ___

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories This sample accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

currently maintain igo attention

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed ~~7167~~ 3503 8343 8/1/24	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	07/31/24 1530	EETA	[signature]	8/1/24 9:35	EHS
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

7051 7620 4878

Ver: 04/02/2024

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins
Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s)	COC No: 810-43729.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Anthony.Hunsberger@et eurofinsus.com	State of Origin: New Jersey	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): NELAP - New Jersey		Job #: 810-113364-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/8/2024	Analysis Requested		Preservation Codes:
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: Middlesex	Project #: 81000276			
Site: Middlesex	SSOW#			Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1632A_OF/ Inorganic Arsenic in Water	Total Number of containers	Special Instructions/Note:
		Preservation Code:							
LOG # 5911 Filtered 1-8 (810-113364-1)	7/25/24	08:44 Eastern		Water			X	1	
LOG # 5912 Filtered 9-12 (810-113364-2)	7/25/24	08:51 Eastern		Water			X	1	

Therm. ID: SC07 Cust. Seal: (Y) / N
Uncorr./Corr. Temp: 0.4/0.4 °C
Delivery: UPS / FedEx / Other
Ice Type: Blue / Dry / Wet / None
Label Ver. R Packing: D

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sam currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instruc Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC not ught to

Possible Hazard Identification: Unconfirmed 6449 7739 7881	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Kristine Rana	7/31/24 1431	ELIET		8/1/24 9:35	ELIET
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

8/21/2024

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254278-1

Login Number: 254278
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254278-1

Login Number: 254278
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/02/24 01:03 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

500-254278 Field Sheet

Date:	8/2/2024
End Time:	13:17
pH Paper Lot:	HC234723
Analyst:	

Preservative ID	Preservative Type	Container ID
A	Nitric Acid	
A	Hydrochloric Acid	
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254278-J-1	<2				
500-254278-J-1	<2				
500-254278-K-1	<2				
500-254278-F-1	<2				
500-254278-E-1	<2				

8/2/24

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 2:16:46 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254279-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

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Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



Generated
8/21/2024 2:16:46 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254279-1

Receipt
The samples were received on 7/31/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.5º C.

Receipt Exceptions
The following sample(s) was received outside of holding time for IC Anions.

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 500-782080 was above the upper control limit. The affected analytes are: Lead. Sample results were below the reporting limit, and have been reported as qualified data.

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-22908 (Incomplete Integration)
- CCB (Incomplete Integration)

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-23405 (Incomplete Integration)

Method 1631E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 350-2528 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779249 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300.0: The following sample was received outside of holding time: PNC-01_20240729 (500-254279-1).

Methods 335.4, 9012B: The initial calibration verification (ICV) associated with batch 500-780762 recovered above the upper control limit for Cyanide, Total. The samples associated with this ICV were rerun for for the affected analytes and only the batch MB and LCS are impacted; therefore, the data have been reported. The associated samples are impacted: (ICV 500-780478/27-A), (LCS 500-780478/2-A) and (MB 500-780478/1-A).

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Client Sample ID: PNC-01_20240729

Lab Sample ID: 500-254279-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl Mercury	0.032	J	0.050	0.022	ng/L	1		1630	Total/NA
Mercury	1.5		0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	1.2		0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	0.037		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.032		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	64	J	100	25	ug/L	1		6020B	Total Recoverable
Arsenic	1.0		1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	21		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	15	J B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	17000		200	44	ug/L	1		6020B	Total Recoverable
Cobalt	0.49	J	1.0	0.40	ug/L	1		6020B	Total Recoverable
Copper	7.8		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	2400		100	47	ug/L	1		6020B	Total Recoverable
Magnesium	3900		200	49	ug/L	1		6020B	Total Recoverable
Manganese	1200		2.5	0.79	ug/L	1		6020B	Total Recoverable
Nickel	0.66	J	2.0	0.63	ug/L	1		6020B	Total Recoverable
Potassium	1300		500	110	ug/L	1		6020B	Total Recoverable
Sodium	1200	B	200	77	ug/L	1		6020B	Total Recoverable
Strontium	47		4.0	0.64	ug/L	1		6020B	Total Recoverable
Aluminum	37	J	100	25	ug/L	1		6020B	Dissolved
Arsenic	0.80	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	21		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	18	J B	50	13	ug/L	1		6020B	Dissolved
Calcium	18000		200	44	ug/L	1		6020B	Dissolved
Cobalt	0.44	J	1.0	0.40	ug/L	1		6020B	Dissolved
Copper	7.0		2.0	0.50	ug/L	1		6020B	Dissolved
Iron	1300		100	47	ug/L	1		6020B	Dissolved
Magnesium	4000		200	49	ug/L	1		6020B	Dissolved
Manganese	1100		2.5	0.79	ug/L	1		6020B	Dissolved
Nickel	0.63	J	2.0	0.63	ug/L	1		6020B	Dissolved
Potassium	1400		500	110	ug/L	1		6020B	Dissolved
Sodium	1000		200	77	ug/L	1		6020B	Dissolved
Strontium	50		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	59		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Nitrate as N	0.43	J H H3	1.0	0.043	mg/L	1		300.0	Total/NA
Chloride	0.54	J B	1.0	0.12	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.43	J H H3	1.0	0.070	mg/L	1		300.0	Total/NA
Alkalinity	60		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	60		5.0	3.7	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: PNC-01_20240729 (Continued) — Lab Sample ID: 500-254279-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	84		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	6.6		5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	14		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	14		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: PNC-01_20240729_FBLL — Lab Sample ID: 500-254279-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.20	J	0.50	0.20	ng/L	1		1631E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254279-1	PNC-01_20240729	Water	07/29/24 09:00	07/31/24 09:50
500-254279-2	PNC-01_20240729_FBLL	Water	07/29/24 09:00	07/31/24 09:50

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Client Sample ID: PNC-01_20240729

Date Collected: 07/29/24 09:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254279-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.032**	**J**	0.050	0.022	ng/L		08/13/24 11:12	08/14/24 21:38	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 21:48	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.5**		0.50	0.20	ng/L			08/08/24 12:18	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.2**		0.50	0.20	ng/L			08/08/24 12:22	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.037**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:16	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.032**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:52	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**64**	**J**	100	25	ug/L		08/14/24 15:40	08/16/24 21:05	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:05	1
Arsenic	**1.0**		1.0	0.23	ug/L		08/14/24 15:40	08/16/24 21:05	1
Barium	**21**		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 21:05	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 21:05	1
Boron	**15**	**J B**	50	13	ug/L		08/14/24 15:40	08/16/24 21:05	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 21:05	1
Calcium	**17000**		200	44	ug/L		08/14/24 15:40	08/16/24 21:05	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 21:05	1
Cobalt	**0.49**	**J**	1.0	0.40	ug/L		08/14/24 15:40	08/16/24 21:05	1
Copper	**7.8**		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 21:05	1
Iron	**2400**		100	47	ug/L		08/14/24 15:40	08/16/24 21:05	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 21:05	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:40	08/16/24 21:05	1
Magnesium	**3900**		200	49	ug/L		08/14/24 15:40	08/16/24 21:05	1
Manganese	**1200**		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 21:05	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 21:05	1
Nickel	**0.66**	**J**	2.0	0.63	ug/L		08/14/24 15:40	08/16/24 21:05	1
Potassium	**1300**		500	110	ug/L		08/14/24 15:40	08/16/24 21:05	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 21:05	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 21:05	1
Sodium	**1200**	**B**	200	77	ug/L		08/14/24 15:40	08/16/24 21:05	1
Strontium	**47**		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 21:05	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 21:05	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:05	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 21:05	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 21:05	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Client Sample ID: PNC-01_20240729
Date Collected: 07/29/24 09:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254279-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**37**	**J**	100	25	ug/L		08/14/24 15:44	08/16/24 19:45	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:45	1
Arsenic	**0.80**	**J**	1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:45	1
Barium	**21**		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:45	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:45	1
Boron	**18**	**J B**	50	13	ug/L		08/14/24 15:44	08/19/24 13:10	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:45	1
Calcium	**18000**		200	44	ug/L		08/14/24 15:44	08/16/24 19:45	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:45	1
Cobalt	**0.44**	**J**	1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:45	1
Copper	**7.0**		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:45	1
Iron	**1300**		100	47	ug/L		08/14/24 15:44	08/16/24 19:45	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:45	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:45	1
Magnesium	**4000**		200	49	ug/L		08/14/24 15:44	08/16/24 19:45	1
Manganese	**1100**		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:45	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:45	1
Nickel	**0.63**	**J**	2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:45	1
Potassium	**1400**		500	110	ug/L		08/14/24 15:44	08/16/24 19:45	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:45	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:45	1
Sodium	**1000**		200	77	ug/L		08/14/24 15:44	08/19/24 13:10	1
Strontium	**50**		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:45	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:45	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:45	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:45	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:45	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**59**		0.91	0.46	mg/L		08/14/24 15:40	08/19/24 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			07/31/24 14:22	1
Nitrate as N (EPA 300.0)	**0.43**	**J H H3**	1.0	0.043	mg/L			07/31/24 14:22	1
Chloride (EPA 300.0)	**0.54**	**J B**	1.0	0.12	mg/L			07/31/24 14:22	1
Nitrite as N (EPA 300.0)	<0.070	H H3	1.0	0.070	mg/L			07/31/24 14:22	1
Fluoride (EPA 300.0)	<0.19		1.0	0.19	mg/L			07/31/24 14:22	1
Nitrate Nitrite as N (EPA 300.0)	**0.43**	**J H H3**	1.0	0.070	mg/L			07/31/24 14:22	1
Sulfate (EPA 300.0)	<0.21		1.0	0.21	mg/L			07/31/24 14:22	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/08/24 10:22	08/10/24 12:51	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:32	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:10	1
Alkalinity (SM 2320B)	**60**		5.0	3.7	mg/L			08/07/24 14:34	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**60**		5.0	3.7	mg/L			08/07/24 14:34	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 14:34	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Client Sample ID: PNC-01_20240729
Date Collected: 07/29/24 09:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254279-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	84		10	4.3	mg/L			08/02/24 03:28	1
Total Suspended Solids (SM 2540D)	6.6		5.0	1.9	mg/L			08/05/24 14:51	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/05/24 22:30	1
Total Organic Carbon (SM 5310C)	14		1.0	0.47	mg/L			08/13/24 04:46	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	14		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Client Sample ID: PNC-01_20240729_FBLL
Date Collected: 07/29/24 09:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254279-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	J	0.50	0.20	ng/L			08/08/24 12:26	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Dissolved	Water	1638	
500-254279-1	PNC-01_20240729	Total Recoverable	Water	1638	
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Dissolved	Water	1638	2504
500-254279-1	PNC-01_20240729	Total Recoverable	Water	1638	2504
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	2504
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	2504
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	2504
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2504

Analysis Batch: 2528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Dissolved	Water	1631E	
500-254279-1	PNC-01_20240729	Total/NA	Water	1631E	
500-254279-2	PNC-01_20240729_FBLL	Total/NA	Water	1631E	
MB 350-2528/13	Method Blank	Total/NA	Water	1631E	
MB 350-2528/14	Method Blank	Total/NA	Water	1631E	
MB 350-2528/15	Method Blank	Total/NA	Water	1631E	
LCS 350-2528/16	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2528/17	Lab Control Sample Dup	Total/NA	Water	1631E	

Prep Batch: 2547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Dissolved	Water	1630	
500-254279-1	PNC-01_20240729	Total/NA	Water	1630	
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Dissolved	Water	1630	2547
500-254279-1	PNC-01_20240729	Total/NA	Water	1630	2547
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	2547
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	2547
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2547

Prep Batch: 781451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total Recoverable	Water	3005A	
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 781451 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 781453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Dissolved	Water	3005A	
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 782080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Dissolved	Water	6020B	781453
500-254279-1	PNC-01_20240729	Total Recoverable	Water	6020B	781451
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	6020B	781451
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781451
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

Analysis Batch: 782130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total Recoverable	Water	SM 2340B	781451

Analysis Batch: 782199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Dissolved	Water	6020B	781453
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

General Chemistry

Analysis Batch: 779249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	300.0	
MB 500-779249/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779249/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	300.0	
MB 500-779250/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779250/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	SM 2540C	
MB 500-779571/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779571/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	SM 2520B	

General Chemistry

Analysis Batch: 779950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	SM 2540D	
MB 500-779950/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779950/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	SM 4500 S2 F	
MB 500-779991/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779991/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 780451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	SM 2320B	
MB 500-780451/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780451/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	Distill/CN	
MB 500-780478/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780478/1-A	Method Blank	Total/NA	Water	335.4	780478
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	335.4	780478

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	SM 5310C	
MB 500-781064/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781064/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 781207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	335.4	780478

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

General Chemistry

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254279-1	PNC-01_20240729	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2547/1-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:14	1

Lab Sample ID: MB 350-2547/2-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:24	1

Lab Sample ID: MB 350-2547/3-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:34	1

Lab Sample ID: LCS 350-2547/4-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.984		ng/L		98	65 - 135

Lab Sample ID: LCSD 350-2547/5-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.971		ng/L		97	65 - 135	1	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2528/13
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 11:07	1

Lab Sample ID: MB 350-2528/14
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 11:11	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2528/15
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 11:16	1

Lab Sample ID: LCS 350-2528/16
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.51		ng/L		90	77 - 123

Lab Sample ID: LCSD 350-2528/17
Matrix: Water
Analysis Batch: 2528

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.57		ng/L		91	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2504/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:07	1

Lab Sample ID: MB 350-2504/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:10	1

Lab Sample ID: LCS 350-2504/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	22.6		ug/L		90	85 - 115

Lab Sample ID: LCSD 350-2504/4-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.6		ug/L		90	85 - 115	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781451/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:40	08/16/24 20:31	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:40	08/16/24 20:31	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 20:31	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 20:31	1
Boron	47.4	J	50	13	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 20:31	1
Calcium	<44		200	44	ug/L		08/14/24 15:40	08/16/24 20:31	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 20:31	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 20:31	1
Iron	<47		100	47	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Magnesium	<49		200	49	ug/L		08/14/24 15:40	08/16/24 20:31	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 20:31	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 20:31	1
Potassium	<110		500	110	ug/L		08/14/24 15:40	08/16/24 20:31	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 20:31	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 20:31	1
Sodium	192	J	200	77	ug/L		08/14/24 15:40	08/16/24 20:31	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 20:31	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 20:31	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 20:31	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 20:31	1

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2040		ug/L		102	80 - 120
Antimony	500	529		ug/L		106	80 - 120
Arsenic	100	103		ug/L		103	80 - 120
Barium	500	527		ug/L		105	80 - 120
Beryllium	50.0	50.2		ug/L		100	80 - 120
Boron	1000	1050		ug/L		105	80 - 120
Cadmium	50.0	51.8		ug/L		104	80 - 120
Calcium	10000	8710		ug/L		87	80 - 120
Chromium	200	212		ug/L		106	80 - 120
Cobalt	500	537		ug/L		107	80 - 120
Copper	250	261		ug/L		104	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	107	^1+	ug/L		107	80 - 120
Lithium	100	107		ug/L		107	80 - 120
Magnesium	10000	10800		ug/L		108	80 - 120
Manganese	500	522		ug/L		104	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	1000		ug/L		100	80 - 120
Nickel	500	518		ug/L		104	80 - 120
Potassium	10000	10700		ug/L		107	80 - 120
Selenium	100	104		ug/L		104	80 - 120
Silver	50.0	52.0		ug/L		104	80 - 120
Sodium	10000	10600		ug/L		106	80 - 120
Strontium	1000	1040		ug/L		104	80 - 120
Thallium	100	106		ug/L		106	80 - 120
Tin	1000	1030		ug/L		103	80 - 120
Vanadium	500	519		ug/L		104	80 - 120
Zinc	500	515		ug/L		103	80 - 120

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:23	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:23	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:23	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:23	1
Calcium	<44		200	44	ug/L		08/14/24 15:44	08/16/24 19:23	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:23	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:23	1
Iron	<47		100	47	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Magnesium	<49		200	49	ug/L		08/14/24 15:44	08/16/24 19:23	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:23	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:23	1
Potassium	<110		500	110	ug/L		08/14/24 15:44	08/16/24 19:23	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:23	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:23	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:23	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:23	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:23	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:23	1

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	45.9	J	50	13	ug/L		08/14/24 15:44	08/19/24 12:47	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<77		200	77	ug/L		08/14/24 15:44	08/19/24 12:47	1

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2130		ug/L		107	80 - 120
Antimony	500	533		ug/L		107	80 - 120
Arsenic	100	99.6		ug/L		100	80 - 120
Barium	500	559		ug/L		112	80 - 120
Beryllium	50.0	48.2		ug/L		96	80 - 120
Cadmium	50.0	52.5		ug/L		105	80 - 120
Calcium	10000	9100		ug/L		91	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	528		ug/L		106	80 - 120
Copper	250	268		ug/L		107	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	110	^1+	ug/L		110	80 - 120
Lithium	100	102		ug/L		102	80 - 120
Magnesium	10000	10900		ug/L		109	80 - 120
Manganese	500	532		ug/L		106	80 - 120
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	537		ug/L		107	80 - 120
Potassium	10000	11000		ug/L		110	80 - 120
Selenium	100	101		ug/L		101	80 - 120
Silver	50.0	52.1		ug/L		104	80 - 120
Strontium	1000	1080		ug/L		108	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1070		ug/L		107	80 - 120
Vanadium	500	521		ug/L		104	80 - 120
Zinc	500	526		ug/L		105	80 - 120

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1070		ug/L		107	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/31/24 12:01	1
Chloride	0.169	J	1.0	0.12	mg/L			07/31/24 12:01	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.19		1.0	0.19	mg/L			07/31/24 12:01	1
Sulfate	<0.21		1.0	0.21	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779249/4
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.7		mg/L		94	90 - 110
Chloride	20.0	20.3		mg/L		102	90 - 110
Fluoride	20.0	20.5		mg/L		103	90 - 110
Sulfate	20.0	21.3		mg/L		106	90 - 110

Lab Sample ID: MB 500-779250/3
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/31/24 12:01	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779250/4
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.5		mg/L		98	90 - 110
Nitrite as N	20.0	20.8		mg/L		104	90 - 110
Nitrate Nitrite as N	20.0	40.3		mg/L		202	

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780478/1-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036	^1+	0.0050	0.0036	mg/L		08/08/24 10:22	08/09/24 13:04	1

Lab Sample ID: LCS 500-780478/2-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0898	^1+	mg/L		90	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780451/3
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1

Lab Sample ID: LCS 500-780451/4
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	99.5		mg/L		100	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779571/1
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/02/24 02:39	1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: LCS 500-779571/2
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	254		mg/L		102	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779950/1
Matrix: Water
Analysis Batch: 779950

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/05/24 14:19	1

Lab Sample ID: LCS 500-779950/2
Matrix: Water
Analysis Batch: 779950

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	179		mg/L		90	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779991/1
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/05/24 22:17	1

Lab Sample ID: LCS 500-779991/2
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.20		mg/L		88	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781064/31
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 00:33	1

Lab Sample ID: LCS 500-781064/32
Matrix: Water
Analysis Batch: 781064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.2		mg/L		102	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			10.0	9.89		mg/L		99	86 - 116		

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Client Sample ID: PNC-01_20240729

Date Collected: 07/29/24 09:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254279-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Dissolved	Analysis	1630		1	2565	CL	EET SSM	08/14/24 21:48
Total/NA	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Total/NA	Analysis	1630		1	2565	CL	EET SSM	08/14/24 21:38
Dissolved	Analysis	1631E		1	2528	AJD	EET SSM	08/08/24 12:22
Total/NA	Analysis	1631E		1	2528	AJD	EET SSM	08/08/24 12:18
Dissolved	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:52
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:16
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 19:45
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 13:10
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 21:05
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	SM 2340B		1	782130	DAJ	EET CHI	08/19/24 09:57
Total/NA	Analysis	300.0		1	779249	W1T	EET CHI	07/31/24 14:22
Total/NA	Analysis	300.0		1	779250	W1T	EET CHI	07/31/24 14:22
Total/NA	Prep	Distill/CN			780478	AC	EET CHI	08/08/24 10:22 - 08/08/24 10:52 [1]
Total/NA	Analysis	335.4		1	781207	AC	EET CHI	08/10/24 12:51
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:32
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:10
Total/NA	Analysis	SM 2320B		1	780451	SO	EET CHI	08/07/24 14:34
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779571	CLB	EET CHI	08/02/24 03:28
Total/NA	Analysis	SM 2540D		1	779950	SO	EET CHI	08/05/24 14:51 - 08/05/24 15:01 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779991	CLB	EET CHI	08/05/24 22:30 - 08/05/24 22:33 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781064	TR	EET CHI	08/13/24 04:46

Client Sample ID: PNC-01_20240729_FBLL

Date Collected: 07/29/24 09:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254279-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2528	AJD	EET SSM	08/08/24 12:26

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254279-1

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	01-19-25
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	01-19-25
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 405179621379	COC No: 500-126351-50241 3
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254279

Address	Due Date Requested	Preservation Codes
35503 Mall Circle Drive		S H2SO4
City: White Pine	TAT Requested (days): 10 days	N None
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No	CB ZnAcetate/NaOH
Phone: 906-204-6500	PO #: Purchase Order not required	B NaOH
Email: AZeidler@whitepinecu com	WO #:	D HNO3
Project Name: White Pine, MI	Project #: 50023455	A HCL
Site	SSOW#:	Other

500-254279 COC

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOC SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, 3500_CR_B, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	3500_CR_B - Dissolved Chromium, Hex (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
				Preservation Code:			S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 PNC-01_20240729	07-29-24	0900	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	10	
2 PNC-01_20240729-FBLL	07-29-24	0900	G	Water										✓						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	7/30/29 1100	MSG	[signature]	7/30/29 1100	MSG
2	[signature]	7/30/29 1600	MSG	405179621379	7/30/29 1600	Fedex
		Date/Time:	Company	[signature]	7/31/24 0950	EEA

Custody Seals Intact Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 4.6-14.5

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1379	COC No: 500-126351-50241 4
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254279
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N None; CB ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			Other
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code				A		
1 PNC-01 - 20240729	07-29-24	0900	G	Water			✓	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ellen	7/30/24 1100	MSG		7/30/24 1100	MSG
2		7/30/24 1600	MSG	4051 7962 1379	7/30/24 1600	Fedex
3		Date/Time	Company		7/31/24 0950	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks



500-254279 Waybi

48 at

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254279-1

Login Number: 254279
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254279-1

Login Number: 254279
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/02/24 01:03 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254279 Field Sheet

Date:	8/2/2024
End Time:	13:17
pH Paper Lot:	HC234723
Analyst:	

Preservative ID	Preservative Type	Container ID
A	Nitric Acid	
A	Hydrochloric Acid	
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254279-K-1	<2				
500-254279-J-1	<2				
500-254279-F-1	<2				
500-254279-E-1	<2				

8/2/24

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 2:18:25 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254280-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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8/21/2024 2:18:25 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254280-1

Receipt
The samples were received on 7/31/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.2º C.

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 500-782080 was above the upper control limit. The affected analytes are: Lead. Sample results were below the reporting limit, and have been reported as qualified data.

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-22908 (Incomplete Integration)
- CCB (Incomplete Integration)

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-23405 (Incomplete Integration)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779249 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Methods 335.4, 9012B: The initial calibration verification (ICV) associated with batch 500-780762 recovered above the upper control limit for Cyanide, Total. The samples associated with this ICV were rerun for for the affected analytes and only the batch MB and LCS are impacted; therefore, the data have been reported. The associated samples are impacted: (ICV 500-780478/27-A), (LCS 500-780478/2-A) and (MB 500-780478/1-A).

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Client Sample ID: SBW-01_20240729 — Lab Sample ID: 500-254280-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.22	J	0.50	0.20	ng/L	1		1631E	Total/NA
Uranium	0.032		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.018	J	0.030	0.0098	ug/L	1		1638	Dissolved
Arsenic	0.62	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	27		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	33	J B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	18000		200	44	ug/L	1		6020B	Total Recoverable
Copper	5.0		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	190		100	47	ug/L	1		6020B	Total Recoverable
Lithium	2.9	J	10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	6400		200	49	ug/L	1		6020B	Total Recoverable
Manganese	27		2.5	0.79	ug/L	1		6020B	Total Recoverable
Potassium	350	J	500	110	ug/L	1		6020B	Total Recoverable
Sodium	3400	B	200	77	ug/L	1		6020B	Total Recoverable
Strontium	67		4.0	0.64	ug/L	1		6020B	Total Recoverable
Arsenic	0.67	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	27		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	35	J B	50	13	ug/L	1		6020B	Dissolved
Calcium	19000		200	44	ug/L	1		6020B	Dissolved
Copper	4.6		2.0	0.50	ug/L	1		6020B	Dissolved
Iron	51	J	100	47	ug/L	1		6020B	Dissolved
Lithium	2.8	J	10	2.5	ug/L	1		6020B	Dissolved
Magnesium	6700		200	49	ug/L	1		6020B	Dissolved
Manganese	8.1		2.5	0.79	ug/L	1		6020B	Dissolved
Potassium	380	J	500	110	ug/L	1		6020B	Dissolved
Sodium	3400		200	77	ug/L	1		6020B	Dissolved
Strontium	71		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	72		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Chloride	0.33	J B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.26	J	1.0	0.19	mg/L	1		300.0	Total/NA
Alkalinity	78		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	78		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	88		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	4.2	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	7.5		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	8.2		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: SBW-01_20240729_FBLL — Lab Sample ID: 500-254280-2

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254280-1	SBW-01_20240729	Water	07/29/24 14:00	07/31/24 09:50
500-254280-2	SBW-01_20240729_FBLL	Water	07/29/24 14:00	07/31/24 09:50

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Client Sample ID: SBW-01_20240729

Date Collected: 07/29/24 14:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254280-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 22:19	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 22:29	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.22**	**J**	0.50	0.20	ng/L			08/02/24 19:22	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:26	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.032**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 20:28	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.018**	**J**	0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:55	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:40	08/16/24 21:07	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:07	1
Arsenic	**0.62**	**J**	1.0	0.23	ug/L		08/14/24 15:40	08/16/24 21:07	1
Barium	**27**		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 21:07	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 21:07	1
Boron	**33**	**J B**	50	13	ug/L		08/14/24 15:40	08/16/24 21:07	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 21:07	1
Calcium	**18000**		200	44	ug/L		08/14/24 15:40	08/16/24 21:07	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 21:07	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 21:07	1
Copper	**5.0**		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 21:07	1
Iron	**190**		100	47	ug/L		08/14/24 15:40	08/16/24 21:07	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 21:07	1
Lithium	**2.9**	**J**	10	2.5	ug/L		08/14/24 15:40	08/16/24 21:07	1
Magnesium	**6400**		200	49	ug/L		08/14/24 15:40	08/16/24 21:07	1
Manganese	**27**		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 21:07	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 21:07	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 21:07	1
Potassium	**350**	**J**	500	110	ug/L		08/14/24 15:40	08/16/24 21:07	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 21:07	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 21:07	1
Sodium	**3400**	**B**	200	77	ug/L		08/14/24 15:40	08/16/24 21:07	1
Strontium	**67**		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 21:07	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 21:07	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:07	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 21:07	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 21:07	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Client Sample ID: SBW-01_20240729
Date Collected: 07/29/24 14:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254280-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:47	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:47	1
Arsenic	**0.67**	**J**	1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:47	1
Barium	**27**		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:47	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:47	1
Boron	**35**	**J B**	50	13	ug/L		08/14/24 15:44	08/19/24 13:12	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:47	1
Calcium	**19000**		200	44	ug/L		08/14/24 15:44	08/16/24 19:47	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:47	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:47	1
Copper	**4.6**		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:47	1
Iron	**51**	**J**	100	47	ug/L		08/14/24 15:44	08/16/24 19:47	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:47	1
Lithium	**2.8**	**J**	10	2.5	ug/L		08/14/24 15:44	08/16/24 19:47	1
Magnesium	**6700**		200	49	ug/L		08/14/24 15:44	08/16/24 19:47	1
Manganese	**8.1**		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:47	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:47	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:47	1
Potassium	**380**	**J**	500	110	ug/L		08/14/24 15:44	08/16/24 19:47	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:47	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:47	1
Sodium	**3400**		200	77	ug/L		08/14/24 15:44	08/19/24 13:12	1
Strontium	**71**		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:47	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:47	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:47	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:47	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:47	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**72**		0.91	0.46	mg/L		08/14/24 15:40	08/19/24 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			07/31/24 12:32	1
Nitrate as N (EPA 300.0)	<0.043		1.0	0.043	mg/L			07/31/24 12:32	1
Chloride (EPA 300.0)	**0.33**	**J B**	1.0	0.12	mg/L			07/31/24 12:32	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/31/24 12:32	1
Fluoride (EPA 300.0)	**0.26**	**J**	1.0	0.19	mg/L			07/31/24 12:32	1
Nitrate Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/31/24 12:32	1
Sulfate (EPA 300.0)	<0.21		1.0	0.21	mg/L			07/31/24 12:32	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/08/24 10:22	08/10/24 12:53	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:33	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:10	1
Alkalinity (SM 2320B)	**78**		5.0	3.7	mg/L			08/07/24 14:42	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**78**		5.0	3.7	mg/L			08/07/24 14:42	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 14:42	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Client Sample ID: SBW-01_20240729
Date Collected: 07/29/24 14:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254280-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	88		10	4.3	mg/L			08/02/24 03:30	1
Total Suspended Solids (SM 2540D)	4.2	J	5.0	1.9	mg/L			08/05/24 15:01	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/05/24 22:33	1
Total Organic Carbon (SM 5310C)	7.5		1.0	0.47	mg/L			08/13/24 18:23	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	8.2		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Client Sample ID: SBW-01_20240729_FBLL
Date Collected: 07/29/24 14:00
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254280-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:30	1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Dissolved	Water	1638	
500-254280-1	SBW-01_20240729	Total Recoverable	Water	1638	
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Dissolved	Water	1631E	
500-254280-1	SBW-01_20240729	Total/NA	Water	1631E	
500-254280-2	SBW-01_20240729_FBLL	Total/NA	Water	1631E	
MB 350-2505/15	Method Blank	Total/NA	Water	1631E	
MB 350-2505/16	Method Blank	Total/NA	Water	1631E	
MB 350-2505/17	Method Blank	Total/NA	Water	1631E	
LCS 350-2505/18	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2505/19	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Dissolved	Water	1638	2504
500-254280-1	SBW-01_20240729	Total Recoverable	Water	1638	2504
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	2504
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	2504
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	2504
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2504

Prep Batch: 2547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Dissolved	Water	1630	
500-254280-1	SBW-01_20240729	Total/NA	Water	1630	
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Dissolved	Water	1630	2547
500-254280-1	SBW-01_20240729	Total/NA	Water	1630	2547
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	2547
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	2547
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2547

Prep Batch: 781451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total Recoverable	Water	3005A	
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 781451 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 781453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Dissolved	Water	3005A	
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 782080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Dissolved	Water	6020B	781453
500-254280-1	SBW-01_20240729	Total Recoverable	Water	6020B	781451
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	6020B	781451
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781451
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

Analysis Batch: 782131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total Recoverable	Water	SM 2340B	781451

Analysis Batch: 782199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Dissolved	Water	6020B	781453
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

General Chemistry

Analysis Batch: 779249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	300.0	
MB 500-779249/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779249/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	300.0	
MB 500-779250/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779250/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	SM 2540C	
MB 500-779571/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779571/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	SM 2520B	

General Chemistry

Analysis Batch: 779950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	SM 2540D	
MB 500-779950/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779950/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	SM 4500 S2 F	
MB 500-779991/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779991/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 780451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	SM 2320B	
MB 500-780451/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780451/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	Distill/CN	
MB 500-780478/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780478/1-A	Method Blank	Total/NA	Water	335.4	780478
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	335.4	780478

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 781207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	335.4	780478

Analysis Batch: 781274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	SM 5310C	
MB 500-781274/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781274/8	Lab Control Sample	Total/NA	Water	SM 5310C	

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

General Chemistry

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254280-1	SBW-01_20240729	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2547/1-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:14	1

Lab Sample ID: MB 350-2547/2-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:24	1

Lab Sample ID: MB 350-2547/3-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:34	1

Lab Sample ID: LCS 350-2547/4-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.984		ng/L		98	65 - 135

Lab Sample ID: LCSD 350-2547/5-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.971		ng/L		97	65 - 135	1	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2505/15
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:30	1

Lab Sample ID: MB 350-2505/16
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:34	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2505/17
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:38	1

Lab Sample ID: LCS 350-2505/18
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.63		ng/L		93	77 - 123

Lab Sample ID: LCSD 350-2505/19
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.64		ng/L		93	77 - 123	0	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2504/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:07	1

Lab Sample ID: MB 350-2504/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:10	1

Lab Sample ID: LCS 350-2504/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	22.6		ug/L		90	85 - 115

Lab Sample ID: LCSD 350-2504/4-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.6		ug/L		90	85 - 115	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781451/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:40	08/16/24 20:31	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:40	08/16/24 20:31	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 20:31	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 20:31	1
Boron	47.4	J	50	13	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 20:31	1
Calcium	<44		200	44	ug/L		08/14/24 15:40	08/16/24 20:31	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 20:31	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 20:31	1
Iron	<47		100	47	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Magnesium	<49		200	49	ug/L		08/14/24 15:40	08/16/24 20:31	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 20:31	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 20:31	1
Potassium	<110		500	110	ug/L		08/14/24 15:40	08/16/24 20:31	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 20:31	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 20:31	1
Sodium	192	J	200	77	ug/L		08/14/24 15:40	08/16/24 20:31	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 20:31	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 20:31	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 20:31	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 20:31	1

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2040		ug/L		102	80 - 120
Antimony	500	529		ug/L		106	80 - 120
Arsenic	100	103		ug/L		103	80 - 120
Barium	500	527		ug/L		105	80 - 120
Beryllium	50.0	50.2		ug/L		100	80 - 120
Boron	1000	1050		ug/L		105	80 - 120
Cadmium	50.0	51.8		ug/L		104	80 - 120
Calcium	10000	8710		ug/L		87	80 - 120
Chromium	200	212		ug/L		106	80 - 120
Cobalt	500	537		ug/L		107	80 - 120
Copper	250	261		ug/L		104	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	107	^1+	ug/L		107	80 - 120
Lithium	100	107		ug/L		107	80 - 120
Magnesium	10000	10800		ug/L		108	80 - 120
Manganese	500	522		ug/L		104	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	1000		ug/L		100	80 - 120
Nickel	500	518		ug/L		104	80 - 120
Potassium	10000	10700		ug/L		107	80 - 120
Selenium	100	104		ug/L		104	80 - 120
Silver	50.0	52.0		ug/L		104	80 - 120
Sodium	10000	10600		ug/L		106	80 - 120
Strontium	1000	1040		ug/L		104	80 - 120
Thallium	100	106		ug/L		106	80 - 120
Tin	1000	1030		ug/L		103	80 - 120
Vanadium	500	519		ug/L		104	80 - 120
Zinc	500	515		ug/L		103	80 - 120

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:23	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:23	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:23	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:23	1
Calcium	<44		200	44	ug/L		08/14/24 15:44	08/16/24 19:23	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:23	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:23	1
Iron	<47		100	47	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Magnesium	<49		200	49	ug/L		08/14/24 15:44	08/16/24 19:23	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:23	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:23	1
Potassium	<110		500	110	ug/L		08/14/24 15:44	08/16/24 19:23	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:23	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:23	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:23	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:23	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:23	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:23	1

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	45.9	J	50	13	ug/L		08/14/24 15:44	08/19/24 12:47	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<77		200	77	ug/L		08/14/24 15:44	08/19/24 12:47	1

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2130		ug/L		107	80 - 120
Antimony	500	533		ug/L		107	80 - 120
Arsenic	100	99.6		ug/L		100	80 - 120
Barium	500	559		ug/L		112	80 - 120
Beryllium	50.0	48.2		ug/L		96	80 - 120
Cadmium	50.0	52.5		ug/L		105	80 - 120
Calcium	10000	9100		ug/L		91	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	528		ug/L		106	80 - 120
Copper	250	268		ug/L		107	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	110	^1+	ug/L		110	80 - 120
Lithium	100	102		ug/L		102	80 - 120
Magnesium	10000	10900		ug/L		109	80 - 120
Manganese	500	532		ug/L		106	80 - 120
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	537		ug/L		107	80 - 120
Potassium	10000	11000		ug/L		110	80 - 120
Selenium	100	101		ug/L		101	80 - 120
Silver	50.0	52.1		ug/L		104	80 - 120
Strontium	1000	1080		ug/L		108	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1070		ug/L		107	80 - 120
Vanadium	500	521		ug/L		104	80 - 120
Zinc	500	526		ug/L		105	80 - 120

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1070		ug/L		107	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/31/24 12:01	1
Chloride	0.169	J	1.0	0.12	mg/L			07/31/24 12:01	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.19		1.0	0.19	mg/L			07/31/24 12:01	1
Sulfate	<0.21		1.0	0.21	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779249/4
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.7		mg/L		94	90 - 110
Chloride	20.0	20.3		mg/L		102	90 - 110
Fluoride	20.0	20.5		mg/L		103	90 - 110
Sulfate	20.0	21.3		mg/L		106	90 - 110

Lab Sample ID: MB 500-779250/3
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/31/24 12:01	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779250/4
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.5		mg/L		98	90 - 110
Nitrite as N	20.0	20.8		mg/L		104	90 - 110
Nitrate Nitrite as N	20.0	40.3		mg/L		202	

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780478/1-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036	^1+	0.0050	0.0036	mg/L		08/08/24 10:22	08/09/24 13:04	1

Lab Sample ID: LCS 500-780478/2-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0898	^1+	mg/L		90	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780451/3
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1

Lab Sample ID: LCS 500-780451/4
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	99.5		mg/L		100	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779571/1
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/02/24 02:39	1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: LCS 500-779571/2
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	254		mg/L		102	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779950/1
Matrix: Water
Analysis Batch: 779950

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/05/24 14:19	1

Lab Sample ID: LCS 500-779950/2
Matrix: Water
Analysis Batch: 779950

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	179		mg/L		90	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779991/1
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/05/24 22:17	1

Lab Sample ID: LCS 500-779991/2
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.20		mg/L		88	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781274/7
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 14:39	1

Lab Sample ID: LCS 500-781274/8
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.1		mg/L		101	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			10.0	9.89		mg/L		99	86 - 116		

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Client Sample ID: SBW-01_20240729

Lab Sample ID: 500-254280-1

Date Collected: 07/29/24 14:00

Matrix: Water

Date Received: 07/31/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Dissolved	Analysis	1630		1	2565	CL	EET SSM	08/14/24 22:29
Total/NA	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Total/NA	Analysis	1630		1	2565	CL	EET SSM	08/14/24 22:19
Dissolved	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 19:26
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 19:22
Dissolved	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:55
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 20:28
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 19:47
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 13:12
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 21:07
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	SM 2340B		1	782131	DAJ	EET CHI	08/19/24 09:57
Total/NA	Analysis	300.0		1	779249	W1T	EET CHI	07/31/24 12:32
Total/NA	Analysis	300.0		1	779250	W1T	EET CHI	07/31/24 12:32
Total/NA	Prep	Distill/CN			780478	AC	EET CHI	08/08/24 10:22 - 08/08/24 10:52 [1]
Total/NA	Analysis	335.4		1	781207	AC	EET CHI	08/10/24 12:53
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:33
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:10
Total/NA	Analysis	SM 2320B		1	780451	SO	EET CHI	08/07/24 14:42
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779571	CLB	EET CHI	08/02/24 03:30
Total/NA	Analysis	SM 2540D		1	779950	SO	EET CHI	08/05/24 15:01 - 08/05/24 15:12 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779991	CLB	EET CHI	08/05/24 22:33 - 08/05/24 22:36 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781274	TR	EET CHI	08/13/24 18:23

Client Sample ID: SBW-01_20240729_FBLL

Lab Sample ID: 500-254280-2

Date Collected: 07/29/24 14:00

Matrix: Water

Date Received: 07/31/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 19:30

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254280-1

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	01-19-25
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	01-19-25
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1427	COC No: 500-126351-50241 21
Client Contact: Amanda Zeidler	Phone: 517-513-2244	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254280

Address: 35503 Mall Circle Drive	Due Date Requested:	
City: White Pine	TAT Requested (days): 10 days	
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No	
Phone: 906-204-6500	PO #: Purchase Order not required	500-254280 COC
Email: AZeidler@whitepinecu com	WO #:	
Project Name: White Pine, MI	Project #: 50023455	
Site:	SSOW#:	

Analysis Requested

Preservation Codes: S H2SO4; N None; CB ZnAcetate/NaOH; B NaOH; D HNO3; A HCL; Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOL SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR~~9056_6R_2~~ SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	3500_CR_B - Dissolved Chromium, Hex (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 SBW-01_20240729	07-29-24	1400	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18	
2 SBW-01_20240729_FBLL	07-29-24	1400	G	Water										✓						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, [II], III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/30/24 1100	MSG		7/30/24 1100	MSG
2		7/30/24 1600	MSG	4051 7962 1427	7/30/24 1600	fedex
3		Date/Time	Company		7/31/24 0950	EETN

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks: 5.3 → 5.2

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1427	COC No: 500-126351-50241 22
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254280
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N None; CB - ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			Other
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
1 SAW-01_20240729	07-29-24	1400	G	Water			✓	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: FedEx Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/30/24 1100	MSG		7/30/24 1100	MSG
2		7/30/24 1600	MSG	4051 7962 1427	7/30/24 1600	FedEx
3		Date/Time	Company		7/31/24 0950	EAT

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks:


THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US

CAD: 0780307/CAFE3808

TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484

(708) 534-5200 REF:

INV:
PO: DEPT:

RMA:

FedEx Express

FedEx
TRK# 0221 4051 7962 1427

WED - 31 JUL AA
PRIORITY OVERNIGHT

XP JOTA

60484
IL-US
ORD

5053123 30Jul2024 CHXA 581G6/A12D/C0B8

Part # 159499-434 MTW EXP 01/25

500-254280 Waybi

48at

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191127.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254280-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/20/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
SBW-01_20240729 (500-254280-1)	7/29/24	14:00 Eastern		Water			X	X	X	X	X	X	8	
SBW-01_20240729_FBLL (500-254280-2)	7/29/24	14:00 Eastern		Water				X					2	

Lg Blue

Therm. ID: SC02 Cust. Seal: Y / N
Uncorr./Corr. Temp: 4.3 / 4.3 °C
Delivery: UPS / FedEx / Other:
Ice Type: Blue / Dry / Wet / None
Label Ver.: 2 Packing: B

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded un accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided Any changes to accredita immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification: Unconfirmed 7051 7620 4878	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	07/31/24 1530	EETA		8/1/24 9:35	
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks.

Ver: 04/02/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191126.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254279-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/20/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
PNC-01_20240729 (500-254279-1)	7/29/24	09:00 Eastern		Water			X	X	X	X	X	X	8	
PNC-01_20240729_FBLL (500-254279-2)	7/29/24	09:00 Eastern		Water				X					2	

5 Blue

Therm. ID: SC02 Cust. Seal: (Y) / N
Uncorr./Corr. Temp: 3.3 / 1.3 °C
Delivery: UPS / (FedEx) / Other:
Ice Type: Blue / Dry / Wet / None
Label Ver.: 2 Packing: D

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories This sample shipment is for [illegible] under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Chicago attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification: Unconfirmed 7051 7620 4878	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	07/31/24 1530	EETA	[signature]	8/1/24 9:35	EETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 04/02/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191124.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254277-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/20/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FB-01-SW_20240729 (500-254277-1)	7/29/24	11:00 Eastern		Water			X	X	X	4	
FB-01-SW_20240729_FBLL (500-254277-2)	7/29/24	11:00 Eastern		Water				X		2	

Therm. ID: SC0 2 **Cust. Seal:** (Y) / N
Uncorr./Corr. Temp: 1.2 / 1.3 °C
Delivery: UPS / (FedEx) / Other: _____
Ice Type: Blue / Dry / (Wet) / None
Label Ver. 12 **Packing:** B

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided Any changes to accre immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed 7767 3503 8343 SR 8/1/24	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	8/31/24 1530	ETA	[signature]	8/1/24 9:35	EFLS
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

7651 7620 4878

Ver: 04/02/2024

1.3 8/21/2024

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254280-1

Login Number: 254280
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254280-1

Login Number: 254280
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/01/24 02:58 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254280 Field Sheet

Date:	8/1/2024
End Time:	15:15
KI Paper Lot:	na
Analyst:	VL

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	19628
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
500-254280-A-1	A	Y	.8 2	
500-254280-B-1	A	Y	.8 2	
500-254280-C-1	A	Y	.8 2	VL
500-254280-D-1	A	Y	.8 2	8/1 1pm
500-254280-A-2	A	Y	.8 2	
500-254280-B-2	A	Y	.8 2	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 2:24:57 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254281-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



Generated
8/21/2024 2:24:57 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254281-1

Receipt
The samples were received on 7/31/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.1º C.

