

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N561955278

FACILITY: Pitsch Sanitary Landfill		SRN / ID: N5619
LOCATION: 7905 Johnson Rd, BELDING		DISTRICT: Grand Rapids
CITY: BELDING		COUNTY: IONIA
CONTACT: Bruce Monroe , Site Manager		ACTIVITY DATE: 09/24/2020
STAFF: David Morgan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

At 11:00 AM on September 24, 2020, Air Quality Division staff Dave Morgan conducted a scheduled inspection at the Pitsch Sanitary Landfill (PSL) located at 7905 Johnson Road in Belding. The purpose of the visit was to determine the facility's compliance with state and federal air pollution regulations. Accompanying AQD staff on the visit was Bruce Monroe, Site Manager and Chris Ogden, Operations Personnel. All personal protective equipment was worn per EGLE policy. Records were obtained prior to the inspection.

FACILITY DESCRIPTION

The PSL is a municipal solid waste landfill located in Belding, in Ionia County, Michigan. The facility is subject to the new Emission Guidelines promulgated under 40 CFR Part 60, Subpart Cf for Existing Municipal Solid Waste Landfills. However until a state plan is developed to implement the guidelines, the requirements of New Source Performance Standard (NSPS), 40 CFR Part 60, Subpart WWW are in effect. It is likely that PSL will be below the GCCS requirements of the new rule once a state plan is developed. The facility is also subject to 40 CFR Part 61, Subpart M for Asbestos.

The PSL has a design capacity greater than 2.5 million cubic meters. The facility consists of solid waste disposal Cells 1 through 4 which are capped and closed and Cells 5 & 6 which are active. Cell 7 was in the middle of liner construction and there was no construction in Cell 8. There is also a closed Act 87 area that began operations in 1975 and ceased operations in 1992. The company completed installation of a landfill gas collection and control system (GCCS) to control non-methane organic compound emissions (NMOC) in August 2009 to comply with Subpart WWW. Renewable Operating Permit (ROP) No. MI-ROP-N5619-2020 was issued on February 28, 2020. It is noted that the PSL accepts more construction and demolition materials than municipal solid waste which reduces its gas generation potential.

In May 2012, U.S.EPA and Pitsch entered into an Administrative Consent Order (ACO) to address NSPS requirements not being met. As part of ACO EPA-5-12-113(a)-MI-03 Pitsch had to meet the following:

- Conduct monitoring, recordkeeping, and reporting as specified by the NSPS and ROP
- Conduct testing to demonstrate current NMOC emissions from the landfill
- If all testing and emission estimates showed NMOC emissions to be below 50 Mg/yr, Pitsch could submit a periodic emission rate report every 5 years consistent with 40 CFR 60.757(b)(1)(ii).
- Pitsch could discontinue submitting the annual NMOC emission rate reports upon capping or removal of the capture and collection system and closure of the landfill pursuant to 40 CFR 60.752(b)(2)(v).

The last NMOC emission report required under the ACO was dated June 21, 2016. That report showed NMOC concentrations of 15.5 ppmv, as hexane, with total estimated NMOC emissions of less than 2.31 Megagrams/year through the year 2020, which is significantly below the 50 Mg/year collection and control threshold in the NSPS, Subpart WWW. The next NMOC emission report is due in **2021**.

On September 1, 2020, the U.S. EPA, Region V, Enforcement and Compliance Assurance Division stated that the intent of the ACO was that if PSL successfully performed the testing outlined in the ACO and the test results showed the facility to be below 50 Mg/year, then the landfill would not have to meet the gas collection and control requirement provisions of NSPS WWW and could continue to submit NMOC emission estimates every five years. Essentially under 60.754(3)(iii), if the resulting NMOC mass emission rate is less than 50 Mg/year, the owner or operator can submit a periodic estimate of NMOC emissions provided in 60.757(b)(1) and retest the site-specific NMOC concentration every 5 years. If NMOC emissions exceeded 50 Mg/year then gas collection and control would be required. Although PSL would no longer need to meet the gas collection and control requirements under 60.752(b)(2), the GCCS requirements are still contained in the active ROP No. MI-ROP-N5619-2020 and will need to be changed through the ROP reopening process. Until the ROP is modified, the company will need to report deviations for any operation or monitoring that does not meet the requirements of the ROP.

COMPLIANCE EVALUATION

Although EPA has determined that gas collection and control is not required, a compliance evaluation is being made based on the conditions of ROP No. MI-ROP-N5619-2020.

(EULANDFILL>50):

In accordance with the ROP, the company installed a GCCS consisting mainly of passive vents with spark ignition solar flares and a small active system in the Act 87 area. The GCCS was based on a design plan submitted in February 2009.

The ROP requires that the collection system be operated so that the methane concentration is less than 500 ppm above background at the surface of the landfill and that the surface methane is monitored on a quarterly basis. If a reading above 500 ppm exists, corrective actions and re-monitoring is required. A violation exists if any reading above 500 parts per million (ppm) is detected three times within a quarterly period.

Surface methane at PSL was conducted by Monitoring Control and Compliance Inc. on a quarterly basis in accordance with the ROP. Records of surface monitoring events include the sample date, sample location, exceedance location (if any) and analyzer calibration information. A flame ionization detector was used to verify surface methane during the 2019 and 2020 monitoring events. The sampling and calibration appeared to be conducted in accordance with USEPA Method 21. No reading above 500 ppm was detected during the quarterly monitoring events. Records are attached.

