

ARBOR HILLS LANDFILL, NORTHVILLE MICHIGAN

SUMMARY OF ACTIONS: NOVEMBER 2019 – MARCH 2020

Background

In January 2016, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) began receiving odor complaints from residents living near the Arbor Hills Landfill (Landfill), which is owned and operated by Advanced Disposal Services (ADS). In order to identify the source of the odors, staff from EGLE and the United States Environmental Protection Agency (USEPA) intensified the frequency of investigations of the odors and other inspections of the Landfill and its operations.

As the waste material collected by the Landfill breaks down and decomposes, landfill gas is created. The Landfill is required to collect and control the gas. Collected gas is used in a gas-to-energy facility, Arbor Hills Energy (AHE), located at the Landfill. This gas-to-energy facility uses the collected gas to create electricity for residential use. Gas escaping collection and being released to the atmosphere is considered a “fugitive emission.” Fugitive emissions of landfill gas contain hydrogen sulfide (H₂S), which can be odorous even at very low concentrations or levels. While H₂S is contributing to odors at the Landfill, repeated air sampling by EGLE and USEPA have found very low concentrations of H₂S in the air outside the boundary of the Landfill. To control odors, EGLE and the USEPA have required numerous improvements to the Landfill’s gas collection system.



Arbor Hills Landfill in Northville, Michigan

As odor investigations and inspections continued at the Landfill, the USEPA and EGLE commenced escalated enforcement action for ongoing violations of state and federal environmental regulations. EGLE continues to respond to odor complaints being filed by residents near the Landfill on a regular basis.

EGLE Actions

EGLE continues to conduct regular inspections of the Landfill and odor observations throughout the community. EGLE is actively seeking resolution of ongoing violations and has required numerous corrective actions. A complete list of EGLE actions during this reporting period can be found [here](#).

- 10/31/19** EGLE held an enforcement meeting with ADS.
- 11/03/19** EGLE Air Quality Division (AQD) conducted an odor investigation, detecting odors in a residential area near the Landfill meeting the criteria of Rule 901 and Rule 433. ADS indicated odors were the result of two wells in the northeast section of the Landfill not capturing gas.
- 11/07/19** EGLE Materials Management Division (MMD) conducted an on-site inspection. Staff noted gas migration probes exceeded lower explosive limit (LEL) of methane on the east side of the Landfill. The secondary leachate volume flow rates in Cell 4 exceeded the allowable flow rates, and levels in Cells 2 and 3 also exceeded allowable levels. LEL exceedances and secondary volume flow rates are ongoing violations and were documented in previous violation notices.

- 11/12/19** EGLE issued a [Violation Notice](#) to ADS citing violations of Rule 901 and Rule 433 for the odors observed on 11/03. The Violation Notice required ADS initiate actions necessary to correct the cited violations and submit a written response by 12/6/19.
- 11/13/19** EGLE AQD received [ADS' response](#) to the 10/21/19 Violation Notice citing improper operation of the gas collection system (GCCS) due to excessive liquid in the landfill gas wells.
- 11/14/19** EGLE AQD conducted an unannounced [compliance inspection](#) of AHE.
- 11/19/19** EGLE AQD conducted an odor complaint investigation and determined odors were present in the downwind residential area that met the criteria of Rule 901 and Rule 433.
- 11/25/19** EGLE MMD conducted an inspection to confirm and follow-up with previous violations, to review site progress related to gas migration probe readings, and to review the secondary volume flow rates in Cell 4. These are ongoing violations and are documented in previous violation letters. Leachate levels in Cells 2 and 3 were found to be in compliance during the inspection.
- 11/26/19** EGLE issued a [Violation Notice](#) to ADS citing Rule 901 and Rule 433 for the odors observed on 11/19/19. The Violation Notice required ADS initiate actions necessary to correct violations and submit a written response by 12/19/19.
- 12/06/19** EGLE received ADS [response to both the 11/12/19 and 11/26/19 Violation Notices](#). ADS acknowledged presence of low-level gas odors during time of the AQD investigations and stated their [3rd party observations](#) also identified odors in the Steeplechase and Northville Ridge subdivisions. ADS identified an area on north side of the Landfill as a potential source of odors.
- 12/09/19** EGLE AQD issued a [Violation Notice](#) to AHE citing continuing violations of their permit and federal regulations. The Violation Notice required AHE to initiate actions necessary to correct cited violations and submit written response by 01/06/20.
- 12/17/19** EGLE held an enforcement meeting with ADS.
- 12/19/19** ADS conducted emissions testing on Landfill gas flares. AQD observed the test. Test results were received on [02/20/20](#) showing compliance with permit limits.
- 12/20/19** AHE conducted emissions testing of Turbine 4. AQD observed the test. Test results received on 02/20/20 showed noncompliance with the sulfur dioxide (SO₂) emission limit. A Violation Notice was issued to AHE on [03/03/20](#).
- 1/06/20** EGLE received AHE [response](#) to the [12/09/19](#) Violation Notice.
- 1/15/20** EGLE received a report for the months of November and December 2019 for Wells of Interest.
- 1/17/20** EGLE AQD received the 4th quarter surface emissions monitoring report from ADS. Fourteen (14) locations had persistent methane exceedances that will require ADS to expand the GCCS within 120 days to resolve.
- 1/24/20** EGLE received and reviewed ADS' Revised Remedial Action Plan to address the continued LEL exceedances at two monitoring locations on the east side of the Landfill adjacent to Napier Road. The additional gas collection laterals have been installed and the monitoring data shows continued LEL exceedances.
- 1/25/20** EGLE MMD conducted an on-site inspection. MMD documented that gas migration probes continued to exceed the LEL on the east side of the Landfill, and that secondary volume flow rates in Cell 4 exceed allowable flow rates. These are ongoing violations and are documented in the 01/24/19, 05/09/19, and 11/25/19 compliance communications and/or violation notices.

