

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

N603531016

FACILITY: DELTA SOLID WASTE MANAGEMENT AUTHORITY		SRN / ID: N6035
LOCATION: 5701 19TH AVENUE N, ESCANABA		DISTRICT: Upper Peninsula
CITY: ESCANABA		COUNTY: DELTA
CONTACT: Don Pyle, Landfill Manager		ACTIVITY DATE: 08/27/2015
STAFF: Joe Scanlan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced inspection of Title V source to determine compliance with MI-ROP-N6035-2012		
RESOLVED COMPLAINTS:		

FACILITY: Delta Solid Waste Management Authority (MI-ROP-N6035-2012)

INSPECTION DATE: 8/27/2015

MDEQ-AQD STAFF:

- Joseph Scanlan, EQA

FACILITY REPRESENTATIVE:

- Don Pyle, Landfill Operations Manager

LOCATION:

Delta Solid Waste Management Authority (DSWMA) is located at 5701 19th Avenue, Escanaba, in Delta County, Michigan. The facility consists of 277.9 acres located in the N 1/2 of Sec. 22 and S 1/2 of Sec. 15, T39N, R23W, Wells Township, Delta County. The facility is located approximately 2.1 miles due west of US-2. There are residential neighborhoods approximately 0.35 miles to the north and 0.45 miles to the northwest from the northern-most boundary line of DSWMA Northern Fill Area north of 19th Avenue. Nearest residential structure to the west is approximately a half mile; to the south of the currently operating cell approximately one mile. Development to the east is commercial and industrial.

SOURCE DESCRIPTION

The Delta Solid Waste Management Authority (DSWMA) is a municipal solid waste (MSW) landfill located at 5701 19th Avenue, Escanaba, in Delta County, Michigan. The landfill is more commonly referred to as the "Delta County Landfill" (Delta County LF). The Facility is owned by DSWMA and the City of Escanaba. It consists of 277.9 acres located in the N 1/2 of Section 22 and the S 1/2 of Section 15, T39N, R23W, Wells Township, Delta County, Michigan.

On July 9, 2009 DSWMA received approval for a construction expansion permit for the Delta County LF from the MDEC Waste and Hazardous Materials Division. The proposed landfill expansion increased the maximum design capacity of landfill site from 1.65 million cubic yards to 7.85 million cubic yards (6.0 million cubic meters).

A landfill means an area of land or an excavation in which wastes are placed for permanent disposal. Delta County LF classified as a Type II sanitary landfill, which is a Municipal Solid Waste (MSW) landfill. In addition, the Delta County LF site does include two (2) closed Type III landfill cells, which contain only construction demolition waste and fly ash. Type III cells are not subject to the requirements of the NSPS or NESHAP for Municipal Landfills or Part 70 permitting.

A MSW landfill or a Type II landfill according to Part 115, Solid Waste Management, of Act 451, is:

"A landfill which receives household waste, municipal solid waste incinerator ash or sewage sludge and which is not a land application unit, surface impoundment, injection well, or waste pile. A municipal solid waste landfill also may receive other types of solid waste, such as commercial waste, non-hazardous sludge, conditionally exempt small quantity generator waste, and industrial waste. Such a landfill may be publicly or privately owned."

Delta County LF currently accepts sludge, asbestos containing wastes, fly ash, industrial waste, and miscellaneous solids, along with municipal household waste. Natural biological processes occurring in landfills transform the waste constituents (above listed wastes) producing leachate and landfill gas. Initially, decomposition is aerobic until the oxygen supply is exhausted. Anaerobic decomposition of buried refuse creates most of the landfill gas. Landfill gas consists mainly of methane, carbon dioxide, and nonmethane organic compounds (NMOC). The NMOC is the primary regulated air pollutant associated with landfill gas generation, which was promulgated as a regulated air pollutant under the Standards of Performance for New Stationary Sources, Subpart WWW - Standards of Performance for Municipal

Solid Waste Landfills (NSPS Subpart WWW).