Records pertaining to maximum design capacity, year-to-year acceptance rate, and amount of waste in place are maintained by the company in accordance with the ROP. This information is also reported to the EGLE, Materials Management Division on a quarterly basis. As of September 2019, the site had less than 2.0 million cubic yards of waste in place which is well below the permitted capacity of 4.2 million cubic yards. As of September 2019, PSL accepted approximately 343,716 cubic yards of waste, (317,562 yd³ was industrial/demolition/construction waste and 26,154 yd³ was municipal consumer waste. Therefore approximately 92% of waste consisted of industrial/construction/demolition material and 8% municipal garbage. Gas generation rates are expected to be lower due to higher amounts of construction/demolition material received. It is noted that approximately 130,000 yd³ of total waste was received in the first half of 2020.

The company maintains the cover of the landfill on an as needed basis and at least on a monthly basis in accordance with the ROP. No cover issues were observed while on site.

Passive Vents (EUPASSIVECOLL) with Open Flares (EUOPENFLARE):

Currently Cells 1 through 6 have nineteen passive wells, each with its own solar vent flare, and includes two leachate collection risers vented to a single vent flare. No new passive wells have been installed since the last AQD inspection.

The location and density of all collection wells to control surface gas emissions was certified by a professional engineer in PSL's Landfill Gas Collection and Control System Design Plan dated February 2009. In addition, all collection wells are marked on an as built site map. Also in accordance with the design plan each well is constructed of HDPE material, equipped with a sampling port, positive throttle valve to shut the well down if need be, a data logger for flare operation, a solar panel to maintain the flare sparking mechanism, and a thermo-couple to monitor flare tip temperature.

EUPASSIVECOLL, Condition VI.1 requires that each interior wellhead be operated with a landfill gas temperature less than 131°F and an oxygen level less than 5% and monitored monthly. In addition, EUPASSIVECOLL, Condition VI.6 requires that the static pressure and methane content of the gas from each gas vent be monitored and recorded on a monthly basis. This monitoring was approved in the design plan and incorporated into the ROP to demonstrate proper operation of the vent flare.

The company monitors each well at the site on a monthly basis. Monthly monitoring records have been reviewed through the ROP Semi-annual Certification Reports.

Each vertical well has a solar vent flare designed to burn landfill gas if gas flows are between 2 cubic feet per minute (cfm) and 90 cfm and if the gas quality contains methane in excess of 30% (see design plan). All vent flares contain a spark ignition system with spark plug, a thermocouple to monitor the pilot flame, and a data logger. The company maintains and monitors each flare on a daily basis.

In 2010, testing was conducted to determine the exit velocity, net heating value of the gas, and visible emissions from the 19 solar flares. The test results were submitted in July 2010 and demonstrated compliance with the applicable NSPS testing requirements.

The company conducts daily observations to ensure that the flares are operating and maintains weekly inspection records of spark plug and flare performance. It is noted that the weekly flare monitoring records show that multiple flares are not operational during any given recorded day. It is indicative of the operational issues that affect the flares, including limited gas production, low methane concentration, and lack of a pilot flame among others.

During the inspection, AQD staff observed a flame present at many of the flares. but not all vent flares had a flame present. The company continues to experience operational issues that have been identified in previous AQD inspections. These issues include methane gas quantity and quality, the ability to meet NSPS operating parameters for oxygen concentration, and keeping the control system operating when gas is present.

Active Collection System (EUACTIVECOLL):

The old Act 87 consists of two unlined closed cells; one is a Type II waste cell and the other is a Type III construction and demolition waste cell. Because the Act 87 area is unlined it could not meet the NSPS requirements for a passive system which requires a synthetic liner on the bottom and sides. Therefore an active collection system needed to be installed. The Type II waste cell (only) has four collection wells which are manifolded to a single vent flare. This system is considered active because it has an in-line blower to maintain a slight vacuum on the cell. The blower motor is powered by a deep cycle battery which is charged using a solar panel. During the inspection, it was not apparent that well GW-1-87 had a flame present, again due to the gas quality issues discussed above.

All monthly monitoring for this emission unit is conducted in accordance with the ROP. Again, the company continues to experience the same operational issues with EUACTIVECOLL that were discovered during previous inspections.

Start-up, Shutdown, Malfunction (SSM) Plan:

The company has a SSM plan in accordance with EUOPENFLARE, Condition IX.2. The plan was modeled from another landfill company and contains sufficient procedures to document the occurrence of startup, shutdown, and malfunction events at the PSL. Many of the documented shutdowns and startups are due to spark plug or igniter failure.

Reporting:

PSL has submitted ROP certification reports in accordance with the ROP

EUASBESTOS:

The PSL actively accepts asbestos containing waste. From August 2019 through September 24, 2020, records show that 1,861 tons of friable and non-friable asbestos waste were received. Asbestos manifest records on site. The asbestos records contained the name, address and telephone number of the generator and transporter as well the amount of asbestos containing waste.

Asbestos containing waste is placed in designated areas and marked on a site map which was reviewed on site. All documentation was readily available. No excavation activities have been conducted by PSL necessitating notification under the NESHAP.

No visible emissions were observed from the active disposal area.

The company has a fence and natural barrier installed which deters access to the site.

SUMMARY

The landfill gas wells and flares at the Pitsch Sanitary Landfill continue to operate in non-conformance with ROP requirements as evidenced by the companies records. As stated earlier, an ACO between U.S.EPA and PSL is intended to address gas collection and control requirements of the NSPS and the ROP will be reopened to reflect this. Records are attached.

NAME _____

DATE _____

SUPERVISOR HH _____