



United States Environmental Protection Agency
Region 7
Enforcement and Compliance Assurance Division

Air Branch

Air Branch Inspection Report
Unannounced Full Compliance Evaluation
Hamm Sanitary Landfill
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Lawrence, Kansas 66044
FRS# 110007364495

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Inspection Date(s):
March 29, 2022

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B TVA and GPS data points (32 pages)
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D Email correspondence for requested records (4 pages)
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and provides a clear indication of the end of this report.**

INSPECTION OVERVIEW

INSPECTION OBJECTIVE

The objectives of the full compliance evaluation (FCE) inspection were to perform surface emission monitoring and to determine the compliance of the facility with the Clean Air Act section 111 New Source Performance Standards (NSPS) regulations as part of the Creating Cleaner Air for Communities National Compliance Initiative (CCAC- NCI). This report documents EPA's activities on site.

Table 1 lists the inspection team members.

Table 1. PROJECT TEAM MEMBERS		
Team Member	Organization	Project Role
Avery Bowers	EPA, Region 7, ECAD	Lead Inspector
Wendi Kessler	Kansas Department of Health and Environment (KDHE) Northeast District, Air Program	Field Team Member

FACILITY CONTACT INFORMATION

Table 2 lists the primary facility contacts.

Table 2. FACILITY CONTACT INFORMATION		
Name, Title	Phone No.	Email Address
Kyle Caton, Regional Operations Manager		Kyle.caton@landfillgroup.com
Chad Davidson, Well Field Technician		
Travis Meyers, Plant Operator		
Kevin Miller, Waste Operations Manager	785-842-2221	Kevin.miller@nrhamm.com
Dan Zimmerman, Director of Operations, Compliance and EHS	704-844-8990	Dan.zimmerman@landfillgroup.com

FACILITY OVERVIEW

Hamm Sanitary Landfill has a Standard Industrial Classification (SIC) code 4953 categorized as refuse system and a North American Industry Classification System (NAICS) code 562212 categorized as solid waste landfill. Prior to the inspection, EPA personnel had not been at the facility within the past five years. The three most recent KDHE on-site compliance monitoring activities include an FCE conducted on December 30, 2020, an FCE conducted on June 28, 2021, and a partial compliance evaluation conducted on December 17, 2021. Hamm Sanitary Landfill's Title V operating permit, issued by KDHE, is subject to the following regulations and standards (**Tables 3 & 4**):

Table 3. APPLICABLE REGULATIONS AND STANDARDS	
Code of Federal Regulation	Standard Name
40 CFR Part 60	Subpart A, General provisions
40 CFR Part 60	Subpart Cc, Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills
40 CFR Part 61	Subpart A, General provisions
40 CFR Part 63	Subpart AAAA, National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
40 CFR Part 61	Subpart M, National emission standards for asbestos
40 CFR Part 62	Subpart OOO, Federal Plan Requirements for Municipal solid waste landfills that commenced construction on or before July 17, 2014, and have not been modified or reconstructed since July 17, 2014

Table 4. APPLICABLE REGULATIONS AND STANDARDS	
Kansas Administrative Regulations	Standard Name
K.A.R. 28-19-647,648	Open burning
K.A.R. 28-19-210	Calculation of actual emission
K.A.R. 28-19-301 (e)	Construction permits and approvals
K.A.R. 28-19-650	Opacity limits
K.A.R. 28-19-720	New source performance standards
K.A.R. 28-19-735	National emission standards for hazardous air pollutants
K.A.R. 28-19-750	Hazardous air pollutants; maximum achievable control technology

FACILITY OPERATIONS SUMMARY

Hamm Sanitary Landfill has been owned and operated by N.R. Hamm Quarry, LLC since its first permit was issued in March 1976. The facility began receiving waste on its 360 acres in 1981. There are 18 employees that help run and manage all site activities. The landfill runs Monday-Friday from 7:30 am until 4:30 pm and on Saturdays from 7:30 am until 1:00 pm. The gas system in place is a combination of lateral and header piping. Collected gas is routed to a mini-flare for combustion.¹ Prior to the installation of the mini-flare, the gas was routed to a thermal oxidizer for treatment. In 2019 the facility installed its third leachate pond to help increase proper landfill gas management. (**Figure 1**).