Landfill gas from the existing Stationary Source is collected through an active gas collection system and routed to an open flare gas control system. Delta County LF expanded the landfill gas collection and control system (GCCS) into the newly permitted Northern Fill Area. The applicable requirements of this system can be found in the ROP Tables EU-ACTIVECOLL and EU-OPENFLARE.

The current active GCCS was required to be installed and operated by Delta County LF under the NSPS Subpart WWW of April 22, 2012 (30 months after their actual NMOC emissions reached 50 Megagrams (Mg) (55 tons)). Control device performance testing is required to be conducted by October 22, 2012.

Delta's NMOC emissions are equal to or greater than 50 Mg/year, and they were required to submit an approvable land GCCS plan that satisfies the requirements of NSPS Subpart WWW. Some of the requirements of NSPS Subpart WWW require the design plan to specify equipment that can fulfill specific capture and destruction efficiencies that includes reduction of NMOC from a control system by 98 weight percent or from a combustion device to less than 20 parts per million by volume. It is expected that this design plan will include the expanded active landfill gas collection system that will be routed to a landfill gas combustion device. An active system mechanically pulls the landfill gas from the landfill gas wells. Within 18 months after the design plan has been submitted, the equipment specified by the approved design plan shall be installed and operating properly.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System.

TOTAL STATIONARY SOURCE EMISSIONS:

Pollutant	Tons per Year
Carbon Monoxide (CO)	1.96
Lead (Pb)	1.86
Nitrogen Oxides (NO _x)	14.91
Particulate Matter (PM)	63.75
Sulfur Dioxide (SO ₂)	49.86
Volatile Organic Compounds (VOCs)	0.93
Individual Hazardous Air Pollutants (HAPs) **	NA
Total Hazardous Air Pollutants (HAPs)	NA

**As listed pursuant to Section 112(b) of the federal Clean Air Act.

In addition to the pollutants listed above that have been reported in MAERS, the potential to emit of Greenhouse Gases in tons per year of CO₂e is less than 100,000. CO₂e is a calculation of the combined global warming potentials of six Greenhouse Gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

See Parts C and D in the draft ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

REGULATORY ANALYSIS

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in Delta County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants. Additionally, the stationary source is not considered a major source of Hazardous Air Pollutant (HAP) emissions because the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112 is less than 10 tons per year and the potential to emit of all HAPs combined is less than 25 tons per year.

No emissions units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451 or 40 CFR, Part 52.21.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR), Part 70, because

the source is subject to the federal New Source Performance Standard (NSPS) for Municipal Solid Waste Landfills (NS Subpart WWW) pursuant to 40 CFR 60.752(b) which requires a 40 CFR Part 70 Title V permit.

The stationary source is subject to the NSPS for Municipal Solid Waste Landfills promulgated in Title 40 of the Code of Federal Regulations (CFR), Part 60, Subparts A and WWW. The stationary source is subject to NSPS Subpart WWW because its design capacity exceeds 2.5 million Mg and 2.5 million cubic meters, and is required to install and operate landfill gas collection and control system because actual NMOC emissions are at or greater than 50 Mg/year.

The Stationary Source has organized its process/equipment into the following emission units and flexible groups:

EU-LANDFILL, EU-ACTIVECOLL, and EU-OPENFLARE at the stationary source are subject to the New Source Performance Standards for Municipal Solid Waste Landfills promulgated in 40 CFR, Part 60, Subparts A and WWW.

EU-LANDFILL, EU-ACTIVECOLL, AND EU-OPENFLARE at the stationary source are subject to the Maximum Achievable Control Technology Standards for Municipal Solid Waste Landfills promulgated in 40 CFR, Part 63, Subparts A and AAAA because pre-controlled emissions of NMOC equal or exceed 50 megagrams. The stationary source is required to develop and implement a start-up, shut-down and malfunction abatement plan (SSM) and submit semi-annual SSM reports.

Although EU-OPENFLARE was installed after August 15, 1967, this equipment was exempt from New Source Review (NSR) permitting requirements at the time it was installed. However, future modifications of this equipment may be subject to NSR.

EU-ASBESTOS The stationary source is subject to the asbestos regulations found in 40 CFR Part 61, 61.154 because the landfill accepts asbestos containing waste. Applicable requirements are contained in EU-ASBESTOS.