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 500-782080 was above the upper control limit. The affected analytes are: Lead. Sample results were below the reporting limit, and have been reported as qualified data.

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-22908 (Incomplete Integration)
- CCB (Incomplete Integration)

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-23405 (Incomplete Integration)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779249 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Methods 335.4, 9012B: The initial calibration verification (ICV) associated with batch 500-780762 recovered above the upper control limit for Cyanide, Total. The samples associated with this ICV were rerun for for the affected analytes and only the batch MB and LCS are impacted; therefore, the data have been reported. The associated samples are impacted: (ICV 500-780478/27-A), (LCS 500-780478/2-A) and (MB 500-780478/1-A).

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Client Sample ID: PNC-02_20240729

Lab Sample ID: 500-254281-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.44	J	0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	0.36	J	0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	0.40		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.38		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	140		100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.86	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	85		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	26	J B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	42000		200	44	ug/L	1		6020B	Total Recoverable
Copper	5.3		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	1200		100	47	ug/L	1		6020B	Total Recoverable
Lithium	3.2	J	10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	10000		200	49	ug/L	1		6020B	Total Recoverable
Manganese	500		2.5	0.79	ug/L	1		6020B	Total Recoverable
Potassium	900		500	110	ug/L	1		6020B	Total Recoverable
Sodium	6000	B	200	77	ug/L	1		6020B	Total Recoverable
Strontium	210		4.0	0.64	ug/L	1		6020B	Total Recoverable
Aluminum	170		100	25	ug/L	1		6020B	Dissolved
Arsenic	0.97	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	93		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	29	J B	50	13	ug/L	1		6020B	Dissolved
Calcium	44000		200	44	ug/L	1		6020B	Dissolved
Copper	5.4		2.0	0.50	ug/L	1		6020B	Dissolved
Iron	1200		100	47	ug/L	1		6020B	Dissolved
Lithium	3.6	J	10	2.5	ug/L	1		6020B	Dissolved
Magnesium	10000		200	49	ug/L	1		6020B	Dissolved
Manganese	640		2.5	0.79	ug/L	1		6020B	Dissolved
Nickel	0.67	J	2.0	0.63	ug/L	1		6020B	Dissolved
Potassium	980		500	110	ug/L	1		6020B	Dissolved
Sodium	6100		200	77	ug/L	1		6020B	Dissolved
Strontium	220		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	150		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	0.23	J	1.0	0.18	mg/L	1		300.0	Total/NA
Chloride	9.2	B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.25	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	0.22	J	1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	130		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	130		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	180		10	4.3	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Client Sample ID: PNC-02_20240729 (Continued) — Lab Sample ID: 500-254281-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	9.5		6.3	2.4	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	24		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	14		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: PNC-02_20240729_FBLL — Lab Sample ID: 500-254281-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254281-1	PNC-02_20240729	Water	07/29/24 17:20	07/31/24 09:50
500-254281-2	PNC-02_20240729_FBLL	Water	07/29/24 17:20	07/31/24 09:50

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Client Sample ID: PNC-02_20240729

Date Collected: 07/29/24 17:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254281-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 22:39	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/03/24 01:26	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.44**	**J**	0.50	0.20	ng/L			08/02/24 19:43	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.36**	**J**	0.50	0.20	ng/L			08/02/24 19:47	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.40**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:19	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.38**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:59	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**140**		100	25	ug/L		08/14/24 15:40	08/16/24 21:09	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:09	1
Arsenic	**0.86**	**J**	1.0	0.23	ug/L		08/14/24 15:40	08/16/24 21:09	1
Barium	**85**		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 21:09	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 21:09	1
Boron	**26**	**J B**	50	13	ug/L		08/14/24 15:40	08/16/24 21:09	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 21:09	1
Calcium	**42000**		200	44	ug/L		08/14/24 15:40	08/16/24 21:09	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 21:09	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 21:09	1
Copper	**5.3**		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 21:09	1
Iron	**1200**		100	47	ug/L		08/14/24 15:40	08/16/24 21:09	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 21:09	1
Lithium	**3.2**	**J**	10	2.5	ug/L		08/14/24 15:40	08/16/24 21:09	1
Magnesium	**10000**		200	49	ug/L		08/14/24 15:40	08/16/24 21:09	1
Manganese	**500**		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 21:09	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 21:09	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 21:09	1
Potassium	**900**		500	110	ug/L		08/14/24 15:40	08/16/24 21:09	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 21:09	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 21:09	1
Sodium	**6000**	**B**	200	77	ug/L		08/14/24 15:40	08/16/24 21:09	1
Strontium	**210**		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 21:09	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 21:09	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:09	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 21:09	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 21:09	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Client Sample ID: PNC-02_20240729

Date Collected: 07/29/24 17:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254281-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**170**		100	25	ug/L		08/14/24 15:44	08/16/24 19:50	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:50	1
Arsenic	**0.97**	**J**	1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:50	1
Barium	**93**		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:50	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:50	1
Boron	**29**	**J B**	50	13	ug/L		08/14/24 15:44	08/19/24 13:14	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:50	1
Calcium	**44000**		200	44	ug/L		08/14/24 15:44	08/16/24 19:50	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:50	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:50	1
Copper	**5.4**		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:50	1
Iron	**1200**		100	47	ug/L		08/14/24 15:44	08/16/24 19:50	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:50	1
Lithium	**3.6**	**J**	10	2.5	ug/L		08/14/24 15:44	08/16/24 19:50	1
Magnesium	**10000**		200	49	ug/L		08/14/24 15:44	08/16/24 19:50	1
Manganese	**640**		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:50	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:50	1
Nickel	**0.67**	**J**	2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:50	1
Potassium	**980**		500	110	ug/L		08/14/24 15:44	08/16/24 19:50	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:50	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:50	1
Sodium	**6100**		200	77	ug/L		08/14/24 15:44	08/19/24 13:14	1
Strontium	**220**		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:50	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:50	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:50	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:50	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:50	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**150**		0.91	0.46	mg/L		08/14/24 15:40	08/19/24 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**0.23**	**J**	1.0	0.18	mg/L			07/31/24 15:09	1
Nitrate as N (EPA 300.0)	<0.043		1.0	0.043	mg/L			07/31/24 15:09	1
Chloride (EPA 300.0)	**9.2**	**B**	1.0	0.12	mg/L			07/31/24 15:09	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/31/24 15:09	1
Fluoride (EPA 300.0)	**0.25**	**J**	1.0	0.19	mg/L			07/31/24 15:09	1
Nitrate Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/31/24 15:09	1
Sulfate (EPA 300.0)	**0.22**	**J**	1.0	0.21	mg/L			07/31/24 15:09	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/08/24 10:22	08/10/24 12:55	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/15/24 14:35	08/16/24 14:37	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:11	1
Alkalinity (SM 2320B)	**130**		5.0	3.7	mg/L			08/07/24 14:51	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**130**		5.0	3.7	mg/L			08/07/24 14:51	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 14:51	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Client Sample ID: PNC-02_20240729
Date Collected: 07/29/24 17:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254281-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	180		10	4.3	mg/L			08/02/24 03:33	1
Total Suspended Solids (SM 2540D)	9.5		6.3	2.4	mg/L			08/05/24 15:12	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/05/24 22:36	1
Total Organic Carbon (SM 5310C)	24		1.0	0.47	mg/L			08/13/24 18:51	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	14		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Client Sample ID: PNC-02_20240729_FBLL
Date Collected: 07/29/24 17:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254281-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 20:49	1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Dissolved	Water	1630	
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Prep Batch: 2504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Dissolved	Water	1638	
500-254281-1	PNC-02_20240729	Total Recoverable	Water	1638	
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Dissolved	Water	1631E	
500-254281-1	PNC-02_20240729	Total/NA	Water	1631E	
500-254281-2	PNC-02_20240729_FBLL	Total/NA	Water	1631E	
MB 350-2505/15	Method Blank	Total/NA	Water	1631E	
MB 350-2505/16	Method Blank	Total/NA	Water	1631E	
MB 350-2505/17	Method Blank	Total/NA	Water	1631E	
MB 350-2505/49	Method Blank	Total/NA	Water	1631E	
MB 350-2505/50	Method Blank	Total/NA	Water	1631E	
MB 350-2505/51	Method Blank	Total/NA	Water	1631E	
LCS 350-2505/18	Lab Control Sample	Total/NA	Water	1631E	
LCS 350-2505/52	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2505/19	Lab Control Sample Dup	Total/NA	Water	1631E	
LCSD 350-2505/53	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Dissolved	Water	1630	2496
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	2496
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	2496
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2496

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Dissolved	Water	1638	2504
500-254281-1	PNC-02_20240729	Total Recoverable	Water	1638	2504
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	2504
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	2504
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	2504
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2504

Metals

Prep Batch: 2547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	1630	
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	1630	2547
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	2547
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	2547
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2547

Prep Batch: 781451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total Recoverable	Water	3005A	
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 781453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Dissolved	Water	3005A	
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 782080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Dissolved	Water	6020B	781453
500-254281-1	PNC-02_20240729	Total Recoverable	Water	6020B	781451
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	6020B	781451
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781451
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

Analysis Batch: 782132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total Recoverable	Water	SM 2340B	781451

Analysis Batch: 782199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Dissolved	Water	6020B	781453
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

General Chemistry

Analysis Batch: 779249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	300.0	
MB 500-779249/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779249/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	300.0	
MB 500-779250/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779250/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	SM 2540C	
MB 500-779571/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779571/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	SM 2520B	

Analysis Batch: 779950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	SM 2540D	
MB 500-779950/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779950/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	SM 4500 S2 F	
MB 500-779991/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779991/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 780451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	SM 2320B	
MB 500-780451/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780451/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	Distill/CN	
MB 500-780478/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780478/1-A	Method Blank	Total/NA	Water	335.4	780478
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	335.4	780478

General Chemistry

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 781207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	335.4	780478

Analysis Batch: 781274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	SM 5310C	
MB 500-781274/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781274/8	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 781665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	Distill/Ammonia	
MB 500-781665/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781665/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254281-1	PNC-02_20240729	Total/NA	Water	350.1	781665
MB 500-781665/1-A	Method Blank	Total/NA	Water	350.1	781665
LCS 500-781665/2-A	Lab Control Sample	Total/NA	Water	350.1	781665

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2496/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:19	1

Lab Sample ID: MB 350-2496/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:30	1

Lab Sample ID: MB 350-2496/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:40	1

Lab Sample ID: LCS 350-2496/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	1.04		ng/L		104	65 - 135

Lab Sample ID: LCSD 350-2496/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.997		ng/L		100	65 - 135	4	35

Lab Sample ID: MB 350-2547/1-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:14	1

Lab Sample ID: MB 350-2547/2-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:24	1

Lab Sample ID: MB 350-2547/3-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:34	1

Method: 1630 - Methyl Mercury

Lab Sample ID: LCS 350-2547/4-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.984		ng/L		98	65 - 135

Lab Sample ID: LCSD 350-2547/5-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.971		ng/L		97	65 - 135	1	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2505/15
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:30	1

Lab Sample ID: MB 350-2505/16
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:34	1

Lab Sample ID: MB 350-2505/17
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:38	1

Lab Sample ID: MB 350-2505/49
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:51	1

Lab Sample ID: MB 350-2505/50
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:55	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2505/51
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:59	1

Lab Sample ID: LCS 350-2505/18
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.63		ng/L		93	77 - 123		

Lab Sample ID: LCS 350-2505/52
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.26		ng/L		85	77 - 123		

Lab Sample ID: LCSD 350-2505/19
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.64		ng/L		93	77 - 123	0	24

Lab Sample ID: LCSD 350-2505/53
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.21		ng/L		84	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2504/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:07	1

Lab Sample ID: MB 350-2504/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:10	1

Method: 1638 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 350-2504/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	22.6		ug/L		90	85 - 115

Lab Sample ID: LCSD 350-2504/4-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.6		ug/L		90	85 - 115	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781451/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:40	08/16/24 20:31	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:40	08/16/24 20:31	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 20:31	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 20:31	1
Boron	47.4	J	50	13	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 20:31	1
Calcium	<44		200	44	ug/L		08/14/24 15:40	08/16/24 20:31	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 20:31	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 20:31	1
Iron	<47		100	47	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Magnesium	<49		200	49	ug/L		08/14/24 15:40	08/16/24 20:31	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 20:31	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 20:31	1
Potassium	<110		500	110	ug/L		08/14/24 15:40	08/16/24 20:31	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 20:31	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 20:31	1
Sodium	192	J	200	77	ug/L		08/14/24 15:40	08/16/24 20:31	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 20:31	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 20:31	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 20:31	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 20:31	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2040		ug/L		102	80 - 120
Antimony	500	529		ug/L		106	80 - 120
Arsenic	100	103		ug/L		103	80 - 120
Barium	500	527		ug/L		105	80 - 120
Beryllium	50.0	50.2		ug/L		100	80 - 120
Boron	1000	1050		ug/L		105	80 - 120
Cadmium	50.0	51.8		ug/L		104	80 - 120
Calcium	10000	8710		ug/L		87	80 - 120
Chromium	200	212		ug/L		106	80 - 120
Cobalt	500	537		ug/L		107	80 - 120
Copper	250	261		ug/L		104	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	107	^1+	ug/L		107	80 - 120
Lithium	100	107		ug/L		107	80 - 120
Magnesium	10000	10800		ug/L		108	80 - 120
Manganese	500	522		ug/L		104	80 - 120
Molybdenum	1000	1000		ug/L		100	80 - 120
Nickel	500	518		ug/L		104	80 - 120
Potassium	10000	10700		ug/L		107	80 - 120
Selenium	100	104		ug/L		104	80 - 120
Silver	50.0	52.0		ug/L		104	80 - 120
Sodium	10000	10600		ug/L		106	80 - 120
Strontium	1000	1040		ug/L		104	80 - 120
Thallium	100	106		ug/L		106	80 - 120
Tin	1000	1030		ug/L		103	80 - 120
Vanadium	500	519		ug/L		104	80 - 120
Zinc	500	515		ug/L		103	80 - 120

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:23	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:23	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:23	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:23	1
Calcium	<44		200	44	ug/L		08/14/24 15:44	08/16/24 19:23	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:23	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:23	1
Iron	<47		100	47	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Magnesium	<49		200	49	ug/L		08/14/24 15:44	08/16/24 19:23	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:23	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:23	1
Potassium	<110		500	110	ug/L		08/14/24 15:44	08/16/24 19:23	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:23	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:23	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:23	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:23	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:23	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:23	1

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	45.9	J	50	13	ug/L		08/14/24 15:44	08/19/24 12:47	1
Sodium	<77		200	77	ug/L		08/14/24 15:44	08/19/24 12:47	1

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2130		ug/L		107	80 - 120
Antimony	500	533		ug/L		107	80 - 120
Arsenic	100	99.6		ug/L		100	80 - 120
Barium	500	559		ug/L		112	80 - 120
Beryllium	50.0	48.2		ug/L		96	80 - 120
Cadmium	50.0	52.5		ug/L		105	80 - 120
Calcium	10000	9100		ug/L		91	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	528		ug/L		106	80 - 120
Copper	250	268		ug/L		107	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	110	^1+	ug/L		110	80 - 120
Lithium	100	102		ug/L		102	80 - 120
Magnesium	10000	10900		ug/L		109	80 - 120
Manganese	500	532		ug/L		106	80 - 120
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	537		ug/L		107	80 - 120
Potassium	10000	11000		ug/L		110	80 - 120
Selenium	100	101		ug/L		101	80 - 120
Silver	50.0	52.1		ug/L		104	80 - 120
Strontium	1000	1080		ug/L		108	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1070		ug/L		107	80 - 120
Vanadium	500	521		ug/L		104	80 - 120
Zinc	500	526		ug/L		105	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1070		ug/L		107	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/31/24 12:01	1
Chloride	0.169	J	1.0	0.12	mg/L			07/31/24 12:01	1
Fluoride	<0.19		1.0	0.19	mg/L			07/31/24 12:01	1
Sulfate	<0.21		1.0	0.21	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779249/4
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.7		mg/L		94	90 - 110
Chloride	20.0	20.3		mg/L		102	90 - 110
Fluoride	20.0	20.5		mg/L		103	90 - 110
Sulfate	20.0	21.3		mg/L		106	90 - 110

Lab Sample ID: MB 500-779250/3
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/31/24 12:01	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779250/4
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.5		mg/L		98	90 - 110
Nitrite as N	20.0	20.8		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.3		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780478/1-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036	^1+	0.0050	0.0036	mg/L		08/08/24 10:22	08/09/24 13:04	1

Lab Sample ID: LCS 500-780478/2-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0898	^1+	mg/L		90	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781665/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 14:35	08/16/24 14:35	1

Lab Sample ID: LCS 500-781665/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.98		mg/L		99	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780451/3
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 500-780451/4
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	99.5		mg/L		100	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779571/1
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/02/24 02:39	1

Lab Sample ID: LCS 500-779571/2
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	254		mg/L		102	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779950/1
Matrix: Water
Analysis Batch: 779950

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/05/24 14:19	1

Lab Sample ID: LCS 500-779950/2
Matrix: Water
Analysis Batch: 779950

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	179		mg/L		90	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779991/1
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/05/24 22:17	1

Lab Sample ID: LCS 500-779991/2
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.20		mg/L		88	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781274/7
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 14:39	1

Lab Sample ID: LCS 500-781274/8
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.1		mg/L		101	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Client Sample ID: PNC-02_20240729

Lab Sample ID: 500-254281-1

Date Collected: 07/29/24 17:20

Matrix: Water

Date Received: 07/31/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/03/24 01:26
Total/NA	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Total/NA	Analysis	1630		1	2565	CL	EET SSM	08/14/24 22:39
Dissolved	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 19:47
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 19:43
Dissolved	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:59
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:19
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 19:50
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 13:14
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 21:09
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	SM 2340B		1	782132	DAJ	EET CHI	08/19/24 09:57
Total/NA	Analysis	300.0		1	779249	W1T	EET CHI	07/31/24 15:09
Total/NA	Analysis	300.0		1	779250	W1T	EET CHI	07/31/24 15:09
Total/NA	Prep	Distill/CN			780478	AC	EET CHI	08/08/24 10:22 - 08/08/24 10:52 [1]
Total/NA	Analysis	335.4		1	781207	AC	EET CHI	08/10/24 12:55
Total/NA	Prep	Distill/Ammonia			781665	EB	EET CHI	08/15/24 14:35 - 08/15/24 15:35 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:37
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:11
Total/NA	Analysis	SM 2320B		1	780451	SO	EET CHI	08/07/24 14:51
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779571	CLB	EET CHI	08/02/24 03:33
Total/NA	Analysis	SM 2540D		1	779950	SO	EET CHI	08/05/24 15:12 - 08/05/24 15:23 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779991	CLB	EET CHI	08/05/24 22:36 - 08/05/24 22:40 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781274	TR	EET CHI	08/13/24 18:51

Client Sample ID: PNC-02_20240729_FBLL

Lab Sample ID: 500-254281-2

Date Collected: 07/29/24 17:20

Matrix: Water

Date Received: 07/31/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 20:49

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254281-1

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	01-19-25
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	01-19-25
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1390	COC No: 500-126351-50241 75
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254281

Address: 35503 Mall Circle Drive	Due Date Requested		Preservation Codes: S H2SO4; N None; CB ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days		
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No		
Phone: 906-204-6500	PO #: Purchase Order not required	500-254281 COC	
Email: AZeidler@whitepinecu com	WO #:		
Project Name: White Pine, MI	Project #: 50023455		
Site	SSOW#:		Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOC SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~3500_CR_B~~	SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~3500_CR_B - Dissolved Chromium, Hex (field filtered)~~	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N			
1 PNC-02_20240729	07-29-24	17.20	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18		
2 PNC-02_20240729_FBLL	07-29-24	17:20	G	Water											✓					2		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, [II], III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by | Date | Time | Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ellen	7/30/24 1100	MSG		7/30/24 1100	MSG
2		7/30/24 1600	MSG	4051 7962 1399	7/30/24 1600	Fedex
3		Date/Time:	Company	Received by:	7/31/24 0950	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks: 1.1-1.2

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

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Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 405179621390	COC No: 500-126351-50241 76
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254281
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N None; CB - ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			Other:
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
1 PNC-02_20240729	07-29-24	17:20	G	Water			✓	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Fedex Priority overnight				
Relinquished by: Ellen	Date/Time: 7/30/24 1100	Company: MSG	Received by:	Date/Time: 7/30/24 1100	Company: MSG
Relinquished by:	Date/Time: 7/30/24 1600	Company: MSG	Received by: 4051 7962 1390	Date/Time: 7/30/24 1600	Company: Fedex
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time: 7/31/24 0950	Company: EETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks:


THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US

CAD: 0780307/CAFE3808

Part # 159469-484 MTW EXP 01/25

TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484

(708) 534-6200 REF:

INV:
PO: DEPT:

RMA:

FedEx Express

FedEx
TRK# 0221 4051 7962 1390

WED - 31 JUL AA
PRIORITY OVERNIGHT

XP JOTA

60484
IL-US
ORD

5053123 30Jul2024 CMXA 581G6/A12D/C088

500-254281 Waybi

USAT

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254281-1

Login Number: 254281
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254281-1

Login Number: 254281
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/01/24 01:51 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254281 Field Sheet

Date:	8/1/2024
End Time:	1405
pH Paper Lot:	324723
Analyst:	

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254281-F-1	<2	NA	NO	NA	NO

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500-254281 Field Sheet

Date:	8/1/2024
End Time:	15:15
KI Paper Lot:	na
Analyst:	

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	19628
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)		Comments
500-254281-A-1	A	Y	.8	2	
500-254281-B-1	A	Y	.8	2	
500-254281-C-1	A	Y	.8	2	
500-254281-D-1	A	Y	.8	2	
500-254281-A-2	A	Y	.8	2	
500-254281-B-2	A	Y	.8	2	

8/1/24

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 2:26:44 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254282-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Eurofins Chicago

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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8/21/2024 2:26:44 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254282-1

Receipt
The samples were received on 7/31/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6º C.

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 500-782080 was above the upper control limit. The affected analytes are: Lead. Sample results were below the reporting limit, and have been reported as qualified data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779249 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Methods 335.4, 9012B: The initial calibration verification (ICV) associated with batch 500-780762 recovered above the upper control limit for Cyanide, Total. The samples associated with this ICV were rerun for for the affected analytes and only the batch MB and LCS are impacted; therefore, the data have been reported. The associated samples are impacted: (ICV 500-780478/27-A), (LCS 500-780478/2-A) and (MB 500-780478/1-A).

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Client Sample ID: SBD-01_20240729

Lab Sample ID: 500-254282-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl Mercury	0.053		0.050	0.022	ng/L	1		1630	Total/NA
Methyl Mercury	0.025	J	0.050	0.022	ng/L	1		1630	Dissolved
Mercury	0.46	J	0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	0.35	J	0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	0.030		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.028	J	0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	31	J	100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.63	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	36		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	51	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	33000		200	44	ug/L	1		6020B	Total Recoverable
Copper	1.3	J	2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	300		100	47	ug/L	1		6020B	Total Recoverable
Lithium	7.2	J	10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	6400		200	49	ug/L	1		6020B	Total Recoverable
Manganese	32		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	3.5	J	5.0	2.5	ug/L	1		6020B	Total Recoverable
Potassium	500		500	110	ug/L	1		6020B	Total Recoverable
Sodium	5100	B	200	77	ug/L	1		6020B	Total Recoverable
Strontium	180		4.0	0.64	ug/L	1		6020B	Total Recoverable
Arsenic	0.55	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	36		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	54	B	50	13	ug/L	1		6020B	Dissolved
Calcium	34000		200	44	ug/L	1		6020B	Dissolved
Copper	0.85	J	2.0	0.50	ug/L	1		6020B	Dissolved
Lithium	7.1	J	10	2.5	ug/L	1		6020B	Dissolved
Magnesium	6500		200	49	ug/L	1		6020B	Dissolved
Manganese	7.7		2.5	0.79	ug/L	1		6020B	Dissolved
Molybdenum	3.6	J	5.0	2.5	ug/L	1		6020B	Dissolved
Potassium	500		500	110	ug/L	1		6020B	Dissolved
Sodium	5200		200	77	ug/L	1		6020B	Dissolved
Strontium	180		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	110		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Chloride	5.4	B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.26	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	0.38	J	1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	110		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SBD-01_20240729 (Continued)

Lab Sample ID: 500-254282-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	130		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	3.2	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	11		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	12		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: SBD-01_20240729_FBLL

Lab Sample ID: 500-254282-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254282-1	SBD-01_20240729	Water	07/29/24 15:30	07/31/24 09:50
500-254282-2	SBD-01_20240729_FBLL	Water	07/29/24 15:30	07/31/24 09:50

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Client Sample ID: SBD-01_20240729

Date Collected: 07/29/24 15:30
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254282-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.053**		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 21:41	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.025**	**J**	0.050	0.022	ng/L		08/02/24 11:02	08/03/24 01:15	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.46**	**J**	0.50	0.20	ng/L			08/02/24 20:53	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.35**	**J**	0.50	0.20	ng/L			08/02/24 20:58	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.030**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:23	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.028**	**J**	0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 20:03	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**31**	**J**	100	25	ug/L		08/14/24 15:40	08/16/24 21:11	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:11	1
Arsenic	**0.63**	**J**	1.0	0.23	ug/L		08/14/24 15:40	08/16/24 21:11	1
Barium	**36**		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 21:11	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 21:11	1
Boron	**51**	**B**	50	13	ug/L		08/14/24 15:40	08/16/24 21:11	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 21:11	1
Calcium	**33000**		200	44	ug/L		08/14/24 15:40	08/16/24 21:11	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 21:11	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 21:11	1
Copper	**1.3**	**J**	2.0	0.50	ug/L		08/14/24 15:40	08/16/24 21:11	1
Iron	**300**		100	47	ug/L		08/14/24 15:40	08/16/24 21:11	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 21:11	1
Lithium	**7.2**	**J**	10	2.5	ug/L		08/14/24 15:40	08/16/24 21:11	1
Magnesium	**6400**		200	49	ug/L		08/14/24 15:40	08/16/24 21:11	1
Manganese	**32**		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 21:11	1
Molybdenum	**3.5**	**J**	5.0	2.5	ug/L		08/14/24 15:40	08/16/24 21:11	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 21:11	1
Potassium	**500**		500	110	ug/L		08/14/24 15:40	08/16/24 21:11	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 21:11	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 21:11	1
Sodium	**5100**	**B**	200	77	ug/L		08/14/24 15:40	08/16/24 21:11	1
Strontium	**180**		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 21:11	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 21:11	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:11	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 21:11	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 21:11	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Client Sample ID: SBD-01_20240729

Date Collected: 07/29/24 15:30
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254282-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:52	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:52	1
Arsenic	**0.55**	**J**	1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:52	1
Barium	**36**		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:52	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:52	1
Boron	**54**	**B**	50	13	ug/L		08/14/24 15:44	08/19/24 13:16	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:52	1
Calcium	**34000**		200	44	ug/L		08/14/24 15:44	08/16/24 19:52	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:52	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:52	1
Copper	**0.85**	**J**	2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:52	1
Iron	<47		100	47	ug/L		08/14/24 15:44	08/16/24 19:52	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:52	1
Lithium	**7.1**	**J**	10	2.5	ug/L		08/14/24 15:44	08/16/24 19:52	1
Magnesium	**6500**		200	49	ug/L		08/14/24 15:44	08/16/24 19:52	1
Manganese	**7.7**		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:52	1
Molybdenum	**3.6**	**J**	5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:52	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:52	1
Potassium	**500**		500	110	ug/L		08/14/24 15:44	08/16/24 19:52	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:52	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:52	1
Sodium	**5200**		200	77	ug/L		08/14/24 15:44	08/19/24 13:16	1
Strontium	**180**		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:52	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:52	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:52	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:52	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:52	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**110**		0.91	0.46	mg/L		08/14/24 15:40	08/19/24 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			07/31/24 12:48	1
Nitrate as N (EPA 300.0)	<0.043		1.0	0.043	mg/L			07/31/24 12:48	1
Chloride (EPA 300.0)	**5.4**	**B**	1.0	0.12	mg/L			07/31/24 12:48	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/31/24 12:48	1
Fluoride (EPA 300.0)	**0.26**	**J**	1.0	0.19	mg/L			07/31/24 12:48	1
Nitrate Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/31/24 12:48	1
Sulfate (EPA 300.0)	**0.38**	**J**	1.0	0.21	mg/L			07/31/24 12:48	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/08/24 10:22	08/10/24 12:57	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/15/24 14:35	08/16/24 14:38	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:11	1
Alkalinity (SM 2320B)	**110**		5.0	3.7	mg/L			08/07/24 15:04	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**110**		5.0	3.7	mg/L			08/07/24 15:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 15:04	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Client Sample ID: SBD-01_20240729
Date Collected: 07/29/24 15:30
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254282-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	130		10	4.3	mg/L			08/02/24 03:35	1
Total Suspended Solids (SM 2540D)	3.2	J	5.0	1.9	mg/L			08/05/24 15:23	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/05/24 22:40	1
Total Organic Carbon (SM 5310C)	11		1.0	0.47	mg/L			08/13/24 20:15	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	12		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Client Sample ID: SBD-01_20240729_FBLL

Date Collected: 07/29/24 15:30
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254282-2

Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 21:02	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Dissolved	Water	1630	
500-254282-1	SBD-01_20240729	Total/NA	Water	1630	
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	
500-254282-1 MS	SBD-01_20240729	Total/NA	Water	1630	
500-254282-1 MSD	SBD-01_20240729	Total/NA	Water	1630	

Prep Batch: 2504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Dissolved	Water	1638	
500-254282-1	SBD-01_20240729	Total Recoverable	Water	1638	
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Dissolved	Water	1631E	
500-254282-1	SBD-01_20240729	Total/NA	Water	1631E	
500-254282-2	SBD-01_20240729_FBLL	Total/NA	Water	1631E	
MB 350-2505/49	Method Blank	Total/NA	Water	1631E	
MB 350-2505/50	Method Blank	Total/NA	Water	1631E	
MB 350-2505/51	Method Blank	Total/NA	Water	1631E	
LCS 350-2505/52	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2505/53	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Dissolved	Water	1630	2496
500-254282-1	SBD-01_20240729	Total/NA	Water	1630	2496
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	2496
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	2496
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2496
500-254282-1 MS	SBD-01_20240729	Total/NA	Water	1630	2496
500-254282-1 MSD	SBD-01_20240729	Total/NA	Water	1630	2496

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Dissolved	Water	1638	2504
500-254282-1	SBD-01_20240729	Total Recoverable	Water	1638	2504
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	2504
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	2504
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	2504
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2504

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Metals

Prep Batch: 781451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total Recoverable	Water	3005A	
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 781453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Dissolved	Water	3005A	
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 782080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Dissolved	Water	6020B	781453
500-254282-1	SBD-01_20240729	Total Recoverable	Water	6020B	781451
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	6020B	781451
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781451
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

Analysis Batch: 782133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total Recoverable	Water	SM 2340B	781451

Analysis Batch: 782199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Dissolved	Water	6020B	781453
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

General Chemistry

Analysis Batch: 779249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	300.0	
MB 500-779249/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779249/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	300.0	
MB 500-779250/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779250/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	SM 2540C	
MB 500-779571/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779571/2	Lab Control Sample	Total/NA	Water	SM 2540C	

General Chemistry

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	SM 2520B	

Analysis Batch: 779950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	SM 2540D	
MB 500-779950/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779950/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	SM 4500 S2 F	
MB 500-779991/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779991/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 780451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	SM 2320B	
MB 500-780451/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780451/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	Distill/CN	
MB 500-780478/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780478/1-A	Method Blank	Total/NA	Water	335.4	780478
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	335.4	780478

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 781207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	335.4	780478

Analysis Batch: 781274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	SM 5310C	
MB 500-781274/7	Method Blank	Total/NA	Water	SM 5310C	

General Chemistry (Continued)

Analysis Batch: 781274 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-781274/8	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 781665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	Distill/Ammonia	
MB 500-781665/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781665/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254282-1	SBD-01_20240729	Total/NA	Water	350.1	781665
MB 500-781665/1-A	Method Blank	Total/NA	Water	350.1	781665
LCS 500-781665/2-A	Lab Control Sample	Total/NA	Water	350.1	781665

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2496/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:19	1

Lab Sample ID: MB 350-2496/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:30	1

Lab Sample ID: MB 350-2496/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:40	1

Lab Sample ID: LCS 350-2496/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2496

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methyl Mercury			1.00	1.04		ng/L		104	65 - 135		

Lab Sample ID: LCSD 350-2496/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2496

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury			1.00	0.997		ng/L		100	65 - 135	4	35

Lab Sample ID: 500-254282-1 MS
Matrix: Water
Analysis Batch: 2513

Client Sample ID: SBD-01_20240729
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Methyl Mercury	0.053		1.00	1.02		ng/L		96	65 - 135		

Lab Sample ID: 500-254282-1 MSD
Matrix: Water
Analysis Batch: 2513

Client Sample ID: SBD-01_20240729
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	0.053		1.00	1.07		ng/L		101	65 - 135	5	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2505/49
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:51	1

Lab Sample ID: MB 350-2505/50
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:55	1

Lab Sample ID: MB 350-2505/51
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:59	1

Lab Sample ID: LCS 350-2505/52
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.26		ng/L		85	77 - 123		

Lab Sample ID: LCSD 350-2505/53
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.21		ng/L		84	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2504/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:07	1

Lab Sample ID: MB 350-2504/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:10	1

Method: 1638 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 350-2504/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	22.6		ug/L		90	85 - 115

Lab Sample ID: LCSD 350-2504/4-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.6		ug/L		90	85 - 115	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781451/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:40	08/16/24 20:31	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:40	08/16/24 20:31	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 20:31	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 20:31	1
Boron	47.4	J	50	13	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 20:31	1
Calcium	<44		200	44	ug/L		08/14/24 15:40	08/16/24 20:31	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 20:31	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 20:31	1
Iron	<47		100	47	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Magnesium	<49		200	49	ug/L		08/14/24 15:40	08/16/24 20:31	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 20:31	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 20:31	1
Potassium	<110		500	110	ug/L		08/14/24 15:40	08/16/24 20:31	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 20:31	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 20:31	1
Sodium	192	J	200	77	ug/L		08/14/24 15:40	08/16/24 20:31	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 20:31	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 20:31	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 20:31	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 20:31	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2040		ug/L		102	80 - 120
Antimony	500	529		ug/L		106	80 - 120
Arsenic	100	103		ug/L		103	80 - 120
Barium	500	527		ug/L		105	80 - 120
Beryllium	50.0	50.2		ug/L		100	80 - 120
Boron	1000	1050		ug/L		105	80 - 120
Cadmium	50.0	51.8		ug/L		104	80 - 120
Calcium	10000	8710		ug/L		87	80 - 120
Chromium	200	212		ug/L		106	80 - 120
Cobalt	500	537		ug/L		107	80 - 120
Copper	250	261		ug/L		104	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	107	^1+	ug/L		107	80 - 120
Lithium	100	107		ug/L		107	80 - 120
Magnesium	10000	10800		ug/L		108	80 - 120
Manganese	500	522		ug/L		104	80 - 120
Molybdenum	1000	1000		ug/L		100	80 - 120
Nickel	500	518		ug/L		104	80 - 120
Potassium	10000	10700		ug/L		107	80 - 120
Selenium	100	104		ug/L		104	80 - 120
Silver	50.0	52.0		ug/L		104	80 - 120
Sodium	10000	10600		ug/L		106	80 - 120
Strontium	1000	1040		ug/L		104	80 - 120
Thallium	100	106		ug/L		106	80 - 120
Tin	1000	1030		ug/L		103	80 - 120
Vanadium	500	519		ug/L		104	80 - 120
Zinc	500	515		ug/L		103	80 - 120

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:23	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:23	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:23	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:23	1
Calcium	<44		200	44	ug/L		08/14/24 15:44	08/16/24 19:23	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:23	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:23	1
Iron	<47		100	47	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Magnesium	<49		200	49	ug/L		08/14/24 15:44	08/16/24 19:23	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:23	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:23	1
Potassium	<110		500	110	ug/L		08/14/24 15:44	08/16/24 19:23	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:23	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:23	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:23	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:23	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:23	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:23	1

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	45.9	J	50	13	ug/L		08/14/24 15:44	08/19/24 12:47	1
Sodium	<77		200	77	ug/L		08/14/24 15:44	08/19/24 12:47	1

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2130		ug/L		107	80 - 120
Antimony	500	533		ug/L		107	80 - 120
Arsenic	100	99.6		ug/L		100	80 - 120
Barium	500	559		ug/L		112	80 - 120
Beryllium	50.0	48.2		ug/L		96	80 - 120
Cadmium	50.0	52.5		ug/L		105	80 - 120
Calcium	10000	9100		ug/L		91	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	528		ug/L		106	80 - 120
Copper	250	268		ug/L		107	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	110	^1+	ug/L		110	80 - 120
Lithium	100	102		ug/L		102	80 - 120
Magnesium	10000	10900		ug/L		109	80 - 120
Manganese	500	532		ug/L		106	80 - 120
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	537		ug/L		107	80 - 120
Potassium	10000	11000		ug/L		110	80 - 120
Selenium	100	101		ug/L		101	80 - 120
Silver	50.0	52.1		ug/L		104	80 - 120
Strontium	1000	1080		ug/L		108	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1070		ug/L		107	80 - 120
Vanadium	500	521		ug/L		104	80 - 120
Zinc	500	526		ug/L		105	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1070		ug/L		107	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/31/24 12:01	1
Chloride	0.169	J	1.0	0.12	mg/L			07/31/24 12:01	1
Fluoride	<0.19		1.0	0.19	mg/L			07/31/24 12:01	1
Sulfate	<0.21		1.0	0.21	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779249/4
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.7		mg/L		94	90 - 110
Chloride	20.0	20.3		mg/L		102	90 - 110
Fluoride	20.0	20.5		mg/L		103	90 - 110
Sulfate	20.0	21.3		mg/L		106	90 - 110

Lab Sample ID: MB 500-779250/3
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/31/24 12:01	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779250/4
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.5		mg/L		98	90 - 110
Nitrite as N	20.0	20.8		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.3		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780478/1-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036	^1+	0.0050	0.0036	mg/L		08/08/24 10:22	08/09/24 13:04	1

Lab Sample ID: LCS 500-780478/2-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0898	^1+	mg/L		90	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781665/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 14:35	08/16/24 14:35	1

Lab Sample ID: LCS 500-781665/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.98		mg/L		99	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780451/3
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 13:41	1

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 500-780451/4
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	99.5		mg/L		100	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779571/1
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/02/24 02:39	1

Lab Sample ID: LCS 500-779571/2
Matrix: Water
Analysis Batch: 779571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	254		mg/L		102	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779950/1
Matrix: Water
Analysis Batch: 779950

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/05/24 14:19	1

Lab Sample ID: LCS 500-779950/2
Matrix: Water
Analysis Batch: 779950

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	179		mg/L		90	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779991/1
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/05/24 22:17	1

Lab Sample ID: LCS 500-779991/2
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.20		mg/L		88	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781274/7
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 14:39	1

Lab Sample ID: LCS 500-781274/8
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.1		mg/L		101	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Client Sample ID: SBD-01_20240729

Date Collected: 07/29/24 15:30
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254282-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/03/24 01:15
Total/NA	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/02/24 21:41
Dissolved	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 20:58
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 20:53
Dissolved	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 20:03
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:23
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 19:52
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 13:16
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 21:11
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	SM 2340B		1	782133	DAJ	EET CHI	08/19/24 09:57
Total/NA	Analysis	300.0		1	779249	W1T	EET CHI	07/31/24 12:48
Total/NA	Analysis	300.0		1	779250	W1T	EET CHI	07/31/24 12:48
Total/NA	Prep	Distill/CN			780478	AC	EET CHI	08/08/24 10:22 - 08/08/24 10:52 [1]
Total/NA	Analysis	335.4		1	781207	AC	EET CHI	08/10/24 12:57
Total/NA	Prep	Distill/Ammonia			781665	EB	EET CHI	08/15/24 14:35 - 08/15/24 15:35 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:38
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:11
Total/NA	Analysis	SM 2320B		1	780451	SO	EET CHI	08/07/24 15:04
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779571	CLB	EET CHI	08/02/24 03:35
Total/NA	Analysis	SM 2540D		1	779950	SO	EET CHI	08/05/24 15:23 - 08/05/24 15:33 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779991	CLB	EET CHI	08/05/24 22:40 - 08/05/24 22:43 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781274	TR	EET CHI	08/13/24 20:15

Client Sample ID: SBD-01_20240729_FBLL

Date Collected: 07/29/24 15:30
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254282-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 21:02

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254282-1

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	08-07-24
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	08-07-24
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

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Client Information	Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Amanda Zeidler	Ellen Coppernoll	Fredrick, Sandie	4051 7962 1416	500-126351-50241 84
Company: White Pine Copper	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 1 of 1
Address: 35503 Mall Circle Drive	PWSID	Due Date Requested		Job #: 500-254282
City: White Pine		TAT Requested (days): 10 days		
State, Zip: MI, 49971	500-254282 COC	Compliance Project: Δ Yes Δ No		
Phone: 906-204-6500		PO #: Purchase Order not required		
Email: AZeidler@whitepinecu com		WO #:		
Project Name: White Pine, MI		Project #: 50023455		
Site		SSOW#:		

Analysis Requested

Preservation Codes: S H2SO4; N None; CB ZnAcetate/NaOH; B NaOH; D HNO3; A HCL; Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC) and Organic Carbon Total (TOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	A		
1 SBD-01_20240729	07-29-24	1530	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	19	
2 SBD-01_20240729_FBLL	07-29-24	1530	G	Water										✓						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/30/24 1100	MSG		7/30/24 1100	MSG
2		7/30/24 1600	MSG	4051 7962 1416	7/30/24 1600	Fedex
3					7/31/24 0950	EBTA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.

Cooler Temperature(s) °C and Other Remarks: 1.2-1.6


THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US

CAD: 0780307/CAFE3808

Part # 159469-434 MTW EXP 01/25

TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484

(708) 534-6200

REF:
INV:
PO:
DEPT:

RMA:

FedEx Express

JP41B23112201uv

FedEx
TRK# 0221 4051 7962 1416

RETURNS MON-SAT
WED - 31 JUL AA
PRIORITY OVERNIGHT

XP JOTA

60484
IL-US
ORD

5053123 30Jul/024 CMXA 581G6/A12D/C0B8

500-254282 Waybi

48at

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254282-1

Login Number: 254282
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254282-1

Login Number: 254282
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/01/24 01:51 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

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500-254282 Field Sheet

Date:	8/1/2024
End Time:	1405
pH Paper Lot:	324723
Analyst:	NL

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254282-E-1	<2	NA	NA	NA	NA
500-254282-F-1	<2				

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500-254282 Field Sheet

Date:	8/1/2024
End Time:	15:15
KI Paper Lot:	na
Analyst:	RL

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	19628
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)		Comments
500-254282-A-1	A	Y	.8	2	
500-254282-B-1	A	Y	.8	2	
500-254282-C-1	A	Y	.8	2	
500-254282-D-1	A	Y	.8	2	
500-254282-A-2	A	Y	.8	2	
500-254282-B-2	A	Y	.8	2	

RL 8/1/24

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 1:24:42 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254283-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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8/21/2024 1:24:42 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254283-1

Receipt
The samples were received on 7/31/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.3º C.

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 500-782080 was above the upper control limit. The affected analytes are: Lead. Sample results were below the reporting limit, and have been reported as qualified data.

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-22908 (Incomplete Integration)
- CCB (Incomplete Integration)

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-23405 (Incomplete Integration)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779249 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Methods 335.4, 9012B: The initial calibration verification (ICV) associated with batch 500-780762 recovered above the upper control limit for Cyanide, Total. The samples associated with this ICV were rerun for for the affected analytes and only the batch MB and LCS are impacted; therefore, the data have been reported. The associated samples are impacted: (ICV 500-780478/27-A), (LCS 500-780478/2-A) and (MB 500-780478/1-A).

