

High Acres Landfill Odor Issues and Response

NYS Solid Waste Program

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WHO TO CONTACT @

Comments and questions are always welcome and should be directed as follows:

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DEC's High Acres Odor Reporting Hotline:
(585) 453-2416

Additional information on odor abatement at the High Acres Landfill, including a list of significant abatement measures and the DEC's Citizen Odor Log, can be found on the following website:
<https://www.dec.ny.gov/chemical/113037.html>

NYSDEC Community Update on Odor Issues at the High Acres Landfill

The New York State Department of Environmental Conservation (DEC) remains committed to addressing potential odors originating from the Waste Management (WM) High Acres Landfill.

New York State's top priority is ensuring that area residents are not exposed to any potential site-related health or safety hazards. DEC directed WM to undertake a number of gas control improvements since the fall of 2017, with a resulting significant decrease in the number and location of residents expressing concerns about landfill operations. However, we are aware of recent occasional days (e.g., over the holidays) where nearby residents have reported odors. DEC wants to assure the public that we continue to review all information received, follow up on the information provided, and continue our consistent communication with the towns of Perinton and Macedon about landfill operations. We particularly appreciate the towns' efforts to work with DEC.

In addition, we have directed Waste Management to review its operations at the High Acres Landfill to ensure that it is taking all necessary and appropriate actions to minimize and prevent operating odors. This update is intended to keep residents informed of these and other ongoing actions at the facility and provide the latest information on DEC's rigorous oversight efforts to ensure that operations at the High Acres Landfill comply with all applicable environmental laws and regulations.

Introduction

On February 2, 2018, DEC issued a Notice of Violation (NOV) to Waste Management requiring the company to undertake several actions to address odors originating from the company's High Acres Landfill. Since the NOV was issued, several aggressive actions including but not limited to those required by the NOV have been or are being completed to ensure that all reasonable measures are taken to minimize impacts to those living near the landfill.

Current Actions

The following measures are currently being undertaken by WM, beyond the specific requirements of the NOV.

WM's Comprehensive Odor Control Plan was conditionally approved by DEC in July 2019. The plan includes an expansion of the facility's odor control network for dispersal of odor neutralizer. The first two phases of the effort were implemented by the end of 2019 (including extension of the network along Perinton Parkway and at Route 31F) and the remainder of the work (including extension of the network on top of the active landfill and along the east perimeter of the landfill) is scheduled to be completed in 2020. This system is designed to reduce garbage odors downwind of the working face of the landfill and at the landfill's perimeter. DEC will continue to evaluate the effectiveness of the Odor Control Plan and require any additional measures deemed appropriate.

In addition, WM has completed the second phase of a Waste Characterization Study, which includes information collected during warm weather months. The results of the study were received by DEC in late November 2019 and are being evaluated. The study was conducted to evaluate, among other things, the sources of waste accepted at the High Acres Landfill, waste characteristics, modes of transportation, and the potential effects these and other factors have on odor generation. Any actions to be taken at the landfill as a result of the study will be communicated in a future Community Update.

WM has instituted the use of Enviro Cover, which is a polyethylene membrane that is used at the end of the day in lieu of soil or other daily cover over much of the working face of the landfill. Use of the Enviro Cover eliminates the need to strip off cover at the beginning of the work day, which saves on soil use and handling, and most importantly with respect to odor control, minimizes the emission of any near-surface gas collected under the daily cover. The membrane can simply be covered with the next day's waste and does not need to be removed. The use of Enviro Cover, initially a pilot program, has proven useful and has now been approved by DEC for continued use.