¹ A “mini-flare” is a dimensionally smaller unit of the average flare unit but functions in the same capacity



Figure 1. Three leachate ponds. Newly installed pond to the left

FIELD ACTIVITIES SUMMARY

On March 29, 2022, at 9:50 am Mrs. Kessler and I met up at a designated area to calibrate the Toxic Vapor Analyzer (TVA) in preparation for the surface emission monitoring. At 10:48 am Ms. Kessler and I arrived at the facility and were directed to Kevin Miller. I introduced myself and Ms. Kessler, presented my credentials, and provided my business card to Mr. Miller. I explained the purpose of the visit (described above in **Inspection Objective**). I explained that after asking for some general business information, I would observe work practices, process units, emission units, control equipment and review associated records demonstrating compliance with the standard, permit, regulation.

We discussed operations at the landfill and then drove to the gas plant area. There, Ms. Kessler and I spoke with Mr. Caton, Mr. Davidson, and Mr. Meyers about the gas collection system, flare, and areas of concern that had been noted in the facility's semi-annual and annual compliance reports. Mr. Miller drove us to see the third leachate pond that had been recently added. Upon our return from the leachate ponds, Ms. Kessler and I retrieved the TVA and Mr. Meyers drove us to the landfill to commence the surface emission monitoring. I used the TVA while Ms. Kessler took photos (Appendix A) and notes. Appendix B contains all of the TVA and GPS data points collected while doing the surface monitoring. Data was stored every two

seconds. Ms. Kessler and I walked around the landfill and noted 7 areas where methane emissions exceeded the 500 parts per million (ppm) threshold (Table 5). We did not collect TVA readings around active cell 112 because there were trucks operating and dumping waste. Around 1:58 pm, while we were conducting the surface emission monitoring, the flare began operating and Mr. Meyers noted that a horizontal gas line well was cracked and that the system went down.² He said that may contribute to the higher methane values shown on the TVA and Ms. Kessler made note.



Figure 2. Areas surveyed with TVA and respective methane values in parts per million.

Once we completed the surface monitoring at 3:20pm, we went back to the office to meet Mr. Miller to review records, ask more questions and conduct the closing conference. Mr. Caton joined shortly after to provide more information. The records and files reviewed are noted in the list below. I informed Mr. Miller and Mr. Caton that they had an opportunity to claim anything as confidential business information (CBI), but they declined. I went over the preliminary findings of the 7 hits we noted for the methane values exceeding 500 ppm. Mr. Miller signed all the documents stating he wasn't claiming CBI, notice of preliminary findings, and receipt of documents (**Appendix C**). I requested further records via email on April 7, 2022. I received responses on April 8, 2022, and April 19, 2022. The records requested electronically are noted in the second list below and the email correspondence is listed as **Appendix D**.

² Mr. Meyers did not specify which system went down and I didn't not ask additional clarifying questions.

RECORDS REVIEWED AT FACILITY

- 1) Log of special waste receipts
- 2) Waste inspection records selected at random
- 3) Tonnage reports for 2020 and 2021
- 4) Employee training records

RECORDS REQUESTED ELECONTRICALLY

- 1) The gas monitoring plan also known as the Gas Collection and Control Design Plan (done by an outside contractor named Blackstone in 2015)
- 2) Annual leachate sampling and analysis reports for the last 2 years
- 3) The last SEM report. The SEM was done January 27-31, 2022. I asked that the facility include all GPS data if it was logged and the values if they were logged.
- 4) The facility's last 6 months (daily or monthly) flow data for gas collection system. I asked for the he data to include a total from the gas collection systems and the flows to the generation station
- 5) Data on the wells that are operating at the Higher Operating Value (previously was 131 degrees (°F) but had been raised to 140 (°F) degrees under subpart OOO). If wells were operating at the HOV, I asked for the root cause analysis of why the wells are operating in that manner
- 6) The Startup, Shutdown, and Malfunction plan (SSM Plan) required by 40 CFR Part 63, Subpart AAAA
- 7) The Operation and Maintenance plan required by 40 CFR Part 63, Subpart AAAA if a shutdown occurred
- 8) Performance test done for the mini-flare that was recently installed,
- 9) The visual monitoring log of the leachate flow at the lagoon pipe outfall or manhole (required by the Solid Waste regulations at 40 CFR Part 258, Subpart C -Operating Criteria)

All records requested electronically were received and are under review by the EPA.