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Client Sample ID: MW-31_20240730 — Lab Sample ID: 500-254283-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	1.6		0.50	0.20	ng/L	1		1631E	Total/NA
Uranium	1.3		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	1.1		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	9600		100	25	ug/L	1		6020B	Total Recoverable
Arsenic	5.0		1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	230		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	890	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	29000		200	44	ug/L	1		6020B	Total Recoverable
Chromium	17		5.0	1.1	ug/L	1		6020B	Total Recoverable
Cobalt	6.6		1.0	0.40	ug/L	1		6020B	Total Recoverable
Copper	18		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	9400		100	47	ug/L	1		6020B	Total Recoverable
Lead	4.3		0.50	0.19	ug/L	1		6020B	Total Recoverable
Lithium	40		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	8600		200	49	ug/L	1		6020B	Total Recoverable
Manganese	310		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	6.6		5.0	2.5	ug/L	1		6020B	Total Recoverable
Nickel	19		2.0	0.63	ug/L	1		6020B	Total Recoverable
Potassium	6100		500	110	ug/L	1		6020B	Total Recoverable
Sodium	56000	B	200	77	ug/L	1		6020B	Total Recoverable
Strontium	340		4.0	0.64	ug/L	1		6020B	Total Recoverable
Vanadium	19		5.0	2.2	ug/L	1		6020B	Total Recoverable
Zinc	27		20	6.9	ug/L	1		6020B	Total Recoverable
Arsenic	2.8		1.0	0.23	ug/L	1		6020B	Dissolved
Barium	130		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	870	B	50	13	ug/L	1		6020B	Dissolved
Calcium	22000		200	44	ug/L	1		6020B	Dissolved
Lithium	32		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	4400		200	49	ug/L	1		6020B	Dissolved
Manganese	36		2.5	0.79	ug/L	1		6020B	Dissolved
Molybdenum	6.5		5.0	2.5	ug/L	1		6020B	Dissolved
Nickel	2.4		2.0	0.63	ug/L	1		6020B	Dissolved
Potassium	3500		500	110	ug/L	1		6020B	Dissolved
Sodium	56000		200	77	ug/L	1		6020B	Dissolved
Strontium	400		4.0	0.64	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-31_20240730 (Continued) — Lab Sample ID: 500-254283-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hardness as calcium carbonate	110		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	0.32	J	1.0	0.18	mg/L	1		300.0	Total/NA
Nitrate as N	0.43	J	1.0	0.043	mg/L	1		300.0	Total/NA
Chloride	21	B	1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.68	J	1.0	0.19	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.43	J	1.0	0.070	mg/L	1		300.0	Total/NA
Sulfate	21		1.0	0.21	mg/L	1		300.0	Total/NA
Ammonia	0.12	J	0.20	0.10	mg/L	1		350.1	Total/NA
Phosphorus as P	0.19	^1- *-	0.050	0.024	mg/L	1		365.1	Total/NA
Alkalinity	150		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	150		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	230		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	170		50	19	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	1.4		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	2.5		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: MW-31_20240730_FBLL — Lab Sample ID: 500-254283-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.22	J	0.50	0.20	ng/L	1		1631E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254283-1	MW-31_20240730	Water	07/30/24 09:20	07/31/24 09:50
500-254283-2	MW-31_20240730_FBLL	Water	07/30/24 09:20	07/31/24 09:50

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Client Sample ID: MW-31_20240730

Date Collected: 07/30/24 09:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254283-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 22:49	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 22:59	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.6**		0.50	0.20	ng/L			08/02/24 21:06	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 21:10	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**1.3**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:34	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**1.1**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 20:06	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**9600**		100	25	ug/L		08/14/24 15:40	08/16/24 21:14	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:14	1
Arsenic	**5.0**		1.0	0.23	ug/L		08/14/24 15:40	08/16/24 21:14	1
Barium	**230**		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 21:14	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 21:14	1
Boron	**890**	**B**	50	13	ug/L		08/14/24 15:40	08/16/24 21:14	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 21:14	1
Calcium	**29000**		200	44	ug/L		08/14/24 15:40	08/16/24 21:14	1
Chromium	**17**		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 21:14	1
Cobalt	**6.6**		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 21:14	1
Copper	**18**		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 21:14	1
Iron	**9400**		100	47	ug/L		08/14/24 15:40	08/16/24 21:14	1
Lead	**4.3**		0.50	0.19	ug/L		08/14/24 15:40	08/19/24 14:16	1
Lithium	**40**		10	2.5	ug/L		08/14/24 15:40	08/16/24 21:14	1
Magnesium	**8600**		200	49	ug/L		08/14/24 15:40	08/16/24 21:14	1
Manganese	**310**		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 21:14	1
Molybdenum	**6.6**		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 21:14	1
Nickel	**19**		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 21:14	1
Potassium	**6100**		500	110	ug/L		08/14/24 15:40	08/16/24 21:14	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 21:14	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 21:14	1
Sodium	**56000**	**B**	200	77	ug/L		08/14/24 15:40	08/16/24 21:14	1
Strontium	**340**		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 21:14	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 21:14	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 21:14	1
Vanadium	**19**		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 21:14	1
Zinc	**27**		20	6.9	ug/L		08/14/24 15:40	08/16/24 21:14	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Client Sample ID: MW-31_20240730

Date Collected: 07/30/24 09:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254283-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:54	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:54	1
Arsenic	**2.8**		1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:54	1
Barium	**130**		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:54	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:54	1
Boron	**870**	**B**	50	13	ug/L		08/14/24 15:44	08/19/24 13:19	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:54	1
Calcium	**22000**		200	44	ug/L		08/14/24 15:44	08/16/24 19:54	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:54	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:54	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:54	1
Iron	<47		100	47	ug/L		08/14/24 15:44	08/16/24 19:54	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:54	1
Lithium	**32**		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:54	1
Magnesium	**4400**		200	49	ug/L		08/14/24 15:44	08/16/24 19:54	1
Manganese	**36**		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:54	1
Molybdenum	**6.5**		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:54	1
Nickel	**2.4**		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:54	1
Potassium	**3500**		500	110	ug/L		08/14/24 15:44	08/16/24 19:54	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:54	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:54	1
Sodium	**56000**		200	77	ug/L		08/14/24 15:44	08/19/24 13:19	1
Strontium	**400**		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:54	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:54	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:54	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:54	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:54	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**110**		0.91	0.46	mg/L		08/14/24 15:40	08/19/24 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**0.32**	**J**	1.0	0.18	mg/L			07/31/24 13:03	1
Nitrate as N (EPA 300.0)	**0.43**	**J**	1.0	0.043	mg/L			07/31/24 13:03	1
Chloride (EPA 300.0)	**21**	**B**	1.0	0.12	mg/L			07/31/24 13:03	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/31/24 13:03	1
Fluoride (EPA 300.0)	**0.68**	**J**	1.0	0.19	mg/L			07/31/24 13:03	1
Nitrate Nitrite as N (EPA 300.0)	**0.43**	**J**	1.0	0.070	mg/L			07/31/24 13:03	1
Sulfate (EPA 300.0)	**21**		1.0	0.21	mg/L			07/31/24 13:03	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/08/24 10:22	08/10/24 12:59	1
Ammonia (EPA 350.1)	**0.12**	**J**	0.20	0.10	mg/L		08/15/24 14:35	08/16/24 14:38	1
Phosphorus as P (EPA 365.1)	**0.19**	**^1- *-**	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:12	1
Alkalinity (SM 2320B)	**150**		5.0	3.7	mg/L			08/07/24 19:45	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**150**		5.0	3.7	mg/L			08/07/24 19:45	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 19:45	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/04/24 14:56	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Client Sample ID: MW-31_20240730
Date Collected: 07/30/24 09:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254283-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	230		10	4.3	mg/L			08/04/24 23:30	1
Total Suspended Solids (SM 2540D)	170		50	19	mg/L			08/06/24 13:53	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/05/24 22:43	1
Total Organic Carbon (SM 5310C)	1.4		1.0	0.47	mg/L			08/13/24 20:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	2.5		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Client Sample ID: MW-31_20240730_FBLL
Date Collected: 07/30/24 09:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254283-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.22	J	0.50	0.20	ng/L			08/08/24 20:25	1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Dissolved	Water	1638	
500-254283-1	MW-31_20240730	Total Recoverable	Water	1638	
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Dissolved	Water	1631E	
500-254283-1	MW-31_20240730	Total/NA	Water	1631E	
MB 350-2505/49	Method Blank	Total/NA	Water	1631E	
MB 350-2505/50	Method Blank	Total/NA	Water	1631E	
MB 350-2505/51	Method Blank	Total/NA	Water	1631E	
LCS 350-2505/52	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2505/53	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Dissolved	Water	1638	2504
500-254283-1	MW-31_20240730	Total Recoverable	Water	1638	2504
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	2504
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	2504
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	2504
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2504

Analysis Batch: 2531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-2	MW-31_20240730_FBLL	Total/NA	Water	1631E	
MB 350-2531/25	Method Blank	Total/NA	Water	1631E	
MB 350-2531/26	Method Blank	Total/NA	Water	1631E	
MB 350-2531/27	Method Blank	Total/NA	Water	1631E	
LCS 350-2531/32	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2531/35	Lab Control Sample Dup	Total/NA	Water	1631E	

Prep Batch: 2547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Dissolved	Water	1630	
500-254283-1	MW-31_20240730	Total/NA	Water	1630	
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Dissolved	Water	1630	2547
500-254283-1	MW-31_20240730	Total/NA	Water	1630	2547
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	2547

Metals (Continued)

Analysis Batch: 2565 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	2547
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	2547
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2547

Prep Batch: 781451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total Recoverable	Water	3005A	
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 781453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Dissolved	Water	3005A	
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 782080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Dissolved	Water	6020B	781453
500-254283-1	MW-31_20240730	Total Recoverable	Water	6020B	781451
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	6020B	781451
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781451
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

Analysis Batch: 782134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total Recoverable	Water	SM 2340B	781451

Analysis Batch: 782199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Dissolved	Water	6020B	781453
500-254283-1	MW-31_20240730	Total Recoverable	Water	6020B	781451
MB 500-781451/1-A	Method Blank	Total Recoverable	Water	6020B	781451
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781451/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781451
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

General Chemistry

Analysis Batch: 779249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	300.0	
MB 500-779249/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779249/4	Lab Control Sample	Total/NA	Water	300.0	
500-254283-1 MS	MW-31_20240730	Total/NA	Water	300.0	
500-254283-1 MSD	MW-31_20240730	Total/NA	Water	300.0	

Analysis Batch: 779250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 779250 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-779250/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779250/4	Lab Control Sample	Total/NA	Water	300.0	
500-254283-1 MS	MW-31_20240730	Total/NA	Water	300.0	
500-254283-1 MSD	MW-31_20240730	Total/NA	Water	300.0	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	SM 2520B	

Analysis Batch: 779809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	SM 2540C	
MB 500-779809/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779809/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	SM 4500 S2 F	
MB 500-779991/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779991/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 780106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	SM 2540D	
MB 500-780106/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-780106/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 780451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	SM 2320B	
MB 500-780451/28	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780451/29	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	Distill/CN	
MB 500-780478/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780478/1-A	Method Blank	Total/NA	Water	335.4	780478
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	335.4	780478

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

General Chemistry

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 781207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	335.4	780478

Analysis Batch: 781274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	SM 5310C	
MB 500-781274/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781274/8	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 781665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	Distill/Ammonia	
MB 500-781665/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781665/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254283-1	MW-31_20240730	Total/NA	Water	350.1	781665
MB 500-781665/1-A	Method Blank	Total/NA	Water	350.1	781665
LCS 500-781665/2-A	Lab Control Sample	Total/NA	Water	350.1	781665

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2547/1-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:14	1

Lab Sample ID: MB 350-2547/2-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:24	1

Lab Sample ID: MB 350-2547/3-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:34	1

Lab Sample ID: LCS 350-2547/4-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.984		ng/L		98	65 - 135

Lab Sample ID: LCSD 350-2547/5-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.971		ng/L		97	65 - 135	1	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2505/49
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:51	1

Lab Sample ID: MB 350-2505/50
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:55	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2505/51
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:59	1

Lab Sample ID: LCS 350-2505/52
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.26		ng/L		85	77 - 123

Lab Sample ID: LCSD 350-2505/53
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.21		ng/L		84	77 - 123	1	24

Lab Sample ID: MB 350-2531/25
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 14:20	1

Lab Sample ID: MB 350-2531/26
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 14:24	1

Lab Sample ID: MB 350-2531/27
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 14:29	1

Lab Sample ID: LCS 350-2531/32
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.83		ng/L		97	77 - 123

Lab Sample ID: LCSD 350-2531/35
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.82		ng/L		96	77 - 123	0	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2504/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:07	1

Lab Sample ID: MB 350-2504/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:10	1

Lab Sample ID: LCS 350-2504/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	22.6		ug/L		90	85 - 115

Lab Sample ID: LCSD 350-2504/4-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.6		ug/L		90	85 - 115	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781451/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:40	08/16/24 20:31	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:40	08/16/24 20:31	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:40	08/16/24 20:31	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:40	08/16/24 20:31	1
Boron	47.4	J	50	13	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:40	08/16/24 20:31	1
Calcium	<44		200	44	ug/L		08/14/24 15:40	08/16/24 20:31	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:40	08/16/24 20:31	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:40	08/16/24 20:31	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:40	08/16/24 20:31	1
Iron	<47		100	47	ug/L		08/14/24 15:40	08/16/24 20:31	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Magnesium	<49		200	49	ug/L		08/14/24 15:40	08/16/24 20:31	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:40	08/16/24 20:31	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:40	08/16/24 20:31	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:40	08/16/24 20:31	1
Potassium	<110		500	110	ug/L		08/14/24 15:40	08/16/24 20:31	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:40	08/16/24 20:31	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:40	08/16/24 20:31	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-781451/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	192	J	200	77	ug/L		08/14/24 15:40	08/16/24 20:31	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:40	08/16/24 20:31	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:40	08/16/24 20:31	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:40	08/16/24 20:31	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:40	08/16/24 20:31	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:40	08/16/24 20:31	1

Lab Sample ID: MB 500-781451/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.19		0.50	0.19	ug/L		08/14/24 15:40	08/19/24 14:11	1

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2040		ug/L		102	80 - 120
Antimony	500	529		ug/L		106	80 - 120
Arsenic	100	103		ug/L		103	80 - 120
Barium	500	527		ug/L		105	80 - 120
Beryllium	50.0	50.2		ug/L		100	80 - 120
Boron	1000	1050		ug/L		105	80 - 120
Cadmium	50.0	51.8		ug/L		104	80 - 120
Calcium	10000	8710		ug/L		87	80 - 120
Chromium	200	212		ug/L		106	80 - 120
Cobalt	500	537		ug/L		107	80 - 120
Copper	250	261		ug/L		104	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lithium	100	107		ug/L		107	80 - 120
Magnesium	10000	10800		ug/L		108	80 - 120
Manganese	500	522		ug/L		104	80 - 120
Molybdenum	1000	1000		ug/L		100	80 - 120
Nickel	500	518		ug/L		104	80 - 120
Potassium	10000	10700		ug/L		107	80 - 120
Selenium	100	104		ug/L		104	80 - 120
Silver	50.0	52.0		ug/L		104	80 - 120
Sodium	10000	10600		ug/L		106	80 - 120
Strontium	1000	1040		ug/L		104	80 - 120
Thallium	100	106		ug/L		106	80 - 120
Tin	1000	1030		ug/L		103	80 - 120
Vanadium	500	519		ug/L		104	80 - 120
Zinc	500	515		ug/L		103	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781451/2-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781451

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	100	106		ug/L		106	80 - 120

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:23	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:23	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:23	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:23	1
Calcium	<44		200	44	ug/L		08/14/24 15:44	08/16/24 19:23	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:23	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:23	1
Iron	<47		100	47	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Magnesium	<49		200	49	ug/L		08/14/24 15:44	08/16/24 19:23	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:23	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:23	1
Potassium	<110		500	110	ug/L		08/14/24 15:44	08/16/24 19:23	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:23	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:23	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:23	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:23	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:23	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:23	1

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	45.9	J	50	13	ug/L		08/14/24 15:44	08/19/24 12:47	1
Sodium	<77		200	77	ug/L		08/14/24 15:44	08/19/24 12:47	1

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2130		ug/L		107	80 - 120
Antimony	500	533		ug/L		107	80 - 120
Arsenic	100	99.6		ug/L		100	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	500	559		ug/L		112	80 - 120
Beryllium	50.0	48.2		ug/L		96	80 - 120
Cadmium	50.0	52.5		ug/L		105	80 - 120
Calcium	10000	9100		ug/L		91	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	528		ug/L		106	80 - 120
Copper	250	268		ug/L		107	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	110	^1+	ug/L		110	80 - 120
Lithium	100	102		ug/L		102	80 - 120
Magnesium	10000	10900		ug/L		109	80 - 120
Manganese	500	532		ug/L		106	80 - 120
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	537		ug/L		107	80 - 120
Potassium	10000	11000		ug/L		110	80 - 120
Selenium	100	101		ug/L		101	80 - 120
Silver	50.0	52.1		ug/L		104	80 - 120
Strontium	1000	1080		ug/L		108	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1070		ug/L		107	80 - 120
Vanadium	500	521		ug/L		104	80 - 120
Zinc	500	526		ug/L		105	80 - 120

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1070		ug/L		107	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/31/24 12:01	1
Chloride	0.169	J	1.0	0.12	mg/L			07/31/24 12:01	1
Fluoride	<0.19		1.0	0.19	mg/L			07/31/24 12:01	1
Sulfate	<0.21		1.0	0.21	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779249/4
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.7		mg/L		94	90 - 110
Chloride	20.0	20.3		mg/L		102	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-779249/4
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	20.0	20.5		mg/L		103	90 - 110
Sulfate	20.0	21.3		mg/L		106	90 - 110

Lab Sample ID: 500-254283-1 MS
Matrix: Water
Analysis Batch: 779249

Client Sample ID: MW-31_20240730
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.32	J	10.0	10.7		mg/L		104	80 - 120
Chloride	21	B	10.0	32.2		mg/L		109	80 - 120
Fluoride	0.68	J	10.0	11.9		mg/L		112	80 - 120
Sulfate	21		10.0	30.6		mg/L		94	80 - 120

Lab Sample ID: 500-254283-1 MSD
Matrix: Water
Analysis Batch: 779249

Client Sample ID: MW-31_20240730
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	0.32	J	10.0	10.7		mg/L		104	80 - 120	0	20
Chloride	21	B	10.0	32.2		mg/L		109	80 - 120	0	20
Fluoride	0.68	J	10.0	11.9		mg/L		112	80 - 120	0	20
Sulfate	21		10.0	30.7		mg/L		94	80 - 120	0	20

Lab Sample ID: MB 500-779250/3
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/31/24 12:01	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779250/4
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.5		mg/L		98	90 - 110
Nitrite as N	20.0	20.8		mg/L		104	90 - 110
Nitrate Nitrite as N	40.0	40.3		mg/L		101	90 - 110

Lab Sample ID: 500-254283-1 MS
Matrix: Water
Analysis Batch: 779250

Client Sample ID: MW-31_20240730
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.43	J	10.0	9.29		mg/L		89	80 - 120
Nitrite as N	<0.070		10.0	10.6		mg/L		106	80 - 120
Nitrate Nitrite as N	0.43	J	20.0	19.9		mg/L		97	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 500-254283-1 MSD — **Client Sample ID: MW-31_20240730**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 779250

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	0.43	J	10.0	9.30		mg/L		89	80 - 120	0	20
Nitrite as N	<0.070		10.0	10.6		mg/L		106	80 - 120	0	20
Nitrate Nitrite as N	0.43	J	20.0	19.9		mg/L		97	80 - 120	0	20

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780478/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 780762 — **Prep Batch: 780478**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036	^1+	0.0050	0.0036	mg/L		08/08/24 10:22	08/09/24 13:04	1

Lab Sample ID: LCS 500-780478/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 780762 — **Prep Batch: 780478**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0898	^1+	mg/L		90	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781665/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 782356 — **Prep Batch: 781665**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 14:35	08/16/24 14:35	1

Lab Sample ID: LCS 500-781665/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 782356 — **Prep Batch: 781665**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.98		mg/L		99	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 781671 — **Prep Batch: 780970**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 781671 — **Prep Batch: 780970**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780451/28
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/07/24 17:20	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 17:20	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 17:20	1

Lab Sample ID: LCS 500-780451/29
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	110		mg/L		110	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779809/1
Matrix: Water
Analysis Batch: 779809

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/04/24 22:39	1

Lab Sample ID: LCS 500-779809/2
Matrix: Water
Analysis Batch: 779809

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	254		mg/L		102	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-780106/1
Matrix: Water
Analysis Batch: 780106

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/06/24 13:36	1

Lab Sample ID: LCS 500-780106/2
Matrix: Water
Analysis Batch: 780106

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	187		mg/L		94	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779991/1
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/05/24 22:17	1

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: LCS 500-779991/2
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			3.64	3.20		mg/L		88	85 - 115		

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781274/7
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 14:39	1

Lab Sample ID: LCS 500-781274/8
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			10.0	10.1		mg/L		101	86 - 116		

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			10.0	9.89		mg/L		99	86 - 116		

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Client Sample ID: MW-31_20240730

Date Collected: 07/30/24 09:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254283-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Dissolved	Analysis	1630		1	2565	CL	EET SSM	08/14/24 22:59
Total/NA	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Total/NA	Analysis	1630		1	2565	CL	EET SSM	08/14/24 22:49
Dissolved	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 21:10
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 21:06
Dissolved	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 20:06
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:34
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 19:54
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 13:19
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 21:14
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 14:16
Total Recoverable	Prep	3005A			781451	S1Z	EET CHI	08/14/24 15:40 - 08/14/24 21:40 [1]
Total Recoverable	Analysis	SM 2340B		1	782134	DAJ	EET CHI	08/19/24 09:57
Total/NA	Analysis	300.0		1	779249	W1T	EET CHI	07/31/24 13:03
Total/NA	Analysis	300.0		1	779250	W1T	EET CHI	07/31/24 13:03
Total/NA	Prep	Distill/CN			780478	AC	EET CHI	08/08/24 10:22 - 08/08/24 10:52 [1]
Total/NA	Analysis	335.4		1	781207	AC	EET CHI	08/10/24 12:59
Total/NA	Prep	Distill/Ammonia			781665	EB	EET CHI	08/15/24 14:35 - 08/15/24 15:35 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:38
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:12
Total/NA	Analysis	SM 2320B		1	780451	SO	EET CHI	08/07/24 19:45
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779809	CLB	EET CHI	08/04/24 23:30
Total/NA	Analysis	SM 2540D		1	780106	SO	EET CHI	08/06/24 13:53 - 08/06/24 13:55 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779991	CLB	EET CHI	08/05/24 22:43 - 08/05/24 22:46 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781274	TR	EET CHI	08/13/24 20:43

Client Sample ID: MW-31_20240730_FBLL

Date Collected: 07/30/24 09:20
Date Received: 07/31/24 09:50

Lab Sample ID: 500-254283-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2531	AJD	EET SSM	08/08/24 20:25

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254283-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick Sandie	Carrier Tracking No(s): 4051 7962 1405	COC No: 500-126351-50241 86
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: White Pine Copper	PWSID:			Job #: 500-254283

Address: 35503 Mall Circle Drive	Due Date Requested:	
City: White Pine	TAT Requested (days): 10 days	
State, Zip: MI 49971	Compliance Project: Δ Yes Δ No	
Phone: 906-204-6500	PO #: Purchase Order not required	500-254283 COC
Email: AZeidler@whitepinecu.com	WO #:	
Project Name: White Pine, MI	Project #: 50023455	
Site:	SSOW#:	

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC) and Organic Carbon Total (TOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note.
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	A		
MW-31_20240730	07-30-24	0920	G	Water			V	V	V	V	V	V	V	V	V	V	V	V	V	17	
MW-31_20240730_FBLL	07-30-24	0920	G	Water										V						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL
Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, [II], III, IV Other (specify)

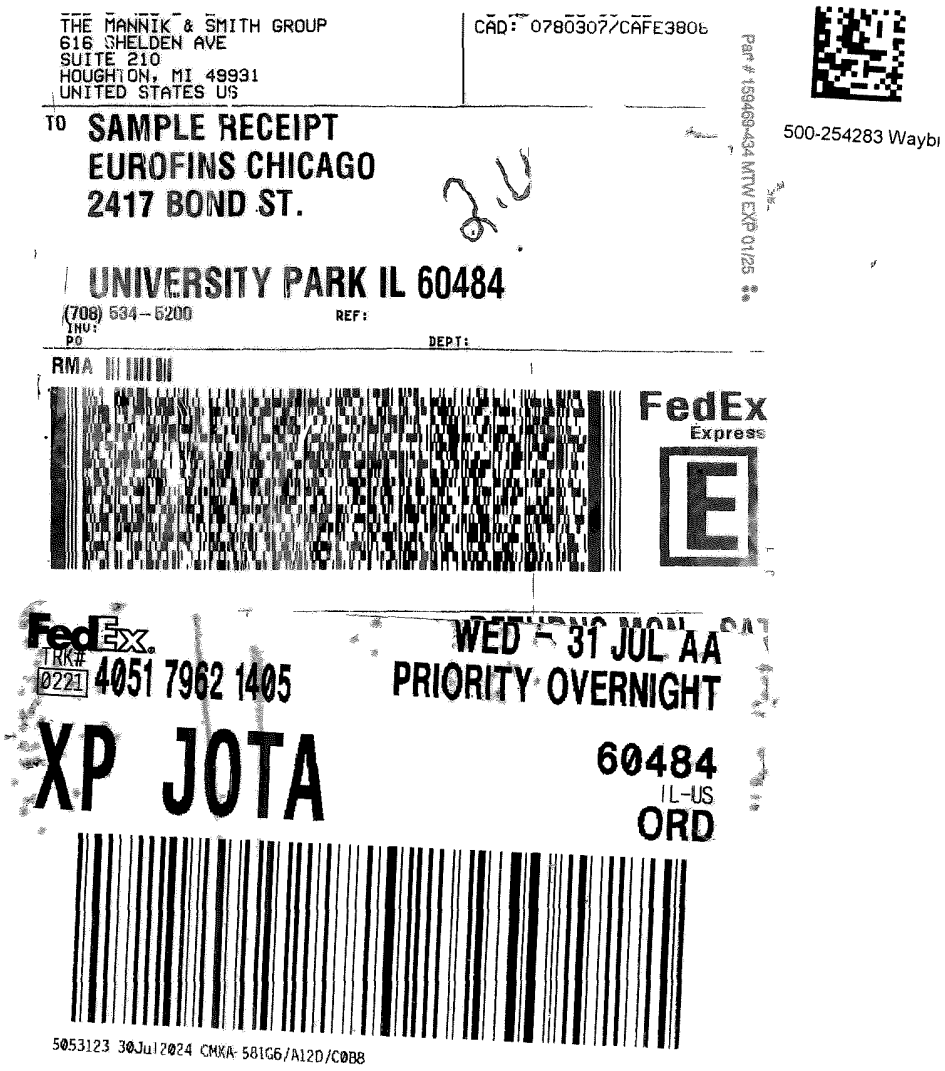
Special Instructions/QC Requirements MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/30/24 1400	MSG		7/30/24 1100	MSG
2		7/30/24 1600	MSG	4051 7962 1405	7/30/24 1600	fedex
					7/31/24 0950	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: 2.4-2.3


THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US
CAD: 0780307/CAFE3806
Part # 159469-434 MTW EXP 01/25
500-254283 Waybi
TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.
UNIVERSITY PARK IL 60484
(708) 534-6200
REF:
INV:
PO
DEPT:
RMA
FedEx
Express
FedEx
TRK#
0221 4051 7962 1405
WED - 31 JUL AA
PRIORITY OVERNIGHT
XP JOTA
60484
IL-US
ORD
5053123 30Jul2024 CMXA 581G6/A12D/C0B8

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254283-1

Login Number: 254283
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254283-1

Login Number: 254283
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/01/24 02:58 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254283-1

Login Number: 254283
List Number: 3
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/02/24 01:47 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254283 Field Sheet

Date:	8/1/2024
End Time:	15:15
KI Paper Lot:	na
Analyst:	RL

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	19628
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
500-254283-A-1	A	Y	.8 1 2	
500-254283-B-1	A	Y	.4 2	RL filter
500-254283-C-1	A	Y	.8 2	
500-254283-D-1	A	Y	.4 2	

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500-254283 Field Sheet

Date:	8/2/2024
End Time:	13:17
pH Paper Lot:	HC234723
Analyst:	JL

Preservative ID	Preservative Type	Container ID
A	Nitric Acid	NA
A	Hydrochloric Acid	
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254283-J-1	<2				
500-254283-K-1	<2		JL 8/2/24		
500-254283-E-1	<2				
500-254283-F-1	<2				

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ANALYTICAL REPORT

PREPARED FOR

Attn: Jakob Wartman
Foth Infrastructure & Environment, LLC
Missabe Building
227 West 1st. Street, Suite 920
Duluth, Minnesota 55802

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JOB DESCRIPTION

FOTH - White Pines, MI

JOB NUMBER

500-254304-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254304-1

Receipt
The samples were received on 7/30/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.8º C, 4.2º C, 5.7º C and 9.5º C.

Receipt Exceptions
The following sample(s) was received outside of holding time IC N3 & N2.

The following sample was received at the laboratory outside the required temperature criteria: We received the 3 1L unpreserved,, NH3 & P, Cn and Methyl Mercury bottles in the cooler that was out of temp.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The following sample was analyzed outside of analytical holding time WP-584-82-132-1 (500-254304-1) and WP-584-82-132-2 (500-254304-3).

Method 335.4: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 500-780716 and analytical batch 500-780798 were outside control limits for Cyanide, Total. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method SM 5310C: Field filtered Dissolved Organic Carbon results are slightly greater than Total Organic Carbon results. WP-584-82-132-1 (500-254304-1)

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Foth Infrastructure & Environment, LLC
Project/Site: FOTH - White Pines, MI

Job ID: 500-254304-1

Client Sample ID: WP-584-82-132-1

Lab Sample ID: 500-254304-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Uranium	32		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	32		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	69	J	100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.57	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	1500		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	290	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	300000		200	44	ug/L	1		6020B	Total Recoverable
Copper	1.9	J	2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	1000		100	47	ug/L	1		6020B	Total Recoverable
Lithium	99		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	17000		200	49	ug/L	1		6020B	Total Recoverable
Manganese	1500		2.5	0.79	ug/L	1		6020B	Total Recoverable
Nickel	1.4	J	2.0	0.63	ug/L	1		6020B	Total Recoverable
Potassium	1100		500	110	ug/L	1		6020B	Total Recoverable
Sodium	310000		200	77	ug/L	1		6020B	Total Recoverable
Strontium	8900		4.0	0.64	ug/L	1		6020B	Total Recoverable
Zinc	200		20	6.9	ug/L	1		6020B	Total Recoverable
Arsenic	0.55	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	1500		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	280	B	50	13	ug/L	1		6020B	Dissolved
Calcium	290000		200	44	ug/L	1		6020B	Dissolved
Iron	860		100	47	ug/L	1		6020B	Dissolved
Lithium	96		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	17000		200	49	ug/L	1		6020B	Dissolved
Manganese	1500		2.5	0.79	ug/L	1		6020B	Dissolved
Nickel	0.86	J	2.0	0.63	ug/L	1		6020B	Dissolved
Potassium	1100		500	110	ug/L	1		6020B	Dissolved
Sodium	290000		200	77	ug/L	1		6020B	Dissolved
Strontium	8700		4.0	0.64	ug/L	1		6020B	Dissolved
Zinc	290		20	6.9	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	820		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	8.5		1.0	0.18	mg/L	1		300.0	Total/NA
Chloride	540		50	5.8	mg/L	50		300.0	Total/NA
Fluoride	0.23	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	2.5		1.0	0.21	mg/L	1		300.0	Total/NA
Ammonia	0.29		0.20	0.10	mg/L	1		350.1	Total/NA
Alkalinity	520		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	520		5.0	3.7	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-584-82-132-1 (Continued) — Lab Sample ID: 500-254304-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Salinity	1.7		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	1700		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	3.6	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	4.3		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	4.4		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: WP-584-82-132-1 FB — Lab Sample ID: 500-254304-2

No Detections.

Client Sample ID: WP-584-82-132-2 — Lab Sample ID: 500-254304-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Uranium	32		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	31		0.030	0.0098	ug/L	1		1638	Dissolved
Arsenic	0.48	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	1500		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	280	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	280000		200	44	ug/L	1		6020B	Total Recoverable
Iron	800		100	47	ug/L	1		6020B	Total Recoverable
Lithium	95		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	17000		200	49	ug/L	1		6020B	Total Recoverable
Manganese	1500		2.5	0.79	ug/L	1		6020B	Total Recoverable
Nickel	0.75	J	2.0	0.63	ug/L	1		6020B	Total Recoverable
Potassium	1000		500	110	ug/L	1		6020B	Total Recoverable
Sodium	290000		200	77	ug/L	1		6020B	Total Recoverable
Strontium	8400		4.0	0.64	ug/L	1		6020B	Total Recoverable
Zinc	130		20	6.9	ug/L	1		6020B	Total Recoverable
Arsenic	0.49	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	1500		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	290	B	50	13	ug/L	1		6020B	Dissolved
Calcium	290000		200	44	ug/L	1		6020B	Dissolved
Iron	740		100	47	ug/L	1		6020B	Dissolved
Lithium	96		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	17000		200	49	ug/L	1		6020B	Dissolved
Manganese	1500		2.5	0.79	ug/L	1		6020B	Dissolved
Nickel	0.73	J	2.0	0.63	ug/L	1		6020B	Dissolved
Potassium	1000		500	110	ug/L	1		6020B	Dissolved
Sodium	290000		200	77	ug/L	1		6020B	Dissolved
Strontium	8500		4.0	0.64	ug/L	1		6020B	Dissolved
Zinc	230		20	6.9	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: WP-584-82-132-2 (Continued)
Lab Sample ID: 500-254304-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hardness as calcium carbonate	780		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	8.2		1.0	0.18	mg/L	1		300.0	Total/NA
Chloride	520		50	5.8	mg/L	50		300.0	Total/NA
Fluoride	0.23	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	2.3		1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	520		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	520		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	1.7		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	1700		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	3.2	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	3.9		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	4.0		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: WP-584-82-132-2 FB
Lab Sample ID: 500-254304-4

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Foth Infrastructure & Environment, LLC
Project/Site: FOTH - White Pines, MI

Job ID: 500-254304-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Foth Infrastructure & Environment, LLC
Project/Site: FOTH - White Pines, MI

Job ID: 500-254304-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254304-1	WP-584-82-132-1	Water	07/28/24 09:50	07/30/24 09:45
500-254304-2	WP-584-82-132-1 FB	Water	07/28/24 00:00	07/30/24 09:45
500-254304-3	WP-584-82-132-2	Water	07/28/24 11:15	07/30/24 09:45
500-254304-4	WP-584-82-132-2 FB	Water	07/28/24 00:00	07/30/24 09:45

Client Sample ID: WP-584-82-132-1
Lab Sample ID: 500-254304-1

Date Collected: 07/28/24 09:50
Matrix: Water
Date Received: 07/30/24 09:45

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/03/24 00:35	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/03/24 00:45	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 18:53	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 18:57	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**32**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:41	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**32**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 20:21	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**69**	**J**	100	25	ug/L		08/14/24 08:44	08/16/24 13:10	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:10	1
Arsenic	**0.57**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 13:10	1
Barium	**1500**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 13:10	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 13:10	1
Boron	**290**	**B**	50	13	ug/L		08/14/24 08:44	08/16/24 13:10	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 13:10	1
Calcium	**300000**		200	44	ug/L		08/14/24 08:44	08/16/24 13:10	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 13:10	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 13:10	1
Copper	**1.9**	**J**	2.0	0.50	ug/L		08/14/24 08:44	08/16/24 13:10	1
Iron	**1000**		100	47	ug/L		08/14/24 08:44	08/16/24 13:10	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 13:10	1
Lithium	**99**		10	2.5	ug/L		08/14/24 08:44	08/16/24 13:10	1
Magnesium	**17000**		200	49	ug/L		08/14/24 08:44	08/16/24 13:10	1
Manganese	**1500**		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 13:10	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 13:10	1
Nickel	**1.4**	**J**	2.0	0.63	ug/L		08/14/24 08:44	08/16/24 13:10	1
Potassium	**1100**		500	110	ug/L		08/14/24 08:44	08/16/24 13:10	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 13:10	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 13:10	1
Sodium	**310000**		200	77	ug/L		08/14/24 08:44	08/16/24 13:10	1
Strontium	**8900**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 13:10	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 13:10	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:10	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 13:10	1
Zinc	**200**		20	6.9	ug/L		08/14/24 08:44	08/16/24 13:10	1

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-584-82-132-1
Lab Sample ID: 500-254304-1
Date Collected: 07/28/24 09:50
Matrix: Water
Date Received: 07/30/24 09:45

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 13:14	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:14	1
Arsenic	**0.55**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 13:14	1
Barium	**1500**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 13:14	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 13:14	1
Boron	**280**	**B**	50	13	ug/L		08/14/24 08:44	08/16/24 13:14	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 13:14	1
Calcium	**290000**		200	44	ug/L		08/14/24 08:44	08/16/24 13:14	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 13:14	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 13:14	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 13:14	1
Iron	**860**		100	47	ug/L		08/14/24 08:44	08/16/24 13:14	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 13:14	1
Lithium	**96**		10	2.5	ug/L		08/14/24 08:44	08/16/24 13:14	1
Magnesium	**17000**		200	49	ug/L		08/14/24 08:44	08/16/24 13:14	1
Manganese	**1500**		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 13:14	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 13:14	1
Nickel	**0.86**	**J**	2.0	0.63	ug/L		08/14/24 08:44	08/16/24 13:14	1
Potassium	**1100**		500	110	ug/L		08/14/24 08:44	08/16/24 13:14	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 13:14	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 13:14	1
Sodium	**290000**		200	77	ug/L		08/14/24 08:44	08/16/24 13:14	1
Strontium	**8700**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 13:14	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 13:14	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:14	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 13:14	1
Zinc	**290**		20	6.9	ug/L		08/14/24 08:44	08/16/24 13:14	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**820**		0.91	0.46	mg/L		08/14/24 08:44	08/16/24 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**8.5**		1.0	0.18	mg/L			07/31/24 15:24	1
Nitrate as N (EPA 300.0)	<0.043	H H3	1.0	0.043	mg/L			07/31/24 15:24	1
Chloride (EPA 300.0)	**540**		50	5.8	mg/L			08/14/24 03:53	50
Nitrite as N (EPA 300.0)	<0.070	H H3	1.0	0.070	mg/L			07/31/24 15:24	1
Fluoride (EPA 300.0)	**0.23**	**J**	1.0	0.19	mg/L			07/31/24 15:24	1
Nitrate Nitrite as N (EPA 300.0)	<0.070	H H3	1.0	0.070	mg/L			07/31/24 15:24	1
Sulfate (EPA 300.0)	**2.5**		1.0	0.21	mg/L			07/31/24 15:24	1
Cyanide, Total (EPA 335.4)	<0.0036	F1	0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 11:11	1
Ammonia (EPA 350.1)	**0.29**		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:33	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:13	1
Alkalinity (SM 2320B)	**520**		5.0	3.7	mg/L			08/07/24 01:55	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**520**		5.0	3.7	mg/L			08/07/24 01:55	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 01:55	1
Salinity (SM 2520B)	**1.7**		0.33	0.33	psu			08/04/24 14:56	1

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-584-82-132-1
Lab Sample ID: 500-254304-1
Date Collected: 07/28/24 09:50
Matrix: Water
Date Received: 07/30/24 09:45

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1700		10	4.3	mg/L			08/01/24 03:24	1
Total Suspended Solids (SM 2540D)	3.6	J	5.0	1.9	mg/L			08/02/24 16:45	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:43	1
Total Organic Carbon (SM 5310C)	4.3		1.0	0.47	mg/L			08/09/24 04:21	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	4.4		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-584-82-132-1 FB
Lab Sample ID: 500-254304-2
Date Collected: 07/28/24 00:00
Matrix: Water
Date Received: 07/30/24 09:45

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:01	1

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-584-82-132-2
Lab Sample ID: 500-254304-3
Date Collected: 07/28/24 11:15
Matrix: Water
Date Received: 07/30/24 09:45

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/03/24 00:55	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/03/24 01:05	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:05	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:10	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**32**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:45	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**31**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 20:25	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 13:12	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:12	1
Arsenic	**0.48**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 13:12	1
Barium	**1500**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 13:12	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 13:12	1
Boron	**280**	**B**	50	13	ug/L		08/14/24 08:44	08/16/24 13:12	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 13:12	1
Calcium	**280000**		200	44	ug/L		08/14/24 08:44	08/16/24 13:12	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 13:12	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 13:12	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 13:12	1
Iron	**800**		100	47	ug/L		08/14/24 08:44	08/16/24 13:12	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 13:12	1
Lithium	**95**		10	2.5	ug/L		08/14/24 08:44	08/16/24 13:12	1
Magnesium	**17000**		200	49	ug/L		08/14/24 08:44	08/16/24 13:12	1
Manganese	**1500**		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 13:12	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 13:12	1
Nickel	**0.75**	**J**	2.0	0.63	ug/L		08/14/24 08:44	08/16/24 13:12	1
Potassium	**1000**		500	110	ug/L		08/14/24 08:44	08/16/24 13:12	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 13:12	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 13:12	1
Sodium	**290000**		200	77	ug/L		08/14/24 08:44	08/16/24 13:12	1
Strontium	**8400**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 13:12	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 13:12	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:12	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 13:12	1
Zinc	**130**		20	6.9	ug/L		08/14/24 08:44	08/16/24 13:12	1

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-584-82-132-2
Lab Sample ID: 500-254304-3
Date Collected: 07/28/24 11:15
Matrix: Water
Date Received: 07/30/24 09:45

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 13:16	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:16	1
Arsenic	**0.49**	**J**	1.0	0.23	ug/L		08/14/24 08:44	08/16/24 13:16	1
Barium	**1500**		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 13:16	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 13:16	1
Boron	**290**	**B**	50	13	ug/L		08/14/24 08:44	08/16/24 13:16	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 13:16	1
Calcium	**290000**		200	44	ug/L		08/14/24 08:44	08/16/24 13:16	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 13:16	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 13:16	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 13:16	1
Iron	**740**		100	47	ug/L		08/14/24 08:44	08/16/24 13:16	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 13:16	1
Lithium	**96**		10	2.5	ug/L		08/14/24 08:44	08/16/24 13:16	1
Magnesium	**17000**		200	49	ug/L		08/14/24 08:44	08/16/24 13:16	1
Manganese	**1500**		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 13:16	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 13:16	1
Nickel	**0.73**	**J**	2.0	0.63	ug/L		08/14/24 08:44	08/16/24 13:16	1
Potassium	**1000**		500	110	ug/L		08/14/24 08:44	08/16/24 13:16	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 13:16	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 13:16	1
Sodium	**290000**		200	77	ug/L		08/14/24 08:44	08/16/24 13:16	1
Strontium	**8500**		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 13:16	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 13:16	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 13:16	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 13:16	1
Zinc	**230**		20	6.9	ug/L		08/14/24 08:44	08/16/24 13:16	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**780**		0.91	0.46	mg/L		08/14/24 08:44	08/16/24 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**8.2**		1.0	0.18	mg/L			07/30/24 15:31	1
Nitrate as N (EPA 300.0)	<0.043	H	1.0	0.043	mg/L			07/30/24 15:31	1
Chloride (EPA 300.0)	**520**		50	5.8	mg/L			08/14/24 04:38	50
Nitrite as N (EPA 300.0)	<0.070	H	1.0	0.070	mg/L			07/30/24 15:31	1
Fluoride (EPA 300.0)	**0.23**	**J**	1.0	0.19	mg/L			07/30/24 15:31	1
Nitrate Nitrite as N (EPA 300.0)	<0.070	H	1.0	0.070	mg/L			07/30/24 15:31	1
Sulfate (EPA 300.0)	**2.3**		1.0	0.21	mg/L			07/30/24 15:31	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 11:15	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:34	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:14	1
Alkalinity (SM 2320B)	**520**		5.0	3.7	mg/L			08/07/24 02:05	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**520**		5.0	3.7	mg/L			08/07/24 02:05	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 02:05	1
Salinity (SM 2520B)	**1.7**		0.33	0.33	psu			08/04/24 14:56	1

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-584-82-132-2
Lab Sample ID: 500-254304-3
Date Collected: 07/28/24 11:15
Matrix: Water
Date Received: 07/30/24 09:45

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1700		10	4.3	mg/L			08/01/24 03:27	1
Total Suspended Solids (SM 2540D)	3.2	J	5.0	1.9	mg/L			08/02/24 16:47	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/01/24 22:47	1
Total Organic Carbon (SM 5310C)	3.9		1.0	0.47	mg/L			08/13/24 22:07	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	4.0		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-584-82-132-2 FB
Lab Sample ID: 500-254304-4
Date Collected: 07/28/24 00:00
Matrix: Water
Date Received: 07/30/24 09:45

