



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

DATE: JUN 12 2019

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Orchard Hill Sanitary Landfill, Watervliet, Michigan

FROM: Kenneth Ruffatto, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Chief
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Orchard Hill Sanitary Landfill

Facility Location: 3290 Hennessey Road, Watervliet, Michigan

Date of Inspection: June 3, 2019

EPA Inspector(s):

1. Kenneth Ruffatto, Environmental Engineer
2. Vicky Mei, Environmental Engineer

Other Attendees

1. Chip Shaw, Operations Manager, Landfill Management Co.

Contact Email Address: Chip Shaw – cshaw@landfillmanagement.com

Purpose of Inspection: CAA Inspection

Facility Type: Municipal Solid Waste (MSW) Landfill

Regulations Central to Inspection: NSPS Subpart WWW; NESHAP Subpart AAAA

Arrival Time: 1:30PM

Departure Time: 3:00PM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Credentials Presented
- ☒ CBI warning to facility provided

The following information was obtained verbally from Mr. Shaw unless otherwise noted.

Process Description:

Orchard Hills Sanitary Landfill (the Landfill) is a 283-acre MSW landfill, owned and operated by Landfill Management Co. since the 1980s. The Landfill accepts approximately 1,000 tons of waste per day that is composed of MSW and construction and demolition waste, containing gypsum. The Landfill also accepts asbestos and keeps GPS coordinates on the locations. The Landfill is currently filling Cell 7B which was started three years ago. Starting with Cell 5 through Cell 7B, the Landfill has a dual composite liner. Part of the Landfill is pre-Subtitle D and has a synthetic cap. Interim cover along the rest of the Landfill is composed of sand, clay, and topsoil. Daily cover is put down over the active waste area after filling each day and is Posi-shell, but dirt is used during the winter months.

Leachate is gravity fed to a tank near Cell 6 and is sent through a treatment system. The treatment system has a settler, pH adjustment, sand filters, and a reverse osmosis (RO) process. Wastewater from the RO process is sent back to the Landfill; and filtered water through the RO process is discharged to ditches.

The Landfill has approximately 248 active gas extraction wells that are mostly vertical wells with a few horizontal wells. There are numerous caisson wells to increase durability. All gas from the wells is sent to three engines or a utility flare. The engines have a total capacity of 4 Megawatts. The utility flare has a capacity of 2,000 standard cubic feet per minute (scfm). Total flow to the control devices is approximately 1,200 scfm at 37 inches of vacuum.

Staff Interview: The Landfill plans to start work preparing a new cell in the next month. Mr. Shaw walks with wellhead monitoring staff on occasion to ensure that well monitoring is performed properly.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations:

EPA observed dust crossing into the roadway on the east side of the Landfill from truck traffic. Mr. Shaw immediately contacted his staff to address the issue, and EPA observed a water truck refilling to water down the roads.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

1. Landfill Map

CLOSING CONFERENCE

Requested documents:

Requested from Landfill

- Landfill Map including Gas Wells
- GCCS Design Plan (most recent)
- NSPS Semi-Annual Reports (2 years)
- Wellhead Monitoring (January 2019 to present)
- Surface Emission Monitoring Reports (3 years)

Requested from Gas-to-Energy Plant

- Collection and Control Flow Data (January 2019 to present)
- Stack Test and Performance Tests (most recent)
- Gas Sampling Data (most recent)

SIGNATURES

Report Author: Kenneth A. [Signature] Date: 6/12/2019

Section Chief: [Signature] for Nathan [Signature] Date: 6/12/2019