

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

N600765697

FACILITY: Tri-City Landfill		SRN / ID: N6007
LOCATION: 426 N. Ruth Rd., CARSONVILLE		DISTRICT: Bay City
CITY: CARSONVILLE		COUNTY: SANILAC
CONTACT: Steve Walters , Environmental Engineer		ACTIVITY DATE: 12/09/2022
STAFF: Gina McCann	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Inspection of Renewable Operating Permit (ROP) No. MI-ROP-N6007-2022		
RESOLVED COMPLAINTS:		

I (glm) performed a scheduled onsite compliance inspection at Tr-City Recycling and Disposal Facility (RDF) located at 426 North Ruth Rd, Carsonville, MI. No odors were detected while approaching the facility. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment Great Lakes and Energy, Air Quality Division (AQD) Administrative Rules; Renewable Operating Permit (ROP) No. MI-ROP-N6007-2022. Mr. Steve Walters provided the requested records, coordinated the onsite inspection, and answered inspection questions.

Facility Description:

Tri-City RDF is a Type II municipal solid waste landfill which is owned and operated by Waste Management of Michigan, Inc. The landfill accepts municipal and solid waste, construction debris, foundry sand, ash, and contaminated soils. The landfill began accepting waste in 1987. In 2012, it underwent a vertical expansion of 80.2 acres, increasing the capacity of the landfill by 7,871,600 cubic yards. Tri-City RDF is subject to 40 CFR Part 62, Subpart OOO Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014. The 40 CFR Part 62, Subpart OOO Federal Plan requires a 40 CFR Part 70, Renewable Operating Permit (ROP) for existing MSW landfills with a capacity equal to or exceeding 2.5 million megagrams and 2.5 million cubic meters. Subpart OOO includes the option to comply with the major compliance provisions of 40 CFR Part 63, Subpart AAAA-NESHAP subpart AAAA- Municipal Solid Waste Landfills.

Tri-City RDF was last inspected by AQD staff on 3/24/2021. The facility was found to be in compliance during the 2021 inspection. There are no complaints associated with the facility and no outstanding violation notices.

EUASBESTOS: Compliant

Asbestos containing material (ACM) is received by Tri-City RDF. The facility requires a 24-hour notice for receiving friable ACM. This allows time to plan where the waste will be placed. When the ACM arrives at the facility, it is taken directly to a designated pit for the load. The facility will cover the load right away unless more ACM is scheduled to arrive on the same day. If more ACM arrives throughout the day, the material is covered at the end of the day. Pits in which ACM is to be placed are dug deeper than pits used to dispose of material that does not contain asbestos. The ACM is covered with either sand or clay. When gas wells are installed, the facility tries to avoid asbestos containing areas, but some wells are likely nearby. If a facility needs to commence construction that has the potential to disturb ACM, proper notification and plans are provided to the AQD and precautions are taken during the excavation.

While on-site I reviewed asbestos records for the last three received asbestos loads. Waste shipment records are maintained documenting the facility generator and delivery information for each asbestos

shipment. A map is maintained displaying the location of all asbestos material on the landfill. In addition to a map, an asbestos disposal log is maintained. The log contains information such as the date, location, elevation at which the waste is placed, a profile number, volume of ACM and an initialed box ensuring the waste was covered with compacted material within 24 hours.

FGLANDFILL: Compliant

At the time of the inspection, Tri-City had begun construction on Cell 12. Waste records are maintained by the facility. Yearly waste acceptance records for the years 1987 through 2022 were provided. For the year 2021, the facility received 33,506 tons of waste. For the year 2022, the facility received 31,726 tons of waste. The facility does not utilize a scale. The amount of waste received by the facility is measured using volume. When waste arrives at the facility, container sizes and truck sizes are estimated to determine the amount of waste delivered. In addition to estimating container volumes, the facility conducts consumed air space calculations using aerial surveys. The method allows for more accurate measurements, taking into account waste receipts, daily cover and compaction. In addition, results can be compared on a year-to-year basis and used to estimate how much space is remaining in the landfill.