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 19:14	1

Definitions/Glossary

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Dissolved	Water	1630	
500-254304-1	WP-584-82-132-1	Total/NA	Water	1630	
500-254304-3	WP-584-82-132-2	Dissolved	Water	1630	
500-254304-3	WP-584-82-132-2	Total/NA	Water	1630	
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Prep Batch: 2504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Dissolved	Water	1638	
500-254304-1	WP-584-82-132-1	Total Recoverable	Water	1638	
500-254304-3	WP-584-82-132-2	Dissolved	Water	1638	
500-254304-3	WP-584-82-132-2	Total Recoverable	Water	1638	
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Dissolved	Water	1631E	
500-254304-1	WP-584-82-132-1	Total/NA	Water	1631E	
500-254304-2	WP-584-82-132-1 FB	Total/NA	Water	1631E	
500-254304-3	WP-584-82-132-2	Dissolved	Water	1631E	
500-254304-3	WP-584-82-132-2	Total/NA	Water	1631E	
500-254304-4	WP-584-82-132-2 FB	Total/NA	Water	1631E	
MB 350-2505/15	Method Blank	Total/NA	Water	1631E	
MB 350-2505/16	Method Blank	Total/NA	Water	1631E	
MB 350-2505/17	Method Blank	Total/NA	Water	1631E	
LCS 350-2505/18	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2505/19	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Dissolved	Water	1630	2496
500-254304-1	WP-584-82-132-1	Total/NA	Water	1630	2496
500-254304-3	WP-584-82-132-2	Dissolved	Water	1630	2496
500-254304-3	WP-584-82-132-2	Total/NA	Water	1630	2496
MB 350-2496/1-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/2-A	Method Blank	Total/NA	Water	1630	2496
MB 350-2496/3-A	Method Blank	Total/NA	Water	1630	2496
LCS 350-2496/4-A	Lab Control Sample	Total/NA	Water	1630	2496
LCSD 350-2496/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2496

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Dissolved	Water	1638	2504
500-254304-1	WP-584-82-132-1	Total Recoverable	Water	1638	2504

Metals (Continued)

Analysis Batch: 2516 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-3	WP-584-82-132-2	Dissolved	Water	1638	2504
500-254304-3	WP-584-82-132-2	Total Recoverable	Water	1638	2504
MB 350-2504/1-A	Method Blank	Total Recoverable	Water	1638	2504
MB 350-2504/2-A	Method Blank	Total Recoverable	Water	1638	2504
LCS 350-2504/3-A	Lab Control Sample	Total Recoverable	Water	1638	2504
LCSD 350-2504/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2504

Prep Batch: 781335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Dissolved	Water	3005A	
500-254304-1	WP-584-82-132-1	Total Recoverable	Water	3005A	
500-254304-3	WP-584-82-132-2	Dissolved	Water	3005A	
500-254304-3	WP-584-82-132-2	Total Recoverable	Water	3005A	
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Dissolved	Water	6020B	781335
500-254304-1	WP-584-82-132-1	Total Recoverable	Water	6020B	781335
500-254304-3	WP-584-82-132-2	Dissolved	Water	6020B	781335
500-254304-3	WP-584-82-132-2	Total Recoverable	Water	6020B	781335
MB 500-781335/1-A	Method Blank	Total Recoverable	Water	6020B	781335
LCS 500-781335/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781335

Analysis Batch: 781916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total Recoverable	Water	SM 2340B	781335
500-254304-3	WP-584-82-132-2	Total Recoverable	Water	SM 2340B	781335

General Chemistry

Analysis Batch: 779012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-3	WP-584-82-132-2	Total/NA	Water	300.0	
MB 500-779012/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779012/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-3	WP-584-82-132-2	Total/NA	Water	300.0	
MB 500-779013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779013/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	300.0	
MB 500-779249/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779249/4	Lab Control Sample	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 779250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	300.0	
MB 500-779250/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779250/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	SM 2540C	
500-254304-3	WP-584-82-132-2	Total/NA	Water	SM 2540C	
MB 500-779370/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779370/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	SM 4500 S2 F	
500-254304-3	WP-584-82-132-2	Total/NA	Water	SM 4500 S2 F	
MB 500-779580/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779580/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	SM 2540D	
500-254304-3	WP-584-82-132-2	Total/NA	Water	SM 2540D	
MB 500-779749/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-779749/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	SM 2520B	
500-254304-3	WP-584-82-132-2	Total/NA	Water	SM 2520B	

Analysis Batch: 780255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	SM 2320B	
500-254304-3	WP-584-82-132-2	Total/NA	Water	SM 2320B	
MB 500-780255/53	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780255/54	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	Distill/CN	
500-254304-3	WP-584-82-132-2	Total/NA	Water	Distill/CN	
MB 500-780716/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
500-254304-1 MS	WP-584-82-132-1	Total/NA	Water	Distill/CN	
500-254304-1 MSD	WP-584-82-132-1	Total/NA	Water	Distill/CN	

Analysis Batch: 780798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	335.4	780716
500-254304-3	WP-584-82-132-2	Total/NA	Water	335.4	780716
MB 500-780716/1-A	Method Blank	Total/NA	Water	335.4	780716

General Chemistry (Continued)

Analysis Batch: 780798 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-780716/2-A	Lab Control Sample	Total/NA	Water	335.4	780716
500-254304-1 MS	WP-584-82-132-1	Total/NA	Water	335.4	780716
500-254304-1 MSD	WP-584-82-132-1	Total/NA	Water	335.4	780716

Analysis Batch: 780802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	SM 5310C	
MB 500-780802/31	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-780802/32	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	365.2/365.3/365	
500-254304-3	WP-584-82-132-2	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Dissolved	Water	SM 5310C	
500-254304-3	WP-584-82-132-2	Dissolved	Water	SM 5310C	
MB 500-781098/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 781160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	300.0	
500-254304-3	WP-584-82-132-2	Total/NA	Water	300.0	
MB 500-781160/35	Method Blank	Total/NA	Water	300.0	
LCS 500-781160/36	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 781274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-3	WP-584-82-132-2	Total/NA	Water	SM 5310C	
MB 500-781274/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781274/8	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 781617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	Distill/Ammonia	
500-254304-3	WP-584-82-132-2	Total/NA	Water	Distill/Ammonia	
MB 500-781617/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	365.1	780970
500-254304-3	WP-584-82-132-2	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

General Chemistry

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254304-1	WP-584-82-132-1	Total/NA	Water	350.1	781617
500-254304-3	WP-584-82-132-2	Total/NA	Water	350.1	781617
MB 500-781617/1-A	Method Blank	Total/NA	Water	350.1	781617
LCS 500-781617/2-A	Lab Control Sample	Total/NA	Water	350.1	781617

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2496/1-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:19	1

Lab Sample ID: MB 350-2496/2-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:30	1

Lab Sample ID: MB 350-2496/3-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/02/24 11:02	08/02/24 20:40	1

Lab Sample ID: LCS 350-2496/4-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	1.04		ng/L		104	65 - 135

Lab Sample ID: LCSD 350-2496/5-A
Matrix: Water
Analysis Batch: 2513

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.997		ng/L		100	65 - 135	4	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2505/15
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:30	1

Lab Sample ID: MB 350-2505/16
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:34	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2505/17
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/02/24 17:38	1

Lab Sample ID: LCS 350-2505/18
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.63		ng/L		93	77 - 123

Lab Sample ID: LCSD 350-2505/19
Matrix: Water
Analysis Batch: 2505

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.64		ng/L		93	77 - 123	0	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2504/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:07	1

Lab Sample ID: MB 350-2504/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:10	1

Lab Sample ID: LCS 350-2504/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	22.6		ug/L		90	85 - 115

Lab Sample ID: LCSD 350-2504/4-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2504

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	22.6		ug/L		90	85 - 115	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781335/1-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 08:44	08/16/24 12:15	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 08:44	08/16/24 12:15	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 08:44	08/16/24 12:15	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 08:44	08/16/24 12:15	1
Boron	27.6	J	50	13	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 08:44	08/16/24 12:15	1
Calcium	<44		200	44	ug/L		08/14/24 08:44	08/16/24 12:15	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 08:44	08/16/24 12:15	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 08:44	08/16/24 12:15	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 08:44	08/16/24 12:15	1
Iron	<47		100	47	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lead	<0.19		0.50	0.19	ug/L		08/14/24 08:44	08/16/24 12:15	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Magnesium	<49		200	49	ug/L		08/14/24 08:44	08/16/24 12:15	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 08:44	08/16/24 12:15	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 08:44	08/16/24 12:15	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 08:44	08/16/24 12:15	1
Potassium	<110		500	110	ug/L		08/14/24 08:44	08/16/24 12:15	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 08:44	08/16/24 12:15	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 08:44	08/16/24 12:15	1
Sodium	<77		200	77	ug/L		08/14/24 08:44	08/16/24 12:15	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 08:44	08/16/24 12:15	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 08:44	08/16/24 12:15	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 08:44	08/16/24 12:15	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 08:44	08/16/24 12:15	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 08:44	08/16/24 12:15	1

Lab Sample ID: LCS 500-781335/2-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1980		ug/L		99	80 - 120
Antimony	500	510		ug/L		102	80 - 120
Arsenic	100	101		ug/L		101	80 - 120
Barium	500	520		ug/L		104	80 - 120
Beryllium	50.0	52.7		ug/L		105	80 - 120
Boron	1000	1030		ug/L		103	80 - 120
Cadmium	50.0	51.9		ug/L		104	80 - 120
Calcium	10000	8920		ug/L		89	80 - 120
Chromium	200	214		ug/L		107	80 - 120
Cobalt	500	541		ug/L		108	80 - 120
Copper	250	264		ug/L		106	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	103		ug/L		103	80 - 120
Lithium	100	108		ug/L		108	80 - 120
Magnesium	10000	10600		ug/L		106	80 - 120
Manganese	500	528		ug/L		106	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781335/2-A
Matrix: Water
Analysis Batch: 781875

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	520		ug/L		104	80 - 120
Potassium	10000	10600		ug/L		106	80 - 120
Selenium	100	100		ug/L		100	80 - 120
Silver	50.0	51.1		ug/L		102	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120
Strontium	1000	999		ug/L		100	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1010		ug/L		101	80 - 120
Vanadium	500	520		ug/L		104	80 - 120
Zinc	500	517		ug/L		103	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779012/3
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/30/24 10:50	1
Fluoride	<0.19		1.0	0.19	mg/L			07/30/24 10:50	1
Sulfate	<0.21		1.0	0.21	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779012/4
Matrix: Water
Analysis Batch: 779012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.9		mg/L		94	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.2		mg/L		106	90 - 110

Lab Sample ID: MB 500-779013/3
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/30/24 10:50	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/30/24 10:50	1

Lab Sample ID: LCS 500-779013/4
Matrix: Water
Analysis Batch: 779013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	20.9		mg/L		104	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-779249/3
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/31/24 12:01	1
Fluoride	<0.19		1.0	0.19	mg/L			07/31/24 12:01	1
Sulfate	<0.21		1.0	0.21	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779249/4
Matrix: Water
Analysis Batch: 779249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	18.7		mg/L		94	90 - 110
Fluoride	20.0	20.5		mg/L		103	90 - 110
Sulfate	20.0	21.3		mg/L		106	90 - 110

Lab Sample ID: MB 500-779250/3
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/31/24 12:01	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/31/24 12:01	1

Lab Sample ID: LCS 500-779250/4
Matrix: Water
Analysis Batch: 779250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.5		mg/L		98	90 - 110
Nitrite as N	20.0	20.8		mg/L		104	90 - 110

Lab Sample ID: MB 500-781160/35
Matrix: Water
Analysis Batch: 781160

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.12		1.0	0.12	mg/L			08/13/24 21:03	1

Lab Sample ID: LCS 500-781160/36
Matrix: Water
Analysis Batch: 781160

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.4		mg/L		97	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780716/1-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/09/24 11:42	08/10/24 10:09	1

Lab Sample ID: LCS 500-780716/2-A
Matrix: Water
Analysis Batch: 780798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0962		mg/L		96	90 - 110

Lab Sample ID: 500-254304-1 MS
Matrix: Water
Analysis Batch: 780798

Client Sample ID: WP-584-82-132-1
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	<0.0036	F1	0.100	0.0821	F1	mg/L		82	90 - 110

Lab Sample ID: 500-254304-1 MSD
Matrix: Water
Analysis Batch: 780798

Client Sample ID: WP-584-82-132-1
Prep Type: Total/NA
Prep Batch: 780716

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Total	<0.0036	F1	0.100	0.0842	F1	mg/L		84	90 - 110	3	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781617/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/15/24 11:06	08/16/24 14:23	1

Lab Sample ID: LCS 500-781617/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.80		mg/L		90	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780255/53
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/06/24 23:21	1

Lab Sample ID: LCS 500-780255/54
Matrix: Water
Analysis Batch: 780255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	105		mg/L		105	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779370/1
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/01/24 02:28	1

Lab Sample ID: LCS 500-779370/2
Matrix: Water
Analysis Batch: 779370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	264		mg/L		106	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-779749/1
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/02/24 15:55	1

Lab Sample ID: LCS 500-779749/2
Matrix: Water
Analysis Batch: 779749

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	201		mg/L		100	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779580/1
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/01/24 21:24	1

Lab Sample ID: LCS 500-779580/2
Matrix: Water
Analysis Batch: 779580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.26		mg/L		90	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-780802/31
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/09/24 00:09	1

Lab Sample ID: LCS 500-780802/32
Matrix: Water
Analysis Batch: 780802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Lab Sample ID: MB 500-781274/7
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 14:39	1

Lab Sample ID: LCS 500-781274/8
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.1		mg/L		101	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/7
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Method: SM 5310C - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCS 500-781098/8
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	9.89		mg/L		99	86 - 116

Lab Chronicle

Client: Foth Infrastructure & Environment, LLC
Project/Site: FOTH - White Pines, MI

Job ID: 500-254304-1

Client Sample ID: WP-584-82-132-1

Lab Sample ID: 500-254304-1

Date Collected: 07/28/24 09:50

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/03/24 00:45
Total/NA	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/03/24 00:35
Dissolved	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 18:57
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 18:53
Dissolved	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 20:21
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:41
Dissolved	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Dissolved	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 13:14
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 13:10
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	SM 2340B		1	781916	PFK	EET CHI	08/16/24 14:48
Total/NA	Analysis	300.0		50	781160	W1T	EET CHI	08/14/24 03:53
Total/NA	Analysis	300.0		1	779249	W1T	EET CHI	07/31/24 15:24
Total/NA	Analysis	300.0		1	779250	W1T	EET CHI	07/31/24 15:24
Total/NA	Prep	Distill/CN			780716	AC	EET CHI	08/09/24 11:42 - 08/09/24 12:12 [1]
Total/NA	Analysis	335.4		1	780798	KF	EET CHI	08/10/24 11:11
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:33
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:13
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 01:55
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779370	CLB	EET CHI	08/01/24 03:24
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:45 - 08/02/24 16:47 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:43 - 08/01/24 22:47 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	780802	TR	EET CHI	08/09/24 04:21

Client Sample ID: WP-584-82-132-1 FB

Lab Sample ID: 500-254304-2

Date Collected: 07/28/24 00:00

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 19:01

Client Sample ID: WP-584-82-132-2

Lab Sample ID: 500-254304-3

Date Collected: 07/28/24 11:15

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Dissolved	Analysis	1630		1	2513	CL	EET SSM	08/03/24 01:05
Total/NA	Prep	1630			2496	AJD	EET SSM	08/02/24 11:02
Total/NA	Analysis	1630		1	2513	CL	EET SSM	08/03/24 00:55
Dissolved	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 19:10
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 19:05
Dissolved	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 20:25
Total Recoverable	Prep	1638			2504	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:45
Dissolved	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Dissolved	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 13:16
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	6020B		1	781875	RN	EET CHI	08/16/24 13:12
Total Recoverable	Prep	3005A			781335	BDE	EET CHI	08/14/24 08:44 - 08/14/24 14:44 [1]
Total Recoverable	Analysis	SM 2340B		1	781916	PFK	EET CHI	08/16/24 14:48
Total/NA	Analysis	300.0		50	781160	W1T	EET CHI	08/14/24 04:38
Total/NA	Analysis	300.0		1	779012	W1T	EET CHI	07/30/24 15:31
Total/NA	Analysis	300.0		1	779013	W1T	EET CHI	07/30/24 15:31
Total/NA	Prep	Distill/CN			780716	AC	EET CHI	08/09/24 11:42 - 08/09/24 12:12 [1]
Total/NA	Analysis	335.4		1	780798	KF	EET CHI	08/10/24 11:15
Total/NA	Prep	Distill/Ammonia			781617	EB	EET CHI	08/15/24 11:06 - 08/15/24 12:06 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:34
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:14
Total/NA	Analysis	SM 2320B		1	780255	SO	EET CHI	08/07/24 02:05
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	779370	CLB	EET CHI	08/01/24 03:27
Total/NA	Analysis	SM 2540D		1	779749	SO	EET CHI	08/02/24 16:47 - 08/02/24 16:50 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779580	CLB	EET CHI	08/01/24 22:47 - 08/01/24 22:51 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781274	TR	EET CHI	08/13/24 22:07

Client Sample ID: WP-584-82-132-2 FB

Lab Sample ID: 500-254304-4

Date Collected: 07/28/24 00:00

Matrix: Water

Date Received: 07/30/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2505	AJD	EET SSM	08/02/24 19:14

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-254304-1
Project/Site: FOTH - White Pines, MI

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	08-07-24
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	08-07-24
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone 708-534-5200 Fax 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Justin Bowa	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 500-126105-50170 4
Client Contact: Jakob Wartman	Phone: 920-858 1535	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin:	Page: Page 1 of 1 (Page 4 of 5)
Company: Foth Infrastructure & Environment, LLC	PWSID			Job #: 500-254304

Address: Missabe Building 227 West 1st. Street, Suite 920
City: Duluth
State, Zip: MN, 55802
Phone: 218-481-6014(Tel)
Email: Jakob Wartman@foth com
Project Name: FOTH - White Pines, MI
Site

500-254304 COC

Due Date Requested:
TAT Requested (days): Standard
Compliance Project: Δ Yes Δ No
PO #: Purchase Order not required
WO #:
Project #: 50023463
SSOW#:

Preservation Codes
N None
S H2SO4
CB ZnAcetate/NaOH
B NaOH
D HNO3
Other:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1631E - Mercury, Low Level (CVAFS)	1631E - Dissolved Mercury, Low Level (FF)	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, SM2520_B	350.1, 365.1	SM4500_S2_F - Sulfide	335.4 - Cyanide, Total	SM5310_DOC_C - DOC	6020B, SM2340B	6020B - Dissolved Metals (ICP/MS) - 27 elements	3500_CR_B - Chromium, Hexavalent	3500_CR_B - Dissolved Chromium, Hexavalent (field fi	1638 - Uranium only (ICP/MS)	1638 - Dissolved Uranium only (ICP/MS) (f	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	S	CB	B	S	D	D	N	N	D	D		
1/2 3/4 WP 584-82-132-1 / FB	07/28/24	0450	G	Water			X	X	X	X	X	X	X	X	X		X	X	X	3	
WP-584-82 132 2 / FB	7/28/24	1115	G	Water			x	x	x	x	x	x	x	x	x		x	x	x	3	Be aware of hold times
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by: ~~Justin~~	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Justin Bowa	7/29/24 0900	Foth	Shri Kadt	7/30/24 0945	EEN
2	Relinquished by	Date/Time	Company	Received by: Shri Kadt	7/30/24 0950	EEN
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No:
Cooler Temperature(s) °C and Other Remarks: 4.3→4.3, 1.9→1.8, 5.8→5.7, 9.8→9.5


JUSTIN BROWN
WHITE PINE COPPER
35503 MALL CIRCLE
WHITE PINE, MI 49971
UNITED STATES US
ACTWGT: 25.00 LB MAN
CAD: 0780307/CAFE3808
TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.
UNIVERSITY PARK IL 60484
(708) 634-6200
REF:
INV:
PO:
DEPT:
RMA:
FedEx Express
TRK# 0221 7414 0291 7323
TUE - 30 JUL AA
PRIORITY OVERNIGHT
XP JOTA
60484
IL-US
ORD
5025547 29Jul2024 CHXA 581G6/A12D/C0B8


JUSTIN BROWN
WHITE PINE COPPER
35503 MALL CIRCLE
WHITE PINE, MI 49971
UNITED STATES US
ACTWGT: 25.00 LB MAN
CAD: 0780307/CAFE3808
TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.
UNIVERSITY PARK IL 60484
(708) 634-6200
REF:
INV:
PO:
DEPT:
RMA:
FedEx Express
TRK# 0221 7414 0291 7301
TUE - 30 JUL AA
PRIORITY OVERNIGHT
XP JOTA
60484
IL-US
ORD

JUSTIN BROWN
WHITE PINE COPPER
35503 MALL CIRCLE

WHITE PINE, MI 49971
UNITED STATES US

ACTWGT: 25.00 LB MAN
CAD: 0780307/CAFE3808

Part # 165969-494 MTWEXP'01/25

TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.

43-742

UNIVERSITY PARK IL 60484

(708) 634-6200 REF:
INV:
PO: DEPT:

RMA:

FedEx Express

J241023112201uv

RETURNS MON-SAT
TUE - 30 JUL AA
PRIORITY OVERNIGHT

FedEx
TRK# 0221 7414 0291 7345

60484
IL-US
ORD

XP JOTA

5025547 29Jul2024 CMXA 581G6/A12D/C0B8

ORIGIN ID:OLVA (800) 463-3339

FEDEX OVERGOODS
2841 DEMOCRAT ROAD

MEMPHIS, TN 38118
UNITED STATES US

SHIP DATE: 30JUL24
ACTWGT: 30.00 LB
CAD: 251405390/WSXI3100

BILL THIRD PARTY

TO ATTN: SAMPLE RECIEVING
EUROFINS TESTAMERICA (CHICAGO)
EUROFINS TESTAMERICA (CHICAGO)
2417 BOND ST
UNIVERSITY PARK IL 60484

(708) 634-6200 REF: PK:16890547
INV:
PO: DEPT:

FedEx Express

J243024071301uv

REL# 3785346

WED - 31 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0201 2776 7423 5233

XS JOTA

60484
IL-US ORD

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins
Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191133.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note)		Job #: 500-254304-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/19/2024			Preservation Codes: -
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: FOTH - White Pines, MI	Project #: 50023463			
Site	SSOW#			Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (f	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	1630_ME/1630_Dist_PFP Methyl Mercury	1631E/ Mercury, Low Level (CVAFS)	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (FF)	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
WP-584-82-132-1 (500-254304-1)	7/28/24	09:50 Eastern		Water			X	X	X	X	X	X	8	
WP-584-82-132-1 FB (500-254304-2)	7/28/24	Eastern		Water							X		2	
WP-584-82-132-2 (500-254304-3)	7/28/24	11:15 Eastern		Water			X	X	X	X	X	X	8	
WP-584-82-132-1 FB (500-254304-4)	7/28/24	Eastern		Water							X		2	
														Ls Blk

Therm. ID: SC0[illegible] Cust. Seal: (Y) / N
Uncorr./Corr. Temp: 1.3 1.3 °C
Delivery: UPS / FedEx / Other [illegible]
Ice Type: Blue / Dry / Wet / None
Label Ver. V Packing: B

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwar accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Chicago attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed 7051 7620 4878	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	07/31/24 1530	EETA	[signature]	8/1/24 9:38	EETA
2						
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191131.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254283-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/20/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
MW-31_20240730 (500-254283-1)	7/30/24	09:20 Eastern		Water			X	X	X	X	X	X	8	
MW-31_20240730_FBLL (500-254283-2)	7/30/24	09:20 Eastern		Water				X					2	

Therm. ID: SC02 Cust. Seal: (Y) / N
Uncorr./Corr. Temp: 3 / 1.7 °C
Delivery: UPS / FedEx / Other: _____
Ice Type: Blue / Dry / Wet / None
Label Ver. 2 Packing: B

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarde accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Chicago attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed 7051 7620 4878	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	07/31/24 1530	EETA	[signature]	8/1/24 9:35	ELPS
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191130.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254282-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/20/2024			Preservation Codes: -
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
SBD-01_20240729 (500-254282-1)	7/29/24	15:30 Eastern		Water			X	X	X	X	X	X	8	
SBD-01_20240729_FBLL (500-254282-2)	7/29/24	15:30 Eastern		Water				X					2	

Ly Blue

Therm. ID: SC02 Cust. Seal: (Y) / N
Uncorr./Corr. Temp: 1.3 / 1.5 °C
Delivery: UPS / FedEx / Other: ____
Ice Type: Blue / Dry / Wet / None
Label Ver.: ____ Packing: D

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Chicago attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed 7051 7620 4878	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	07/31/24 1530	EETA	[signature]	8/1/24 9:35	[illegible]
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 500-191128.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Michigan	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State - Wisconsin		Job #: 500-254281-1
Address: 5755 8th Street East, ,	Due Date Requested: 8/20/2024			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #			
Email	WO #			
Project Name: White Pines, MI	Project #: 50023455			
Site	SSOW#			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1638/1638_Prep_W Uranium only (ICP/MS)	1631E/ Mercury, Low Level (CVAFS)	1630_ME/1630_Dist_PFP Methyl Mercury	1638/FIELD_FLTRD Dissolved Uranium only (ICP/MS) (field f	1631E/FIELD_FLTRD Dissolved Mercury, Low Level (CVAFS) (fi	1630_ME/FIELD_FLTRD Dissolved Methyl Mercury (field filtered	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
PNC-02_20240729 (500-254281-1)	7/29/24	17:20 Eastern		Water			X	X	X	X	X	X	8	
PNC-02_20240729_FBLL (500-254281-2)	7/29/24	17:20 Eastern		Water				X					2	

Lg Blue

Therm. ID: SC02 Cust. Seal: Y / N
Uncorr./Corr. Temp: 1.3 / 1.2 °C
Delivery: UPS / FedEx / Other: ____
Ice Type: Blue / Dry / Wet / None
Label Ver.: ____ Packing: D

Note Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Chicago attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed 7051 7620 4878	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	07/31/24 1530	EET A	[signature]	8/1/24 9:35	EET S
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 04/02/2024

Login Sample Receipt Checklist

Client: Foth Infrastructure & Environment, LLC

Job Number: 500-254304-1

Login Number: 254304
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	4.2,1.8,5.7,9.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Foth Infrastructure & Environment, LLC

Job Number: 500-254304-1

Login Number: 254304
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/01/24 01:51 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

500-254304 Field Sheet

Date:	8/1/2024
End Time:	17:05
pH Paper Lot:	324723
Analyst:	VL

Preservative ID	Preservative Type	Container ID
A	Hydrochloric Acid	na
A	Nitric Acid	na
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254304-J-3	<2				
500-254304-K-3	<2				
500-254304-M-1	<2				
500-254304-L-1	<2				
500-254304-E-1	<2				
500-254304-F-1	<2				
500-254304-E-3	<2				
500-254304-F-3	<2				

VL 8/2/24

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 1:12:22 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254363-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



Generated
8/21/2024 1:12:22 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254363-1

Receipt
The samples were received on 08/01/24 09:50. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.4º C.

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 500-782080 was above the upper control limit. The affected analytes are: Lead. Sample results were below the reporting limit, and have been reported as qualified data.

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-22908 (Incomplete Integration)
- CCB (Incomplete Integration)

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-23405 (Incomplete Integration)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779470 contained Nitrate as N and Nitrate Nitrite as N above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 335.4: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 500-780478 and analytical batch 500-781207 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 335.4: The initial calibration verification (ICV) associated with batch 500-780762 recovered above the upper control limit for Cyanide, Total. The samples associated with this ICV were rerun for for the affected analytes and only the batch MB and LCS are impacted; therefore, the data have been reported. The associated samples are impacted: (ICV 500-780478/27-A), (LCS 500-780478/2-A) and (MB 500-780478/1-A).

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254363-1

Client Sample ID: MW-3A_20240730

Lab Sample ID: 500-254363-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.27	J	0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	0.22	J	0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	6.1		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	6.9		0.030	0.0098	ug/L	1		1638	Dissolved
Arsenic	0.75	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	720		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	380	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	210000		200	44	ug/L	1		6020B	Total Recoverable
Cobalt	0.44	J	1.0	0.40	ug/L	1		6020B	Total Recoverable
Copper	1.3	J	2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	1100		100	47	ug/L	1		6020B	Total Recoverable
Lithium	95		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	43000		200	49	ug/L	1		6020B	Total Recoverable
Manganese	540		2.5	0.79	ug/L	1		6020B	Total Recoverable
Potassium	1700		500	110	ug/L	1		6020B	Total Recoverable
Sodium	170000		200	77	ug/L	1		6020B	Total Recoverable
Strontium	4500		4.0	0.64	ug/L	1		6020B	Total Recoverable
Arsenic	0.58	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	800		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	390	B	50	13	ug/L	1		6020B	Dissolved
Calcium	230000		200	44	ug/L	1		6020B	Dissolved
Cobalt	0.44	J	1.0	0.40	ug/L	1		6020B	Dissolved
Copper	0.70	J	2.0	0.50	ug/L	1		6020B	Dissolved
Iron	1300		100	47	ug/L	1		6020B	Dissolved
Lithium	96		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	47000		200	49	ug/L	1		6020B	Dissolved
Manganese	550		2.5	0.79	ug/L	1		6020B	Dissolved
Potassium	1900		500	110	ug/L	1		6020B	Dissolved
Sodium	170000		200	77	ug/L	1		6020B	Dissolved
Strontium	4800		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	700		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	4.3		1.0	0.18	mg/L	1		300.0	Total/NA
Chloride	380		20	2.3	mg/L	20		300.0	Total/NA
Sulfate	2.5		1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	400		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	400		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	1.1		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	1100		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	2.0	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	2.3		1.0	0.47	mg/L	1		SM 5310C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Client Sample ID: MW-3A_20240730 (Continued) — Lab Sample ID: 500-254363-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dissolved Organic Carbon	2.6		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: MW-3A_20240730_FBLL — Lab Sample ID: 500-254363-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.24	J	0.50	0.20	ng/L	1		1631E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254363-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254363-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254363-1	MW-3A_20240730	Water	07/30/24 17:10	08/01/24 09:50
500-254363-2	MW-3A_20240730_FBLL	Water	07/30/24 17:10	08/01/24 09:50

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254363-1

Client Sample ID: MW-3A_20240730

Date Collected: 07/30/24 17:10
Date Received: 08/01/24 09:50

Lab Sample ID: 500-254363-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 23:10	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 23:20	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.27**	**J**	0.50	0.20	ng/L			08/08/24 17:19	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.22**	**J**	0.50	0.20	ng/L			08/08/24 17:31	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**6.1**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 20:32	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**6.9**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 20:39	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 20:08	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 20:08	1
Arsenic	**0.75**	**J**	1.0	0.23	ug/L		08/14/24 15:44	08/16/24 20:08	1
Barium	**720**		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 20:08	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 20:08	1
Boron	**380**	**B**	50	13	ug/L		08/14/24 15:44	08/19/24 13:33	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 20:08	1
Calcium	**210000**		200	44	ug/L		08/14/24 15:44	08/16/24 20:08	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 20:08	1
Cobalt	**0.44**	**J**	1.0	0.40	ug/L		08/14/24 15:44	08/16/24 20:08	1
Copper	**1.3**	**J**	2.0	0.50	ug/L		08/14/24 15:44	08/16/24 20:08	1
Iron	**1100**		100	47	ug/L		08/14/24 15:44	08/16/24 20:08	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 20:08	1
Lithium	**95**		10	2.5	ug/L		08/14/24 15:44	08/16/24 20:08	1
Magnesium	**43000**		200	49	ug/L		08/14/24 15:44	08/16/24 20:08	1
Manganese	**540**		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 20:08	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 20:08	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 20:08	1
Potassium	**1700**		500	110	ug/L		08/14/24 15:44	08/16/24 20:08	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 20:08	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 20:08	1
Sodium	**170000**		200	77	ug/L		08/14/24 15:44	08/19/24 13:33	1
Strontium	**4500**		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 20:08	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 20:08	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 20:08	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 20:08	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 20:08	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254363-1

Client Sample ID: MW-3A_20240730

Date Collected: 07/30/24 17:10
Date Received: 08/01/24 09:50

Lab Sample ID: 500-254363-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:57	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:57	1
Arsenic	**0.58**	**J**	1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:57	1
Barium	**800**		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:57	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:57	1
Boron	**390**	**B**	50	13	ug/L		08/14/24 15:44	08/19/24 13:21	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:57	1
Calcium	**230000**		200	44	ug/L		08/14/24 15:44	08/16/24 19:57	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:57	1
Cobalt	**0.44**	**J**	1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:57	1
Copper	**0.70**	**J**	2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:57	1
Iron	**1300**		100	47	ug/L		08/14/24 15:44	08/16/24 19:57	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:57	1
Lithium	**96**		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:57	1
Magnesium	**47000**		200	49	ug/L		08/14/24 15:44	08/16/24 19:57	1
Manganese	**550**		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:57	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:57	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:57	1
Potassium	**1900**		500	110	ug/L		08/14/24 15:44	08/16/24 19:57	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:57	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:57	1
Sodium	**170000**		200	77	ug/L		08/14/24 15:44	08/19/24 13:21	1
Strontium	**4800**		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:57	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:57	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:57	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:57	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:57	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**700**		0.91	0.46	mg/L		08/14/24 15:44	08/19/24 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**4.3**		1.0	0.18	mg/L			08/01/24 13:04	1
Nitrate as N (EPA 300.0)	<0.043		1.0	0.043	mg/L			08/01/24 13:04	1
Chloride (EPA 300.0)	**380**		20	2.3	mg/L			08/14/24 04:53	20
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			08/01/24 13:04	1
Fluoride (EPA 300.0)	<0.19		1.0	0.19	mg/L			08/01/24 13:04	1
Nitrate Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			08/01/24 13:04	1
Sulfate (EPA 300.0)	**2.5**		1.0	0.21	mg/L			08/01/24 13:04	1
Cyanide, Total (EPA 335.4)	<0.0036	F1	0.0050	0.0036	mg/L		08/08/24 10:22	08/10/24 13:00	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/16/24 11:19	08/16/24 14:49	1
Phosphorus as P (EPA 365.1)	<0.024	F1 ^1- *- F2	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:14	1
Alkalinity (SM 2320B)	**400**		5.0	3.7	mg/L			08/07/24 19:54	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**400**		5.0	3.7	mg/L			08/07/24 19:54	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 19:54	1
Salinity (SM 2520B)	**1.1**		0.33	0.33	psu			08/19/24 08:00	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254363-1

Client Sample ID: MW-3A_20240730
Date Collected: 07/30/24 17:10
Date Received: 08/01/24 09:50

Lab Sample ID: 500-254363-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1100		10	4.3	mg/L			08/05/24 00:19	1
Total Suspended Solids (SM 2540D)	2.0	J	5.0	1.9	mg/L			08/06/24 14:09	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/05/24 22:46	1
Total Organic Carbon (SM 5310C)	2.3		1.0	0.47	mg/L			08/13/24 21:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	2.6		1.0	0.47	mg/L			08/13/24 08:18	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254363-1

Client Sample ID: MW-3A_20240730_FBLL
Date Collected: 07/30/24 17:10
Date Received: 08/01/24 09:50

Lab Sample ID: 500-254363-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.24	J	0.50	0.20	ng/L			08/08/24 17:35	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254363-1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Dissolved	Water	1638	
500-254363-1	MW-3A_20240730	Total Recoverable	Water	1638	
MB 350-2507/1-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2507/2-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2507/3-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Dissolved	Water	1638	2507
500-254363-1	MW-3A_20240730	Total Recoverable	Water	1638	2507
MB 350-2507/1-A	Method Blank	Total Recoverable	Water	1638	2507
LCS 350-2507/2-A	Lab Control Sample	Total Recoverable	Water	1638	2507
LCSD 350-2507/3-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2507

Analysis Batch: 2531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Dissolved	Water	1631E	
500-254363-1	MW-3A_20240730	Total/NA	Water	1631E	
500-254363-2	MW-3A_20240730_FBLL	Total/NA	Water	1631E	
MB 350-2531/17	Method Blank	Total/NA	Water	1631E	
MB 350-2531/18	Method Blank	Total/NA	Water	1631E	
MB 350-2531/19	Method Blank	Total/NA	Water	1631E	
LCS 350-2531/28	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2531/29	Lab Control Sample Dup	Total/NA	Water	1631E	

Prep Batch: 2547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Dissolved	Water	1630	
500-254363-1	MW-3A_20240730	Total/NA	Water	1630	
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Dissolved	Water	1630	2547
500-254363-1	MW-3A_20240730	Total/NA	Water	1630	2547
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	2547
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	2547
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2547

Prep Batch: 781453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Dissolved	Water	3005A	
500-254363-1	MW-3A_20240730	Total Recoverable	Water	3005A	
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals

Analysis Batch: 782080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Dissolved	Water	6020B	781453
500-254363-1	MW-3A_20240730	Total Recoverable	Water	6020B	781453
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

Analysis Batch: 782135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total Recoverable	Water	SM 2340B	781453

Analysis Batch: 782199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Dissolved	Water	6020B	781453
500-254363-1	MW-3A_20240730	Total Recoverable	Water	6020B	781453
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

General Chemistry

Analysis Batch: 779469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	300.0	
MB 500-779469/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779469/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	300.0	
MB 500-779470/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779470/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	SM 2540C	
MB 500-779810/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779810/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 779991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	SM 4500 S2 F	
MB 500-779991/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779991/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 780106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	SM 2540D	
MB 500-780106/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-780106/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 780451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 780451 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780451/28	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780451/29	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	Distill/CN	
MB 500-780478/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
500-254363-1 MS	MW-3A_20240730	Total/NA	Water	Distill/CN	
500-254363-1 MSD	MW-3A_20240730	Total/NA	Water	Distill/CN	

Analysis Batch: 780762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780478/1-A	Method Blank	Total/NA	Water	335.4	780478
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	335.4	780478

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
500-254363-1 MS	MW-3A_20240730	Total/NA	Water	365.2/365.3/365	
500-254363-1 MSD	MW-3A_20240730	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Dissolved	Water	SM 5310C	
MB 500-781098/31	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781098/32	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 781160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	300.0	
MB 500-781160/35	Method Blank	Total/NA	Water	300.0	
LCS 500-781160/36	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 781207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	335.4	780478
500-254363-1 MS	MW-3A_20240730	Total/NA	Water	335.4	780478
500-254363-1 MSD	MW-3A_20240730	Total/NA	Water	335.4	780478

Analysis Batch: 781274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	SM 5310C	
MB 500-781274/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781274/8	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	365.1	780970

General Chemistry (Continued)

Analysis Batch: 781671 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970
500-254363-1 MS	MW-3A_20240730	Total/NA	Water	365.1	780970
500-254363-1 MSD	MW-3A_20240730	Total/NA	Water	365.1	780970

Prep Batch: 781826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	Distill/Ammonia	
MB 500-781826/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781826/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 782060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	SM 2520B	
500-254363-1 DU	MW-3A_20240730	Total/NA	Water	SM 2520B	

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254363-1	MW-3A_20240730	Total/NA	Water	350.1	781826
MB 500-781826/1-A	Method Blank	Total/NA	Water	350.1	781826
LCS 500-781826/2-A	Lab Control Sample	Total/NA	Water	350.1	781826

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2547/1-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:14	1

Lab Sample ID: MB 350-2547/2-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:24	1

Lab Sample ID: MB 350-2547/3-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:34	1

Lab Sample ID: LCS 350-2547/4-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.984		ng/L		98	65 - 135

Lab Sample ID: LCSD 350-2547/5-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.971		ng/L		97	65 - 135	1	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2531/17
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 13:47	1

Lab Sample ID: MB 350-2531/18
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 13:51	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2531/19
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 13:55	1

Lab Sample ID: LCS 350-2531/28
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.74		ng/L		95	77 - 123

Lab Sample ID: LCSD 350-2531/29
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.80		ng/L		96	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2507/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:14	1

Lab Sample ID: LCS 350-2507/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	21.7		ug/L		87	85 - 115

Lab Sample ID: LCSD 350-2507/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2507

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	23.0		ug/L		92	85 - 115	6	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:23	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:23	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:23	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:23	1
Calcium	<44		200	44	ug/L		08/14/24 15:44	08/16/24 19:23	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:23	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:23	1
Iron	<47		100	47	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Magnesium	<49		200	49	ug/L		08/14/24 15:44	08/16/24 19:23	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:23	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:23	1
Potassium	<110		500	110	ug/L		08/14/24 15:44	08/16/24 19:23	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:23	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:23	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:23	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:23	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:23	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:23	1

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	45.9	J	50	13	ug/L		08/14/24 15:44	08/19/24 12:47	1
Sodium	<77		200	77	ug/L		08/14/24 15:44	08/19/24 12:47	1

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2130		ug/L		107	80 - 120
Antimony	500	533		ug/L		107	80 - 120
Arsenic	100	99.6		ug/L		100	80 - 120
Barium	500	559		ug/L		112	80 - 120
Beryllium	50.0	48.2		ug/L		96	80 - 120
Cadmium	50.0	52.5		ug/L		105	80 - 120
Calcium	10000	9100		ug/L		91	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	528		ug/L		106	80 - 120
Copper	250	268		ug/L		107	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	110	^1+	ug/L		110	80 - 120
Lithium	100	102		ug/L		102	80 - 120
Magnesium	10000	10900		ug/L		109	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Manganese	500	532		ug/L		106	80 - 120
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	537		ug/L		107	80 - 120
Potassium	10000	11000		ug/L		110	80 - 120
Selenium	100	101		ug/L		101	80 - 120
Silver	50.0	52.1		ug/L		104	80 - 120
Strontium	1000	1080		ug/L		108	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1070		ug/L		107	80 - 120
Vanadium	500	521		ug/L		104	80 - 120
Zinc	500	526		ug/L		105	80 - 120

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1070		ug/L		107	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779469/3
Matrix: Water
Analysis Batch: 779469

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			08/01/24 11:48	1
Fluoride	<0.19		1.0	0.19	mg/L			08/01/24 11:48	1
Sulfate	<0.21		1.0	0.21	mg/L			08/01/24 11:48	1

Lab Sample ID: LCS 500-779469/4
Matrix: Water
Analysis Batch: 779469

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	19.5		mg/L		98	90 - 110
Fluoride	20.0	19.9		mg/L		100	90 - 110
Sulfate	20.0	20.6		mg/L		103	90 - 110

Lab Sample ID: MB 500-779470/3
Matrix: Water
Analysis Batch: 779470

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.106	J	1.0	0.043	mg/L			08/01/24 11:48	1
Nitrite as N	<0.070		1.0	0.070	mg/L			08/01/24 11:48	1
Nitrate Nitrite as N	0.106	J	1.0	0.070	mg/L			08/01/24 11:48	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-779470/4
Matrix: Water
Analysis Batch: 779470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate as N			20.0	20.2		mg/L		101	90 - 110		
Nitrite as N			20.0	20.1		mg/L		101	90 - 110		
Nitrate Nitrite as N			40.0	40.3		mg/L		101	90 - 110		

Lab Sample ID: MB 500-781160/35
Matrix: Water
Analysis Batch: 781160

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.12		1.0	0.12	mg/L			08/13/24 21:03	1

Lab Sample ID: LCS 500-781160/36
Matrix: Water
Analysis Batch: 781160

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			20.0	19.4		mg/L		97	90 - 110		

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780478/1-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036	^1+	0.0050	0.0036	mg/L		08/08/24 10:22	08/09/24 13:04	1

Lab Sample ID: LCS 500-780478/2-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780478

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Cyanide, Total			0.100	0.0898	^1+	mg/L		90	90 - 110		

Lab Sample ID: 500-254363-1 MS
Matrix: Water
Analysis Batch: 781207

Client Sample ID: MW-3A_20240730
Prep Type: Total/NA
Prep Batch: 780478

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Cyanide, Total	<0.0036	F1	0.100	0.0735	F1	mg/L		74	90 - 110		

Lab Sample ID: 500-254363-1 MSD
Matrix: Water
Analysis Batch: 781207

Client Sample ID: MW-3A_20240730
Prep Type: Total/NA
Prep Batch: 780478

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cyanide, Total	<0.0036	F1	0.100	0.0712	F1	mg/L		71	90 - 110	3	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781826/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781826

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/16/24 11:19	08/16/24 14:49	1

Lab Sample ID: LCS 500-781826/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781826

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.95		mg/L		97	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Lab Sample ID: 500-254363-1 MS
Matrix: Water
Analysis Batch: 781671

Client Sample ID: MW-3A_20240730
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	<0.024	F1 ^1- *- F2	0.250	0.242	^1-	mg/L		97	75 - 125

Lab Sample ID: 500-254363-1 MSD
Matrix: Water
Analysis Batch: 781671

Client Sample ID: MW-3A_20240730
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phosphorus as P	<0.024	F1 ^1- *- F2	0.250	0.193	^1- F2	mg/L		77	75 - 125	23	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780451/28
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/07/24 17:20	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 17:20	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 17:20	1

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 500-780451/29
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	110		mg/L		110	95 - 121

Method: SM 2520B - Salinity

Lab Sample ID: 500-254363-1 DU
Matrix: Water
Analysis Batch: 782060

Client Sample ID: MW-3A_20240730
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Salinity	1.1		1.07		psu		0	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779810/1
Matrix: Water
Analysis Batch: 779810

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/05/24 00:12	1

Lab Sample ID: LCS 500-779810/2
Matrix: Water
Analysis Batch: 779810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	238		mg/L		95	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-780106/1
Matrix: Water
Analysis Batch: 780106

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/06/24 13:36	1

Lab Sample ID: LCS 500-780106/2
Matrix: Water
Analysis Batch: 780106

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	187		mg/L		94	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779991/1
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/05/24 22:17	1

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: LCS 500-779991/2
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			3.64	3.20		mg/L		88	85 - 115		

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781274/7
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 14:39	1

Lab Sample ID: LCS 500-781274/8
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			10.0	10.1		mg/L		101	86 - 116		

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781098/31
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 08:18	1

Lab Sample ID: LCS 500-781098/32
Matrix: Water
Analysis Batch: 781098

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			10.0	10.2		mg/L		102	86 - 116		

Client Sample ID: MW-3A_20240730

Lab Sample ID: 500-254363-1

Date Collected: 07/30/24 17:10

Matrix: Water

Date Received: 08/01/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Dissolved	Analysis	1630		1	2565	CL	EET SSM	08/14/24 23:20
Total/NA	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Total/NA	Analysis	1630		1	2565	CL	EET SSM	08/14/24 23:10
Dissolved	Analysis	1631E		1	2531	AJD	EET SSM	08/08/24 17:31
Total/NA	Analysis	1631E		1	2531	AJD	EET SSM	08/08/24 17:19
Dissolved	Prep	1638			2507	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 20:39
Total Recoverable	Prep	1638			2507	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 20:32
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 19:57
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 13:21
Total Recoverable	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Total Recoverable	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 20:08
Total Recoverable	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Total Recoverable	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 13:33
Total Recoverable	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Total Recoverable	Analysis	SM 2340B		1	782135	DAJ	EET CHI	08/19/24 09:57
Total/NA	Analysis	300.0		1	779469	NMB	EET CHI	08/01/24 13:04
Total/NA	Analysis	300.0		1	779470	NMB	EET CHI	08/01/24 13:04
Total/NA	Analysis	300.0		20	781160	W1T	EET CHI	08/14/24 04:53
Total/NA	Prep	Distill/CN			780478	AC	EET CHI	08/08/24 10:22 - 08/08/24 10:52 [1]
Total/NA	Analysis	335.4		1	781207	AC	EET CHI	08/10/24 13:00
Total/NA	Prep	Distill/Ammonia			781826	EB	EET CHI	08/16/24 11:19 - 08/16/24 12:19 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:49
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:14
Total/NA	Analysis	SM 2320B		1	780451	SO	EET CHI	08/07/24 19:54
Total/NA	Analysis	SM 2520B		1	782060	TR	EET CHI	08/19/24 08:00
Total/NA	Analysis	SM 2540C		1	779810	CLB	EET CHI	08/05/24 00:19
Total/NA	Analysis	SM 2540D		1	780106	SO	EET CHI	08/06/24 14:09 - 08/06/24 14:11 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779991	CLB	EET CHI	08/05/24 22:46 - 08/05/24 22:49 [1]
Dissolved	Analysis	SM 5310C		1	781098	TR	EET CHI	08/13/24 08:18
Total/NA	Analysis	SM 5310C		1	781274	TR	EET CHI	08/13/24 21:11

Client Sample ID: MW-3A_20240730_FBLL

Lab Sample ID: 500-254363-2

Date Collected: 07/30/24 17:10

Matrix: Water

Date Received: 08/01/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2531	AJD	EET SSM	08/08/24 17:35

Lab Chronicle

Client: White Pine Copper LLC
Job ID: 500-254363-1
Project/Site: White Pines, MI

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254363-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1850	COC No: 500-126351-50241 55
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254363
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site	SSOW#:			

Analysis Requested

Preservation Codes:
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D - HNO3
A HCL

500-254363 COC

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TDL SM5810	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~3500_CR_B~~, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~3500_CR_B - Dissolved Chromium, Hex (field filtered)~~	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 MW-3A_20240730	07-30-24	1710	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18	
2 MW-3A_20240730_FBLL	07-30-24	1710	G	Water										J						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Elliott	7/30/24 2100	MSG		7/30/24 2100	MSG
2		7/31/24 1200	MSG	4051 7962 1850	7/31/24 1200	fedex
3				Stephanie Hernandez	8/1/24 0950	EETA

Custody Seals Intact. Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks 4.5+4.4

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1850	COC No: 500-126351-50241 56
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254363
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4, N None, CB ZnAcetate/NaOH, B NaOH, D HNO3, A HCL
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			Other
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
MW-3A-20240730	07-30-24	1710	G	Water			1	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	7/30/24 2100	MSG	[signature]	7/30/24 2100	MSG
2	[signature]	7/31/24 1200	MSG	4051 7962 1850	7/31/24 1200	Fedex
3				Stephanie Hernandez	8/1/24 0950	EETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks.


