



Honeygo Rubble Landfill Odor Issues

What You Need to Know

Permittee: Honeygo Run Reclamation Center, Inc., d/b/a/ Republic Services, Inc.

Address: 10710 Philadelphia Rd., Perry Hall/White Marsh, Baltimore County, MD.

The Honeygo Rubble Landfill, located north of Md. Rt. 43 and east of I-95 in White Marsh, Baltimore County, is a commercial landfill for the disposal of construction and demolition debris from building construction and demolition. The landfill is permitted to accept lumber, wood, shingles, metal, carpet, concrete, drywall, plaster and plasterboard, appliances, packaging materials, and related materials commonly used in structures and generated during their construction. It consists of a 77.2 acre landfill on a 116.9 acre site. Since September, 2018, strong sulfur odors have been noted in the vicinity of the landfill.

Cause of the Odors

- The odors being emitted from the landfill at this time are not due to any specific action or operational error at the landfill.
- The cause of the odors is largely hydrogen sulfide (H₂S). It is formed naturally within the landfill when gypsum, the prime ingredient in drywall (“gypsum board”) and plaster, decomposes in a wet, strongly anaerobic (oxygen free) environment in the presence of organic carbon.
- The organic carbon is derived from wood, paper, leaves, and other organic materials that are also disposed of in the landfill, and the water is from precipitation. Decomposition of the organic materials by soil bacteria in the landfill use up the oxygen in the landfill and create the anaerobic environment.
- The excessive rain that occurred during this year is believed to have contributed to the development of the odor problems observed since September. The Baltimore area is already at least ten inches over its average annual rainfall of 43 inches, with two months left in the year.
- The problem was initially noted when leachate was being pumped down from storage tanks at the landfill, in preparation for rain from Hurricane Florence, which at that time had not yet hit the coast. H₂S odors were noted near sewer line manholes and a pump station downstream from the landfill, and Baltimore County officials tracked it back to the landfill.

What is the Maryland Department of the Environment (the “Department”) doing to address the situation?

- When the Department first received a notification of the issue from Baltimore County, a solid waste inspector responded to the site the same day, confirmed odors on- and off-site, and issued a Site Complaint to the operator directing the landfill’s operators to take action to abate the nuisance conditions.
- Air monitoring by the Department had initially indicated a maximum of 0.7 parts per million (ppm) H₂S in ambient air at the landfill, and no more than 0.5 ppm offsite. When untreated leachate was being discharged to the sanitary sewer initially, Baltimore County had measured concentrations in the hundreds of ppm in the sewer line itself, but did not perform measurements outside of the sewer. Since the landfill operator has been treating the leachate with oxidizers, the concentration of H₂S in the sewer has dropped to acceptable levels. Ambient air readings have also declined to below the meter’s detection limit in recent weeks.
- According to the federal Occupational Safety and Health Administration (OSHA), humans can detect odors from H₂S at concentrations of 0.1 to 1.5 ppm, and typically find odors very offensive at 3-5 ppm. The OSHA Permissible Exposure Limit for an 8-hour continuous workday exposure is 10 ppm. Long term exposures can cause eye irritation



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in some people at levels as low as 5 ppm, and conjunctivitis and respiratory tract irritation can occur at exposures of 50-100 ppm, with more severe health effects occurring with prolonged and higher exposures. More data is available from OSHA at <https://www.osha.gov/SLTC/hydrogensulfide/hazards.html>.

- The Department is conducting frequent odor surveys and has not detected unhealthy concentrations of H₂S offsite; however as H₂S can be smelled at very low concentrations, the odors are still creating a nuisance offsite at times.
- Based on citizen complaints, it appears that the problem is most frequently detected offsite in the early morning and evenings when the air is still. The Department is conducting after-hours inspections to try to assess the situation outside of daylight hours, when atmospheric conditions minimize vertical air mixing that would otherwise dilute the smell.
- The most frequent odor reports currently are along the ramp from Md. Rt. 43 to I-95, which is opposite the active landfill cell, but odors have also been reported along Md. Rt. 7 and in other areas.
- The Department is also working with the landfill operator to implement corrective measures as fast as possible, and to try new tactics when it appears they might help.

What is the permittee doing?

- The landfill operator has been responsive to the Department's direction, and has taken numerous steps to reduce the odor on both short- and long-term basis.
- These include improvement to the landfill gas flaring system, improved periodic and final soil cover over the waste, the installation of a cap over completed portions of the landfill (which helps keep rain out and landfill gas in), carbon filters on the leachate tanks, neutralization of the leachate in the tanks, and other activities.

Prospectus

At this time the Department believes that the efforts being put forward by the landfill operator are having a positive effect. The gradual dewatering of the landfill, which is partly weather –dependent, will help reduce H₂S formation long term, and efforts to control the migration of landfill gas will continue to be pursued.

Questions

Questions and reports of odors can be directed by telephone to the Solid Waste Program at (410) 537-3315 on weekdays from 8 am to 5 pm, directed by mail to the Solid Waste Program, Suite 605, Maryland Department of the Environment, 1800 Washington Blvd., Baltimore MD 21230-1719, or sent via email to ed.dexter@maryland.gov.