- 2/10/20** EGLE AQD received verbal and written notification from ADS about a problem with one of the enclosed flares. An estimated 0.597 million cubic feet of un-combusted landfill gas was released to the atmosphere after a valve to the flare had been inadvertently left partially open. This release occurred between 02/06/20 and 02/10/20. The situation was corrected on 2/10/20 and ADS has taken subsequent actions to prevent a reoccurrence.
- 2/24/20** EGLE received, and approved with comments, ADS' Phase I per- and poly-fluoroalkyl substances (PFAS) source investigation workplan. Site-specific information on the [PFAS investigation at the Landfill](#) is posted on the Michigan PFAS Action Response Team (MPART) [website](#).
- 2/27/20** EGLE AQD issued a [Violation Notice](#) to ADS due to 2/6 through 2/10/20 flare malfunction.
- 3/02/20** EGLE conducted an on-site inspection to evaluate flares and verified 1) the control system has been reprogrammed with new logic to alarm (send email alerts) if it detects a condition in the future with gas flow and no flame; 2) flame detection system was working; 3) all the equipment involved is top of the line including the valve, flow meter, pilot, and computer control system; and 4) subsequent to the event, each supply valve to the 3 flares has been equipped with heating tape to prevent freezing up in the future. A [Violation Notice](#) was issued on 3/3/20.
- 3/03/20** EGLE received emissions test report for AHE Turbine 4. Based on emissions test results, EGLE issued a Violation Notice to AHE for exceeding SO₂ limits.
- 3/13/20** EGLE AQD received written notification from ADS of another problem with the enclosed flares. ADS reported the review of the three-hour rolling flare temperature data for 2019 indicated flares had been operated below their [NSPS Subpart WWW](#) compliance test temperatures for intermittent periods. This situation was corrected prior to the 12/19/19 performance test and new lower compliance operating temperatures were set during that test.
- 3/16/20** EGLE received January through February 2020 Wells of Interest Report.
- 3/18/20** EGLE issued a [Violation Notice](#) to ADS for 3/13/20 reported flare issue.
- 3/20/20** EGLE received ADS' [response](#) to the 02/27/20 Violation Notice. The response provided the additional information requested and an acceptable corrective action plan with several actions implemented to prevent a reoccurrence.
- 3/24/20** EGLE held an enforcement meeting with ADS.
- 3/25/20** EGLE AQD received AHE's [response](#) to the 03/03/20 Violation Notice.
- 3/31/20** EGLE MMD and MPART recorded and posted [a presentation](#) of the [PFAS activities conducted around the Landfill](#). This is a recorded webinar presentation given by EGLE and Michigan Department of Health and Human Services staff on the status of the Landfill PFAS groundwater investigation and residential well sampling.



Construction Completion – ETLF

- Pressure integrity check and corrective actions on 2,000 feet of airline.
- Installation of 4 replacement wells, one new well, and one re-drill.
- Installation of approximately 1,000 feet of new 6" vacuum line
- Installation of approximately 250 feet of new 2" airline and 3" force main.
- Landfill gas well temperature profile of 20 of 21 ETLF wells.

Enforcement Update:

EGLE continues to be actively engaged in escalated enforcement against ADS and AHE to resolve the ongoing violations at the Landfill. This includes developing a robust compliance plan that effectively addresses and resolves the violations at the Landfill while at the same time addressing the concerns of the nearby community.

The USEPA and EGLE are jointly taking an enforcement action against AHE for SO₂ emission violations and other operational violations of state and federal air quality rules and regulations. EGLE AQD and MMD are also jointly taking an enforcement action against ADS for nuisance odor violations, gas collection and control system violations, and other state and federal air quality and solid waste violations. As of this date, EGLE has yet to reach agreement with AHE or ADS. EGLE continues to receive assistance from the Michigan Department of Attorney General to resolve these matters.

Air Permit Application Update

- 10/25/19** AHE submitted a Permit to Install application. Preliminary review showed it lacked certain basic information necessary for AQD to begin their review. A 11/5/19, letter with a response deadline of 12/2/19 to submit the required information.
- 12/02/19** Additional information was submitted by AHE. A review of the information determined all the requested items were incomplete and were not properly addressed. A meeting was held with AHE on 12/19/19 and AQD follow-up via email on 12/23/19.
- 1/10/20** AHE submitted some additional information. The AQD accepted the permit application.
- 3/26/20** Following a thorough review of all materials received, AQD issued a letter to AHE outlining the remaining permit application deficiencies and requiring submittal of the requested information within 30 days.

More Information and Assistance

EGLE has developed a website specifically to keep the community updated on the issues involving Arbor Hills Landfill – Michigan.gov/ArborHills. You are also encouraged to register to be part of our e-mail listserv. This is another way EGLE hopes to provide up-to-date information to interested parties. Go to our website to sign up, Michigan.gov/EGLE, click on the red envelope at the bottom of the page, and then choose “Arbor Hills.”

Complaints or other concerns may be directed to EGLE by calling its Environmental Assistance Center at 800-662-9278 or by filling out the EGLE Online Complaint Form located at Michigan.gov/ArborHills.

Michigan’s Environmental Justice Policy promotes the fair, non-discriminatory treatment and meaningful involvement of Michigan’s residents regarding the development, implementation, and enforcement of environmental laws, regulations, and policies by this state. Fair, non-discriminatory treatment intends that no group of people, including racial, ethnic, or low-income populations, will bear a disproportionately greater burden resulting from environmental laws, regulations, policies, and decision-making. Meaningful involvement of residents ensures an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health.

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