JED CHRESTENSEN
THE MANNIK & SMITH GROUP
616 SHELDEN AVE
SUITE 210
HOUGHTON, MI 49931
UNITED STATES US

ACTWGT: 25.00 LB MAN
CAD: 0780307/CAFE3808

Part # 158469-484 MTW EXP 01/25

TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484
(708) 534-6200

REF:
INV:
PO:
DEPT:

RMA:

FedEx Express

TRK# 0221 4051 7962 1850

RETURNS MON-SAT
PRIORITY OVERNIGHT
THU - 01 AUG AA
PRIORITY OVERNIGHT

FedEx
TRK# 0221 4051 7962 1850

XP JOTA

60484
IL-US
ORD

5878720 31Jul2024 CMXA 581G6/A12D/C0B8

500-254363 Waybi

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254363-1

Login Number: 254363
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254363-1

Login Number: 254363
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/05/24 11:24 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254363 Field Sheet

Date:	8/5/2024
End Time:	13:30
KI Paper Lot:	na
Analyst:	Y

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	19628
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
500-254363-A-1	A	Y	.8 2	
500-254363-B-1	A	Y	.8 2	
500-254363-C-1	A	Y	.8 2	
500-254363-D-1	A	Y	.8 2	
500-254363-A-2	A	Y	.8 2	
500-254363-B-2	A	Y	.8 2	

8/5/24

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/21/2024 12:39:12 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254364-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254364-1

Receipt
The samples were received on 8/1/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.8º C.

Metals
Method 6020B: The initial low level calibration verification (ICVL) result for batch 500-782080 was above the upper control limit. The affected analytes are: Lead. Sample results were below the reporting limit, and have been reported as qualified data.

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-22908 (Incomplete Integration)
- CCB (Incomplete Integration)

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- STD1-23405 (Incomplete Integration)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The method blank for analytical batch 500-779470 contained Nitrate as N and Nitrate Nitrite as N above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Methods 335.4, 9012B: The initial calibration verification (ICV) associated with batch 500-780762 recovered above the upper control limit for Cyanide, Total. The samples associated with this ICV were rerun for for the affected analytes and only the batch MB and LCS are impacted; therefore, the data have been reported. The associated samples are impacted: (ICV 500-780478/27-A), (LCS 500-780478/2-A) and (MB 500-780478/1-A).

Method 365.1: The initial calibration verification (ICV) associated with batch 500-781671 recovered below the lower control limit for Phosphorus as P. The ICV was out by 1% and the LCS was in control ; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Client Sample ID: MW-3B_20240730

Lab Sample ID: 500-254364-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl Mercury	0.25		0.050	0.022	ng/L	1		1630	Total/NA
Methyl Mercury	0.083		0.050	0.022	ng/L	1		1630	Dissolved
Mercury	0.51		0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	0.41	J	0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	39		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	37		0.030	0.0098	ug/L	1		1638	Dissolved
Arsenic	0.61	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	580		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	130	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	98000		200	44	ug/L	1		6020B	Total Recoverable
Cobalt	0.59	J	1.0	0.40	ug/L	1		6020B	Total Recoverable
Copper	0.54	J	2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	180		100	47	ug/L	1		6020B	Total Recoverable
Lithium	41		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	66000		200	49	ug/L	1		6020B	Total Recoverable
Manganese	780		2.5	0.79	ug/L	1		6020B	Total Recoverable
Nickel	0.94	J	2.0	0.63	ug/L	1		6020B	Total Recoverable
Potassium	2400		500	110	ug/L	1		6020B	Total Recoverable
Sodium	36000		200	77	ug/L	1		6020B	Total Recoverable
Strontium	1500		4.0	0.64	ug/L	1		6020B	Total Recoverable
Vanadium	4.6	J	5.0	2.2	ug/L	1		6020B	Total Recoverable
Arsenic	0.49	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	570		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	130	B	50	13	ug/L	1		6020B	Dissolved
Calcium	97000		200	44	ug/L	1		6020B	Dissolved
Cobalt	0.58	J	1.0	0.40	ug/L	1		6020B	Dissolved
Iron	170		100	47	ug/L	1		6020B	Dissolved
Lithium	41		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	64000		200	49	ug/L	1		6020B	Dissolved
Manganese	760		2.5	0.79	ug/L	1		6020B	Dissolved
Nickel	0.93	J	2.0	0.63	ug/L	1		6020B	Dissolved
Potassium	2300		500	110	ug/L	1		6020B	Dissolved
Sodium	37000		200	77	ug/L	1		6020B	Dissolved
Strontium	1400		4.0	0.64	ug/L	1		6020B	Dissolved
Vanadium	3.2	J	5.0	2.2	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	520		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Chloride	44		1.0	0.12	mg/L	1		300.0	Total/NA
Sulfate	14		1.0	0.21	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Client Sample ID: MW-3B_20240730 (Continued) — Lab Sample ID: 500-254364-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	430		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	430		5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	>0.33		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	500		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Organic Carbon	1.3		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	1.3		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: MW-3B_20240730_FBLL — Lab Sample ID: 500-254364-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254364-1	MW-3B_20240730	Water	07/30/24 18:10	08/01/24 09:50
500-254364-2	MW-3B_20240730_FBLL	Water	07/30/24 18:10	08/01/24 09:50

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Client Sample ID: MW-3B_20240730

Lab Sample ID: 500-254364-1

Date Collected: 07/30/24 18:10

Matrix: Water

Date Received: 08/01/24 09:50

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.25**		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 23:30	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.083**		0.050	0.022	ng/L		08/15/24 10:55	08/15/24 19:21	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.51**		0.50	0.20	ng/L			08/08/24 16:58	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.41**	**J**	0.50	0.20	ng/L			08/08/24 17:02	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**39**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 20:35	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**37**		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 19:01	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 20:10	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 20:10	1
Arsenic	**0.61**	**J**	1.0	0.23	ug/L		08/14/24 15:44	08/16/24 20:10	1
Barium	**580**		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 20:10	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 20:10	1
Boron	**130**	**B**	50	13	ug/L		08/14/24 15:44	08/19/24 13:35	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 20:10	1
Calcium	**98000**		200	44	ug/L		08/14/24 15:44	08/16/24 20:10	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 20:10	1
Cobalt	**0.59**	**J**	1.0	0.40	ug/L		08/14/24 15:44	08/16/24 20:10	1
Copper	**0.54**	**J**	2.0	0.50	ug/L		08/14/24 15:44	08/16/24 20:10	1
Iron	**180**		100	47	ug/L		08/14/24 15:44	08/16/24 20:10	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 20:10	1
Lithium	**41**		10	2.5	ug/L		08/14/24 15:44	08/16/24 20:10	1
Magnesium	**66000**		200	49	ug/L		08/14/24 15:44	08/16/24 20:10	1
Manganese	**780**		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 20:10	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 20:10	1
Nickel	**0.94**	**J**	2.0	0.63	ug/L		08/14/24 15:44	08/16/24 20:10	1
Potassium	**2400**		500	110	ug/L		08/14/24 15:44	08/16/24 20:10	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 20:10	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 20:10	1
Sodium	**36000**		200	77	ug/L		08/14/24 15:44	08/19/24 13:35	1
Strontium	**1500**		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 20:10	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 20:10	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 20:10	1
Vanadium	**4.6**	**J**	5.0	2.2	ug/L		08/14/24 15:44	08/16/24 20:10	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 20:10	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Client Sample ID: MW-3B_20240730

Date Collected: 07/30/24 18:10
Date Received: 08/01/24 09:50

Lab Sample ID: 500-254364-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:59	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:59	1
Arsenic	**0.49**	**J**	1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:59	1
Barium	**570**		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:59	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:59	1
Boron	**130**	**B**	50	13	ug/L		08/14/24 15:44	08/19/24 13:23	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:59	1
Calcium	**97000**		200	44	ug/L		08/14/24 15:44	08/16/24 19:59	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:59	1
Cobalt	**0.58**	**J**	1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:59	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:59	1
Iron	**170**		100	47	ug/L		08/14/24 15:44	08/16/24 19:59	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:59	1
Lithium	**41**		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:59	1
Magnesium	**64000**		200	49	ug/L		08/14/24 15:44	08/16/24 19:59	1
Manganese	**760**		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:59	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:59	1
Nickel	**0.93**	**J**	2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:59	1
Potassium	**2300**		500	110	ug/L		08/14/24 15:44	08/16/24 19:59	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:59	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:59	1
Sodium	**37000**		200	77	ug/L		08/14/24 15:44	08/19/24 13:23	1
Strontium	**1400**		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:59	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:59	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:59	1
Vanadium	**3.2**	**J**	5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:59	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:59	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**520**		0.91	0.46	mg/L		08/14/24 15:44	08/19/24 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	<0.18		1.0	0.18	mg/L			08/01/24 13:19	1
Nitrate as N (EPA 300.0)	<0.043		1.0	0.043	mg/L			08/01/24 13:19	1
Chloride (EPA 300.0)	**44**		1.0	0.12	mg/L			08/01/24 13:19	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			08/01/24 13:19	1
Fluoride (EPA 300.0)	<0.19		1.0	0.19	mg/L			08/01/24 13:19	1
Nitrate Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			08/01/24 13:19	1
Sulfate (EPA 300.0)	**14**		1.0	0.21	mg/L			08/01/24 13:19	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/08/24 10:22	08/10/24 13:06	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/16/24 11:19	08/16/24 14:50	1
Phosphorus as P (EPA 365.1)	<0.024	^1- *-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:15	1
Alkalinity (SM 2320B)	**430**		5.0	3.7	mg/L			08/07/24 20:04	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**430**		5.0	3.7	mg/L			08/07/24 20:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/07/24 20:04	1
Salinity (SM 2520B)	**>0.33**		0.33	0.33	psu			08/19/24 08:00	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Client Sample ID: MW-3B_20240730
Date Collected: 07/30/24 18:10
Date Received: 08/01/24 09:50

Lab Sample ID: 500-254364-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**500**		10	4.3	mg/L			08/05/24 00:22	1
Total Suspended Solids (SM 2540D)	<1.9		5.0	1.9	mg/L			08/06/24 13:57	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			08/05/24 22:49	1
Total Organic Carbon (SM 5310C)	**1.3**		1.0	0.47	mg/L			08/13/24 21:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	**1.3**		1.0	0.47	mg/L			08/15/24 14:55	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Client Sample ID: MW-3B_20240730_FBLL

Date Collected: 07/30/24 18:10
Date Received: 08/01/24 09:50

Lab Sample ID: 500-254364-2

Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 17:06	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Dissolved	Water	1638	
500-254364-1	MW-3B_20240730	Total Recoverable	Water	1638	
MB 350-2507/1-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2507/2-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2507/3-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Dissolved	Water	1638	2507
500-254364-1	MW-3B_20240730	Total Recoverable	Water	1638	2507
MB 350-2507/1-A	Method Blank	Total Recoverable	Water	1638	2507
LCS 350-2507/2-A	Lab Control Sample	Total Recoverable	Water	1638	2507
LCSD 350-2507/3-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2507

Analysis Batch: 2531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Dissolved	Water	1631E	
500-254364-1	MW-3B_20240730	Total/NA	Water	1631E	
500-254364-2	MW-3B_20240730_FBLL	Total/NA	Water	1631E	
MB 350-2531/17	Method Blank	Total/NA	Water	1631E	
MB 350-2531/18	Method Blank	Total/NA	Water	1631E	
MB 350-2531/19	Method Blank	Total/NA	Water	1631E	
LCS 350-2531/28	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2531/29	Lab Control Sample Dup	Total/NA	Water	1631E	

Prep Batch: 2547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	1630	
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Prep Batch: 2564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Dissolved	Water	1630	
MB 350-2564/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2564/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2564/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2564/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2564/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Analysis Batch: 2565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	1630	2547
MB 350-2547/1-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/2-A	Method Blank	Total/NA	Water	1630	2547
MB 350-2547/3-A	Method Blank	Total/NA	Water	1630	2547
LCS 350-2547/4-A	Lab Control Sample	Total/NA	Water	1630	2547
LCSD 350-2547/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2547

Metals

Analysis Batch: 2572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Dissolved	Water	1630	2564
MB 350-2564/1-A	Method Blank	Total/NA	Water	1630	2564
MB 350-2564/2-A	Method Blank	Total/NA	Water	1630	2564
MB 350-2564/3-A	Method Blank	Total/NA	Water	1630	2564
LCS 350-2564/4-A	Lab Control Sample	Total/NA	Water	1630	2564
LCSD 350-2564/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2564

Prep Batch: 781453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Dissolved	Water	3005A	
500-254364-1	MW-3B_20240730	Total Recoverable	Water	3005A	
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 782080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Dissolved	Water	6020B	781453
500-254364-1	MW-3B_20240730	Total Recoverable	Water	6020B	781453
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

Analysis Batch: 782136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total Recoverable	Water	SM 2340B	781453

Analysis Batch: 782199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Dissolved	Water	6020B	781453
500-254364-1	MW-3B_20240730	Total Recoverable	Water	6020B	781453
MB 500-781453/1-A	Method Blank	Total Recoverable	Water	6020B	781453
LCS 500-781453/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781453

General Chemistry

Analysis Batch: 779469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	300.0	
MB 500-779469/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779469/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	300.0	
MB 500-779470/3	Method Blank	Total/NA	Water	300.0	
LCS 500-779470/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 779810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	SM 2540C	
MB 500-779810/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-779810/2	Lab Control Sample	Total/NA	Water	SM 2540C	

General Chemistry

Analysis Batch: 779991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	SM 4500 S2 F	
MB 500-779991/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779991/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 780106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	SM 2540D	
MB 500-780106/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-780106/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 780451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	SM 2320B	
MB 500-780451/28	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-780451/29	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	Distill/CN	
MB 500-780478/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 780762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-780478/1-A	Method Blank	Total/NA	Water	335.4	780478
LCS 500-780478/2-A	Lab Control Sample	Total/NA	Water	335.4	780478

Prep Batch: 780970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	365.2/365.3/365	
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 781207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	335.4	780478

Analysis Batch: 781274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	SM 5310C	
MB 500-781274/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-781274/8	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 781671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	365.1	780970
MB 500-780970/1-A	Method Blank	Total/NA	Water	365.1	780970
LCS 500-780970/2-A	Lab Control Sample	Total/NA	Water	365.1	780970

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

General Chemistry

Prep Batch: 781826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	Distill/Ammonia	
MB 500-781826/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781826/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Dissolved	Water	SM 5310C	
MB 500-781988/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-781988/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 782060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	SM 2520B	

Analysis Batch: 782356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254364-1	MW-3B_20240730	Total/NA	Water	350.1	781826
MB 500-781826/1-A	Method Blank	Total/NA	Water	350.1	781826
LCS 500-781826/2-A	Lab Control Sample	Total/NA	Water	350.1	781826

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2547/1-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:14	1

Lab Sample ID: MB 350-2547/2-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:24	1

Lab Sample ID: MB 350-2547/3-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/13/24 11:12	08/14/24 18:34	1

Lab Sample ID: LCS 350-2547/4-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.984		ng/L		98	65 - 135

Lab Sample ID: LCSD 350-2547/5-A
Matrix: Water
Analysis Batch: 2565

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2547

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.971		ng/L		97	65 - 135	1	35

Lab Sample ID: MB 350-2564/1-A
Matrix: Water
Analysis Batch: 2572

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2564

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/15/24 10:55	08/15/24 17:28	1

Lab Sample ID: MB 350-2564/2-A
Matrix: Water
Analysis Batch: 2572

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2564

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/15/24 10:55	08/15/24 17:39	1

Lab Sample ID: MB 350-2564/3-A
Matrix: Water
Analysis Batch: 2572

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2564

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		08/15/24 10:55	08/15/24 17:49	1

Method: 1630 - Methyl Mercury

Lab Sample ID: LCS 350-2564/4-A
Matrix: Water
Analysis Batch: 2572

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2564

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methyl Mercury			1.00	1.01		ng/L		101	65 - 135		

Lab Sample ID: LCSD 350-2564/5-A
Matrix: Water
Analysis Batch: 2572

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2564

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury			1.00	0.969		ng/L		97	65 - 135	5	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2531/17
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 13:47	1

Lab Sample ID: MB 350-2531/18
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 13:51	1

Lab Sample ID: MB 350-2531/19
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			08/08/24 13:55	1

Lab Sample ID: LCS 350-2531/28
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.74		ng/L		95	77 - 123		

Lab Sample ID: LCSD 350-2531/29
Matrix: Water
Analysis Batch: 2531

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.80		ng/L		96	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2507/1-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		08/05/24 14:37	08/06/24 18:14	1

Lab Sample ID: LCS 350-2507/2-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	21.7		ug/L		87	85 - 115

Lab Sample ID: LCSD 350-2507/3-A
Matrix: Water
Analysis Batch: 2516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2507

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	23.0		ug/L		92	85 - 115	6	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/14/24 15:44	08/16/24 19:23	1
Antimony	<1.3		3.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Arsenic	<0.23		1.0	0.23	ug/L		08/14/24 15:44	08/16/24 19:23	1
Barium	<0.73		2.5	0.73	ug/L		08/14/24 15:44	08/16/24 19:23	1
Beryllium	<0.53		1.0	0.53	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cadmium	<0.17		0.50	0.17	ug/L		08/14/24 15:44	08/16/24 19:23	1
Calcium	<44		200	44	ug/L		08/14/24 15:44	08/16/24 19:23	1
Chromium	<1.1		5.0	1.1	ug/L		08/14/24 15:44	08/16/24 19:23	1
Cobalt	<0.40		1.0	0.40	ug/L		08/14/24 15:44	08/16/24 19:23	1
Copper	<0.50		2.0	0.50	ug/L		08/14/24 15:44	08/16/24 19:23	1
Iron	<47		100	47	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lead	<0.19	^1+	0.50	0.19	ug/L		08/14/24 15:44	08/16/24 19:23	1
Lithium	<2.5		10	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Magnesium	<49		200	49	ug/L		08/14/24 15:44	08/16/24 19:23	1
Manganese	<0.79		2.5	0.79	ug/L		08/14/24 15:44	08/16/24 19:23	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/14/24 15:44	08/16/24 19:23	1
Nickel	<0.63		2.0	0.63	ug/L		08/14/24 15:44	08/16/24 19:23	1
Potassium	<110		500	110	ug/L		08/14/24 15:44	08/16/24 19:23	1
Selenium	<0.98		2.5	0.98	ug/L		08/14/24 15:44	08/16/24 19:23	1
Silver	<0.12		0.50	0.12	ug/L		08/14/24 15:44	08/16/24 19:23	1
Strontium	<0.64		4.0	0.64	ug/L		08/14/24 15:44	08/16/24 19:23	1
Thallium	<0.57		2.0	0.57	ug/L		08/14/24 15:44	08/16/24 19:23	1
Tin	<1.3		5.0	1.3	ug/L		08/14/24 15:44	08/16/24 19:23	1
Vanadium	<2.2		5.0	2.2	ug/L		08/14/24 15:44	08/16/24 19:23	1
Zinc	<6.9		20	6.9	ug/L		08/14/24 15:44	08/16/24 19:23	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-781453/1-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	45.9	J	50	13	ug/L		08/14/24 15:44	08/19/24 12:47	1
Sodium	<77		200	77	ug/L		08/14/24 15:44	08/19/24 12:47	1

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782080

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2130		ug/L		107	80 - 120
Antimony	500	533		ug/L		107	80 - 120
Arsenic	100	99.6		ug/L		100	80 - 120
Barium	500	559		ug/L		112	80 - 120
Beryllium	50.0	48.2		ug/L		96	80 - 120
Cadmium	50.0	52.5		ug/L		105	80 - 120
Calcium	10000	9100		ug/L		91	80 - 120
Chromium	200	207		ug/L		104	80 - 120
Cobalt	500	528		ug/L		106	80 - 120
Copper	250	268		ug/L		107	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Lead	100	110	^1+	ug/L		110	80 - 120
Lithium	100	102		ug/L		102	80 - 120
Magnesium	10000	10900		ug/L		109	80 - 120
Manganese	500	532		ug/L		106	80 - 120
Molybdenum	1000	1010		ug/L		101	80 - 120
Nickel	500	537		ug/L		107	80 - 120
Potassium	10000	11000		ug/L		110	80 - 120
Selenium	100	101		ug/L		101	80 - 120
Silver	50.0	52.1		ug/L		104	80 - 120
Strontium	1000	1080		ug/L		108	80 - 120
Thallium	100	107		ug/L		107	80 - 120
Tin	1000	1070		ug/L		107	80 - 120
Vanadium	500	521		ug/L		104	80 - 120
Zinc	500	526		ug/L		105	80 - 120

Lab Sample ID: LCS 500-781453/2-A
Matrix: Water
Analysis Batch: 782199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1070		ug/L		107	80 - 120
Sodium	10000	10500		ug/L		105	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-779469/3
Matrix: Water
Analysis Batch: 779469

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			08/01/24 11:48	1
Chloride	<0.12		1.0	0.12	mg/L			08/01/24 11:48	1
Fluoride	<0.19		1.0	0.19	mg/L			08/01/24 11:48	1
Sulfate	<0.21		1.0	0.21	mg/L			08/01/24 11:48	1

Lab Sample ID: LCS 500-779469/4
Matrix: Water
Analysis Batch: 779469

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	19.5		mg/L		98	90 - 110
Chloride	20.0	19.3		mg/L		97	90 - 110
Fluoride	20.0	19.9		mg/L		100	90 - 110
Sulfate	20.0	20.6		mg/L		103	90 - 110

Lab Sample ID: MB 500-779470/3
Matrix: Water
Analysis Batch: 779470

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.106	J	1.0	0.043	mg/L			08/01/24 11:48	1
Nitrite as N	<0.070		1.0	0.070	mg/L			08/01/24 11:48	1
Nitrate Nitrite as N	0.106	J	1.0	0.070	mg/L			08/01/24 11:48	1

Lab Sample ID: LCS 500-779470/4
Matrix: Water
Analysis Batch: 779470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	20.2		mg/L		101	90 - 110
Nitrite as N	20.0	20.1		mg/L		101	90 - 110
Nitrate Nitrite as N	40.0	40.3		mg/L		101	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-780478/1-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036	^1+	0.0050	0.0036	mg/L		08/08/24 10:22	08/09/24 13:04	1

Lab Sample ID: LCS 500-780478/2-A
Matrix: Water
Analysis Batch: 780762

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0898	^1+	mg/L		90	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781826/1-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781826

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/16/24 11:19	08/16/24 14:49	1

Lab Sample ID: LCS 500-781826/2-A
Matrix: Water
Analysis Batch: 782356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781826

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.95		mg/L		97	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780970/1-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^1-	0.050	0.024	mg/L		08/13/24 11:40	08/15/24 12:04	1

Lab Sample ID: LCS 500-780970/2-A
Matrix: Water
Analysis Batch: 781671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.410	^1- *-	mg/L		82	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-780451/28
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<3.7		5.0	3.7	mg/L			08/07/24 17:20	1
Bicarbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 17:20	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/07/24 17:20	1

Lab Sample ID: LCS 500-780451/29
Matrix: Water
Analysis Batch: 780451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	110		mg/L		110	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-779810/1
Matrix: Water
Analysis Batch: 779810

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			08/05/24 00:12	1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: LCS 500-779810/2
Matrix: Water
Analysis Batch: 779810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	238		mg/L		95	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-780106/1
Matrix: Water
Analysis Batch: 780106

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			08/06/24 13:36	1

Lab Sample ID: LCS 500-780106/2
Matrix: Water
Analysis Batch: 780106

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	187		mg/L		94	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779991/1
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			08/05/24 22:17	1

Lab Sample ID: LCS 500-779991/2
Matrix: Water
Analysis Batch: 779991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.20		mg/L		88	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-781274/7
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			08/13/24 14:39	1

Lab Sample ID: LCS 500-781274/8
Matrix: Water
Analysis Batch: 781274

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.1		mg/L		101	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-781988/7
Matrix: Water
Analysis Batch: 781988

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			08/15/24 13:59	1

Lab Sample ID: LCS 500-781988/8
Matrix: Water
Analysis Batch: 781988

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dissolved Organic Carbon			10.0	10.1		mg/L		101	86 - 116		

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Client Sample ID: MW-3B_20240730

Lab Sample ID: 500-254364-1

Date Collected: 07/30/24 18:10

Matrix: Water

Date Received: 08/01/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2564	AJD	EET SSM	08/15/24 10:55
Dissolved	Analysis	1630		1	2572	CL	EET SSM	08/15/24 19:21
Total/NA	Prep	1630			2547	AJD	EET SSM	08/13/24 11:12
Total/NA	Analysis	1630		1	2565	CL	EET SSM	08/14/24 23:30
Dissolved	Analysis	1631E		1	2531	AJD	EET SSM	08/08/24 17:02
Total/NA	Analysis	1631E		1	2531	AJD	EET SSM	08/08/24 16:58
Dissolved	Prep	1638			2507	CL	EET SSM	08/05/24 14:37
Dissolved	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 19:01
Total Recoverable	Prep	1638			2507	CL	EET SSM	08/05/24 14:37
Total Recoverable	Analysis	1638		1	2516	V1R	EET SSM	08/06/24 20:35
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 19:59
Dissolved	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Dissolved	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 13:23
Total Recoverable	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Total Recoverable	Analysis	6020B		1	782080	RN	EET CHI	08/16/24 20:10
Total Recoverable	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Total Recoverable	Analysis	6020B		1	782199	RN	EET CHI	08/19/24 13:35
Total Recoverable	Prep	3005A			781453	S1Z	EET CHI	08/14/24 15:44 - 08/14/24 21:45 [1]
Total Recoverable	Analysis	SM 2340B		1	782136	DAJ	EET CHI	08/19/24 09:57
Total/NA	Analysis	300.0		1	779469	NMB	EET CHI	08/01/24 13:19
Total/NA	Analysis	300.0		1	779470	NMB	EET CHI	08/01/24 13:19
Total/NA	Prep	Distill/CN			780478	AC	EET CHI	08/08/24 10:22 - 08/08/24 10:52 [1]
Total/NA	Analysis	335.4		1	781207	AC	EET CHI	08/10/24 13:06
Total/NA	Prep	Distill/Ammonia			781826	EB	EET CHI	08/16/24 11:19 - 08/16/24 12:19 [1]
Total/NA	Analysis	350.1		1	782356	KF	EET CHI	08/16/24 14:50
Total/NA	Prep	365.2/365.3/365			780970	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781671	KF	EET CHI	08/15/24 12:15
Total/NA	Analysis	SM 2320B		1	780451	SO	EET CHI	08/07/24 20:04
Total/NA	Analysis	SM 2520B		1	782060	TR	EET CHI	08/19/24 08:00
Total/NA	Analysis	SM 2540C		1	779810	CLB	EET CHI	08/05/24 00:22
Total/NA	Analysis	SM 2540D		1	780106	SO	EET CHI	08/06/24 13:57 - 08/06/24 13:58 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779991	CLB	EET CHI	08/05/24 22:49 - 08/05/24 22:53 [1]
Dissolved	Analysis	SM 5310C		1	781988	TR	EET CHI	08/15/24 14:55
Total/NA	Analysis	SM 5310C		1	781274	TR	EET CHI	08/13/24 21:39

Client Sample ID: MW-3B_20240730_FBLL

Lab Sample ID: 500-254364-2

Date Collected: 07/30/24 18:10

Matrix: Water

Date Received: 08/01/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2531	AJD	EET SSM	08/08/24 17:06

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254364-1

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999580010	08-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Nitrate Nitrite as N
6020B	3005A	Water	Lithium
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3
SM 2520B		Water	Salinity

Laboratory: Eurofins Seattle Specialty Metals

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399133460	12-18-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1630	1630	Water	Methyl Mercury
1638	1638	Water	Uranium

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1861	COC No: 500-126351-50241 79
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254364
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TDL SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, 3500_CR_B, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	3500_CR_B - Dissolved Chromium, Hex (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code.				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 MW-3B_20240730	07-30-24	1810	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18	
2 MW-3B_20240730_FBLL	07-30-24	1810	G	Water										✓						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D - HNO3
A HCL
Other: 500-254364 COC

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority Overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	7/30/24 2100	MSG	[signature]	7/30/24 2100	MSG
2	[signature]	7/31/24 1200	MSG	4051 7962 1861	7/31/24 1200	Fedex
3		Date/Time:	Company	Stephanie Hernandez	8/1/24 0950	EEIA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: 1.9+1.8

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1861	COC No: 500-126351-50241 80
Client Contact: Amanda Zeidler	Phone: 517-513-2249	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254364
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N - None; CB - ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
1 MW-3B_20240730	07-30-24	1810	G	Water			✓	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7/30/24 2100	MSG		7/30/24 2100	MSG
2		7/31/24 1200	MSG	4051 7962 1861	7/31/24 1200	Fedex
3		Date/Time	Company	Stephanie Hernandez	8/1/24 0950	EEN

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks





500-254364 Waybi

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254364-1

Login Number: 254364
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254364-1

Login Number: 254364
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 08/05/24 11:24 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254364 Field Sheet

Date:	8/5/2024
End Time:	13:30
KI Paper Lot:	na
Analyst:	a

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	19628
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
500-254364-A-1	A	Y	.8 2	
500-254364-B-1	A	Y	.8 2	
500-254364-C-1	A	Y	.8 2	
500-254364-D-1	A	Y	.8 2	
500-254364-A-2	A	Y	.8 2	
500-254364-B-2	A	Y	.8 2	

Y
8/5-24

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

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JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-253864-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-253864-1

Receipt
The samples were received on 7/23/2024 11:02 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.8º C and 3.8º C.

Receipt Exceptions
Methods FIELD_FLTRD, SM 3500 CR B: The following sample(s) analysis was canceled by the client on arrival. NTC-01_20240722 (500-253864-1).

Metals
Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- ICB (Instrument Noise)
- MB 350-2451/1-A (Instrument Noise)
- 350-771-A-2-A (Instrument Noise)
- 350-771-A-5-A (Instrument Noise)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method SM 2320B: The method blank for analytical batch 500-779874 contained Alkalinity above the reporting limit (RL). Associated sample(s) were not re-analyzed because results were greater than 10X the value found in the method blank.

Method 365.1: ICV recovered low at 76% Recovery. Samples were reprepped out of hold. (ICV 500-781722/9)

Method 365.1: Reanalysis of the following sample(s) was performed outside of the analytical holding time due to QC failure during initial analysis. : NTC-01_20240722 (500-253864-1). Both sets of data are being reported.

Method 365.1: LCS failed low. Samples were reprepped out of hold. Both sets of data are reported. (LCS 500-780961/2-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Client Sample ID: NTC-01_20240722

Lab Sample ID: 500-253864-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl Mercury	0.048	J	0.050	0.022	ng/L	1		1630	Total/NA
Methyl Mercury	0.059		0.050	0.022	ng/L	1		1630	Dissolved
Mercury	1.1		0.50	0.20	ng/L	1		1631E	Total/NA
Mercury	0.98		0.50	0.20	ng/L	1		1631E	Dissolved
Uranium	0.18		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.052		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	620		100	25	ug/L	1		6020B	Total Recoverable
Arsenic	1.2		1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	73		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	71	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	23000		200	44	ug/L	1		6020B	Total Recoverable
Chromium	1.1	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Cobalt	0.86	J	1.0	0.40	ug/L	1		6020B	Total Recoverable
Copper	8.5		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	2400		100	47	ug/L	1		6020B	Total Recoverable
Lead	0.40	J	0.50	0.19	ug/L	1		6020B	Total Recoverable
Lithium	4.8	J	10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	4900		200	49	ug/L	1		6020B	Total Recoverable
Manganese	1300		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	3.9	J	5.0	2.5	ug/L	1		6020B	Total Recoverable
Nickel	1.0	J	2.0	0.63	ug/L	1		6020B	Total Recoverable
Potassium	1400		500	110	ug/L	1		6020B	Total Recoverable
Sodium	8100		200	77	ug/L	1		6020B	Total Recoverable
Strontium	180		4.0	0.64	ug/L	1		6020B	Total Recoverable
Vanadium	3.4	J	5.0	2.2	ug/L	1		6020B	Total Recoverable
Aluminum	28	J	100	25	ug/L	1		6020B	Dissolved
Arsenic	0.67	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	49		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	69	B	50	13	ug/L	1		6020B	Dissolved
Calcium	23000		200	44	ug/L	1		6020B	Dissolved
Copper	4.1		2.0	0.50	ug/L	1		6020B	Dissolved
Iron	500		100	47	ug/L	1		6020B	Dissolved
Lithium	3.8	J	10	2.5	ug/L	1		6020B	Dissolved
Magnesium	4700		200	49	ug/L	1		6020B	Dissolved
Manganese	250		2.5	0.79	ug/L	1		6020B	Dissolved
Molybdenum	3.5	J	5.0	2.5	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

Client Sample ID: NTC-01_20240722 (Continued)

Lab Sample ID: 500-253864-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	1300		500	110	ug/L	1		6020B	Dissolved
Sodium	8200		200	77	ug/L	1		6020B	Dissolved
Strontium	180		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	78		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	0.27	J	1.0	0.18	mg/L	1		300.0	Total/NA
Nitrate as N	0.45	J	1.0	0.043	mg/L	1		300.0	Total/NA
Chloride	37		1.0	0.12	mg/L	1		300.0	Total/NA
Fluoride	0.26	J	1.0	0.19	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.45	J	1.0	0.070	mg/L	1		300.0	Total/NA
Sulfate	0.86	J	1.0	0.21	mg/L	1		300.0	Total/NA
Phosphorus as P	0.027	J H	0.050	0.024	mg/L	1		365.1	Total/NA
Alkalinity	72	B	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	72	B	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	240		10	4.3	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	26		5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	12		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	12		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: NTC-01_20240722_FBLL

Lab Sample ID: 500-253864-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-253864-1	NTC-01_20240722	Water	07/22/24 10:30	07/23/24 11:02
500-253864-2	NTC-01_20240722_FBLL	Water	07/22/24 10:30	07/23/24 11:02

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Client Sample ID: NTC-01_20240722

Date Collected: 07/22/24 10:30
Date Received: 07/23/24 11:02

Lab Sample ID: 500-253864-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.048**	**J**	0.050	0.022	ng/L		07/26/24 09:19	07/26/24 15:53	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	**0.059**		0.050	0.022	ng/L		07/26/24 09:19	07/26/24 16:23	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.1**		0.50	0.20	ng/L			07/30/24 18:04	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.98**		0.50	0.20	ng/L			07/30/24 18:16	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.18**		0.030	0.0098	ug/L		07/26/24 16:16	07/29/24 12:46	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.052**		0.030	0.0098	ug/L		07/26/24 16:16	07/29/24 12:57	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**620**		100	25	ug/L		08/09/24 08:59	08/12/24 12:22	1
Antimony	<1.3		3.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:22	1
Arsenic	**1.2**		1.0	0.23	ug/L		08/09/24 08:59	08/12/24 12:22	1
Barium	**73**		2.5	0.73	ug/L		08/09/24 08:59	08/12/24 12:22	1
Beryllium	<0.53		1.0	0.53	ug/L		08/09/24 08:59	08/12/24 12:22	1
Boron	**71**	**B**	50	13	ug/L		08/09/24 08:59	08/12/24 12:22	1
Cadmium	<0.17		0.50	0.17	ug/L		08/09/24 08:59	08/12/24 12:22	1
Calcium	**23000**		200	44	ug/L		08/09/24 08:59	08/12/24 12:22	1
Chromium	**1.1**	**J**	5.0	1.1	ug/L		08/09/24 08:59	08/12/24 12:22	1
Cobalt	**0.86**	**J**	1.0	0.40	ug/L		08/09/24 08:59	08/12/24 12:22	1
Copper	**8.5**		2.0	0.50	ug/L		08/09/24 08:59	08/12/24 12:22	1
Iron	**2400**		100	47	ug/L		08/09/24 08:59	08/12/24 12:22	1
Lead	**0.40**	**J**	0.50	0.19	ug/L		08/09/24 08:59	08/12/24 12:22	1
Lithium	**4.8**	**J**	10	2.5	ug/L		08/09/24 08:59	08/12/24 12:22	1
Magnesium	**4900**		200	49	ug/L		08/09/24 08:59	08/12/24 12:22	1
Manganese	**1300**		2.5	0.79	ug/L		08/09/24 08:59	08/12/24 12:22	1
Molybdenum	**3.9**	**J**	5.0	2.5	ug/L		08/09/24 08:59	08/12/24 12:22	1
Nickel	**1.0**	**J**	2.0	0.63	ug/L		08/09/24 08:59	08/12/24 12:22	1
Potassium	**1400**		500	110	ug/L		08/09/24 08:59	08/12/24 12:22	1
Selenium	<0.98		2.5	0.98	ug/L		08/09/24 08:59	08/12/24 12:22	1
Silver	<0.12		0.50	0.12	ug/L		08/09/24 08:59	08/12/24 12:22	1
Sodium	**8100**		200	77	ug/L		08/09/24 08:59	08/12/24 12:22	1
Strontium	**180**		4.0	0.64	ug/L		08/09/24 08:59	08/12/24 12:22	1
Thallium	<0.57		2.0	0.57	ug/L		08/09/24 08:59	08/12/24 12:22	1
Tin	<1.3		5.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:22	1
Vanadium	**3.4**	**J**	5.0	2.2	ug/L		08/09/24 08:59	08/12/24 12:22	1
Zinc	<6.9		20	6.9	ug/L		08/09/24 08:59	08/12/24 12:22	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Client Sample ID: NTC-01_20240722
Date Collected: 07/22/24 10:30
Date Received: 07/23/24 11:02

Lab Sample ID: 500-253864-1
Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**28**	**J**	100	25	ug/L		08/09/24 08:59	08/12/24 12:24	1
Antimony	<1.3		3.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:24	1
Arsenic	**0.67**	**J**	1.0	0.23	ug/L		08/09/24 08:59	08/12/24 12:24	1
Barium	**49**		2.5	0.73	ug/L		08/09/24 08:59	08/12/24 12:24	1
Beryllium	<0.53		1.0	0.53	ug/L		08/09/24 08:59	08/12/24 12:24	1
Boron	**69**	**B**	50	13	ug/L		08/09/24 08:59	08/12/24 12:24	1
Cadmium	<0.17		0.50	0.17	ug/L		08/09/24 08:59	08/12/24 12:24	1
Calcium	**23000**		200	44	ug/L		08/09/24 08:59	08/12/24 12:24	1
Chromium	<1.1		5.0	1.1	ug/L		08/09/24 08:59	08/12/24 12:24	1
Cobalt	<0.40		1.0	0.40	ug/L		08/09/24 08:59	08/12/24 12:24	1
Copper	**4.1**		2.0	0.50	ug/L		08/09/24 08:59	08/12/24 12:24	1
Iron	**500**		100	47	ug/L		08/09/24 08:59	08/12/24 12:24	1
Lead	<0.19		0.50	0.19	ug/L		08/09/24 08:59	08/12/24 12:24	1
Lithium	**3.8**	**J**	10	2.5	ug/L		08/09/24 08:59	08/12/24 12:24	1
Magnesium	**4700**		200	49	ug/L		08/09/24 08:59	08/12/24 12:24	1
Manganese	**250**		2.5	0.79	ug/L		08/09/24 08:59	08/12/24 12:24	1
Molybdenum	**3.5**	**J**	5.0	2.5	ug/L		08/09/24 08:59	08/12/24 12:24	1
Nickel	<0.63		2.0	0.63	ug/L		08/09/24 08:59	08/12/24 12:24	1
Potassium	**1300**		500	110	ug/L		08/09/24 08:59	08/12/24 12:24	1
Selenium	<0.98		2.5	0.98	ug/L		08/09/24 08:59	08/12/24 12:24	1
Silver	<0.12		0.50	0.12	ug/L		08/09/24 08:59	08/12/24 12:24	1
Sodium	**8200**		200	77	ug/L		08/09/24 08:59	08/12/24 12:24	1
Strontium	**180**		4.0	0.64	ug/L		08/09/24 08:59	08/12/24 12:24	1
Thallium	<0.57		2.0	0.57	ug/L		08/09/24 08:59	08/12/24 12:24	1
Tin	<1.3		5.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:24	1
Vanadium	<2.2		5.0	2.2	ug/L		08/09/24 08:59	08/12/24 12:24	1
Zinc	<6.9		20	6.9	ug/L		08/09/24 08:59	08/12/24 12:24	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**78**		0.91	0.46	mg/L		08/09/24 08:59	08/12/24 13:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**0.27**	**J**	1.0	0.18	mg/L			07/24/24 00:29	1
Nitrate as N (EPA 300.0)	**0.45**	**J**	1.0	0.043	mg/L			07/24/24 00:29	1
Chloride (EPA 300.0)	**37**		1.0	0.12	mg/L			07/25/24 12:47	1
Nitrite as N (EPA 300.0)	<0.070		1.0	0.070	mg/L			07/24/24 00:29	1
Fluoride (EPA 300.0)	**0.26**	**J**	1.0	0.19	mg/L			07/24/24 00:29	1
Nitrate Nitrite as N (EPA 300.0)	**0.45**	**J**	1.0	0.070	mg/L			07/24/24 00:29	1
Sulfate (EPA 300.0)	**0.86**	**J**	1.0	0.21	mg/L			07/24/24 00:29	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/02/24 10:37	08/02/24 15:54	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/14/24 10:58	08/15/24 17:00	1
Phosphorus as P (EPA 365.1)	<0.024	^1- ^- *-	0.050	0.024	mg/L		08/13/24 11:40	08/13/24 17:38	1
Phosphorus as P (EPA 365.1)	**0.027**	**J H**	0.050	0.024	mg/L		08/22/24 14:15	08/23/24 12:04	1
Alkalinity (SM 2320B)	**72**	**B**	5.0	3.7	mg/L			08/02/24 19:02	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**72**	**B**	5.0	3.7	mg/L			08/02/24 19:02	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/02/24 19:02	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Client Sample ID: NTC-01_20240722
Date Collected: 07/22/24 10:30
Date Received: 07/23/24 11:02