EU-FURNACE covers an Omni Waste Oil furnace with capacity of 150,000 Btu/hr. EU-FURNACE incorporates applicable requirements contained in Air Use Permit to Install No. 30-03 which was issued on April 17, 2003. The furnace has applicable requirements of R336.1201(3), R336.1224(2)(b), R336.1225, R 336.1301, R336.1901, and 40 CFR 279.23. The original Omni furnace has since been decommissioned and two more efficient units have taken its place.

FG-COLDCLEANERS is a flexible group covering existing and future exempt cold cleaners regulated pursuant to Act 451, R 336.1611 (Rule 611) and/or R 336.1707 (Rule 707).

No emission units are subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64, because all emission units at the stationary source either do not have a control device or those with a control device do not have potential pre-control emissions over the major source thresholds.

INSPECTION

On 8/27/2015 I conducted an unscheduled visit of Delta County LF. PPE worn during this inspection included steel-toe boots, safety vest, safety glasses and hardhat. No odors were noted downwind and outside of the facility. All haul roads in the plant yard, and the active parts of the landfill had no noticeable visible emissions during the inspection and appear to be in good repair.

Mr. Pyle provided me with all records for asbestos waste handling and disposal locations and waste throughput for all other waste (municipal, etc.). We did not do a walk-through of the facility. The two waste oil furnaces in the new shop building constructed in 2014 are now in use and the former furnace in the old maintenance garage has been decommissioned. Mr. Pyle stated that they began using cell #5 in May, however they are still landfilling cells 4a & 4b, with cell 4a being partially capped and still open and in use. Cells 3a & 3b are partially capped but not officially closed.

EMISSION UNIT DETAILS

Emission Unit ID	Description of Emission Unit	ROP/PTI#	Installation/Modification Date	Compliance Status
	This emission unit is of a landfill which has a design capacity greater than 2.5 million megagrams and 2.5 million cubic meters, but actual emissions based upon an			

EU-LANDFILL	established Tier 2 value in the landfill calculation are less than 50 megagrams. This landfill also has received a volume expansion permit to increase design capacity from the DEQ after May 30, 1991, and therefore making the landfill subject to NSPS WWW.	MI-ROP-N6035-2012	12/09/1985 7/20/2009	C
EU-ACTIVECOLL	This emission unit represents the active landfill gas collection system at the landfill that uses gas mover equipment to draw landfill gas from the wells and moves the gas to the control equipment.	MI-ROP-N6035-2012	10/01/1998	C
EU-OPENFLARE	Open flare is an open combustor without enclosure or shroud.	MI-ROP-N6035-2012	10/01/1998	C
EU-FURNACE	Omni Waste Oil furnace with capacity of 150,000 Btu/hr. EU-FURNACE incorporates applicable requirements contained in Air Use Permit to Install No. 30-03 which was issued on April 17, 2003. The furnace has applicable requirements of R336.1201(3), R336.1224(2)(b), R336.1225, R336.1301, R336.1901, and 40 CFR 279.23.	MI-ROP-N6035-2012 PTI# 30-03	04/17/2003	C
FG-COLDCLEANERS	Existing and future exempt cold cleaners regulated pursuant to Act 451, R 336.1611 (Rule 611) and/or R 336.1707 (Rule 707).	MI-ROP-N6035-2012	01/01/1985	C
EU-ASBESTOS	The landfill is actively or has accepted asbestos waste in the past.	MI-ROP-N6035-2012	01/01/1985	C

EU-LANDFILL, EU-ACTIVECOLL, EU-OPENFLARE

I. EMISSION LIMIT(S) – Emissions remain below the 500 ppm above background level

II. MATERIAL LIMIT(S) – NA

III. PROCESS/OPERATIONAL RESTRICTION(S) – NA

IV. DESIGN/EQUIPMENT PARAMETER(S) – Gas collection system and flare are installed and operating as required with minimal disruption.

