

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

P122570068

FACILITY: UP Health System - Marquette		SRN / ID: P1225
LOCATION: 850 West Baraga Avenue, MARQUETTE		DISTRICT: Marquette
CITY: MARQUETTE		COUNTY: MARQUETTE
CONTACT: Cheryl Bollero-Oberstar , Director of Plant Operations		ACTIVITY DATE: 10/25/2023
STAFF: Lauren Luce	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Targeted Inspection FY24		
RESOLVED COMPLAINTS:		

Facility: UP Health System – Marquette (SRN: P1225)

Location: 850 Baraga Ave, Marquette, Marquette County, MI

Contacts: Cheryl Bollero-Oberstar, Director of Plant Operations

Jeremy Jones, Supervisor of Plant Operations

Regulatory Authority

Under the Authority of Section 5526 of Part 55 of NREPA, The Department of Environment, Great Lakes, and Energy (EGLE) may upon the presentation of their card, and stating the authority and purpose of the investigation, enter and inspect any property at reasonable times for the purpose of investigating either an actual or suspected source of air pollution or ascertaining compliance or noncompliance with NREPA, Rules promulgated thereunder, and the federal Clean Air Act.

Facility Description

UP Health System – Marquette (UPHS-Marquette) is a 222-bed specialty care hospital located in the City of Marquette. The facility was built in 2017-2018 and began operating in June 2019. The facility consists of an approximately 535,000 square foot hospital along with an attached 90,000 square foot medical office building. There are three (3) Hurst dual-fuel boilers that provide heat to the building. Each boiler is rated at 600HP/ 25.2 MMBTU/hr. There are also two (2) emergency engines. The engines are Caterpillar generator sets model 3512C.

Emissions

Pollutants emitted from the combustion process of fuel oil-fired RICE units include nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOCs), and particulate matter (PM). Sulfur oxides emissions are directly related to the sulfur content of the fuel. The formation of nitrogen oxides is related to the combustion temperature in the engine cylinder, and CO and VOC emissions are primarily a result of incomplete combustion. PM emissions can include trace amounts of metals and condensable, semi-volatile organics which result from incomplete combustion, volatilized lubricating oil, and engine wear. The emissions from natural gas-fired boilers and furnaces include nitrogen oxides (NO_x), carbon monoxide (CO), and carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), volatile organic compounds (VOCs), trace amounts of sulfur dioxide (SO₂), and particulate matter (PM).

Emissions Reporting

The table below shows the facility's Michigan Air Emissions Reporting System (MAERS) 2022 submittal.

Pollutant	Tons per Year (TPY)
CO	4.68
NOx	4.59
PM10	<1
PM2.5	<1
SO2	<1
VOC	<1

Regulatory Analysis

UPHS - Marquette is currently subject to PTI No. 99-21. FGENGINES is also subject to the federal NESHAP for reciprocating internal combustion engines (40 CFR Part 63, Subpart ZZZZ) and to the federal NSPS for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60 Subpart IIII). FGBOILERS is subject to the federal NSPS for Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60, Subparts A and Dc).

Compliance History

The facility was last inspected in May 2021 and received a Rule 201 violation notice as a result of that inspection. A permit was applied for, PTI No. 99-21 was issued, and the violation was resolved.

Inspection

On October 25, 2023, AQD Staff (Lauren Luce) conducted a targeted inspection at UP Health System - Marquette in Marquette, MI. AQD Staff arrived at the facility and met with Cheryl Bollero-Oberstar, Director of Plant Operations and Jeremy Jones, Supervisor of Plants Operations. It was explained that the purpose of the inspection was to ensure compliance with the PTI No. 99-21 and all other applicable air pollution control rules and federal regulations. The inspection began by discussing permitted equipment, the facility, and records. A tour of the facility was then provided.

FGENGINES

This flexible group consists of two (2) diesel-fueled emergency engine generators. Each engine is rated for a maximum of 2,206 BHP, with a generator rated at 1,645 kW. At the time of the inspection, neither unit was operating. Fuel oil invoices provided stated that the product was Dyed Ultra Low Sulfur #2 Diesel. This fuel is certified to contain 0-15 ppm of sulfur. A fuel analysis was also provided from Iowa Central Fuel Testing Laboratory showing a sulfur content of less than 15ppm and a cetane index of greater than 40 (SC II.1 and SC VI. 5).

Engine 1 operated for 46.1 hours in 2022 and 54.6 hours from January 1, 2023 - October 31, 2023. Engine 2 operated for 49.3 hours in 2022 and 54.2 hours from January 1, 2023 - October 31, 2023. The purpose for operating, generally maintenance, is also recorded. (SC III. 1-3). Both engines in FGEngines are certified engines. A record of certification and manufacturer's emission data was provided for both engines. A detailed maintenance schedule and maintenance records were also provided. The engines are operated and maintained as specified in the condition (SC III.4 and SC VI. 2)

Each engine is equipped with a non-resettable hours meter. At the time of inspection, Engine 1 hours were 338.1 and Engine 2 hours were 335.6 (SC IV.1). Stack height was not confirmed but appeared to be at least 43 feet above ground (SC.VII. 1,2).

FGBOILERS

This flexible group consists of three identical Hurst dual-fired boilers. These boilers have a maximum output of 600 HP and maximum heat input of 25.2 MMBTU/hr.2,231 kW.

Fuel oil invoices provided stated that the product was Dyed Ultra Low Sulfur #2 Diesel. This fuel is certified to contain 0-15 ppm of sulfur. A fuel analysis was also provided from Iowa Central Fuel Testing Laboratory showing a sulfur content of less than 15ppm (SC II.1). Records were provided on the dates, times, and amount of fuel oil burned in the boilers. From January 1-June 30, 2023, the total run time on fuel oil was 6 hours and 18 minutes with 694 gallons used. Monthly records of natural gas use in Dekatherms were also provided. (SC VI.2). Fuel oil is only burned during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. (SC III.1,2) The facility has been submitting semi-annual reports as required by SC VII.2.

Compliance

Based on this inspection and records reviewed, UP Health System - Marquette appears to be in compliance with PTI No. 99-21 and all other applicable air pollution control rules and federal regulations.



Image 1: FGBOILERS



Image 2: FG ENGINES

NAME *Sam Sam*

DATE 12-8-23

SUPERVISOR *Michael Kollar*