Lab Sample ID: 500-253864-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Salinity (SM 2520B)	<0.33		0.33	0.33	psu			07/29/24 15:13	1
Total Dissolved Solids (SM 2540C)	**240**		10	4.3	mg/L			07/25/24 02:38	1
Total Suspended Solids (SM 2540D)	**26**		5.0	1.9	mg/L			07/29/24 02:56	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			07/26/24 00:14	1
Total Organic Carbon (SM 5310C)	**12**		1.0	0.47	mg/L			07/30/24 20:10	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	**12**		1.0	0.47	mg/L			07/28/24 22:02	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Client Sample ID: NTC-01_20240722_FBLL
Date Collected: 07/22/24 10:30
Date Received: 07/23/24 11:02

Lab Sample ID: 500-253864-2
Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 18:20	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^-	Continuing Calibration Verification (CCV) is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Dissolved	Water	1630	
500-253864-1	NTC-01_20240722	Total/NA	Water	1630	
MB 350-2451/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2451/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2451/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2451/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2451/5-A	Lab Control Sample Dup	Total/NA	Water	1630	
500-253864-1 MS	NTC-01_20240722	Total/NA	Water	1630	
500-253864-1 MSD	NTC-01_20240722	Total/NA	Water	1630	

Prep Batch: 2455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Dissolved	Water	1638	
500-253864-1	NTC-01_20240722	Total Recoverable	Water	1638	
MB 350-2455/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2455/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2455/4-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2455/5-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Dissolved	Water	1630	2451
500-253864-1	NTC-01_20240722	Total/NA	Water	1630	2451
MB 350-2451/1-A	Method Blank	Total/NA	Water	1630	2451
MB 350-2451/2-A	Method Blank	Total/NA	Water	1630	2451
MB 350-2451/3-A	Method Blank	Total/NA	Water	1630	2451
LCS 350-2451/4-A	Lab Control Sample	Total/NA	Water	1630	2451
LCSD 350-2451/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2451
500-253864-1 MS	NTC-01_20240722	Total/NA	Water	1630	2451
500-253864-1 MSD	NTC-01_20240722	Total/NA	Water	1630	2451

Analysis Batch: 2467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Dissolved	Water	1638	2455
500-253864-1	NTC-01_20240722	Total Recoverable	Water	1638	2455
MB 350-2455/1-A	Method Blank	Total Recoverable	Water	1638	2455
MB 350-2455/2-A	Method Blank	Total Recoverable	Water	1638	2455
LCS 350-2455/4-A	Lab Control Sample	Total Recoverable	Water	1638	2455
LCSD 350-2455/5-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2455

Analysis Batch: 2481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Dissolved	Water	1631E	
500-253864-1	NTC-01_20240722	Total/NA	Water	1631E	
500-253864-2	NTC-01_20240722_FBLL	Total/NA	Water	1631E	
MB 350-2481/30	Method Blank	Total/NA	Water	1631E	
MB 350-2481/31	Method Blank	Total/NA	Water	1631E	
MB 350-2481/32	Method Blank	Total/NA	Water	1631E	
MB 350-2481/41	Method Blank	Total/NA	Water	1631E	
MB 350-2481/42	Method Blank	Total/NA	Water	1631E	
MB 350-2481/43	Method Blank	Total/NA	Water	1631E	

Metals (Continued)

Analysis Batch: 2481 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 350-2481/35	Lab Control Sample	Total/NA	Water	1631E	
LCS 350-2481/44	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2481/36	Lab Control Sample Dup	Total/NA	Water	1631E	
LCSD 350-2481/47	Lab Control Sample Dup	Total/NA	Water	1631E	

Prep Batch: 780674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Dissolved	Water	3005A	
500-253864-1	NTC-01_20240722	Total Recoverable	Water	3005A	
MB 500-780674/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-780674/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 780966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Dissolved	Water	6020B	780674
500-253864-1	NTC-01_20240722	Total Recoverable	Water	6020B	780674
MB 500-780674/1-A	Method Blank	Total Recoverable	Water	6020B	780674
LCS 500-780674/2-A	Lab Control Sample	Total Recoverable	Water	6020B	780674

Analysis Batch: 780975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total Recoverable	Water	SM 2340B	780674

General Chemistry

Analysis Batch: 778013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	300.0	
MB 500-778013/3	Method Blank	Total/NA	Water	300.0	
LCS 500-778013/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 778014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	300.0	
MB 500-778014/3	Method Blank	Total/NA	Water	300.0	
LCS 500-778014/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 778249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	SM 2540C	
MB 500-778249/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-778249/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 778269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	300.0	
MB 500-778269/9	Method Blank	Total/NA	Water	300.0	
LCS 500-778269/10	Lab Control Sample	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 778568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	SM 4500 S2 F	
MB 500-778568/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-778568/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 778715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	SM 2540D	
MB 500-778715/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-778715/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 778742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Dissolved	Water	SM 5310C	
MB 500-778742/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-778742/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 779224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	SM 5310C	
MB 500-779224/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-779224/8	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 779504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	SM 2520B	

Prep Batch: 779702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	Distill/CN	
MB 500-779702/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-779702/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 779754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	335.4	779702
MB 500-779702/1-A	Method Blank	Total/NA	Water	335.4	779702
LCS 500-779702/2-A	Lab Control Sample	Total/NA	Water	335.4	779702

Analysis Batch: 779874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	SM 2320B	
MB 500-779874/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-779874/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 780961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	365.2/365.3/365	
MB 500-780961/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780961/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

General Chemistry

Prep Batch: 781346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	Distill/Ammonia	
MB 500-781346/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781346/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	365.1	780961
MB 500-780961/1-A	Method Blank	Total/NA	Water	365.1	780961
LCS 500-780961/2-A	Lab Control Sample	Total/NA	Water	365.1	780961

Analysis Batch: 781794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	350.1	781346
MB 500-781346/1-A	Method Blank	Total/NA	Water	350.1	781346
LCS 500-781346/2-A	Lab Control Sample	Total/NA	Water	350.1	781346

Prep Batch: 782810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	365.2/365.3/365	
MB 500-782810/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-782810/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 782997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253864-1	NTC-01_20240722	Total/NA	Water	365.1	782810
MB 500-782810/1-A	Method Blank	Total/NA	Water	365.1	782810
LCS 500-782810/2-A	Lab Control Sample	Total/NA	Water	365.1	782810

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2451/1-A
Matrix: Water
Analysis Batch: 2465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/26/24 09:19	07/26/24 14:31	1

Lab Sample ID: MB 350-2451/2-A
Matrix: Water
Analysis Batch: 2465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/26/24 09:19	07/26/24 14:41	1

Lab Sample ID: MB 350-2451/3-A
Matrix: Water
Analysis Batch: 2465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2451

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/26/24 09:19	07/26/24 14:51	1

Lab Sample ID: LCS 350-2451/4-A
Matrix: Water
Analysis Batch: 2465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2451

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methyl Mercury			1.00	0.788		ng/L		79	65 - 135		

Lab Sample ID: LCSD 350-2451/5-A
Matrix: Water
Analysis Batch: 2465

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2451

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury			1.00	0.773		ng/L		77	65 - 135	2	35

Lab Sample ID: 500-253864-1 MS
Matrix: Water
Analysis Batch: 2465

Client Sample ID: NTC-01_20240722
Prep Type: Total/NA
Prep Batch: 2451

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Methyl Mercury	0.048	J	1.00	0.910		ng/L		86	65 - 135		

Lab Sample ID: 500-253864-1 MSD
Matrix: Water
Analysis Batch: 2465

Client Sample ID: NTC-01_20240722
Prep Type: Total/NA
Prep Batch: 2451

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	0.048	J	1.00	0.904		ng/L		86	65 - 135	1	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2481/30
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 13:13	1

Lab Sample ID: MB 350-2481/31
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 13:17	1

Lab Sample ID: MB 350-2481/32
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 13:22	1

Lab Sample ID: MB 350-2481/41
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 13:59	1

Lab Sample ID: MB 350-2481/42
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:03	1

Lab Sample ID: MB 350-2481/43
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:07	1

Lab Sample ID: LCS 350-2481/35
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.52		ng/L		90	77 - 123		

Lab Sample ID: LCS 350-2481/44
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.44		ng/L		89	77 - 123		

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: LCSD 350-2481/36
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.49		ng/L		90	77 - 123	1	24

Lab Sample ID: LCSD 350-2481/47
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.46		ng/L		89	77 - 123	0	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2455/1-A
Matrix: Water
Analysis Batch: 2467

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2455

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		07/26/24 16:16	07/29/24 11:30	1

Lab Sample ID: MB 350-2455/2-A
Matrix: Water
Analysis Batch: 2467

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2455

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		07/26/24 16:16	07/29/24 11:34	1

Lab Sample ID: LCS 350-2455/4-A
Matrix: Water
Analysis Batch: 2467

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2455

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Uranium			25.0	24.4		ug/L		98	85 - 115		

Lab Sample ID: LCSD 350-2455/5-A
Matrix: Water
Analysis Batch: 2467

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2455

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium			25.0	24.4		ug/L		97	85 - 115	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-780674/1-A
Matrix: Water
Analysis Batch: 780966

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 780674

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/09/24 08:59	08/12/24 12:13	1
Antimony	<1.3		3.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:13	1
Arsenic	<0.23		1.0	0.23	ug/L		08/09/24 08:59	08/12/24 12:13	1
Barium	<0.73		2.5	0.73	ug/L		08/09/24 08:59	08/12/24 12:13	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 500-780674/1-A
Matrix: Water
Analysis Batch: 780966

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 780674

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.53		1.0	0.53	ug/L		08/09/24 08:59	08/12/24 12:13	1
Boron	34.0	J	50	13	ug/L		08/09/24 08:59	08/12/24 12:13	1
Cadmium	<0.17		0.50	0.17	ug/L		08/09/24 08:59	08/12/24 12:13	1
Calcium	<44		200	44	ug/L		08/09/24 08:59	08/12/24 12:13	1
Chromium	<1.1		5.0	1.1	ug/L		08/09/24 08:59	08/12/24 12:13	1
Cobalt	<0.40		1.0	0.40	ug/L		08/09/24 08:59	08/12/24 12:13	1
Copper	<0.50		2.0	0.50	ug/L		08/09/24 08:59	08/12/24 12:13	1
Iron	<47		100	47	ug/L		08/09/24 08:59	08/12/24 12:13	1
Lead	<0.19		0.50	0.19	ug/L		08/09/24 08:59	08/12/24 12:13	1
Lithium	<2.5		10	2.5	ug/L		08/09/24 08:59	08/12/24 12:13	1
Magnesium	<49		200	49	ug/L		08/09/24 08:59	08/12/24 12:13	1
Manganese	<0.79		2.5	0.79	ug/L		08/09/24 08:59	08/12/24 12:13	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/09/24 08:59	08/12/24 12:13	1
Nickel	<0.63		2.0	0.63	ug/L		08/09/24 08:59	08/12/24 12:13	1
Potassium	<110		500	110	ug/L		08/09/24 08:59	08/12/24 12:13	1
Selenium	<0.98		2.5	0.98	ug/L		08/09/24 08:59	08/12/24 12:13	1
Silver	<0.12		0.50	0.12	ug/L		08/09/24 08:59	08/12/24 12:13	1
Sodium	<77		200	77	ug/L		08/09/24 08:59	08/12/24 12:13	1
Strontium	<0.64		4.0	0.64	ug/L		08/09/24 08:59	08/12/24 12:13	1
Thallium	<0.57		2.0	0.57	ug/L		08/09/24 08:59	08/12/24 12:13	1
Tin	<1.3		5.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:13	1
Vanadium	<2.2		5.0	2.2	ug/L		08/09/24 08:59	08/12/24 12:13	1
Zinc	<6.9		20	6.9	ug/L		08/09/24 08:59	08/12/24 12:13	1

Lab Sample ID: LCS 500-780674/2-A
Matrix: Water
Analysis Batch: 780966

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 780674

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1930		ug/L		96	80 - 120
Antimony	500	496		ug/L		99	80 - 120
Arsenic	100	97.5		ug/L		98	80 - 120
Barium	500	511		ug/L		102	80 - 120
Beryllium	50.0	49.8		ug/L		100	80 - 120
Boron	1000	1020		ug/L		102	80 - 120
Cadmium	50.0	49.7		ug/L		99	80 - 120
Calcium	10000	9130		ug/L		91	80 - 120
Chromium	200	209		ug/L		104	80 - 120
Cobalt	500	526		ug/L		105	80 - 120
Copper	250	258		ug/L		103	80 - 120
Iron	1000	1040		ug/L		104	80 - 120
Lead	100	101		ug/L		101	80 - 120
Lithium	100	104		ug/L		104	80 - 120
Magnesium	10000	10300		ug/L		103	80 - 120
Manganese	500	517		ug/L		103	80 - 120
Molybdenum	1000	969		ug/L		97	80 - 120
Nickel	500	513		ug/L		103	80 - 120
Potassium	10000	10200		ug/L		102	80 - 120
Selenium	100	96.5		ug/L		96	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-780674/2-A
Matrix: Water
Analysis Batch: 780966

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 780674

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	50.0	49.5		ug/L		99	80 - 120
Sodium	10000	10300		ug/L		103	80 - 120
Strontium	1000	956		ug/L		96	80 - 120
Thallium	100	104		ug/L		104	80 - 120
Tin	1000	969		ug/L		97	80 - 120
Vanadium	500	510		ug/L		102	80 - 120
Zinc	500	505		ug/L		101	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-778013/3
Matrix: Water
Analysis Batch: 778013

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/23/24 16:55	1
Fluoride	<0.19		1.0	0.19	mg/L			07/23/24 16:55	1
Sulfate	<0.21		1.0	0.21	mg/L			07/23/24 16:55	1

Lab Sample ID: LCS 500-778013/4
Matrix: Water
Analysis Batch: 778013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	20.0		mg/L		100	90 - 110
Fluoride	20.0	20.6		mg/L		103	90 - 110
Sulfate	20.0	21.4		mg/L		107	90 - 110

Lab Sample ID: MB 500-778014/3
Matrix: Water
Analysis Batch: 778014

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/23/24 16:55	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/23/24 16:55	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/23/24 16:55	1

Lab Sample ID: LCS 500-778014/4
Matrix: Water
Analysis Batch: 778014

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.6		mg/L		98	90 - 110
Nitrite as N	20.0	21.3		mg/L		106	90 - 110
Nitrate Nitrite as N	40.0	40.9		mg/L		102	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-778269/9
Matrix: Water
Analysis Batch: 778269

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.12		1.0	0.12	mg/L			07/25/24 10:51	1

Lab Sample ID: LCS 500-778269/10
Matrix: Water
Analysis Batch: 778269

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.9		mg/L		99	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-779702/1-A
Matrix: Water
Analysis Batch: 779754

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 779702

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/02/24 10:37	08/02/24 15:30	1

Lab Sample ID: LCS 500-779702/2-A
Matrix: Water
Analysis Batch: 779754

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 779702

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0970		mg/L		97	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781346/1-A
Matrix: Water
Analysis Batch: 781794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/14/24 10:58	08/15/24 16:49	1

Lab Sample ID: LCS 500-781346/2-A
Matrix: Water
Analysis Batch: 781794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	2.10		mg/L		105	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780961/1-A
Matrix: Water
Analysis Batch: 781722

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780961

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^- ^1-	0.050	0.024	mg/L		08/13/24 11:40	08/13/24 17:36	1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: LCS 500-780961/2-A
Matrix: Water
Analysis Batch: 781722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780961

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.367	^1- *- ^-	mg/L		73	88 - 123

Lab Sample ID: MB 500-782810/1-A
Matrix: Water
Analysis Batch: 782997

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 782810

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024		0.050	0.024	mg/L		08/22/24 14:15	08/23/24 12:03	1

Lab Sample ID: LCS 500-782810/2-A
Matrix: Water
Analysis Batch: 782997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 782810

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	1.00	0.889		mg/L		89	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-779874/3
Matrix: Water
Analysis Batch: 779874

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.71		5.0	3.7	mg/L			08/02/24 18:17	1
Bicarbonate Alkalinity as CaCO3	5.71		5.0	3.7	mg/L			08/02/24 18:17	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/02/24 18:17	1

Lab Sample ID: LCS 500-779874/4
Matrix: Water
Analysis Batch: 779874

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	106		mg/L		106	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-778249/1
Matrix: Water
Analysis Batch: 778249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			07/25/24 02:07	1

Lab Sample ID: LCS 500-778249/2
Matrix: Water
Analysis Batch: 778249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	238		mg/L		95	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-778715/1
Matrix: Water
Analysis Batch: 778715

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			07/29/24 02:07	1

Lab Sample ID: LCS 500-778715/2
Matrix: Water
Analysis Batch: 778715

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	176		mg/L		88	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-778568/1
Matrix: Water
Analysis Batch: 778568

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			07/25/24 23:14	1

Lab Sample ID: LCS 500-778568/2
Matrix: Water
Analysis Batch: 778568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.54		mg/L		98	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-779224/7
Matrix: Water
Analysis Batch: 779224

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			07/30/24 11:17	1

Lab Sample ID: LCS 500-779224/8
Matrix: Water
Analysis Batch: 779224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.2		mg/L		102	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-778742/7
Matrix: Water
Analysis Batch: 778742

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			07/28/24 18:19	1

Method: SM 5310C - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCS 500-778742/8
Matrix: Water
Analysis Batch: 778742

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Client Sample ID: NTC-01_20240722

Lab Sample ID: 500-253864-1

Date Collected: 07/22/24 10:30

Matrix: Water

Date Received: 07/23/24 11:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2451	AJD	EET SSM	07/26/24 09:19
Dissolved	Analysis	1630		1	2465	CL	EET SSM	07/26/24 16:23
Total/NA	Prep	1630			2451	AJD	EET SSM	07/26/24 09:19
Total/NA	Analysis	1630		1	2465	CL	EET SSM	07/26/24 15:53
Dissolved	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 18:16
Total/NA	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 18:04
Dissolved	Prep	1638			2455	V1R	EET SSM	07/26/24 16:16
Dissolved	Analysis	1638		1	2467	V1R	EET SSM	07/29/24 12:57
Total Recoverable	Prep	1638			2455	V1R	EET SSM	07/26/24 16:16
Total Recoverable	Analysis	1638		1	2467	V1R	EET SSM	07/29/24 12:46
Dissolved	Prep	3005A			780674	BDE	EET CHI	08/09/24 08:59 - 08/09/24 14:59 [1]
Dissolved	Analysis	6020B		1	780966	RN	EET CHI	08/12/24 12:24
Total Recoverable	Prep	3005A			780674	BDE	EET CHI	08/09/24 08:59 - 08/09/24 14:59 [1]
Total Recoverable	Analysis	6020B		1	780966	RN	EET CHI	08/12/24 12:22
Total Recoverable	Prep	3005A			780674	BDE	EET CHI	08/09/24 08:59 - 08/09/24 14:59 [1]
Total Recoverable	Analysis	SM 2340B		1	780975	DAJ	EET CHI	08/12/24 13:40
Total/NA	Analysis	300.0		1	778269	W1T	EET CHI	07/25/24 12:47
Total/NA	Analysis	300.0		1	778013	W1T	EET CHI	07/24/24 00:29
Total/NA	Analysis	300.0		1	778014	W1T	EET CHI	07/24/24 00:29
Total/NA	Prep	Distill/CN			779702	KF	EET CHI	08/02/24 10:37 - 08/02/24 11:07 [1]
Total/NA	Analysis	335.4		1	779754	KF	EET CHI	08/02/24 15:54
Total/NA	Prep	Distill/Ammonia			781346	EB	EET CHI	08/14/24 10:58 - 08/14/24 11:58 [1]
Total/NA	Analysis	350.1		1	781794	KF	EET CHI	08/15/24 17:00
Total/NA	Prep	365.2/365.3/365			780961	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781722	LP	EET CHI	08/13/24 17:38
Total/NA	Prep	365.2/365.3/365			782810	ER	EET CHI	08/22/24 14:15 - 08/22/24 18:15 [1]
Total/NA	Analysis	365.1		1	782997	KF	EET CHI	08/23/24 12:04
Total/NA	Analysis	SM 2320B		1	779874	SO	EET CHI	08/02/24 19:02
Total/NA	Analysis	SM 2520B		1	779504	TR	EET CHI	07/29/24 15:13
Total/NA	Analysis	SM 2540C		1	778249	CLB	EET CHI	07/25/24 02:38
Total/NA	Analysis	SM 2540D		1	778715	CLB	EET CHI	07/29/24 02:56 - 07/29/24 02:59 [1]
Total/NA	Analysis	SM 4500 S2 F		1	778568	CLB	EET CHI	07/26/24 00:14 - 07/26/24 00:18 [1]
Dissolved	Analysis	SM 5310C		1	778742	TR	EET CHI	07/28/24 22:02
Total/NA	Analysis	SM 5310C		1	779224	TR	EET CHI	07/30/24 20:10

Client Sample ID: NTC-01_20240722_FBLL

Lab Sample ID: 500-253864-2

Date Collected: 07/22/24 10:30

Matrix: Water

Date Received: 07/23/24 11:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 18:20

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-253864-1

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	08-07-24
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	08-07-24
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jacob Dean	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 1Z09NFT5013069462S	COC No: 500-126351-50241 15
Client Contact: Amanda Zeidler	Phone	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID			Job #: 500-253864
Address: 35503 Mall Circle Drive	Due Date Requested			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site	SSOW#:			

Analysis Requested

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL

500-253864 COC

Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, 3500_CR_B, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	3500_CR_B - Dissolved Chromium, Hex (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
				Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1	NTC-01_20240722	7-22-24	10:30	G	Water			X	X	X	X	X	X	X	X	X	X	X	X	X	17	
2	~~FB~~ NTC-01_20240722_FBLL MS	7 22 24	10.30	G	Water										X					~~X~~	2	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	
				G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: UPS OVERNIGHT

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7-22-24 12:15	MSG		7-22-24 ~~12~~ 13:15	MSG
2		7.22 24 14:15	MSG		7/22/24 14:15	MSG
3		7/22/24 16.06	MSG	1Z09NFT5013069462S	~~7/22/24~~	UPS

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: 1.9+1.8

Stephanie Hernandez 7/23/24 1075 EDT 1020 EEHA
UPS NDA

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

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Client Information	Sampler: Jacob Dean	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 1Z09NFT50130694625	COC No: 500-126351-50241 16
Client Contact: Amanda Zeidler	Phone:	E Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-253864
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S - H2SO4; N None; CB ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			Other
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site	SSOW#:			

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
				Preservation Code:				A		
1	NTC-01-20240722	7-22-24	10:30	G	Water			X	1	
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					
				G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: UPS OVERNIGHT

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		7-22 24 12:15	MSG		7/22/24 12:15	MSG
2		7/22/24 14:15	MSG		7/22/24 14:15	MSG
3		7/22/24 16:00	MSG	1Z09NFT50130694625		UPS

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks.

Stephanie Hernandez 7/23/24 1045 1020 EEHA

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

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Client Information	Sampler: Ellen Coppernoll	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 4051 7962 1265	COC No: 500-126351-50241 13
Client Contact: Amanda Zeidler	Phone: 517 513 2249	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-253864
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A HCL

Other: 500-253864 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos Toc SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, ~~2500_CB_B~~ SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_IC - Organic Carbon, Dissolved (DOC)	6020B, SM3340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	~~3500_CB_B_Dissolved Chromium; Hex (field filtered)~~	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
MLR-01_20240725	07-25-24	0930	G	Water			V	V	V	V	V	V	V	V	V	V	V		V	18	
MLR-01_20240725_FBLL	07-25-24	0930	G	Water										V						2	
3 NTC-01_20240725	07-25-24	1240	G	Water				V												1	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: Fedex Priority overnight

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Ellen	7/25/24 ~~1300~~ 1400	MSG		7/25/24 ~~1300~~ 1400	MSG
	7/25/24 1600	MSG	4051 7962 1265	7/25/24 1600	Fedex
	Date/Time	Company	Stephanie Hemond	7/26/24 0050	EEIA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 3.9+3.8

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-253864-1

Login Number: 253864
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.8,3.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-253864-1

Login Number: 253864
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/24/24 01:20 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-253864 Field Sheet

Date:	7/24/2024
End Time:	13:38
KI Paper Lot:	na
Analyst:	IZ

Preservative ID	Preservative Type	Container ID
A	Bromine Monochloride (0.2N)	19628
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Pres. Used (ID)	Oxidized (Y/N)?	Pres. Vol. (mL)/Percent (%)	Comments
500-253864-A-2	A	Y	5 2	
500-253864-C-1	A	Y	5 2	
500-253864-A-1	A	Y	5 2	
500-253864-B-2	A	Y	5 2	
500-253864-D-1	A	Y	5 2	
500-253864-B-1	A	Y	5 2	

IZ 7/24/24

8/23/2024

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500-253864 Field Sheet

Date:	7/24/2024
End Time:	13:42
pH Paper Lot:	HC234723
Analyst:	

Preservative ID	Preservative Type	Container ID
A	Nitric Acid	na
A	Hydrochloric Acid	na
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-253864-J-1	<2				
500-253864-K-1	<2				
500-253864-E-1	<2				
500-253864-F-1	<2				

7/24/24

8/23/2024

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Jakob Wartman
Foth Infrastructure & Environment, LLC
Missabe Building
227 West 1st. Street, Suite 920
Duluth, Minnesota 55802

Generated 8/23/2024 3:27:19 PM

JOB DESCRIPTION

FOTH - White Pines, MI

JOB NUMBER

500-253934-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



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8/23/2024 3:27:19 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job ID: 500-253934-1 Eurofins Chicago

Job Narrative
500-253934-1

Receipt
The samples were received on 7/24/2024 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.9º C and 1.4º C.

Receipt Exceptions
Missing cooler initially received second day.

The following sample(s) was received outside of holding time: Sample #3 for IC N2, N3. Sampled 7/22/24 received 7/25 (FedEX delay).

Metals
Method 1630: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 350-2462 and analytical batch 350-2488 was outside control limits. Sample matrix interference is suspected.

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- MB 350-2462/3-A (Instrument Noise)
- 500-253934-E-3-A (Instrument Noise)
- 500-254020-F-1-A (Instrument Noise)
- CCB (Instrument Noise)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The following sample was received with less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: WP-583-233-284.4-2 (500-253934-1).

Method 300.0: The following sample was received outside of holding time: WP-583-233-284.4-1 (500-253934-3).

Method 300.0: The following sample was received with less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: WP-583-233-284.4-2 (500-253934-1).

Method SM 2320B: The method blank for analytical batch 500-779874 contained Alkalinity above the reporting limit (RL). Associated sample(s) were not re-analyzed because results were greater than 10X the value found in the method blank.

Method 365.1: ICV recovered low at 76% Recovery. Samples were reprepped out of hold. (ICV 500-781722/9)

Method 365.1: CCV failed low. Samples were reprepped out of hold. (CCV 500-780961/25-A)

Method 365.1: LCS failed low. Samples were reprepped out of hold. Data Confirmed initial analysis. (LCS 500-780961/2-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-583-233-284.4-2
Lab Sample ID: 500-253934-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Uranium	0.53		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.53		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	36	J	100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.33	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	1300		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	190	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	380000		1000	220	ug/L	5		6020B	Total Recoverable
Copper	0.60	J	2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	1400		100	47	ug/L	1		6020B	Total Recoverable
Lithium	240		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	3300		200	49	ug/L	1		6020B	Total Recoverable
Manganese	490		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	32		5.0	2.5	ug/L	1		6020B	Total Recoverable
Potassium	2500		500	110	ug/L	1		6020B	Total Recoverable
Sodium	970000		1000	390	ug/L	5		6020B	Total Recoverable
Strontium	10000		4.0	0.64	ug/L	1		6020B	Total Recoverable
Zinc	220		20	6.9	ug/L	1		6020B	Total Recoverable
Arsenic	0.30	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	1300		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	190	B	50	13	ug/L	1		6020B	Dissolved
Calcium	380000		1000	220	ug/L	5		6020B	Dissolved
Iron	1200		100	47	ug/L	1		6020B	Dissolved
Lithium	240		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	3200		200	49	ug/L	1		6020B	Dissolved
Manganese	470		2.5	0.79	ug/L	1		6020B	Dissolved
Molybdenum	32		5.0	2.5	ug/L	1		6020B	Dissolved
Potassium	2400		500	110	ug/L	1		6020B	Dissolved
Sodium	970000		1000	390	ug/L	5		6020B	Dissolved
Strontium	10000		4.0	0.64	ug/L	1		6020B	Dissolved
Zinc	94		20	6.9	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	960		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	22		1.0	0.18	mg/L	1		300.0	Total/NA
Chloride	1800		100	12	mg/L	100		300.0	Total/NA
Fluoride	0.59	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	3.9		1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	93	B	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	93	B	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	4.1		0.33	0.33	psu	1		SM 2520B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WP-583-233-284.4-2 (Continued) — Lab Sample ID: 500-253934-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	3600		25	11	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.0		5.0	1.9	mg/L	1		SM 2540D	Total/NA
Sulfide	3.6		1.0	0.23	mg/L	1		SM 4500 S2 F	Total/NA
Dissolved Organic Carbon	0.49	J	1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: WP-583-233-284.4-R — Lab Sample ID: 500-253934-2

No Detections.

Client Sample ID: WP-583-233-284.4-1 — Lab Sample ID: 500-253934-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Uranium	0.57		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.53		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	33	J	100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.34	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	1300		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	180	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	360000		200	44	ug/L	1		6020B	Total Recoverable
Copper	0.96	J	2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	1700		100	47	ug/L	1		6020B	Total Recoverable
Lithium	260		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	3500		200	49	ug/L	1		6020B	Total Recoverable
Manganese	500		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	31		5.0	2.5	ug/L	1		6020B	Total Recoverable
Potassium	2500		500	110	ug/L	1		6020B	Total Recoverable
Sodium	900000		200	77	ug/L	1		6020B	Total Recoverable
Strontium	10000		4.0	0.64	ug/L	1		6020B	Total Recoverable
Zinc	330		20	6.9	ug/L	1		6020B	Total Recoverable
Arsenic	0.28	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	1400		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	190	B	50	13	ug/L	1		6020B	Dissolved
Calcium	370000		200	44	ug/L	1		6020B	Dissolved
Iron	1600		100	47	ug/L	1		6020B	Dissolved
Lithium	270		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	3600		200	49	ug/L	1		6020B	Dissolved
Manganese	510		2.5	0.79	ug/L	1		6020B	Dissolved
Molybdenum	32		5.0	2.5	ug/L	1		6020B	Dissolved
Potassium	2600		500	110	ug/L	1		6020B	Dissolved
Sodium	930000		200	77	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: WP-583-233-284.4-1 (Continued)

Lab Sample ID: 500-253934-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Strontium	11000		4.0	0.64	ug/L	1		6020B	Dissolved
Zinc	210		20	6.9	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	910		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	28		1.0	0.18	mg/L	1		300.0	Total/NA
Chloride	1900		100	12	mg/L	100		300.0	Total/NA
Sulfate	4.0		1.0	0.21	mg/L	1		300.0	Total/NA
Ammonia	0.17	J	0.20	0.10	mg/L	1		350.1	Total/NA
Alkalinity	88	B	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	88	B	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Salinity	4.4		0.33	0.33	psu	1		SM 2520B	Total/NA
Total Dissolved Solids	3700		25	11	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	12		5.0	1.9	mg/L	1		SM 2540D	Total/NA
Dissolved Organic Carbon	0.47	J	1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: WP-583-233-284.4-1-FB

Lab Sample ID: 500-253934-4

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-253934-1	WP-583-233-284.4-2	Water	07/22/24 10:45	07/24/24 09:20
500-253934-2	WP-583-233-284.4-R	Water	07/22/24 10:45	07/24/24 09:20
500-253934-3	WP-583-233-284.4-1	Water	07/22/24 08:35	07/25/24 09:30
500-253934-4	WP-583-233-284.4-1-FB	Water	07/22/24 08:35	07/25/24 09:30

Client Sample ID: WP-583-233-284.4-2
Lab Sample ID: 500-253934-1

Date Collected: 07/22/24 10:45
Matrix: Water
Date Received: 07/24/24 09:20

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 17:32	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 17:42	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 19:27	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 19:31	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.53**		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 21:17	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.53**		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 18:59	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**36**	**J**	100	25	ug/L		08/09/24 08:59	08/12/24 12:28	1
Antimony	<1.3		3.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:28	1
Arsenic	**0.33**	**J**	1.0	0.23	ug/L		08/09/24 08:59	08/12/24 12:28	1
Barium	**1300**		2.5	0.73	ug/L		08/09/24 08:59	08/12/24 12:28	1
Beryllium	<0.53		1.0	0.53	ug/L		08/09/24 08:59	08/12/24 12:28	1
Boron	**190**	**B**	50	13	ug/L		08/09/24 08:59	08/12/24 12:28	1
Cadmium	<0.17		0.50	0.17	ug/L		08/09/24 08:59	08/12/24 12:28	1
Calcium	**380000**		1000	220	ug/L		08/09/24 08:59	08/12/24 15:25	5
Chromium	<1.1		5.0	1.1	ug/L		08/09/24 08:59	08/12/24 12:28	1
Cobalt	<0.40		1.0	0.40	ug/L		08/09/24 08:59	08/12/24 12:28	1
Copper	**0.60**	**J**	2.0	0.50	ug/L		08/09/24 08:59	08/12/24 12:28	1
Iron	**1400**		100	47	ug/L		08/09/24 08:59	08/12/24 12:28	1
Lead	<0.19		0.50	0.19	ug/L		08/09/24 08:59	08/12/24 12:28	1
Lithium	**240**		10	2.5	ug/L		08/09/24 08:59	08/12/24 12:28	1
Magnesium	**3300**		200	49	ug/L		08/09/24 08:59	08/12/24 12:28	1
Manganese	**490**		2.5	0.79	ug/L		08/09/24 08:59	08/12/24 12:28	1
Molybdenum	**32**		5.0	2.5	ug/L		08/09/24 08:59	08/12/24 12:28	1
Nickel	<0.63		2.0	0.63	ug/L		08/09/24 08:59	08/12/24 12:28	1
Potassium	**2500**		500	110	ug/L		08/09/24 08:59	08/12/24 12:28	1
Selenium	<0.98		2.5	0.98	ug/L		08/09/24 08:59	08/12/24 12:28	1
Silver	<0.12		0.50	0.12	ug/L		08/09/24 08:59	08/12/24 12:28	1
Sodium	**970000**		1000	390	ug/L		08/09/24 08:59	08/12/24 15:25	5
Strontium	**10000**		4.0	0.64	ug/L		08/09/24 08:59	08/12/24 12:28	1
Thallium	<0.57		2.0	0.57	ug/L		08/09/24 08:59	08/12/24 12:28	1
Tin	<1.3		5.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:28	1
Vanadium	<2.2		5.0	2.2	ug/L		08/09/24 08:59	08/12/24 12:28	1
Zinc	**220**		20	6.9	ug/L		08/09/24 08:59	08/12/24 12:28	1

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-583-233-284.4-2
Lab Sample ID: 500-253934-1
Date Collected: 07/22/24 10:45
Matrix: Water
Date Received: 07/24/24 09:20

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/09/24 08:59	08/12/24 12:31	1
Antimony	<1.3		3.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:31	1
Arsenic	**0.30**	**J**	1.0	0.23	ug/L		08/09/24 08:59	08/12/24 12:31	1
Barium	**1300**		2.5	0.73	ug/L		08/09/24 08:59	08/12/24 12:31	1
Beryllium	<0.53		1.0	0.53	ug/L		08/09/24 08:59	08/12/24 12:31	1
Boron	**190**	**B**	50	13	ug/L		08/09/24 08:59	08/12/24 12:31	1
Cadmium	<0.17		0.50	0.17	ug/L		08/09/24 08:59	08/12/24 12:31	1
Calcium	**380000**		1000	220	ug/L		08/09/24 08:59	08/12/24 15:28	5
Chromium	<1.1		5.0	1.1	ug/L		08/09/24 08:59	08/12/24 12:31	1
Cobalt	<0.40		1.0	0.40	ug/L		08/09/24 08:59	08/12/24 12:31	1
Copper	<0.50		2.0	0.50	ug/L		08/09/24 08:59	08/12/24 12:31	1
Iron	**1200**		100	47	ug/L		08/09/24 08:59	08/12/24 12:31	1
Lead	<0.19		0.50	0.19	ug/L		08/09/24 08:59	08/12/24 12:31	1
Lithium	**240**		10	2.5	ug/L		08/09/24 08:59	08/12/24 12:31	1
Magnesium	**3200**		200	49	ug/L		08/09/24 08:59	08/12/24 12:31	1
Manganese	**470**		2.5	0.79	ug/L		08/09/24 08:59	08/12/24 12:31	1
Molybdenum	**32**		5.0	2.5	ug/L		08/09/24 08:59	08/12/24 12:31	1
Nickel	<0.63		2.0	0.63	ug/L		08/09/24 08:59	08/12/24 12:31	1
Potassium	**2400**		500	110	ug/L		08/09/24 08:59	08/12/24 12:31	1
Selenium	<0.98		2.5	0.98	ug/L		08/09/24 08:59	08/12/24 12:31	1
Silver	<0.12		0.50	0.12	ug/L		08/09/24 08:59	08/12/24 12:31	1
Sodium	**970000**		1000	390	ug/L		08/09/24 08:59	08/12/24 15:28	5
Strontium	**10000**		4.0	0.64	ug/L		08/09/24 08:59	08/12/24 12:31	1
Thallium	<0.57		2.0	0.57	ug/L		08/09/24 08:59	08/12/24 12:31	1
Tin	<1.3		5.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:31	1
Vanadium	<2.2		5.0	2.2	ug/L		08/09/24 08:59	08/12/24 12:31	1
Zinc	**94**		20	6.9	ug/L		08/09/24 08:59	08/12/24 12:31	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**960**		0.91	0.46	mg/L		08/09/24 08:59	08/14/24 11:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**22**		1.0	0.18	mg/L			07/24/24 11:20	1
Nitrate as N (EPA 300.0)	<0.043	H	1.0	0.043	mg/L			07/26/24 11:03	1
Chloride (EPA 300.0)	**1800**		100	12	mg/L			07/26/24 11:18	100
Nitrite as N (EPA 300.0)	<0.070	H	1.0	0.070	mg/L			07/24/24 11:20	1
Fluoride (EPA 300.0)	**0.59**	**J**	1.0	0.19	mg/L			07/24/24 11:20	1
Nitrate Nitrite as N (EPA 300.0)	<0.070	H	1.0	0.070	mg/L			07/24/24 11:20	1
Sulfate (EPA 300.0)	**3.9**		1.0	0.21	mg/L			07/24/24 11:20	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/02/24 10:37	08/02/24 15:56	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/14/24 11:34	08/15/24 17:12	1
Phosphorus as P (EPA 365.1)	<0.024	^1- ^- *-	0.050	0.024	mg/L		08/13/24 11:40	08/13/24 17:39	1
Alkalinity (SM 2320B)	**93**	**B**	5.0	3.7	mg/L			08/02/24 19:10	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**93**	**B**	5.0	3.7	mg/L			08/02/24 19:10	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/02/24 19:10	1
Salinity (SM 2520B)	**4.1**		0.33	0.33	psu			07/29/24 15:23	1

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-583-233-284.4-2
Lab Sample ID: 500-253934-1
Date Collected: 07/22/24 10:45
Matrix: Water
Date Received: 07/24/24 09:20

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3600		25	11	mg/L			07/26/24 03:01	1
Total Suspended Solids (SM 2540D)	9.0		5.0	1.9	mg/L			07/29/24 03:19	1
Sulfide (SM 4500 S2 F)	3.6		1.0	0.23	mg/L			07/26/24 00:21	1
Total Organic Carbon (SM 5310C)	<0.47		1.0	0.47	mg/L			07/30/24 20:38	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	0.49	J	1.0	0.47	mg/L			07/28/24 21:06	1

Client Sample Results

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-583-233-284.4-R
Lab Sample ID: 500-253934-2
Date Collected: 07/22/24 10:45
Matrix: Water
Date Received: 07/24/24 09:20

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 19:35	1

Client Sample ID: WP-583-233-284.4-1
Lab Sample ID: 500-253934-3

Date Collected: 07/22/24 08:35
Matrix: Water
Date Received: 07/25/24 09:30

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 17:53	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 18:03	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 19:39	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 19:43	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.57**		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 21:21	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.53**		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 20:55	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**33**	**J**	100	25	ug/L		08/12/24 15:45	08/13/24 17:18	1
Antimony	<1.3		3.0	1.3	ug/L		08/12/24 15:45	08/13/24 17:18	1
Arsenic	**0.34**	**J**	1.0	0.23	ug/L		08/12/24 15:45	08/13/24 17:18	1
Barium	**1300**		2.5	0.73	ug/L		08/12/24 15:45	08/13/24 17:18	1
Beryllium	<0.53		1.0	0.53	ug/L		08/12/24 15:45	08/13/24 17:18	1
Boron	**180**	**B**	50	13	ug/L		08/12/24 15:45	08/13/24 17:18	1
Cadmium	<0.17		0.50	0.17	ug/L		08/12/24 15:45	08/13/24 17:18	1
Calcium	**360000**		200	44	ug/L		08/12/24 15:45	08/13/24 17:18	1
Chromium	<1.1		5.0	1.1	ug/L		08/12/24 15:45	08/13/24 17:18	1
Cobalt	<0.40		1.0	0.40	ug/L		08/12/24 15:45	08/13/24 17:18	1
Copper	**0.96**	**J**	2.0	0.50	ug/L		08/12/24 15:45	08/13/24 17:18	1
Iron	**1700**		100	47	ug/L		08/12/24 15:45	08/13/24 17:18	1
Lead	<0.19		0.50	0.19	ug/L		08/12/24 15:45	08/13/24 17:18	1
Lithium	**260**		10	2.5	ug/L		08/12/24 15:45	08/13/24 17:18	1
Magnesium	**3500**		200	49	ug/L		08/12/24 15:45	08/13/24 17:18	1
Manganese	**500**		2.5	0.79	ug/L		08/12/24 15:45	08/13/24 17:18	1
Molybdenum	**31**		5.0	2.5	ug/L		08/12/24 15:45	08/13/24 17:18	1
Nickel	<0.63		2.0	0.63	ug/L		08/12/24 15:45	08/13/24 17:18	1
Potassium	**2500**		500	110	ug/L		08/12/24 15:45	08/13/24 17:18	1
Selenium	<0.98		2.5	0.98	ug/L		08/12/24 15:45	08/13/24 17:18	1
Silver	<0.12		0.50	0.12	ug/L		08/12/24 15:45	08/13/24 17:18	1
Sodium	**900000**		200	77	ug/L		08/12/24 15:45	08/13/24 17:18	1
Strontium	**10000**		4.0	0.64	ug/L		08/12/24 15:45	08/13/24 17:18	1
Thallium	<0.57		2.0	0.57	ug/L		08/12/24 15:45	08/13/24 17:18	1
Tin	<1.3		5.0	1.3	ug/L		08/12/24 15:45	08/13/24 17:18	1
Vanadium	<2.2		5.0	2.2	ug/L		08/12/24 15:45	08/13/24 17:18	1
Zinc	**330**		20	6.9	ug/L		08/12/24 15:45	08/13/24 17:18	1

