

Arbor Hills Landfill, Inc.
Ridge Wood Elementary Hydrogen Sulfide (H₂S) Monitoring: 24-hour average concentrations
June 2021

For the June 1 – 30, 2021 monitoring time period, the following is noted:

- 1) Equipment Operation
 - a. SPM Flex functioning and operations were within the manufacturer specified ranges except during maintenance period noted below.
 - b. No malfunctions or fault conditions occurred.
- 2) Data Downloading
 - a. On June 29, communication issues with the site occurred and an emergency site visit was conducted; power was cycled to the cell-modem and connection restored. SPM Flex functioning was affected for approximately 4 minutes; minimal effect on average concentrations.
 - b. No other malfunctions or issues with data downloading were identified.
- 3) Meteorological Conditions
 - a. No unusual meteorological conditions such as strong winds, large storms, or excessive precipitation occurred during the time period.
- 4) Maintenance
 - a. Barr conducted a routine maintenance visit on June 1. Low sample flow detected for one 15-minute time period during site visit; minimal effect on average concentrations.
 - b. Barr completed routine maintenance activities previously planned for July 1 on June 29, coinciding with the emergency site visit.
- 5) Audits
 - a. No audits of the network were conducted during the time period.
- 6) Data – Average Air Concentrations
 - a. Average concentrations are calculated from 10-second readings obtained from the SPM Flex by the data logger.
 - b. The SPM Flex output range is 0.000 to 9.999 parts per million (0 to 9,999 parts per billion, ppb). Therefore, an average air concentration may be derived from a data set that includes one or more zero values.
 - c. A reported average concentration is a rounded value, for example:
 - i. A calculated average concentration of 0.0 to 0.9 ppb is identified as “<1 ppb”
 - ii. A calculated average concentration of 1.6 ppb is rounded to 2 ppb
 - iii. A calculated average concentration of 3.1 ppb is rounded to 3 ppb
- 7) Data Report (24-hour Average Concentrations)
 - a. No notifications required to be sent to Ridge Wood Elementary for elevated H₂S.¹
 - b. All 24-hour average concentrations are low; all < 1 ppb.²

¹ Notifications to be sent to the Ridge Wood Elementary School if a 15-minute average concentration exceeds 750 ppb (0.75 ppm, USEPA Acute Exposure Guideline Value) or a 24-hour average concentration exceeds 72 ppb (0.072 ppm).

² The 24-hour guideline value from the Michigan EGLE is 72 ppb (~100 microgram per cubic meter of air). A 24-hour air concentration that is below the guideline value is interpreted to mean there is no appreciable risk to a person breathing the air. However, a 24-hour air concentration that exceeds the guideline value does not mean that adverse health effects have or will occur as there are safety factors built into the guideline value to be protective of human health. But air concentrations that exceed the guideline value indicate that further review and assessment of the monitored air concentrations is needed.

Please contact the following Arbor Hills Landfill or Barr staff if you have questions about the air monitoring being conducted at the Ridge Wood Elementary School.

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Ridge Wood Elementary Hydrogen Sulfide (H2S) Monitoring

June-2021

Day	24-hr Average H2S Concentration (parts per billion; ppb)	Comment
6/1/21	<1	Low sample flow occurred for one 15-minute time period during routine maintenance; minimal effect on the 24-hour average air concentration.
6/2/21	<1	
6/3/21	<1	
6/4/21	<1	
6/5/21	<1	
6/6/21	<1	
6/7/21	<1	
6/8/21	<1	
6/9/21	<1	
6/10/21	<1	
6/11/21	<1	
6/12/21	<1	
6/13/21	<1	
6/14/21	<1	
6/15/21	<1	
6/16/21	<1	
6/17/21	<1	
6/18/21	<1	
6/19/21	<1	
6/20/21	<1	
6/21/21	<1	
6/22/21	<1	
6/23/21	<1	
6/24/21	<1	
6/25/21	<1	
6/26/21	<1	
6/27/21	<1	
6/28/21	<1	
6/29/21	<1	Barr onsite to check cell-modem functioning; power was cycled to the cell-modem and connections restored. SPM Flex functioning was affected for approximately 4 minutes; minimal effect on average concentration.
6/30/21	<1	