Methane surface scans are conducted quarterly. Records for the last five quarterly surface methane monitoring were provided and reviewed. Surface scans are conducted by a third party. The most recent scan was completed on July 28 and 29, 2022 by Monitoring Control and Compliance Inc. I reviewed Q1, Q2, and Q3 SEMs and no exceedances above 500 ppm were detected. Appropriate records documenting the route traversed, meteorological conditions and calibration data are maintained.

The facility conducts monthly monitoring for cover integrity while making repairs as necessary, pursuant to FGLANDFILL SC.VI.1. Onsite staff said the cover integrity monitoring is conducted while completing well-head monitoring. Staff look for cracks and leachate outbreaks on the surface of the landfill. If problems are identified, onsite personnel work together to resolve them.

FGLANDFILL-AAAA, SC. IX.1. a. requires the landfill to submit a revised design plan under 40 CFR 63.1981 (d), to the Department for approval at least 90 days before expanding operations to an area not covered by the previously approved design plan. The current GCCS Design plan is from 2003 and initially it was not clear it included cells 12-20. Cells 12-20 were included in the 2012 construction permit. However, upon closer review the 2003 construction permit included cells 12-20 and the 2012 permit included a vertical expansion of those cells. The 2003 GCCS design plan includes future GCCS maps of these cells, therefore it appears to reflect current conditions.

The federal plan requires the landfill to submit a liquids addition report since the site recirculated liquids within the last 10 years. Below is the historical data for the site.

Historical 10-Year Annual Leachate Recirculation

Year	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Records available (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Volume of leachate recirculated (gallons)	0	0	0	37000	0	25800	8000	30400	78800	0

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EUACTIVECOLL: Compliant

An active landfill gas collection system is in place at Tri-City RDF, used to draw and redirect gas produced during waste decomposition to the facility's flare. Facility personnel report that in 2022, the only times the collection system would have been inoperable were during times of scheduled maintenance, or if a power outage were to occur. In the event the system was to become inoperable, Tri-City RDF has procedures in place. The facility has electricians on standby that can be contacted to quickly address the matter.

Wellheads in the collection system are monitored monthly. Records of wellhead monitoring for the last 12 months, as well as an up-to-date plot map, were provided and reviewed. A number of wells at the facility have variances in place that allow for higher operating values (HOV). Currently, wells GW-01, GW-02, GW-04, GW-05, GW-13 and GW-17 are listed in the facilities approved GCCS Design Plan as having a HOV of 15% O₂. Upon the effective day of the NESHAP, oxygen no longer has a 5% limit. Wellhead data appeared to be within the appropriate range.

EUOPENFLARE: Compliant

All gas collected at Tri-City RDF is routed to a single flare. The current flare was installed in 2015 and has a capacity of 1000 scfm. At the time of the inspection, the flare was operating, and a flame was present. The following operating parameters were observed. Gas flow rate to the flare was 175 SCFM. The pilot flame temperature was 1122°F. The overall vacuum on the well field was -16.00" W.C.

The flare is equipped with three thermocouples to detect if the pilot light or flame go out. Facility personnel receive alerts on their phones if the temperature drops. The flare is considered down if the temperature drops below 250°F for 10 minutes. Staff can monitor thermocouple data in real time from their phones. In the event there is a loss of power or gas flow, a valve shuts to halt gas flow to the flare. There is no bypass. When flare shuts down the flow closes pneumatically. Maintenance is performed quarterly on the flare. Thermocouples are replaced on an as needed basis. Since the installation of the flare in 2015, facility personnel report a single thermocouple has needed to be replaced once.

Special Condition VI. 3. Requires continuous monitoring of the open flare pilot flame or open flare flame monitoring. Monitoring records were requested and received for June, July, August, and September 2022. Temperature measurements of the pilot flame and main flame are recorded every 10 minutes. For each recording, a minimum and maximum temperature are recorded.

NAME

DATE 1/19/2023

SUPERVISOR