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-583-233-284.4-1
Lab Sample ID: 500-253934-3
Date Collected: 07/22/24 08:35
Matrix: Water
Date Received: 07/25/24 09:30

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/12/24 15:45	08/13/24 17:16	1
Antimony	<1.3		3.0	1.3	ug/L		08/12/24 15:45	08/13/24 17:16	1
Arsenic	**0.28**	**J**	1.0	0.23	ug/L		08/12/24 15:45	08/13/24 17:16	1
Barium	**1400**		2.5	0.73	ug/L		08/12/24 15:45	08/13/24 17:16	1
Beryllium	<0.53		1.0	0.53	ug/L		08/12/24 15:45	08/13/24 17:16	1
Boron	**190**	**B**	50	13	ug/L		08/12/24 15:45	08/13/24 17:16	1
Cadmium	<0.17		0.50	0.17	ug/L		08/12/24 15:45	08/13/24 17:16	1
Calcium	**370000**		200	44	ug/L		08/12/24 15:45	08/13/24 17:16	1
Chromium	<1.1		5.0	1.1	ug/L		08/12/24 15:45	08/13/24 17:16	1
Cobalt	<0.40		1.0	0.40	ug/L		08/12/24 15:45	08/13/24 17:16	1
Copper	<0.50		2.0	0.50	ug/L		08/12/24 15:45	08/13/24 17:16	1
Iron	**1600**		100	47	ug/L		08/12/24 15:45	08/13/24 17:16	1
Lead	<0.19		0.50	0.19	ug/L		08/12/24 15:45	08/13/24 17:16	1
Lithium	**270**		10	2.5	ug/L		08/12/24 15:45	08/13/24 17:16	1
Magnesium	**3600**		200	49	ug/L		08/12/24 15:45	08/13/24 17:16	1
Manganese	**510**		2.5	0.79	ug/L		08/12/24 15:45	08/13/24 17:16	1
Molybdenum	**32**		5.0	2.5	ug/L		08/12/24 15:45	08/13/24 17:16	1
Nickel	<0.63		2.0	0.63	ug/L		08/12/24 15:45	08/13/24 17:16	1
Potassium	**2600**		500	110	ug/L		08/12/24 15:45	08/13/24 17:16	1
Selenium	<0.98		2.5	0.98	ug/L		08/12/24 15:45	08/13/24 17:16	1
Silver	<0.12		0.50	0.12	ug/L		08/12/24 15:45	08/13/24 17:16	1
Sodium	**930000**		200	77	ug/L		08/12/24 15:45	08/13/24 17:16	1
Strontium	**11000**		4.0	0.64	ug/L		08/12/24 15:45	08/13/24 17:16	1
Thallium	<0.57		2.0	0.57	ug/L		08/12/24 15:45	08/13/24 17:16	1
Tin	<1.3		5.0	1.3	ug/L		08/12/24 15:45	08/13/24 17:16	1
Vanadium	<2.2		5.0	2.2	ug/L		08/12/24 15:45	08/13/24 17:16	1
Zinc	**210**		20	6.9	ug/L		08/12/24 15:45	08/13/24 17:16	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**910**		0.91	0.46	mg/L		08/12/24 15:45	08/14/24 13:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**28**		1.0	0.18	mg/L			07/25/24 11:31	1
Nitrate as N (EPA 300.0)	<0.043	H H3	1.0	0.043	mg/L			07/25/24 11:31	1
Chloride (EPA 300.0)	**1900**		100	12	mg/L			08/08/24 19:15	100
Nitrite as N (EPA 300.0)	<0.070	H H3	1.0	0.070	mg/L			07/25/24 11:31	1
Fluoride (EPA 300.0)	<0.19		1.0	0.19	mg/L			07/25/24 11:31	1
Nitrate Nitrite as N (EPA 300.0)	<0.070	H H3	1.0	0.070	mg/L			07/25/24 11:31	1
Sulfate (EPA 300.0)	**4.0**		1.0	0.21	mg/L			07/25/24 11:31	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/02/24 10:37	08/02/24 15:58	1
Ammonia (EPA 350.1)	**0.17**	**J**	0.20	0.10	mg/L		08/14/24 11:34	08/15/24 17:13	1
Phosphorus as P (EPA 365.1)	<0.024	^1- ^- *-	0.050	0.024	mg/L		08/13/24 11:40	08/13/24 17:40	1
Alkalinity (SM 2320B)	**88**	**B**	5.0	3.7	mg/L			08/02/24 19:20	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**88**	**B**	5.0	3.7	mg/L			08/02/24 19:20	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/02/24 19:20	1
Salinity (SM 2520B)	**4.4**		0.33	0.33	psu			08/04/24 14:56	1

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-583-233-284.4-1
Lab Sample ID: 500-253934-3
Date Collected: 07/22/24 08:35
Matrix: Water
Date Received: 07/25/24 09:30

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3700		25	11	mg/L			07/26/24 03:03	1
Total Suspended Solids (SM 2540D)	12		5.0	1.9	mg/L			07/29/24 03:22	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			07/26/24 00:24	1
Total Organic Carbon (SM 5310C)	<0.47		1.0	0.47	mg/L			07/30/24 15:30	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	0.47	J	1.0	0.47	mg/L			07/28/24 21:34	1

Client Sample Results

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-583-233-284.4-1-FB
Lab Sample ID: 500-253934-4
Date Collected: 07/22/24 08:35
Matrix: Water
Date Received: 07/25/24 09:30

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 19:51	1

Definitions/Glossary

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^-	Continuing Calibration Verification (CCV) is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Filtration Batch: 2441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
350-771-A-7-A MB	Method Blank	Total/NA	Water	Filtration	

Prep Batch: 2462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Dissolved	Water	1630	
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	1630	
500-253934-3	WP-583-233-284.4-1	Dissolved	Water	1630	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	1630	
MB 350-2462/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2462/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2462/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2462/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2462/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Prep Batch: 2463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Dissolved	Water	1638	
500-253934-1	WP-583-233-284.4-2	Total Recoverable	Water	1638	
500-253934-3	WP-583-233-284.4-1	Dissolved	Water	1638	
500-253934-3	WP-583-233-284.4-1	Total Recoverable	Water	1638	
MB 350-2463/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2463/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2463/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2463/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	
500-253934-1 MS	WP-583-233-284.4-2	Dissolved	Water	1638	
500-253934-1 MSD	WP-583-233-284.4-2	Dissolved	Water	1638	

Analysis Batch: 2472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Dissolved	Water	1638	2463
500-253934-1	WP-583-233-284.4-2	Total Recoverable	Water	1638	2463
500-253934-3	WP-583-233-284.4-1	Dissolved	Water	1638	2463
500-253934-3	WP-583-233-284.4-1	Total Recoverable	Water	1638	2463
MB 350-2463/1-A	Method Blank	Total Recoverable	Water	1638	2463
MB 350-2463/2-A	Method Blank	Total Recoverable	Water	1638	2463
LCS 350-2463/3-A	Lab Control Sample	Total Recoverable	Water	1638	2463
LCSD 350-2463/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2463
500-253934-1 MS	WP-583-233-284.4-2	Dissolved	Water	1638	2463
500-253934-1 MSD	WP-583-233-284.4-2	Dissolved	Water	1638	2463

Analysis Batch: 2481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Dissolved	Water	1631E	
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	1631E	
500-253934-2	WP-583-233-284.4-R	Total/NA	Water	1631E	
500-253934-3	WP-583-233-284.4-1	Dissolved	Water	1631E	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	1631E	
500-253934-4	WP-583-233-284.4-1-FB	Total/NA	Water	1631E	
350-771-A-7-A MB	Method Blank	Total/NA	Water	1631E	2441
MB 350-2481/41	Method Blank	Total/NA	Water	1631E	
MB 350-2481/42	Method Blank	Total/NA	Water	1631E	

Metals (Continued)

Analysis Batch: 2481 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 350-2481/43	Method Blank	Total/NA	Water	1631E	
MB 350-2481/52	Method Blank	Total/NA	Water	1631E	
MB 350-2481/53	Method Blank	Total/NA	Water	1631E	
MB 350-2481/54	Method Blank	Total/NA	Water	1631E	
LCS 350-2481/44	Lab Control Sample	Total/NA	Water	1631E	
LCS 350-2481/55	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2481/47	Lab Control Sample Dup	Total/NA	Water	1631E	
LCSD 350-2481/56	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Dissolved	Water	1630	2462
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	1630	2462
500-253934-3	WP-583-233-284.4-1	Dissolved	Water	1630	2462
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	1630	2462
MB 350-2462/1-A	Method Blank	Total/NA	Water	1630	2462
MB 350-2462/2-A	Method Blank	Total/NA	Water	1630	2462
MB 350-2462/3-A	Method Blank	Total/NA	Water	1630	2462
LCS 350-2462/4-A	Lab Control Sample	Total/NA	Water	1630	2462
LCSD 350-2462/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2462

Prep Batch: 780674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Dissolved	Water	3005A	
500-253934-1	WP-583-233-284.4-2	Total Recoverable	Water	3005A	
MB 500-780674/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-780674/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 780966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Dissolved	Water	6020B	780674
500-253934-1	WP-583-233-284.4-2	Total Recoverable	Water	6020B	780674
MB 500-780674/1-A	Method Blank	Total Recoverable	Water	6020B	780674
LCS 500-780674/2-A	Lab Control Sample	Total Recoverable	Water	6020B	780674

Prep Batch: 781004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-3	WP-583-233-284.4-1	Dissolved	Water	3005A	
500-253934-3	WP-583-233-284.4-1	Total Recoverable	Water	3005A	
MB 500-781004/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781004/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Dissolved	Water	6020B	780674
500-253934-1	WP-583-233-284.4-2	Total Recoverable	Water	6020B	780674

Analysis Batch: 781318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-3	WP-583-233-284.4-1	Dissolved	Water	6020B	781004
500-253934-3	WP-583-233-284.4-1	Total Recoverable	Water	6020B	781004

Metals (Continued)

Analysis Batch: 781318 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-781004/1-A	Method Blank	Total Recoverable	Water	6020B	781004
LCS 500-781004/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781004

Analysis Batch: 781363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total Recoverable	Water	SM 2340B	780674
500-253934-3	WP-583-233-284.4-1	Total Recoverable	Water	SM 2340B	781004

General Chemistry

Analysis Batch: 778155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	300.0	
MB 500-778155/3	Method Blank	Total/NA	Water	300.0	
LCS 500-778155/4	Lab Control Sample	Total/NA	Water	300.0	
500-253934-1 MS	WP-583-233-284.4-2	Total/NA	Water	300.0	
500-253934-1 MSD	WP-583-233-284.4-2	Total/NA	Water	300.0	

Analysis Batch: 778156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	300.0	
MB 500-778156/3	Method Blank	Total/NA	Water	300.0	
LCS 500-778156/4	Lab Control Sample	Total/NA	Water	300.0	
500-253934-1 MS	WP-583-233-284.4-2	Total/NA	Water	300.0	
500-253934-1 MSD	WP-583-233-284.4-2	Total/NA	Water	300.0	

Analysis Batch: 778269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	300.0	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	300.0	
MB 500-778269/75	Method Blank	Total/NA	Water	300.0	
MB 500-778269/9	Method Blank	Total/NA	Water	300.0	
LCS 500-778269/10	Lab Control Sample	Total/NA	Water	300.0	
LCS 500-778269/76	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 778270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	300.0	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	300.0	
MB 500-778270/75	Method Blank	Total/NA	Water	300.0	
MB 500-778270/9	Method Blank	Total/NA	Water	300.0	
LCS 500-778270/10	Lab Control Sample	Total/NA	Water	300.0	
LCS 500-778270/76	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 778480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	SM 2540C	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	SM 2540C	
MB 500-778480/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-778480/2	Lab Control Sample	Total/NA	Water	SM 2540C	

General Chemistry

Analysis Batch: 778568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	SM 4500 S2 F	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	SM 4500 S2 F	
MB 500-778568/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-778568/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 778715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	SM 2540D	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	SM 2540D	
MB 500-778715/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-778715/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 778742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Dissolved	Water	SM 5310C	
500-253934-3	WP-583-233-284.4-1	Dissolved	Water	SM 5310C	
MB 500-778742/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-778742/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 779224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	SM 5310C	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	SM 5310C	
MB 500-779224/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-779224/8	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 779504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	SM 2520B	

Prep Batch: 779702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	Distill/CN	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	Distill/CN	
MB 500-779702/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-779702/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 779754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	335.4	779702
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	335.4	779702
MB 500-779702/1-A	Method Blank	Total/NA	Water	335.4	779702
LCS 500-779702/2-A	Lab Control Sample	Total/NA	Water	335.4	779702

Analysis Batch: 779789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	SM 2520B	

Analysis Batch: 779874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 779874 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	SM 2320B	
MB 500-779874/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-779874/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 780563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	300.0	
MB 500-780563/3	Method Blank	Total/NA	Water	300.0	
LCS 500-780563/4	Lab Control Sample	Total/NA	Water	300.0	

Prep Batch: 780961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	365.2/365.3/365	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	365.2/365.3/365	
MB 500-780961/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780961/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Prep Batch: 781374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	Distill/Ammonia	
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	Distill/Ammonia	
MB 500-781374/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781374/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 781722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	365.1	780961
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	365.1	780961
MB 500-780961/1-A	Method Blank	Total/NA	Water	365.1	780961
LCS 500-780961/2-A	Lab Control Sample	Total/NA	Water	365.1	780961

Analysis Batch: 781794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-253934-1	WP-583-233-284.4-2	Total/NA	Water	350.1	781374
500-253934-3	WP-583-233-284.4-1	Total/NA	Water	350.1	781374
MB 500-781374/1-A	Method Blank	Total/NA	Water	350.1	781374
LCS 500-781374/2-A	Lab Control Sample	Total/NA	Water	350.1	781374

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2462/1-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2462

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 15:20	1

Lab Sample ID: MB 350-2462/2-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2462

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 15:30	1

Lab Sample ID: MB 350-2462/3-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2462

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 15:40	1

Lab Sample ID: LCS 350-2462/4-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2462

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.949		ng/L		95	65 - 135

Lab Sample ID: LCSD 350-2462/5-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2462

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.904		ng/L		90	65 - 135	5	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: 350-771-A-7-A MB
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 19:02	1

Lab Sample ID: MB 350-2481/41
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 13:59	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2481/42
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:03	1

Lab Sample ID: MB 350-2481/43
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:07	1

Lab Sample ID: MB 350-2481/52
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:45	1

Lab Sample ID: MB 350-2481/53
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:49	1

Lab Sample ID: MB 350-2481/54
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:53	1

Lab Sample ID: LCS 350-2481/44
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.44		ng/L		89	77 - 123

Lab Sample ID: LCS 350-2481/55
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.54		ng/L		91	77 - 123

Lab Sample ID: LCSD 350-2481/47
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.46		ng/L		89	77 - 123	0	24

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: LCSD 350-2481/56
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.57		ng/L		91	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2463/1-A
Matrix: Water
Analysis Batch: 2472

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2463

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 17:31	1

Lab Sample ID: MB 350-2463/2-A
Matrix: Water
Analysis Batch: 2472

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2463

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 17:35	1

Lab Sample ID: LCS 350-2463/3-A
Matrix: Water
Analysis Batch: 2472

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2463

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Uranium			25.0	23.8		ug/L		95	85 - 115		

Lab Sample ID: LCSD 350-2463/4-A
Matrix: Water
Analysis Batch: 2472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2463

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium			25.0	23.1		ug/L		92	85 - 115	3	20

Lab Sample ID: 500-253934-1 MS
Matrix: Water
Analysis Batch: 2472

Client Sample ID: WP-583-233-284.4-2
Prep Type: Dissolved
Prep Batch: 2463

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Uranium	0.53		25.0	29.9		ug/L		118	70 - 130		

Lab Sample ID: 500-253934-1 MSD
Matrix: Water
Analysis Batch: 2472

Client Sample ID: WP-583-233-284.4-2
Prep Type: Dissolved
Prep Batch: 2463

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	0.53		25.0	29.4		ug/L		116	70 - 130	2	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-780674/1-A
Matrix: Water
Analysis Batch: 780966

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 780674

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/09/24 08:59	08/12/24 12:13	1
Antimony	<1.3		3.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:13	1
Arsenic	<0.23		1.0	0.23	ug/L		08/09/24 08:59	08/12/24 12:13	1
Barium	<0.73		2.5	0.73	ug/L		08/09/24 08:59	08/12/24 12:13	1
Beryllium	<0.53		1.0	0.53	ug/L		08/09/24 08:59	08/12/24 12:13	1
Boron	34.0	J	50	13	ug/L		08/09/24 08:59	08/12/24 12:13	1
Cadmium	<0.17		0.50	0.17	ug/L		08/09/24 08:59	08/12/24 12:13	1
Calcium	<44		200	44	ug/L		08/09/24 08:59	08/12/24 12:13	1
Chromium	<1.1		5.0	1.1	ug/L		08/09/24 08:59	08/12/24 12:13	1
Cobalt	<0.40		1.0	0.40	ug/L		08/09/24 08:59	08/12/24 12:13	1
Copper	<0.50		2.0	0.50	ug/L		08/09/24 08:59	08/12/24 12:13	1
Iron	<47		100	47	ug/L		08/09/24 08:59	08/12/24 12:13	1
Lead	<0.19		0.50	0.19	ug/L		08/09/24 08:59	08/12/24 12:13	1
Lithium	<2.5		10	2.5	ug/L		08/09/24 08:59	08/12/24 12:13	1
Magnesium	<49		200	49	ug/L		08/09/24 08:59	08/12/24 12:13	1
Manganese	<0.79		2.5	0.79	ug/L		08/09/24 08:59	08/12/24 12:13	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/09/24 08:59	08/12/24 12:13	1
Nickel	<0.63		2.0	0.63	ug/L		08/09/24 08:59	08/12/24 12:13	1
Potassium	<110		500	110	ug/L		08/09/24 08:59	08/12/24 12:13	1
Selenium	<0.98		2.5	0.98	ug/L		08/09/24 08:59	08/12/24 12:13	1
Silver	<0.12		0.50	0.12	ug/L		08/09/24 08:59	08/12/24 12:13	1
Sodium	<77		200	77	ug/L		08/09/24 08:59	08/12/24 12:13	1
Strontium	<0.64		4.0	0.64	ug/L		08/09/24 08:59	08/12/24 12:13	1
Thallium	<0.57		2.0	0.57	ug/L		08/09/24 08:59	08/12/24 12:13	1
Tin	<1.3		5.0	1.3	ug/L		08/09/24 08:59	08/12/24 12:13	1
Vanadium	<2.2		5.0	2.2	ug/L		08/09/24 08:59	08/12/24 12:13	1
Zinc	<6.9		20	6.9	ug/L		08/09/24 08:59	08/12/24 12:13	1

Lab Sample ID: LCS 500-780674/2-A
Matrix: Water
Analysis Batch: 780966

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 780674

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	1930		ug/L		96	80 - 120
Antimony	500	496		ug/L		99	80 - 120
Arsenic	100	97.5		ug/L		98	80 - 120
Barium	500	511		ug/L		102	80 - 120
Beryllium	50.0	49.8		ug/L		100	80 - 120
Boron	1000	1020		ug/L		102	80 - 120
Cadmium	50.0	49.7		ug/L		99	80 - 120
Calcium	10000	9130		ug/L		91	80 - 120
Chromium	200	209		ug/L		104	80 - 120
Cobalt	500	526		ug/L		105	80 - 120
Copper	250	258		ug/L		103	80 - 120
Iron	1000	1040		ug/L		104	80 - 120
Lead	100	101		ug/L		101	80 - 120
Lithium	100	104		ug/L		104	80 - 120
Magnesium	10000	10300		ug/L		103	80 - 120
Manganese	500	517		ug/L		103	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-780674/2-A
Matrix: Water
Analysis Batch: 780966

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 780674

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	969		ug/L		97	80 - 120
Nickel	500	513		ug/L		103	80 - 120
Potassium	10000	10200		ug/L		102	80 - 120
Selenium	100	96.5		ug/L		96	80 - 120
Silver	50.0	49.5		ug/L		99	80 - 120
Sodium	10000	10300		ug/L		103	80 - 120
Strontium	1000	956		ug/L		96	80 - 120
Thallium	100	104		ug/L		104	80 - 120
Tin	1000	969		ug/L		97	80 - 120
Vanadium	500	510		ug/L		102	80 - 120
Zinc	500	505		ug/L		101	80 - 120

Lab Sample ID: MB 500-781004/1-A
Matrix: Water
Analysis Batch: 781318

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781004

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/12/24 15:45	08/13/24 16:23	1
Antimony	<1.3		3.0	1.3	ug/L		08/12/24 15:45	08/13/24 16:23	1
Arsenic	<0.23		1.0	0.23	ug/L		08/12/24 15:45	08/13/24 16:23	1
Barium	<0.73		2.5	0.73	ug/L		08/12/24 15:45	08/13/24 16:23	1
Beryllium	<0.53		1.0	0.53	ug/L		08/12/24 15:45	08/13/24 16:23	1
Boron	41.3	J	50	13	ug/L		08/12/24 15:45	08/13/24 16:23	1
Cadmium	<0.17		0.50	0.17	ug/L		08/12/24 15:45	08/13/24 16:23	1
Calcium	<44		200	44	ug/L		08/12/24 15:45	08/13/24 16:23	1
Chromium	<1.1		5.0	1.1	ug/L		08/12/24 15:45	08/13/24 16:23	1
Cobalt	<0.40		1.0	0.40	ug/L		08/12/24 15:45	08/13/24 16:23	1
Copper	<0.50		2.0	0.50	ug/L		08/12/24 15:45	08/13/24 16:23	1
Iron	<47		100	47	ug/L		08/12/24 15:45	08/13/24 16:23	1
Lead	<0.19		0.50	0.19	ug/L		08/12/24 15:45	08/13/24 16:23	1
Lithium	<2.5		10	2.5	ug/L		08/12/24 15:45	08/13/24 16:23	1
Magnesium	<49		200	49	ug/L		08/12/24 15:45	08/13/24 16:23	1
Manganese	<0.79		2.5	0.79	ug/L		08/12/24 15:45	08/13/24 16:23	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/12/24 15:45	08/13/24 16:23	1
Nickel	<0.63		2.0	0.63	ug/L		08/12/24 15:45	08/13/24 16:23	1
Potassium	<110		500	110	ug/L		08/12/24 15:45	08/13/24 16:23	1
Selenium	<0.98		2.5	0.98	ug/L		08/12/24 15:45	08/13/24 16:23	1
Silver	<0.12		0.50	0.12	ug/L		08/12/24 15:45	08/13/24 16:23	1
Sodium	<77		200	77	ug/L		08/12/24 15:45	08/13/24 16:23	1
Strontium	<0.64		4.0	0.64	ug/L		08/12/24 15:45	08/13/24 16:23	1
Thallium	<0.57		2.0	0.57	ug/L		08/12/24 15:45	08/13/24 16:23	1
Tin	<1.3		5.0	1.3	ug/L		08/12/24 15:45	08/13/24 16:23	1
Vanadium	<2.2		5.0	2.2	ug/L		08/12/24 15:45	08/13/24 16:23	1
Zinc	<6.9		20	6.9	ug/L		08/12/24 15:45	08/13/24 16:23	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781004/2-A
Matrix: Water
Analysis Batch: 781318

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2010		ug/L		100	80 - 120
Antimony	500	499		ug/L		100	80 - 120
Arsenic	100	98.0		ug/L		98	80 - 120
Barium	500	522		ug/L		104	80 - 120
Beryllium	50.0	53.4		ug/L		107	80 - 120
Boron	1000	1070		ug/L		107	80 - 120
Cadmium	50.0	50.3		ug/L		101	80 - 120
Calcium	10000	8630		ug/L		86	80 - 120
Chromium	200	210		ug/L		105	80 - 120
Cobalt	500	535		ug/L		107	80 - 120
Copper	250	257		ug/L		103	80 - 120
Iron	1000	1050		ug/L		105	80 - 120
Lead	100	102		ug/L		102	80 - 120
Lithium	100	114		ug/L		114	80 - 120
Magnesium	10000	10500		ug/L		105	80 - 120
Manganese	500	522		ug/L		104	80 - 120
Molybdenum	1000	971		ug/L		97	80 - 120
Nickel	500	511		ug/L		102	80 - 120
Potassium	10000	10300		ug/L		103	80 - 120
Selenium	100	97.4		ug/L		97	80 - 120
Silver	50.0	49.9		ug/L		100	80 - 120
Sodium	10000	10400		ug/L		104	80 - 120
Strontium	1000	969		ug/L		97	80 - 120
Thallium	100	104		ug/L		104	80 - 120
Tin	1000	985		ug/L		98	80 - 120
Vanadium	500	517		ug/L		103	80 - 120
Zinc	500	500		ug/L		100	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-778155/3
Matrix: Water
Analysis Batch: 778155

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/24/24 10:49	1
Fluoride	<0.19		1.0	0.19	mg/L			07/24/24 10:49	1
Sulfate	<0.21		1.0	0.21	mg/L			07/24/24 10:49	1

Lab Sample ID: LCS 500-778155/4
Matrix: Water
Analysis Batch: 778155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	19.1		mg/L		96	90 - 110
Fluoride	20.0	21.2		mg/L		106	90 - 110
Sulfate	20.0	19.1		mg/L		95	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 500-253934-1 MS
Matrix: Water
Analysis Batch: 778155

Client Sample ID: WP-583-233-284.4-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	22		10.0	31.3		mg/L		94	80 - 120
Fluoride	0.59	J	10.0	10.4		mg/L		98	80 - 120
Sulfate	3.9		10.0	13.6		mg/L		96	80 - 120

Lab Sample ID: 500-253934-1 MSD
Matrix: Water
Analysis Batch: 778155

Client Sample ID: WP-583-233-284.4-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	22		10.0	30.4		mg/L		86	80 - 120	3	20
Fluoride	0.59	J	10.0	10.2		mg/L		96	80 - 120	2	20
Sulfate	3.9		10.0	13.5		mg/L		95	80 - 120	1	20

Lab Sample ID: MB 500-778156/3
Matrix: Water
Analysis Batch: 778156

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	<0.070		1.0	0.070	mg/L			07/24/24 10:49	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/24/24 10:49	1

Lab Sample ID: LCS 500-778156/4
Matrix: Water
Analysis Batch: 778156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	20.0	19.6		mg/L		98	90 - 110
Nitrate Nitrite as N	40.0	37.3		mg/L		93	90 - 110

Lab Sample ID: 500-253934-1 MS
Matrix: Water
Analysis Batch: 778156

Client Sample ID: WP-583-233-284.4-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	<0.070	H	10.0	11.9		mg/L		119	80 - 120
Nitrate Nitrite as N	<0.070	H	20.0	20.9		mg/L		104	80 - 120

Lab Sample ID: 500-253934-1 MSD
Matrix: Water
Analysis Batch: 778156

Client Sample ID: WP-583-233-284.4-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	<0.070	H	10.0	11.6		mg/L		116	80 - 120	3	20
Nitrate Nitrite as N	<0.070	H	20.0	20.3		mg/L		102	80 - 120	3	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-778269/75
Matrix: Water
Analysis Batch: 778269

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.12		1.0	0.12	mg/L			07/26/24 03:43	1

Lab Sample ID: MB 500-778269/9
Matrix: Water
Analysis Batch: 778269

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/25/24 10:51	1
Fluoride	<0.19		1.0	0.19	mg/L			07/25/24 10:51	1
Sulfate	<0.21		1.0	0.21	mg/L			07/25/24 10:51	1

Lab Sample ID: LCS 500-778269/10
Matrix: Water
Analysis Batch: 778269

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	19.2		mg/L		96	90 - 110
Fluoride	20.0	20.2		mg/L		101	90 - 110
Sulfate	20.0	20.1		mg/L		101	90 - 110

Lab Sample ID: LCS 500-778269/76
Matrix: Water
Analysis Batch: 778269

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.3		mg/L		97	90 - 110

Lab Sample ID: MB 500-778270/75
Matrix: Water
Analysis Batch: 778270

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/26/24 03:43	1

Lab Sample ID: MB 500-778270/9
Matrix: Water
Analysis Batch: 778270

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/25/24 10:51	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/25/24 10:51	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/25/24 10:51	1

Lab Sample ID: LCS 500-778270/10
Matrix: Water
Analysis Batch: 778270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.3		mg/L		97	90 - 110
Nitrite as N	20.0	20.3		mg/L		101	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 500-778270/10
Matrix: Water
Analysis Batch: 778270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	40.0	39.6		mg/L		99	90 - 110

Lab Sample ID: LCS 500-778270/76
Matrix: Water
Analysis Batch: 778270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.3		mg/L		97	90 - 110

Lab Sample ID: MB 500-780563/3
Matrix: Water
Analysis Batch: 780563

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.12		1.0	0.12	mg/L			08/08/24 18:45	1

Lab Sample ID: LCS 500-780563/4
Matrix: Water
Analysis Batch: 780563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.3		mg/L		96	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-779702/1-A
Matrix: Water
Analysis Batch: 779754

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 779702

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/02/24 10:37	08/02/24 15:30	1

Lab Sample ID: LCS 500-779702/2-A
Matrix: Water
Analysis Batch: 779754

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 779702

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0970		mg/L		97	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781374/1-A
Matrix: Water
Analysis Batch: 781794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781374

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/14/24 11:34	08/15/24 17:01	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 500-781374/2-A
Matrix: Water
Analysis Batch: 781794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781374

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.96		mg/L		98	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780961/1-A
Matrix: Water
Analysis Batch: 781722

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780961

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^- ^1-	0.050	0.024	mg/L		08/13/24 11:40	08/13/24 17:36	1

Lab Sample ID: LCS 500-780961/2-A
Matrix: Water
Analysis Batch: 781722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780961

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.367	^1- *- ^-	mg/L		73	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-779874/3
Matrix: Water
Analysis Batch: 779874

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.71		5.0	3.7	mg/L			08/02/24 18:17	1
Bicarbonate Alkalinity as CaCO3	5.71		5.0	3.7	mg/L			08/02/24 18:17	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/02/24 18:17	1

Lab Sample ID: LCS 500-779874/4
Matrix: Water
Analysis Batch: 779874

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	106		mg/L		106	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-778480/1
Matrix: Water
Analysis Batch: 778480

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			07/26/24 02:38	1

Lab Sample ID: LCS 500-778480/2
Matrix: Water
Analysis Batch: 778480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	240		mg/L		96	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-778715/1
Matrix: Water
Analysis Batch: 778715

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			07/29/24 02:07	1

Lab Sample ID: LCS 500-778715/2
Matrix: Water
Analysis Batch: 778715

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	176		mg/L		88	80 - 120

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-778568/1
Matrix: Water
Analysis Batch: 778568

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			07/25/24 23:14	1

Lab Sample ID: LCS 500-778568/2
Matrix: Water
Analysis Batch: 778568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.54		mg/L		98	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-779224/7
Matrix: Water
Analysis Batch: 779224

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			07/30/24 11:17	1

Lab Sample ID: LCS 500-779224/8
Matrix: Water
Analysis Batch: 779224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.2		mg/L		102	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-778742/7
Matrix: Water
Analysis Batch: 778742

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			07/28/24 18:19	1

Method: SM 5310C - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCS 500-778742/8
Matrix: Water
Analysis Batch: 778742

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Lab Chronicle

Client: Foth Infrastructure & Environment, LLC
Project/Site: FOTH - White Pines, MI

Job ID: 500-253934-1

Client Sample ID: WP-583-233-284.4-2

Date Collected: 07/22/24 10:45
Date Received: 07/24/24 09:20

Lab Sample ID: 500-253934-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2462	AJD	EET SSM	07/29/24 09:45
Dissolved	Analysis	1630		1	2488	CL	EET SSM	07/30/24 17:42
Total/NA	Prep	1630			2462	AJD	EET SSM	07/29/24 09:45
Total/NA	Analysis	1630		1	2488	CL	EET SSM	07/30/24 17:32
Dissolved	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 19:31
Total/NA	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 19:27
Dissolved	Prep	1638			2463	V1R	EET SSM	07/29/24 12:49
Dissolved	Analysis	1638		1	2472	V1R	EET SSM	07/29/24 18:59
Total Recoverable	Prep	1638			2463	V1R	EET SSM	07/29/24 12:49
Total Recoverable	Analysis	1638		1	2472	V1R	EET SSM	07/29/24 21:17
Dissolved	Prep	3005A			780674	BDE	EET CHI	08/09/24 08:59 - 08/09/24 14:59 [1]
Dissolved	Analysis	6020B		1	780966	RN	EET CHI	08/12/24 12:31
Dissolved	Prep	3005A			780674	BDE	EET CHI	08/09/24 08:59 - 08/09/24 14:59 [1]
Dissolved	Analysis	6020B		5	781097	RN	EET CHI	08/12/24 15:28
Total Recoverable	Prep	3005A			780674	BDE	EET CHI	08/09/24 08:59 - 08/09/24 14:59 [1]
Total Recoverable	Analysis	6020B		1	780966	RN	EET CHI	08/12/24 12:28
Total Recoverable	Prep	3005A			780674	BDE	EET CHI	08/09/24 08:59 - 08/09/24 14:59 [1]
Total Recoverable	Analysis	6020B		5	781097	RN	EET CHI	08/12/24 15:25
Total Recoverable	Prep	3005A			780674	BDE	EET CHI	08/09/24 08:59 - 08/09/24 14:59 [1]
Total Recoverable	Analysis	SM 2340B		1	781363	DAJ	EET CHI	08/14/24 11:50
Total/NA	Analysis	300.0		1	778155	W1T	EET CHI	07/24/24 11:20
Total/NA	Analysis	300.0		1	778156	W1T	EET CHI	07/24/24 11:20
Total/NA	Analysis	300.0		1	778270	W1T	EET CHI	07/26/24 11:03
Total/NA	Analysis	300.0		100	778269	W1T	EET CHI	07/26/24 11:18
Total/NA	Prep	Distill/CN			779702	KF	EET CHI	08/02/24 10:37 - 08/02/24 11:07 [1]
Total/NA	Analysis	335.4		1	779754	KF	EET CHI	08/02/24 15:56
Total/NA	Prep	Distill/Ammonia			781374	EB	EET CHI	08/14/24 11:34 - 08/14/24 12:34 [1]
Total/NA	Analysis	350.1		1	781794	KF	EET CHI	08/15/24 17:12
Total/NA	Prep	365.2/365.3/365			780961	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781722	LP	EET CHI	08/13/24 17:39
Total/NA	Analysis	SM 2320B		1	779874	SO	EET CHI	08/02/24 19:10
Total/NA	Analysis	SM 2520B		1	779504	TR	EET CHI	07/29/24 15:23
Total/NA	Analysis	SM 2540C		1	778480	CLB	EET CHI	07/26/24 03:01
Total/NA	Analysis	SM 2540D		1	778715	CLB	EET CHI	07/29/24 03:19 - 07/29/24 03:22 [1]
Total/NA	Analysis	SM 4500 S2 F		1	778568	CLB	EET CHI	07/26/24 00:21 - 07/26/24 00:24 [1]
Dissolved	Analysis	SM 5310C		1	778742	TR	EET CHI	07/28/24 21:06
Total/NA	Analysis	SM 5310C		1	779224	TR	EET CHI	07/30/24 20:38

Lab Chronicle

Client: Foth Infrastructure & Environment, LLC
Project/Site: FOTH - White Pines, MI

Job ID: 500-253934-1

Client Sample ID: WP-583-233-284.4-R

Date Collected: 07/22/24 10:45
Date Received: 07/24/24 09:20

Lab Sample ID: 500-253934-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 19:35

Client Sample ID: WP-583-233-284.4-1

Date Collected: 07/22/24 08:35
Date Received: 07/25/24 09:30

Lab Sample ID: 500-253934-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2462	AJD	EET SSM	07/29/24 09:45
Dissolved	Analysis	1630		1	2488	CL	EET SSM	07/30/24 18:03
Total/NA	Prep	1630			2462	AJD	EET SSM	07/29/24 09:45
Total/NA	Analysis	1630		1	2488	CL	EET SSM	07/30/24 17:53
Dissolved	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 19:43
Total/NA	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 19:39
Dissolved	Prep	1638			2463	V1R	EET SSM	07/29/24 12:49
Dissolved	Analysis	1638		1	2472	V1R	EET SSM	07/29/24 20:55
Total Recoverable	Prep	1638			2463	V1R	EET SSM	07/29/24 12:49
Total Recoverable	Analysis	1638		1	2472	V1R	EET SSM	07/29/24 21:21
Dissolved	Prep	3005A			781004	S1Z	EET CHI	08/12/24 15:45 - 08/12/24 21:45 [1]
Dissolved	Analysis	6020B		1	781318	RN	EET CHI	08/13/24 17:16
Total Recoverable	Prep	3005A			781004	S1Z	EET CHI	08/12/24 15:45 - 08/12/24 21:45 [1]
Total Recoverable	Analysis	6020B		1	781318	RN	EET CHI	08/13/24 17:18
Total Recoverable	Prep	3005A			781004	S1Z	EET CHI	08/12/24 15:45 - 08/12/24 21:45 [1]
Total Recoverable	Analysis	SM 2340B		1	781363	DAJ	EET CHI	08/14/24 13:16
Total/NA	Analysis	300.0		1	778269	W1T	EET CHI	07/25/24 11:31
Total/NA	Analysis	300.0		1	778270	W1T	EET CHI	07/25/24 11:31
Total/NA	Analysis	300.0		100	780563	W1T	EET CHI	08/08/24 19:15
Total/NA	Prep	Distill/CN			779702	KF	EET CHI	08/02/24 10:37 - 08/02/24 11:07 [1]
Total/NA	Analysis	335.4		1	779754	KF	EET CHI	08/02/24 15:58
Total/NA	Prep	Distill/Ammonia			781374	EB	EET CHI	08/14/24 11:34 - 08/14/24 12:34 [1]
Total/NA	Analysis	350.1		1	781794	KF	EET CHI	08/15/24 17:13
Total/NA	Prep	365.2/365.3/365			780961	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781722	LP	EET CHI	08/13/24 17:40
Total/NA	Analysis	SM 2320B		1	779874	SO	EET CHI	08/02/24 19:20
Total/NA	Analysis	SM 2520B		1	779789	TR	EET CHI	08/04/24 14:56
Total/NA	Analysis	SM 2540C		1	778480	CLB	EET CHI	07/26/24 03:03
Total/NA	Analysis	SM 2540D		1	778715	CLB	EET CHI	07/29/24 03:22 - 07/29/24 03:25 [1]
Total/NA	Analysis	SM 4500 S2 F		1	778568	CLB	EET CHI	07/26/24 00:24 - 07/26/24 00:27 [1]
Dissolved	Analysis	SM 5310C		1	778742	TR	EET CHI	07/28/24 21:34
Total/NA	Analysis	SM 5310C		1	779224	TR	EET CHI	07/30/24 15:30

Lab Chronicle

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Client Sample ID: WP-583-233-284.4-1-FB
Lab Sample ID: 500-253934-4

Date Collected: 07/22/24 08:35
Matrix: Water
Date Received: 07/25/24 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 19:51

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Foth Infrastructure & Environment, LLC
Job ID: 500-253934-1
Project/Site: FOTH - White Pines, MI

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	08-07-24
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	08-07-24
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.


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Part # 159469-4C4 MTM/EXP 01/25

TO SAMPLE RECEIPT
EUROFINS CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484

(708) 534-5200 REF:

INV: PO: DEPT:

RMA:

FedEx Express

FedEx TRK# 0221 7414 0291 7069

WED - 24 JUL AA
PRIORITY OVERNIGHT

XP JOTA

60484
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ORD

500-253934 COC

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone 708-534-5200 Fax 708 534-5211

Chain of Custody Record

eurofins | Environment Testing

500-253934 COC

Client Information	Sampler: May Willison	Lab PM: Fredrick, Sandie		COC No: 500-126105-50170 2
Client Contact: Jakob Wartman	Phone:	E-Mail: Sandra Fredrick@et eurofinsus com		Page: Page 2 of 5
Company: Foth Infrastructure & Environment, LLC	PWSID:			Job #: 500-253934
Address: Missabe Building 227 West 1st. Street, Suite 920	Due Date Requested: Standard			
City: Duluth	TAT Requested (days): Standard			
State, Zip: MN, 55802	Compliance Project: Δ Yes Δ No			
Phone: 218-481-6014(Tel)	PO #: Purchase Order not required			
Email: Jakob Wartman@foth com	WO #:			
Project Name: FOTH - White Pines, MI	Project #: 50023463			
Site:	SSOW#:			

Analysis Requested

Preservation Codes: N None; S H2SO4; CB ZnAcetate/NaOH; B NaOH; D HNO3

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1631E - Mercury, Low Level (CVAFS)	1631E - Dissolved Mercury, Low Level (FF)	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, SM2520_B	350.1, 365.1	SM4500_S2_F - Sulfide	335.4 - Cyanide, Total	SM5310_DOC_C - DOC	6020B, SM2340B	6020B - Dissolved Metals (ICP/MS) - 27 elements	3500_CR_B - Chromium, Hexavalent	3500_CR_B - Dissolved Chromium, Hexavalent (field fi	1638 - Uranium only (ICP/MS)	1638 - Dissolved Uranium only (ICP/MS) (f	Total Number of containers	Special Instructions/Note:
	Preservation Code:							N	N	N	S	CB	B	S	D	D	N	N	D	D		
3	WP-583-233-2844-4	7/22/24	0835	G	Water			X		X	X	X	X		X		X		X	X		
					Water	X			X					X		X		X	X	X		
1	WP-583-233-284.4-2	7/22/24	1045	G	Water		MS	X		X	X	X	X		X		X		X	X		
					Water		MSD		X					X		X		X	X	X		
2	WP-583-233-284.4-2-R				Water																	2 Field Blanks added
4	WP-583-233-284.4-1-FB				Water																	BY EEIA 7/25/24 SH
					Water																	
					Water																	
					Water																	
					Water																	
					Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
May Willison	7/23/24 0830	Foth	Stephanie Hernandez	7/25/24 0930	EEIA

Custody Seals Intact	Custody Seal No	Cooler Temperature(s) °C and Other Remarks
Δ Yes Δ No		1.5+1.4



500-253934 Waybi

WHITE PINE COPPER
35362 MALL CIRCLE DRIVE

WHITE PINE, MI 49971
UNITED STATES US

CAD 3030

TO **SAMPLE RECEIPT**
EUROFINS CHICAGO
2417 BOND ST.

UNIVERSITY PARK IL 60484

(708) 534-5200 REF
INV:
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PRIORITY OVERNIGHT

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Login Sample Receipt Checklist

Client: Foth Infrastructure & Environment, LLC

Job Number: 500-253934-1

Login Number: 253934
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.9,1.4
COC is present.	False	Missing coolers and COC
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	Anion hold time missed due to FE delay
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Foth Infrastructure & Environment, LLC

Job Number: 500-253934-1

Login Number: 253934
List Number: 2
Creator: Groden, Kyle J

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/26/24 01:20 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-253934 Field Sheet

8/23/2024

Date:	7/26/2024
End Time:	15:07
pH Paper Lot:	HC324723
Analyst:	VHL

Preservative ID	Preservative Type	Container ID
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-253934-J-3	<2				
500-253934-J-1	<2				
500-253934-K-1	<2				
500-253934-K-3	<2				VHL 7-26-24

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500-253934 Field Sheet

Date:	7/26/2024
End Time:	15:29
pH Paper Lot:	HC324723
Analyst:	

Preservative ID	Preservative Type	Container ID
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-253934-E-3	<2				
500-253934-F-3	<2				
500-253934-F-1	<2				
500-253934-E-1	<2				

7-26-24

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ANALYTICAL REPORT

PREPARED FOR

Attn: Amanda Zeidler
White Pine Copper LLC
35362 Mall Circle Drive
White Pine, Michigan 49971

Generated 8/23/2024 2:33:09 PM

JOB DESCRIPTION

White Pines, MI

JOB NUMBER

500-254002-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

Results relate only to the items tested and the sample(s) as received by the laboratory. The results, detection limits (LOD) and Quantitation Limits (LOQ) have been adjusted for sample dilutions and/or solids content.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Compliance Statement

The LOD and LOQ reported are adjusted by the dilution factor when a dilution factor greater than 1 is needed. Additionally, where results are indicated as being reported on a dry weight basis, the LOD and LOQ are adjusted for moisture content as well.