Measurement and/or Sampling Activities

The inspection team conducted field measurements via Method 21, as required by 40 CFR Part 62, Subpart OOO. Figure 2 shows the areas on the landfill that were measured throughout the inspection. **Table 5** summarizes field measurements that were above the 500 ppm threshold for methane.

All environmental measurement activities were performed in accordance with the EPA Region 7 quality system. The EPA team used the same TVA for all measurements noted in **Table 5**.

Table 5 summarizes field measurement activities; additional information can be found in the project file.

Table 5. FIELD MEASUREMENT ACTIVITIES			
Location Identifier	Date(s) and Time	Method and/or Procedure ¹ , and Equipment	Measurer Name
Flag 1/ Well 13R	3/29/22 12:36 pm	Method: EPA Method 21: Methane Emission; 1,054 ppm Region 7 Procedure: <i>Toxic Vapor Analyzer (TVA)</i> Equipment: <u>Thermo Fisher Scientific TVA-2020 (TVA-2020) serial number 202019034113</u>	Avery Bowers
Flag 2/ Well 1GW150	3/29/22 1:10 pm	Method: EPA Method 21: Methane Emission; 664 ppm	Avery Bowers
Flag 3/ Well 1GW 005R	3/29/22 1:29 pm	Method: EPA Method 21: Methane Emission; 4,000-1.7% ppm	Avery Bowers
Flag 4/ Well 1GW 01	3/29/22 1:33 pm	Method: EPA Method 21: Methane Emission; 592 ppm	Avery Bowers
Flag 5/ Well GW 008R	3/29/22 1:47 pm	Method: EPA Method 21: Methane Emission; 1,287 ppm	Avery Bowers
Flag 6/ Well GW 0098R	3/29/22 1:58 pm	Method: EPA Method 21: Methane Emission; 1,001 ppm. (system was down)	Avery Bowers
Flag 7/ Well 1GW 011R	3/29/22 2:15 pm	Method: EPA Method 21: Methane Emission; 1,348 ppm (system was down)	Avery Bowers
¹ The current version of each procedure, at the time of the investigation, was followed.			

INVESTIGATION OBSERVATIONS AND FINDINGS

Ambient weather, site conditions and activities were documented in field records. All photographs are attached as **Appendix A**. The inspection team made the following observations

during the inspection. I discussed all observations with facility representatives during the closeout meeting unless otherwise noted in the observation description.

Although I made several notable observations (below), none of my observations are listed as potential findings of noncompliance in this report. These observations are not final compliance determinations. EPA Region 7 Air Branch case review team will make the final compliance determinations based on its review of this report and other technical, regulatory, and facility information.

The facility is required by 40 CFR § 62.16716(d) to perform surface emission monitoring on the landfill. Surface emission monitoring did not occur on all areas of the landfill. There were areas labeled on the facility's semi-annual compliance report titled "3rd quarter 2021 monitoring route" that did not have methane value readings. I asked Mr. Caton why part of the areas on cell 3, 4, and 5, were not monitored and he explained that the slope was too steep, and people were not able to drive or walk on those areas. **Appendix E** contains the "3rd quarter 2021 monitoring route" map.

The facility is required by 40 CFR § 62.16716(c) to operate the wellheads below 131 °F however, the facility is permitted to operate 8 wellheads above the 131 °F (**Appendix F**).³ I asked Mr. Caton about the operating temperatures of the 8 wellheads that were permitted to operate above the 131°F threshold. He stated that well GW 45 had been decommissioned and the other 7 wellheads were operating at or below the permitted temperature as shown in the facility's 2021 semi-annual report.⁴

The landfill is required by 40 CFR § 62.16716(a) to ensure that all wells are operating correctly. The facility had seven gas wells that lost vacuum because of damaged or crushed lateral pipes beneath the waste mass (**Appendix G**). I asked Mr. Caton about the status of the seven gas well that had lost vacuum and were out of compliance. The facility's 2021 semi-annual report noted that these gas wells would be repaired and in compliance by January 2022. Mr. Caton informed me that the wells were repaired around Christmas time. I did not obtain proof of the wells that had been repaired.

³ I do not know the total number of operable wells at the facility.

⁴ I did not ask about the operating temperature of other wellheads that may be operating on the property. They only note wellheads with operating temperatures that are different than the regulatory requirement on compliance reports.