High Acres Landfill - Enviro Cover deployed with stone ballast

In addition to these actions to address odor issues, a measure instituted by WM since 2019 that will continue through 2020 is the re-direction (to an out of state facility) of approximately one-third of the previous volume of waste brought in from New York City by rail. Redirecting this waste has essentially returned the monthly volume of waste brought by rail to the High Acres Landfill to the volume accepted in 2015-2016, before gas collection and control problems heightened neighborhood concerns. While it remains uncertain that the rail waste volume was a cause of the problems at the facility from late 2017 through the spring of 2018, this adjustment has resulted in no rail waste handling on most Saturdays, far fewer instances where CSX operational or logistical issues create operational challenges for the facility, and an overall more efficient landfill operation. While the waste volume previously accepted was within the landfill's permitted authority, DEC determined that the logistics of the rail transport and the reliance on the ebb and flow of CSX deliveries was a potential strain on operational efficiency.

On September 12, 2019, work being performed on the renewable energy facilities at the landfill site caused a vibration event that neighbors also experienced. This is the only such event reported to DEC since January 2018, after which WM implemented vibration prevention measures that DEC subsequently required to be retained as part of the landfill Operations and Maintenance Manual. WM investigated to learn more about specific causes of equipment malfunction, and the following is understood at this time.

As required by DEC, and in cooperation with the towns of Perinton and Macedon, High Acres installed an automatic transfer switch and backup generator associated with the renewable energy facilities and flares, which became operational on February 1, 2019. On September 12, 2019, the High Acres landfill gas control systems experienced an automated shutdown associated with this backup generator. Specifically, the breaker on the transfer switch was tripped, resulting in the cutoff of utility power at 6:55 p.m. The system operated as intended and was back online at 8:36 p.m. The flare anti-vibration system required by DEC has been in place since January 2018 and monitors for normal flare flow fluctuations that can occur with gas system variations (oxygen content, vacuum, gas quality, etc.). This system adjusts conditions to prevent any rumbling/vibrations from the operating flares. While not designed for startup conditions, the system acted during startup attempts on September 12 to limit the duration of the vibration events, the longest of which was approximately 30 seconds, and shut down the flare when vibration was detected during this multiple step process of bringing both the flare and plants back on line. There were five startup/shutdown events on September 12 that occurred while the facility attempted to re-start the flares between approximately 7:30 and 8:30 p.m. During these five startup events, the total duration of the recorded reverberation events was approximately 126 seconds.

DEC's inspection immediately after these events confirmed the system is now operating normally. High Acres engaged with electrical supply vendors, installation contractors, and engineers to evaluate the cause of the automatic transfer switch breaker overload/trip condition. As a result of the evaluation, the settings on the breaker were modified. Since then, no further vibration events have been reported.

Background Information

The High Acres Landfill is a privately-owned landfill, a division of Waste Management of New York, LLC (WM). Established in 1971, the landfill is located on approximately 1,000 acres on the eastern edge of Monroe County in the Town of Perinton and crosses over the western border of Wayne County in the Town of Macedon. Approximately 72 acres of the landfill used from 1971 to 1994 has been capped and closed. The remaining constructed 123 acres is available for ongoing waste disposal, except for the plateau area at the top of cells 10 and 11, which were the focus of recent cover improvement efforts and where DEC has restricted future placement of waste. In addition, the landfill permit was modified in 2013 to allow for construction and operation of an intermodal rail facility to accept municipal solid waste from a new rail spur connecting to the CSX railroad. The landfill began accepting municipal solid waste via rail in May 2015.

Landfill gas is collected and controlled by a gas collection system consisting of vertical gas extraction wells, horizontal collectors, and a perimeter landfill gas header system. The gas is conveyed to the landfill gas to energy plant to be converted to electricity and/or the on-site flares for destruction. The facility continues to use both permanent and mobile control systems to neutralize odors. The permanent systems are located along the perimeter of the facility, while mobile misting systems are placed at the active cells and can be relocated based on weather conditions. Landfill gas collection infrastructure is installed on an ongoing basis to minimize fugitive gas emissions.

History of Odor Control & Landfill Gas Collection System Issues

In November 2017, residents contacted DEC management to express concerns about ongoing odor issues at the High Acres Landfill. DEC acted to increase inspections of the landfill and required WM to develop a plan to address the issues.