Definitions of Limits
- LOD = Limit of Detection = MDL as defined by 40 CFR part 136 Appendix B
- LOQ = Limit of Quantitation = 3.33 x LOD as defined by Wisconsin
- RL = Report Limit = a concentration supported by a standard in the calibration curves

Authorization



Generated
8/23/2024 2:33:09 PM

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

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Job Narrative
500-254002-1

Receipt
The samples were received on 7/25/2024 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7º C.

Receipt Exceptions
The following sample(s) was received outside of holding time: sample #1 for IC N2,N3.

Metals
Method 1630: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 350-2462 and analytical batch 350-2488 was outside control limits. Sample matrix interference is suspected.

Method 1630: The following samples analyzed by EPA 1630 required manual integration:
- MB 350-2462/3-A (Instrument Noise)
- 500-253934-E-3-A (Instrument Noise)
- 500-254020-F-1-A (Instrument Noise)
- CCB (Instrument Noise)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 300.0: The following sample was received outside of holding time: PRC-01_20240722 (500-254002-1).

Method SM 2320B: The method blank for analytical batch 500-779874 contained Alkalinity above the reporting limit (RL). Associated sample(s) were not re-analyzed because results were greater than 10X the value found in the method blank.

Method 365.1: ICV recovered low at 76% Recovery. Samples were reprepped out of hold. (ICV 500-781722/9)

Method 365.1: CCV failed low. Samples were reprepped out of hold. (CCV 500-780961/25-A)

Method 365.1: LCS failed low. Samples were reprepped out of hold. Data Confirmed initial analysis. (LCS 500-780961/2-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

Client Sample ID: PRC-01_20240722

Lab Sample ID: 500-254002-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Uranium	0.29		0.030	0.0098	ug/L	1		1638	Total Recoverable
Uranium	0.29		0.030	0.0098	ug/L	1		1638	Dissolved
Aluminum	45	J	100	25	ug/L	1		6020B	Total Recoverable
Arsenic	0.63	J	1.0	0.23	ug/L	1		6020B	Total Recoverable
Barium	130		2.5	0.73	ug/L	1		6020B	Total Recoverable
Boron	400	B	50	13	ug/L	1		6020B	Total Recoverable
Calcium	75000		200	44	ug/L	1		6020B	Total Recoverable
Copper	12		2.0	0.50	ug/L	1		6020B	Total Recoverable
Iron	240		100	47	ug/L	1		6020B	Total Recoverable
Lithium	38		10	2.5	ug/L	1		6020B	Total Recoverable
Magnesium	11000		200	49	ug/L	1		6020B	Total Recoverable
Manganese	53		2.5	0.79	ug/L	1		6020B	Total Recoverable
Molybdenum	37		5.0	2.5	ug/L	1		6020B	Total Recoverable
Potassium	3800		500	110	ug/L	1		6020B	Total Recoverable
Sodium	86000	B	200	77	ug/L	1		6020B	Total Recoverable
Strontium	940		4.0	0.64	ug/L	1		6020B	Total Recoverable
Zinc	7.8	J	20	6.9	ug/L	1		6020B	Total Recoverable
Arsenic	0.64	J	1.0	0.23	ug/L	1		6020B	Dissolved
Barium	130		2.5	0.73	ug/L	1		6020B	Dissolved
Boron	390	B	50	13	ug/L	1		6020B	Dissolved
Calcium	75000		200	44	ug/L	1		6020B	Dissolved
Copper	11		2.0	0.50	ug/L	1		6020B	Dissolved
Iron	50	J	100	47	ug/L	1		6020B	Dissolved
Lithium	38		10	2.5	ug/L	1		6020B	Dissolved
Magnesium	11000		200	49	ug/L	1		6020B	Dissolved
Manganese	19		2.5	0.79	ug/L	1		6020B	Dissolved
Molybdenum	37		5.0	2.5	ug/L	1		6020B	Dissolved
Potassium	3900		500	110	ug/L	1		6020B	Dissolved
Sodium	87000	B	200	77	ug/L	1		6020B	Dissolved
Strontium	940		4.0	0.64	ug/L	1		6020B	Dissolved
Hardness as calcium carbonate	230		0.91	0.46	mg/L	1		SM 2340B	Total Recoverable
Bromide	1.9		1.0	0.18	mg/L	1		300.0	Total/NA
Chloride	200		10	1.2	mg/L	10		300.0	Total/NA
Fluoride	0.33	J	1.0	0.19	mg/L	1		300.0	Total/NA
Sulfate	30		1.0	0.21	mg/L	1		300.0	Total/NA
Alkalinity	74	B	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	74	B	5.0	3.7	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	610		10	4.3	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: PRC-01_20240722 (Continued) — Lab Sample ID: 500-254002-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	3.8	J	5.0	1.9	mg/L	1		SM 2540D	Total/NA
Total Organic Carbon	3.7		1.0	0.47	mg/L	1		SM 5310C	Total/NA
Dissolved Organic Carbon	4.0		1.0	0.47	mg/L	1		SM 5310C	Dissolved

Client Sample ID: PRC-01_20240722_FBLL — Lab Sample ID: 500-254002-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

Method	Method Description	Protocol	Laboratory
1630	Methyl Mercury	EPA	EET SSM
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1638	Metals (ICP/MS)	EPA	EET SSM
6020B	Metals (ICP/MS)	SW846	EET CHI
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EET CHI
300.0	Anions, Ion Chromatography	EPA	EET CHI
335.4	Cyanide, Total	EPA	EET CHI
350.1	Nitrogen, Ammonia	EPA	EET CHI
365.1	Phosphorus, Total	EPA	EET CHI
SM 2320B	Alkalinity	SM	EET CHI
SM 2520B	Salinity	SM	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 2540D	Solids, Total Suspended (TSS)	SM	EET CHI
SM 4500 S2 F	Sulfide, Total	SM	EET CHI
SM 5310C	Organic Carbon, Dissolved (DOC)	SM	EET CHI
SM 5310C	TOC	SM	EET CHI
1630	Distillation, Methyl Mercury	EPA	EET SSM
1638	Preparation, Total Recoverable Metals	EPA	EET SSM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
365.2/365.3/365	Phosphorus, Total	EPA	EET CHI
Distill/Ammonia	Distillation, Ammonia	None	EET CHI
Distill/CN	Distillation, Cyanide	None	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-254002-1	PRC-01_20240722	Water	07/22/24 16:00	07/25/24 10:10
500-254002-2	PRC-01_20240722_FBLL	Water	07/22/24 16:00	07/25/24 10:10

Client Sample ID: PRC-01_20240722

Date Collected: 07/22/24 16:00
Date Received: 07/25/24 10:10

Lab Sample ID: 500-254002-1

Matrix: Water

Method: EPA 1630 - Methyl Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 18:13	1

Method: EPA 1630 - Methyl Mercury - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 18:23	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 19:56	1

Method: EPA 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 20:00	1

Method: EPA 1638 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.29**		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 21:24	1

Method: EPA 1638 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**0.29**		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 20:59	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**45**	**J**	100	25	ug/L		08/13/24 09:16	08/13/24 17:41	1
Antimony	<1.3		3.0	1.3	ug/L		08/13/24 09:16	08/13/24 17:41	1
Arsenic	**0.63**	**J**	1.0	0.23	ug/L		08/13/24 09:16	08/13/24 17:41	1
Barium	**130**		2.5	0.73	ug/L		08/13/24 09:16	08/13/24 17:41	1
Beryllium	<0.53		1.0	0.53	ug/L		08/13/24 09:16	08/13/24 17:41	1
Boron	**400**	**B**	50	13	ug/L		08/13/24 09:16	08/13/24 17:41	1
Cadmium	<0.17		0.50	0.17	ug/L		08/13/24 09:16	08/13/24 17:41	1
Calcium	**75000**		200	44	ug/L		08/13/24 09:16	08/13/24 17:41	1
Chromium	<1.1		5.0	1.1	ug/L		08/13/24 09:16	08/13/24 17:41	1
Cobalt	<0.40		1.0	0.40	ug/L		08/13/24 09:16	08/13/24 17:41	1
Copper	**12**		2.0	0.50	ug/L		08/13/24 09:16	08/13/24 17:41	1
Iron	**240**		100	47	ug/L		08/13/24 09:16	08/13/24 17:41	1
Lead	<0.19		0.50	0.19	ug/L		08/13/24 09:16	08/13/24 17:41	1
Lithium	**38**		10	2.5	ug/L		08/13/24 09:16	08/14/24 12:25	1
Magnesium	**11000**		200	49	ug/L		08/13/24 09:16	08/13/24 17:41	1
Manganese	**53**		2.5	0.79	ug/L		08/13/24 09:16	08/13/24 17:41	1
Molybdenum	**37**		5.0	2.5	ug/L		08/13/24 09:16	08/13/24 17:41	1
Nickel	<0.63		2.0	0.63	ug/L		08/13/24 09:16	08/13/24 17:41	1
Potassium	**3800**		500	110	ug/L		08/13/24 09:16	08/13/24 17:41	1
Selenium	<0.98		2.5	0.98	ug/L		08/13/24 09:16	08/13/24 17:41	1
Silver	<0.12		0.50	0.12	ug/L		08/13/24 09:16	08/13/24 17:41	1
Sodium	**86000**	**B**	200	77	ug/L		08/13/24 09:16	08/13/24 17:41	1
Strontium	**940**		4.0	0.64	ug/L		08/13/24 09:16	08/13/24 17:41	1
Thallium	<0.57		2.0	0.57	ug/L		08/13/24 09:16	08/13/24 17:41	1
Tin	<1.3		5.0	1.3	ug/L		08/13/24 09:16	08/13/24 17:41	1
Vanadium	<2.2		5.0	2.2	ug/L		08/13/24 09:16	08/13/24 17:41	1
Zinc	**7.8**	**J**	20	6.9	ug/L		08/13/24 09:16	08/13/24 17:41	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

Client Sample ID: PRC-01_20240722

Date Collected: 07/22/24 16:00
Date Received: 07/25/24 10:10

Lab Sample ID: 500-254002-1

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/13/24 09:16	08/13/24 17:43	1
Antimony	<1.3		3.0	1.3	ug/L		08/13/24 09:16	08/13/24 17:43	1
Arsenic	**0.64**	**J**	1.0	0.23	ug/L		08/13/24 09:16	08/13/24 17:43	1
Barium	**130**		2.5	0.73	ug/L		08/13/24 09:16	08/13/24 17:43	1
Beryllium	<0.53		1.0	0.53	ug/L		08/13/24 09:16	08/13/24 17:43	1
Boron	**390**	**B**	50	13	ug/L		08/13/24 09:16	08/13/24 17:43	1
Cadmium	<0.17		0.50	0.17	ug/L		08/13/24 09:16	08/13/24 17:43	1
Calcium	**75000**		200	44	ug/L		08/13/24 09:16	08/13/24 17:43	1
Chromium	<1.1		5.0	1.1	ug/L		08/13/24 09:16	08/13/24 17:43	1
Cobalt	<0.40		1.0	0.40	ug/L		08/13/24 09:16	08/13/24 17:43	1
Copper	**11**		2.0	0.50	ug/L		08/13/24 09:16	08/13/24 17:43	1
Iron	**50**	**J**	100	47	ug/L		08/13/24 09:16	08/13/24 17:43	1
Lead	<0.19		0.50	0.19	ug/L		08/13/24 09:16	08/13/24 17:43	1
Lithium	**38**		10	2.5	ug/L		08/13/24 09:16	08/14/24 12:27	1
Magnesium	**11000**		200	49	ug/L		08/13/24 09:16	08/13/24 17:43	1
Manganese	**19**		2.5	0.79	ug/L		08/13/24 09:16	08/13/24 17:43	1
Molybdenum	**37**		5.0	2.5	ug/L		08/13/24 09:16	08/13/24 17:43	1
Nickel	<0.63		2.0	0.63	ug/L		08/13/24 09:16	08/13/24 17:43	1
Potassium	**3900**		500	110	ug/L		08/13/24 09:16	08/13/24 17:43	1
Selenium	<0.98		2.5	0.98	ug/L		08/13/24 09:16	08/13/24 17:43	1
Silver	<0.12		0.50	0.12	ug/L		08/13/24 09:16	08/13/24 17:43	1
Sodium	**87000**	**B**	200	77	ug/L		08/13/24 09:16	08/13/24 17:43	1
Strontium	**940**		4.0	0.64	ug/L		08/13/24 09:16	08/13/24 17:43	1
Thallium	<0.57		2.0	0.57	ug/L		08/13/24 09:16	08/13/24 17:43	1
Tin	<1.3		5.0	1.3	ug/L		08/13/24 09:16	08/13/24 17:43	1
Vanadium	<2.2		5.0	2.2	ug/L		08/13/24 09:16	08/13/24 17:43	1
Zinc	<6.9		20	6.9	ug/L		08/13/24 09:16	08/13/24 17:43	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**230**		0.91	0.46	mg/L		08/13/24 09:16	08/14/24 10:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide (EPA 300.0)	**1.9**		1.0	0.18	mg/L			07/25/24 19:55	1
Nitrate as N (EPA 300.0)	<0.043	H3	1.0	0.043	mg/L			07/25/24 19:55	1
Chloride (EPA 300.0)	**200**		10	1.2	mg/L			08/09/24 12:57	10
Nitrite as N (EPA 300.0)	<0.070	H3	1.0	0.070	mg/L			07/25/24 19:55	1
Fluoride (EPA 300.0)	**0.33**	**J**	1.0	0.19	mg/L			07/25/24 19:55	1
Nitrate Nitrite as N (EPA 300.0)	<0.070	H3	1.0	0.070	mg/L			07/25/24 19:55	1
Sulfate (EPA 300.0)	**30**		1.0	0.21	mg/L			07/25/24 19:55	1
Cyanide, Total (EPA 335.4)	<0.0036		0.0050	0.0036	mg/L		08/02/24 10:37	08/02/24 16:15	1
Ammonia (EPA 350.1)	<0.10		0.20	0.10	mg/L		08/14/24 15:14	08/15/24 17:29	1
Phosphorus as P (EPA 365.1)	<0.024	^1- ^- *-	0.050	0.024	mg/L		08/13/24 11:40	08/13/24 17:40	1
Alkalinity (SM 2320B)	**74**	**B**	5.0	3.7	mg/L			08/02/24 19:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**74**	**B**	5.0	3.7	mg/L			08/02/24 19:29	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<3.7		5.0	3.7	mg/L			08/02/24 19:29	1
Salinity (SM 2520B)	<0.33		0.33	0.33	psu			07/29/24 15:14	1

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

Client Sample ID: PRC-01_20240722
Date Collected: 07/22/24 16:00
Date Received: 07/25/24 10:10

Lab Sample ID: 500-254002-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	610		10	4.3	mg/L			07/26/24 03:29	1
Total Suspended Solids (SM 2540D)	3.8	J	5.0	1.9	mg/L			07/29/24 21:40	1
Sulfide (SM 4500 S2 F)	<0.23		1.0	0.23	mg/L			07/29/24 22:41	1
Total Organic Carbon (SM 5310C)	3.7		1.0	0.47	mg/L			07/30/24 21:06	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	4.0		1.0	0.47	mg/L			07/28/24 22:30	1

Client Sample Results

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

Client Sample ID: PRC-01_20240722_FBLL

Date Collected: 07/22/24 16:00
Date Received: 07/25/24 10:10

Lab Sample ID: 500-254002-2

Matrix: Water

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 20:12	1

Definitions/Glossary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
^-	Continuing Calibration Verification (CCV) is outside acceptance limits, low biased.
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 2462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Dissolved	Water	1630	
500-254002-1	PRC-01_20240722	Total/NA	Water	1630	
MB 350-2462/1-A	Method Blank	Total/NA	Water	1630	
MB 350-2462/2-A	Method Blank	Total/NA	Water	1630	
MB 350-2462/3-A	Method Blank	Total/NA	Water	1630	
LCS 350-2462/4-A	Lab Control Sample	Total/NA	Water	1630	
LCSD 350-2462/5-A	Lab Control Sample Dup	Total/NA	Water	1630	

Prep Batch: 2463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Dissolved	Water	1638	
500-254002-1	PRC-01_20240722	Total Recoverable	Water	1638	
MB 350-2463/1-A	Method Blank	Total Recoverable	Water	1638	
MB 350-2463/2-A	Method Blank	Total Recoverable	Water	1638	
LCS 350-2463/3-A	Lab Control Sample	Total Recoverable	Water	1638	
LCSD 350-2463/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	

Analysis Batch: 2472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Dissolved	Water	1638	2463
500-254002-1	PRC-01_20240722	Total Recoverable	Water	1638	2463
MB 350-2463/1-A	Method Blank	Total Recoverable	Water	1638	2463
MB 350-2463/2-A	Method Blank	Total Recoverable	Water	1638	2463
LCS 350-2463/3-A	Lab Control Sample	Total Recoverable	Water	1638	2463
LCSD 350-2463/4-A	Lab Control Sample Dup	Total Recoverable	Water	1638	2463

Analysis Batch: 2481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Dissolved	Water	1631E	
500-254002-1	PRC-01_20240722	Total/NA	Water	1631E	
500-254002-2	PRC-01_20240722_FBLL	Total/NA	Water	1631E	
MB 350-2481/52	Method Blank	Total/NA	Water	1631E	
MB 350-2481/53	Method Blank	Total/NA	Water	1631E	
MB 350-2481/54	Method Blank	Total/NA	Water	1631E	
LCS 350-2481/55	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-2481/56	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 2488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Dissolved	Water	1630	2462
500-254002-1	PRC-01_20240722	Total/NA	Water	1630	2462
MB 350-2462/1-A	Method Blank	Total/NA	Water	1630	2462
MB 350-2462/2-A	Method Blank	Total/NA	Water	1630	2462
MB 350-2462/3-A	Method Blank	Total/NA	Water	1630	2462
LCS 350-2462/4-A	Lab Control Sample	Total/NA	Water	1630	2462
LCSD 350-2462/5-A	Lab Control Sample Dup	Total/NA	Water	1630	2462

Prep Batch: 781119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Dissolved	Water	3005A	
500-254002-1	PRC-01_20240722	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 781119 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-781119/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-781119/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 781318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Dissolved	Water	6020B	781119
500-254002-1	PRC-01_20240722	Total Recoverable	Water	6020B	781119
MB 500-781119/1-A	Method Blank	Total Recoverable	Water	6020B	781119
LCS 500-781119/2-A	Lab Control Sample	Total Recoverable	Water	6020B	781119

Analysis Batch: 781363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total Recoverable	Water	SM 2340B	781119

Analysis Batch: 781422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Dissolved	Water	6020B	781119
500-254002-1	PRC-01_20240722	Total Recoverable	Water	6020B	781119

General Chemistry

Analysis Batch: 778450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	300.0	
MB 500-778450/3	Method Blank	Total/NA	Water	300.0	
LCS 500-778450/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 778451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	300.0	
MB 500-778451/3	Method Blank	Total/NA	Water	300.0	
LCS 500-778451/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 778480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	SM 2540C	
MB 500-778480/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-778480/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 778742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Dissolved	Water	SM 5310C	
MB 500-778742/7	Method Blank	Dissolved	Water	SM 5310C	
LCS 500-778742/8	Lab Control Sample	Dissolved	Water	SM 5310C	

Analysis Batch: 778906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	SM 2540D	
MB 500-778906/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 500-778906/2	Lab Control Sample	Total/NA	Water	SM 2540D	
500-254002-1 DU	PRC-01_20240722	Total/NA	Water	SM 2540D	

General Chemistry

Analysis Batch: 779001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	SM 4500 S2 F	
MB 500-779001/1	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 500-779001/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 779224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	SM 5310C	
MB 500-779224/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-779224/8	Lab Control Sample	Total/NA	Water	SM 5310C	

Analysis Batch: 779504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	SM 2520B	

Prep Batch: 779702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	Distill/CN	
MB 500-779702/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 500-779702/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 779754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	335.4	779702
MB 500-779702/1-A	Method Blank	Total/NA	Water	335.4	779702
LCS 500-779702/2-A	Lab Control Sample	Total/NA	Water	335.4	779702

Analysis Batch: 779874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	SM 2320B	
MB 500-779874/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 500-779874/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 780563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	300.0	
MB 500-780563/67	Method Blank	Total/NA	Water	300.0	
LCS 500-780563/68	Lab Control Sample	Total/NA	Water	300.0	

Prep Batch: 780961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	365.2/365.3/365	
MB 500-780961/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 500-780961/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Prep Batch: 781418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	Distill/Ammonia	
MB 500-781418/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 500-781418/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

QC Association Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

General Chemistry

Analysis Batch: 781722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	365.1	780961
MB 500-780961/1-A	Method Blank	Total/NA	Water	365.1	780961
LCS 500-780961/2-A	Lab Control Sample	Total/NA	Water	365.1	780961

Analysis Batch: 781794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-254002-1	PRC-01_20240722	Total/NA	Water	350.1	781418
MB 500-781418/1-A	Method Blank	Total/NA	Water	350.1	781418
LCS 500-781418/2-A	Lab Control Sample	Total/NA	Water	350.1	781418

Method: 1630 - Methyl Mercury

Lab Sample ID: MB 350-2462/1-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2462

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 15:20	1

Lab Sample ID: MB 350-2462/2-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2462

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 15:30	1

Lab Sample ID: MB 350-2462/3-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2462

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl Mercury	<0.022		0.050	0.022	ng/L		07/29/24 09:45	07/30/24 15:40	1

Lab Sample ID: LCS 350-2462/4-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2462

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl Mercury	1.00	0.949		ng/L		95	65 - 135

Lab Sample ID: LCSD 350-2462/5-A
Matrix: Water
Analysis Batch: 2488

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2462

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl Mercury	1.00	0.904		ng/L		90	65 - 135	5	35

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-2481/52
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:45	1

Lab Sample ID: MB 350-2481/53
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:49	1

Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

Lab Sample ID: MB 350-2481/54
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.20		0.50	0.20	ng/L			07/30/24 14:53	1

Lab Sample ID: LCS 350-2481/55
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.54		ng/L		91	77 - 123

Lab Sample ID: LCSD 350-2481/56
Matrix: Water
Analysis Batch: 2481

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.57		ng/L		91	77 - 123	1	24

Method: 1638 - Metals (ICP/MS)

Lab Sample ID: MB 350-2463/1-A
Matrix: Water
Analysis Batch: 2472

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2463

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 17:31	1

Lab Sample ID: MB 350-2463/2-A
Matrix: Water
Analysis Batch: 2472

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 2463

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.0098		0.030	0.0098	ug/L		07/29/24 12:49	07/29/24 17:35	1

Lab Sample ID: LCS 350-2463/3-A
Matrix: Water
Analysis Batch: 2472

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 2463

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Uranium	25.0	23.8		ug/L		95	85 - 115

Lab Sample ID: LCSD 350-2463/4-A
Matrix: Water
Analysis Batch: 2472

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 2463

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Uranium	25.0	23.1		ug/L		92	85 - 115	3	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-781119/1-A
Matrix: Water
Analysis Batch: 781318

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 781119

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<25		100	25	ug/L		08/13/24 09:16	08/13/24 17:21	1
Antimony	<1.3		3.0	1.3	ug/L		08/13/24 09:16	08/13/24 17:21	1
Arsenic	<0.23		1.0	0.23	ug/L		08/13/24 09:16	08/13/24 17:21	1
Barium	<0.73		2.5	0.73	ug/L		08/13/24 09:16	08/13/24 17:21	1
Beryllium	<0.53		1.0	0.53	ug/L		08/13/24 09:16	08/13/24 17:21	1
Boron	36.6	J	50	13	ug/L		08/13/24 09:16	08/13/24 17:21	1
Cadmium	<0.17		0.50	0.17	ug/L		08/13/24 09:16	08/13/24 17:21	1
Calcium	<44		200	44	ug/L		08/13/24 09:16	08/13/24 17:21	1
Chromium	<1.1		5.0	1.1	ug/L		08/13/24 09:16	08/13/24 17:21	1
Cobalt	<0.40		1.0	0.40	ug/L		08/13/24 09:16	08/13/24 17:21	1
Copper	<0.50		2.0	0.50	ug/L		08/13/24 09:16	08/13/24 17:21	1
Iron	<47		100	47	ug/L		08/13/24 09:16	08/13/24 17:21	1
Lead	<0.19		0.50	0.19	ug/L		08/13/24 09:16	08/13/24 17:21	1
Lithium	<2.5		10	2.5	ug/L		08/13/24 09:16	08/13/24 17:21	1
Magnesium	<49		200	49	ug/L		08/13/24 09:16	08/13/24 17:21	1
Manganese	<0.79		2.5	0.79	ug/L		08/13/24 09:16	08/13/24 17:21	1
Molybdenum	<2.5		5.0	2.5	ug/L		08/13/24 09:16	08/13/24 17:21	1
Nickel	<0.63		2.0	0.63	ug/L		08/13/24 09:16	08/13/24 17:21	1
Potassium	<110		500	110	ug/L		08/13/24 09:16	08/13/24 17:21	1
Selenium	<0.98		2.5	0.98	ug/L		08/13/24 09:16	08/13/24 17:21	1
Silver	<0.12		0.50	0.12	ug/L		08/13/24 09:16	08/13/24 17:21	1
Sodium	179	J	200	77	ug/L		08/13/24 09:16	08/13/24 17:21	1
Strontium	<0.64		4.0	0.64	ug/L		08/13/24 09:16	08/13/24 17:21	1
Thallium	<0.57		2.0	0.57	ug/L		08/13/24 09:16	08/13/24 17:21	1
Tin	<1.3		5.0	1.3	ug/L		08/13/24 09:16	08/13/24 17:21	1
Vanadium	<2.2		5.0	2.2	ug/L		08/13/24 09:16	08/13/24 17:21	1
Zinc	<6.9		20	6.9	ug/L		08/13/24 09:16	08/13/24 17:21	1

Lab Sample ID: LCS 500-781119/2-A
Matrix: Water
Analysis Batch: 781318

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	2000	2040		ug/L		102	80 - 120
Antimony	500	502		ug/L		100	80 - 120
Arsenic	100	97.8		ug/L		98	80 - 120
Barium	500	528		ug/L		106	80 - 120
Beryllium	50.0	52.9		ug/L		106	80 - 120
Boron	1000	1070		ug/L		107	80 - 120
Cadmium	50.0	50.2		ug/L		100	80 - 120
Calcium	10000	8640		ug/L		86	80 - 120
Chromium	200	209		ug/L		105	80 - 120
Cobalt	500	533		ug/L		107	80 - 120
Copper	250	259		ug/L		103	80 - 120
Iron	1000	1050		ug/L		105	80 - 120
Lead	100	102		ug/L		102	80 - 120
Lithium	100	116		ug/L		116	80 - 120
Magnesium	10000	10700		ug/L		107	80 - 120
Manganese	500	520		ug/L		104	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-781119/2-A
Matrix: Water
Analysis Batch: 781318

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 781119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	1000	972		ug/L		97	80 - 120
Nickel	500	515		ug/L		103	80 - 120
Potassium	10000	10400		ug/L		104	80 - 120
Selenium	100	98.1		ug/L		98	80 - 120
Silver	50.0	49.6		ug/L		99	80 - 120
Sodium	10000	10600		ug/L		106	80 - 120
Strontium	1000	988		ug/L		99	80 - 120
Thallium	100	104		ug/L		104	80 - 120
Tin	1000	992		ug/L		99	80 - 120
Vanadium	500	518		ug/L		104	80 - 120
Zinc	500	499		ug/L		100	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-778450/3
Matrix: Water
Analysis Batch: 778450

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<0.18		1.0	0.18	mg/L			07/25/24 19:23	1
Fluoride	<0.19		1.0	0.19	mg/L			07/25/24 19:23	1
Sulfate	<0.21		1.0	0.21	mg/L			07/25/24 19:23	1

Lab Sample ID: LCS 500-778450/4
Matrix: Water
Analysis Batch: 778450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	20.0	19.5		mg/L		98	90 - 110
Fluoride	20.0	21.1		mg/L		106	90 - 110
Sulfate	20.0	21.6		mg/L		108	90 - 110

Lab Sample ID: MB 500-778451/3
Matrix: Water
Analysis Batch: 778451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.043		1.0	0.043	mg/L			07/25/24 19:23	1
Nitrite as N	<0.070		1.0	0.070	mg/L			07/25/24 19:23	1
Nitrate Nitrite as N	<0.070		1.0	0.070	mg/L			07/25/24 19:23	1

Lab Sample ID: LCS 500-778451/4
Matrix: Water
Analysis Batch: 778451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	20.0	19.2		mg/L		96	90 - 110
Nitrite as N	20.0	21.0		mg/L		105	90 - 110
Nitrate Nitrite as N	40.0	40.2		mg/L		101	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 500-780563/67
Matrix: Water
Analysis Batch: 780563

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.12		1.0	0.12	mg/L			08/09/24 10:56	1

Lab Sample ID: LCS 500-780563/68
Matrix: Water
Analysis Batch: 780563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.2		mg/L		96	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 500-779702/1-A
Matrix: Water
Analysis Batch: 779754

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 779702

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0036		0.0050	0.0036	mg/L		08/02/24 10:37	08/02/24 15:30	1

Lab Sample ID: LCS 500-779702/2-A
Matrix: Water
Analysis Batch: 779754

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 779702

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.100	0.0970		mg/L		97	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 500-781418/1-A
Matrix: Water
Analysis Batch: 781794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 781418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.10		0.20	0.10	mg/L		08/14/24 15:14	08/15/24 17:26	1

Lab Sample ID: LCS 500-781418/2-A
Matrix: Water
Analysis Batch: 781794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 781418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	2.00	1.97		mg/L		99	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 500-780961/1-A
Matrix: Water
Analysis Batch: 781722

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 780961

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus as P	<0.024	^- ^1-	0.050	0.024	mg/L		08/13/24 11:40	08/13/24 17:36	1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: LCS 500-780961/2-A
Matrix: Water
Analysis Batch: 781722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 780961

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phosphorus as P	0.500	0.367	^1- *- ^-	mg/L		73	88 - 123

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 500-779874/3
Matrix: Water
Analysis Batch: 779874

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.71		5.0	3.7	mg/L			08/02/24 18:17	1
Bicarbonate Alkalinity as CaCO3	5.71		5.0	3.7	mg/L			08/02/24 18:17	1
Carbonate Alkalinity as CaCO3	<3.7		5.0	3.7	mg/L			08/02/24 18:17	1

Lab Sample ID: LCS 500-779874/4
Matrix: Water
Analysis Batch: 779874

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	106		mg/L		106	95 - 121

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-778480/1
Matrix: Water
Analysis Batch: 778480

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<4.3		10	4.3	mg/L			07/26/24 02:38	1

Lab Sample ID: LCS 500-778480/2
Matrix: Water
Analysis Batch: 778480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	240		mg/L		96	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 500-778906/1
Matrix: Water
Analysis Batch: 778906

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.9		5.0	1.9	mg/L			07/29/24 21:05	1

Lab Sample ID: LCS 500-778906/2
Matrix: Water
Analysis Batch: 778906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	200	180		mg/L		90	80 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: 500-254002-1 DU
Matrix: Water
Analysis Batch: 778906

Client Sample ID: PRC-01_20240722
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	3.8	J	3.60	J	mg/L		5	5

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 500-779001/1
Matrix: Water
Analysis Batch: 779001

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.23		1.0	0.23	mg/L			07/29/24 22:23	1

Lab Sample ID: LCS 500-779001/2
Matrix: Water
Analysis Batch: 779001

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.29		mg/L		91	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-779224/7
Matrix: Water
Analysis Batch: 779224

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<0.47		1.0	0.47	mg/L			07/30/24 11:17	1

Lab Sample ID: LCS 500-779224/8
Matrix: Water
Analysis Batch: 779224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	10.0	10.2		mg/L		102	86 - 116

Method: SM 5310C - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 500-778742/7
Matrix: Water
Analysis Batch: 778742

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.47		1.0	0.47	mg/L			07/28/24 18:19	1

Lab Sample ID: LCS 500-778742/8
Matrix: Water
Analysis Batch: 778742

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	10.0	10.3		mg/L		103	86 - 116

Lab Chronicle

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

Client Sample ID: PRC-01_20240722

Lab Sample ID: 500-254002-1

Date Collected: 07/22/24 16:00

Matrix: Water

Date Received: 07/25/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	1630			2462	AJD	EET SSM	07/29/24 09:45
Dissolved	Analysis	1630		1	2488	CL	EET SSM	07/30/24 18:23
Total/NA	Prep	1630			2462	AJD	EET SSM	07/29/24 09:45
Total/NA	Analysis	1630		1	2488	CL	EET SSM	07/30/24 18:13
Dissolved	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 20:00
Total/NA	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 19:56
Dissolved	Prep	1638			2463	V1R	EET SSM	07/29/24 12:49
Dissolved	Analysis	1638		1	2472	V1R	EET SSM	07/29/24 20:59
Total Recoverable	Prep	1638			2463	V1R	EET SSM	07/29/24 12:49
Total Recoverable	Analysis	1638		1	2472	V1R	EET SSM	07/29/24 21:24
Dissolved	Prep	3005A			781119	BDE	EET CHI	08/13/24 09:16 - 08/13/24 15:16 [1]
Dissolved	Analysis	6020B		1	781318	RN	EET CHI	08/13/24 17:43
Dissolved	Prep	3005A			781119	BDE	EET CHI	08/13/24 09:16 - 08/13/24 15:16 [1]
Dissolved	Analysis	6020B		1	781422	RN	EET CHI	08/14/24 12:27
Total Recoverable	Prep	3005A			781119	BDE	EET CHI	08/13/24 09:16 - 08/13/24 15:16 [1]
Total Recoverable	Analysis	6020B		1	781318	RN	EET CHI	08/13/24 17:41
Total Recoverable	Prep	3005A			781119	BDE	EET CHI	08/13/24 09:16 - 08/13/24 15:16 [1]
Total Recoverable	Analysis	6020B		1	781422	RN	EET CHI	08/14/24 12:25
Total Recoverable	Prep	3005A			781119	BDE	EET CHI	08/13/24 09:16 - 08/13/24 15:16 [1]
Total Recoverable	Analysis	SM 2340B		1	781363	DAJ	EET CHI	08/14/24 10:25
Total/NA	Analysis	300.0		10	780563	W1T	EET CHI	08/09/24 12:57
Total/NA	Analysis	300.0		1	778450	W1T	EET CHI	07/25/24 19:55
Total/NA	Analysis	300.0		1	778451	W1T	EET CHI	07/25/24 19:55
Total/NA	Prep	Distill/CN			779702	KF	EET CHI	08/02/24 10:37 - 08/02/24 11:07 [1]
Total/NA	Analysis	335.4		1	779754	KF	EET CHI	08/02/24 16:15
Total/NA	Prep	Distill/Ammonia			781418	EB	EET CHI	08/14/24 15:14 - 08/14/24 16:14 [1]
Total/NA	Analysis	350.1		1	781794	KF	EET CHI	08/15/24 17:29
Total/NA	Prep	365.2/365.3/365			780961	NSJ	EET CHI	08/13/24 11:40 - 08/13/24 15:40 [1]
Total/NA	Analysis	365.1		1	781722	LP	EET CHI	08/13/24 17:40
Total/NA	Analysis	SM 2320B		1	779874	SO	EET CHI	08/02/24 19:29
Total/NA	Analysis	SM 2520B		1	779504	TR	EET CHI	07/29/24 15:14
Total/NA	Analysis	SM 2540C		1	778480	CLB	EET CHI	07/26/24 03:29
Total/NA	Analysis	SM 2540D		1	778906	CLB	EET CHI	07/29/24 21:40 - 07/29/24 21:43 [1]
Total/NA	Analysis	SM 4500 S2 F		1	779001	CLB	EET CHI	07/29/24 22:41 - 07/29/24 22:45 [1]
Dissolved	Analysis	SM 5310C		1	778742	TR	EET CHI	07/28/24 22:30
Total/NA	Analysis	SM 5310C		1	779224	TR	EET CHI	07/30/24 21:06

Client Sample ID: PRC-01_20240722_FBLL

Lab Sample ID: 500-254002-2

Date Collected: 07/22/24 16:00

Matrix: Water

Date Received: 07/25/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	1631E		1	2481	CL	EET SSM	07/30/24 20:12

Lab Chronicle

Client: White Pine Copper LLC
Job ID: 500-254002-1
Project/Site: White Pines, MI

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: White Pine Copper LLC
Project/Site: White Pines, MI

Job ID: 500-254002-1

Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Georgia	State	N/A	05-31-25
Georgia (DW)	State	939	05-31-25
Hawaii	State	NA	05-31-25
Illinois	NELAP	IL00035	05-31-25
Indiana	State	C-IL-02	05-31-25
Iowa	State	082	05-01-26
Kansas	NELAP	E-10161	10-31-24
Kentucky (UST)	State	AI # 108083	05-31-25
Kentucky (WW)	State	KY90023	12-31-24
Louisiana (All)	NELAP	02046	06-30-25
Mississippi	State	NA	05-31-25
North Carolina (WW/SW)	State	291	12-31-24
North Dakota	State	R-194	04-29-24 *
Oklahoma	State	8908	08-31-24
South Carolina	State	77001003	04-29-24 *
USDA	US Federal Programs	P330-18-00018	03-30-26
Wisconsin	State	999580010	08-31-24
Wyoming	State	8TMS-Q	05-31-25

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	12-18-24
ANAB	Dept. of Defense ELAP	L2236	08-07-24
ANAB	Dept. of Energy	L2236.01	12-18-24
ANAB	ISO/IEC 17025	L2236	08-07-24
California	State	2954	12-18-24
Florida	NELAP	E87575	12-18-24
Louisiana (All)	NELAP	03073	12-18-24
Maine	State	WA01273	12-18-24
New Jersey	NELAP	WA014	12-18-24
New York	NELAP	11662	12-18-24
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	12-18-24
Washington	State	C788-23a	12-18-24
Wisconsin	State	399133460	12-18-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jacob.Deun	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 1Z09NFTS0104699303	COC No: 500-126351-50241 7
Client Contact: Amanda Zeidler	Phone: 616 822 8858	E-Mail: Sandra Fredrick@et.eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254002
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D - HNO3
A - HCL

Other: 500-254002 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	[redacted]	350.1 Ammonia, 365.1 Phos TOL SM5310	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, 3500_CR_B	SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	3500_CR_B - Dissolved Chromium, Hex (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code				S	N	CB	B	S	D	D	N	A	D	D	N	N			
1 PRC-01_20240722	07-22-24	1600	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18		
2 PRC-01_20240722_FBLL	07-22-24	1600	G	Water										✓						2		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		
			G	Water																		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: UPS OVERNIGHT

Relinquished by	Date/Time: 07-22-24 / 18.40	Company: MSG	Received by:	Date/Time: 7/23/24 1315	Company: MSG
Relinquished by	Date/Time: 7/23/24 1600	Company: MSG	Received by: 1Z09NFTS0104699303	Date/Time: 7/23/24 1600	Company: UPS
Relinquished by	Date/Time:	Company:	Received by: Stephanie Hernandez	Date/Time: 7/25/24 1010	Company: FEDEX

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.8+4.7

Ver: 04/02/2024

*updated COC 7/25/24

8/23/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jacob Dean	Lab PM: Fredrick, Sandle	Carrier Tracking No(s): 1Z69NFT50104699303	COC No: 500 126351-50241 8
Client Contact: Amanda Zeidler	Phone: 616 826 8858	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:			Job #: 500- 254002
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
S H2SO4
N None
CB ZnAcetate/NaOH
B NaOH
D HNO3
A - HCL
Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:			A		
1 PRC-01_20240722	07-22-24	1600	G	Water		✓	1	
			G	Water				
			G	Water				
			G	Water				
			G	Water				
			G	Water				
			G	Water				
			G	Water				
			G	Water				
			G	Water				
			G	Water				

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date.	Time	Method of Shipment: UPS OVERNIGHT

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Jacob Dean	07-22-24 / 18:40	MSG		7/23/24 1315	MSG
2		7/23/24 1600	MSG	1Z69NFT50104699303	7/23/24 1600	UPS
3				Stephanie Hernandez	7/25/24 1010	EEA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks.

Ver: 04/02/2024

*updated COC 7/25/24

8/23/2024

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jacob Dean	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 1Z09NFT50104699303	COC No: 500-126351-50241 7
Client Contact: Amanda Zeidler	Phone: 616 821 8858	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 1 of 2
Company: White Pine Copper	PWSID:			Job #: 500-254002
Address: 35503 Mall Circle Drive	Due Date Requested:			
City: White Pine	TAT Requested (days): 10 days			
State, Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
S H2SO4
N None
CB ZnAcetate/NaOH
B - NaOH
D HNO3
A HCL
Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 Ammonia, 365.1 Phos TOL	2320B, 2540C, 2540D, 300.0_28D, 300_48HR, 3500_CR_B, SM2520_B	SM4500_S2_F - Sulfide, Total	335.4 - Cyanide, Total	SM5310_DOC_C - Organic Carbon, Dissolved (DOC)	6020B, SM2340B Total Metals / Hardness	1638 - Uranium only (ICP/MS) Total	1631E - Mercury, Low Level (CVAFS)	1630_ME - Methyl Mercury - Total	6020B - Dissolved Metals (ICP/MS) - 27 elements (field filtered)	1638 - Dissolved Uranium only (field filtered)	3500_CR_B - Dissolved Chromium, Hex (field filtered)	1631E - Dissolved Mercury, Low Level (CVAFS) (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	CB	B	S	D	D	N	A	D	D	N	N		
1 PRC-01_20240722	07-22-24	1600	G	Water			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	18	
2 PRC-01_20240722_FBLL	07-22-24	1600	G	Water										✓						2	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	
			G	Water																	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, [II], III, IV, Other (specify)

Special Instructions/QC Requirements MDLs must meet Michigan requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: UPS OVERNIGHT

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Jacob Dean	07-22 24 / 18 40	MSG		7/23/24 1315	MSG
2		7/23/24 1600	MSG	1Z09NFT50104699303	7/23/24 1600	UPS
	Relinquished by:	Date/Time	Company	Received by: Stephanie Hernandez	Date/Time: 7/25/24 1010	Company: EEIA

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks. 4.8-3.7

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jacob Dean	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 1269 NFT 501046993 03	COC No: 500-126351-50241 8
Client Contact: Amanda Zeidler	Phone: 616 826 8858	E Mail: Sandra Fredrick@et eurofinsus com	State of Origin: Michigan	Page: Page 2 of 2
Company: White Pine Copper	PWSID:	Analysis Requested		Job #: 500-254002
Address: 35503 Mall Circle Drive	Due Date Requested:			Preservation Codes: S H2SO4; N None; CB - ZnAcetate/NaOH; B NaOH; D HNO3; A HCL
City: White Pine	TAT Requested (days): 10 days			
State Zip: MI, 49971	Compliance Project: Δ Yes Δ No			
Phone: 906-204-6500	PO #: Purchase Order not required			
Email: AZeidler@whitepinecu com	WO #:			
Project Name: White Pine, MI	Project #: 50023455			
Site:	SSOW#:			Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1630_ME - Dissolved Methyl Mercury (field filtered)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
1 PRC-01_20240722	07-22-24	1600	G	Water			✓	1	
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					
			G	Water					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: UPS OVERNIGHT

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	07-22-24 / 18:40	MSG	[signature]	7/23/24 1315	MSG
2	[signature]	7/23/24 1600	MSG	1269 NFT 501046993 03	7/23/24 1600	UPS
3				Stephanie Hemandez	7/25/24 1010	EEN

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254002-1

Login Number: 254002
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	False	Anions received past hold
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: White Pine Copper LLC

Job Number: 500-254002-1

Login Number: 254002
List Number: 2
Creator: Groden, Kyle J

List Source: Eurofins Seattle Specialty Metals
List Creation: 07/26/24 01:20 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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500-254002 Field Sheet

8/23/2024

Date:	7/26/2024
End Time:	15:04
pH Paper Lot:	HC324723
Analyst:	VM

Preservative ID	Preservative Type	Container ID
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ
ZZZZZZZZZZZZZZZ	ZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZZZ

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254002-J-1	≤2				
500-254002-K-1	≤2				VM 7.26.24

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500-254002 Field Sheet

Date:	7/26/2024
End Time:	1529
pH Paper Lot:	HC324723
Analyst:	[illegible]

Preservative ID	Preservative Type	Container ID
zzzzzzzzzzzzzzzz	zzzzzzzzzzzzzzzzzzzzzzzz	zzzzzzzzzz
zzzzzzzzzzzzzzzz	zzzzzzzzzzzzzzzzzzzzzzzz	zzzzzzzzzz
zzzzzzzzzzzzzzzz	zzzzzzzzzzzzzzzzzzzzzzzz	zzzzzzzzzz
zzzzzzzzzzzzzzzz	zzzzzzzzzzzzzzzzzzzzzzzz	zzzzzzzzzz

Sample ID	Initial pH	Final pH	Preservative ID	Preservative Added (mL)	Comments
500-254002-E-1	<2				
500-254002-F-1	<2				

[illegible] 7-26-24