V. TESTING/SAMPLING – Tier 2 testing to demonstrate the NMOC annual emissions rate was performed in 2011 and demonstrated that the facility was below the 50 Mg threshold for NMOC annual emissions. Current modelling indicates that NMOC emissions in 2049 would be _____ Mg/year, still below thresholds prescribed in 40 CFR 60 WWW.

VI. MONITORING/RECORDKEEPING – 5 year record retention on-site of design capacity report; current amount of solid waste in-place; year-by-year waste acceptance rates; gas collection system flow rates, O₂ concentrations, and well temperatures were all provided upon request. Thermocouple is installed and operating on the flare. There were a few deviations reported regarding flare operation and O₂ concentrations, however these deviations were isolated and minor occurrences which were corrected in a satisfactory time-frame.

VII. REPORTING – All required ROP reporting has been submitted in a complete and timely manner.

EU-ASBESTOS

I. EMISSION LIMIT(S) – NA

II. MATERIAL LIMIT(S) – NA

III. PROCESS/OPERATIONAL RESTRICTION(S) – The entire facility was adequately fenced and properly signed to dete the general public. Asbestos containing material is logged in, surveyed for latitude, longitude, and elevation, and buri properly.

IV. DESIGN/EQUIPMENT PARAMETER(S) - The facility currently a gas collection system. In the event that a well is to b drilled or disturbed all locations of asbestos containing materials taken in at the facility have been recorded on a map the facility (provided by Mr. Pyle).

V. TESTING/SAMPLING – NA

VI. MONITORING/RECORDKEEPING – Review or records of the last 12 months demonstrated that the records are kept a timely manner. Information relating to generator identification, transporter identification, quality of material, containment, and location of material are all being kept in a compliant manner.

VII. REPORTING – Semi-Annual and Annual Reporting is being performed in a timely manner. There are no records of requests to disturb placed waste and no indications of the need to do so.

VIII. STACK RESTRICTIONS – NA**IX. OTHER REQUIREMENTS—NA****EU-FURNACE****I. EMISSION LIMIT(S) – NA**

II. MATERIAL LIMIT(S) – 1 gallon/hr max waste oil consumption; limits for arsenic, cadmium, chromium, lead, & haloge monitored per annual sampling.

III. PROCESS/OPERATIONAL RESTRICTION(S) – Not to exceed 10% opacity – furnaces were not in operation at the tin of inspection; only waste oil is used to fuel the furnaces; in-line filter in place and maintained.

IV. DESIGN/EQUIPMENT PARAMETER(S) – Pretreatment filter in place and maintained.

V. TESTING/SAMPLING – Sampling once per calendar year for parameters required

VI. MONITORING/RECORDKEEPING – – Review or records of the last 12 months demonstrated that the records are kei in a timely manner.

VII. REPORTING – No deviations reported for EU-FURNACE

VIII. STACK RESTRICTIONS – Max exhaust diameter <8"; Stack exceeds 27' height requirement.

IX. OTHER REQUIREMENTS—NA**FG-COLDCLEANERS****I. EMISSION LIMIT(S) – NA**

II. MATERIAL LIMIT(S) – No halogenated solvents of more than 5% by weight

III. PROCESS/OPERATIONAL RESTRICTION(S) – Maintenance performed as needed.

IV. DESIGN/EQUIPMENT PARAMETER(S) – Cover in place when not in use

V. TESTING/SAMPLING – NA

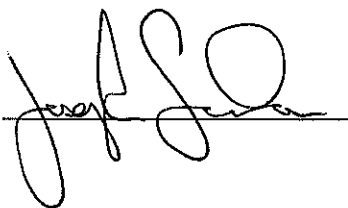
VI. MONITORING/RECORDKEEPING – Review or records of the last 12 months demonstrated that the records are kept a timely manner.

VII. REPORTING – No deviations reported for FG-COLDCLEANERS

VIII. STACK RESTRICTIONS – NA**IX. OTHER REQUIREMENTS – NA**

SUMMARY

No violations of ROP #MI-ROP-N6035-2012 were observed at the time of this inspection and the facility appears to be in compliance with the ROP.

NAME 

DATE 10/12/15

SUPERVISOR _____