In December 2017, DEC Commissioner Basil Seggos sent a letter to WM demanding an expeditious resolution to the issue and a response to the letter within five days. WM acknowledged the odor issue and committed to addressing it by including a list of actions that would be taken by the facility by March 2018. DEC met with WM representatives on December 13, 2017, to discuss the actions to be taken. In addition, DEC urged WM to advise the residents and town officials about planned actions. Later in December 2017, WM submitted a progress report to the DEC and started providing regular updates to the community.

In January 2018, a vibration event from one of the on-site flares was noticed by some members of the

community. DEC acted immediately to require WM to install an anti-vibration system to address the cause of the vibration event. That system is mentioned above.

Status of Compliance with NOV

On February 2, 2018, DEC issued a Notice of Violation (NOV) to WM requiring the company to undertake several actions to address odors originating from the company's High Acres Landfill. The NOV contained a series of expectations and requirements, including but not limited to:

- ambient air monitoring at the Dudley/Northside Elementary School campus and in areas surrounding the landfill;
- actions to improve landfill gas collection at the landfill, including installation of horizontal gas collection lines, placement of an intermediate soil cover and geomembrane on several areas of the landfill, and stopping waste placement in those areas until the odor issue is resolved;
- enhanced quarterly surface scans for methane and real time hydrogen sulfide monitoring in locations where WM has access to property and locations nearest to the most impacted neighborhoods; and
- continued operation of the vibration prevention measures installed in January 2018.

Under rigorous DEC oversight, through 2018 to the present time, WM has completed multiple actions to ensure that all reasonable measures are taken to minimize impacts to those living near the landfill. Ambient air monitoring for the presence of hydrogen sulfide (H₂S) started in March 2018, with sampling at the Dudley/Northside school and at the landfill property boundary in all directions from the landfill every 10 minutes. Monitoring results are provided to DEC and local officials and are posted on the Town of Perinton website and are typically below the limits of detection. Infrequent detections of H₂S have not exceeded the associated Ambient Air Quality Standard (6 NYCRR Subpart 257-10). The continuous H₂S monitoring at the landfill perimeter has ended but resumes quarterly during the duration of surface scans and it remains continuous at the school.

WM has installed horizontal gas collection lines in specified areas at the frequency required under new state regulations to improve the efficiency of the landfill gas collection system.

In addition, an engineered soil cover and geomembrane cover systems have been placed and waste placement has ceased in those areas. The first enhanced surface scan for methane was completed in April 2018. These scans are performed quarterly and corrective measures are taken when methane is detected at a concentration that is less than half of what is required under federal regulations. WM also committed to following standard operating procedures to maintain and operate the anti-vibration system.



High Acres Landfill – engineered soil cover and geomembrane cover systems

Waste Management has implemented all the specific measures required by the NOV. These obligations have been incorporated into the revised, DEC-approved, Operations and Maintenance Manual for the facility.

Site Inspections and Complaint Response

DEC maintains active and continuous monitoring and inspections of the landfill to ensure its operations comply with applicable environmental laws and regulations and to allow DEC to quickly respond to potential violations or other concerns.

In April 2018, DEC established a formal and comprehensive response process to address issues and residents' concerns using the 24-hour dedicated odor hotline at (585) 453-2416. This system alerts WM that there is a concern in the neighborhood and allows them the opportunity to examine and address any problems at the facility. The location of the complaint is investigated by Towpath Investigative Services, a third-party odor detection consultant utilized by WM. The complaint system is an effective method for DEC to respond directly to complaints, evaluate the situation, talk directly to residents and address community concerns. DEC uses the information generated to evaluate the effectiveness of required mitigation steps taken by WM, and to determine if further steps are necessary.

Where to Find More Information

Additional information on odor abatement at the High Acres Landfill, including a list of significant abatement measures since the fall 2017 and the DEC's Citizen Odor Log, can be found at the following website:

<https://www.dec.ny.gov/chemical/113037.html>

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Watch for additional Community Updates from DEC.