



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

DATE: See date of Section Chief signature.

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Prarie View Recycling and Disposal, Wyatt, IN

FROM: Emma Leeds, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Chief
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Prairie View Recycling and Disposal

Facility Location: 15505 Shively Rd, Wyatt, IN 46595

Date of Inspection: July 20th, 2021

EPA Inspector(s):

1. Emma Leeds, Environmental Engineer
2. Alexandra Letuchy, Environmental Engineer
3. Karina Kuc, Environmental Scientist
4. Vicky Mei, Environmental Engineer

Other Attendees:

1. Chak Chakraborty - Earthmovers Site Engineer, Waste Management
2. Randy Russell - Indiana Gas Operations Manager, Waste Management
3. Clayton Franklin - Area Gas Operations Supervisor, Waste Management
4. Jim Anderson – District Manager, Waste Management
5. Rick Reynolds – Compliance and Environment Manager, Indiana Department of Environmental Management (IDEM)

Contact Email Address: cchakrab@wm.com

Purpose of Inspection: To determine compliance with New Source Performance Standards (NSPS) Subpart WWW and other relevant regulations, and to perform comparative Method 21 surface emissions monitoring (SEM)

Facility Type: Municipal solid waste landfill

Regulations Central to Inspection: 40 C.F.R. Part 60 Subpart WWW - New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills; 40 C.F.R. Part 62 Subpart OOO – Federal Plan Requirements for Municipal Solid Waste Landfills; 40 C.F.R. Part 63 Subpart AAAA – National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills

Arrival Time: 9:00 AM ET

Departure Time: 5:00 PM ET

Inspection Type:

- Unannounced Inspection
- Announced Inspection

OPENING CONFERENCE

- Presented Credentials
- Stated authority and purpose of inspection
- Provided Small Business Resource Information Sheet
- Small Business Resource Information Sheet not provided. Reason: Not a small business
- Provided CBI warning to facility

The following information was obtained verbally from Prairie View personnel unless otherwise noted.

Process Description:

The Prairie View Recycling and Disposal Landfill (“Prairie View”) was first permitted for 158 total acres in 1994 and began receiving trash in 1996. Currently 135 acres are developed, and closure is estimated for 2044 with the possibility of expansion. The landfill is divided into 8 cells, with about half of the landfill under intermediate cover, a quarter under closed cover or pending closure certification, and a quarter either active or not yet developed. The landfill is currently split into a north hill and a south hill, with the closed areas in the northwest and southeast corners.

Daily cover consists of soil, intermediate cover consists of one foot of soil, and final cover will consist of clay cap on the southeast corner of the landfill in Cell 1 and geomembrane on the remainder of the landfill. Final cover had only been placed in Cell 1 at the time of the inspection.

The gas collection and control system consists of 129 active wells that predominantly route gas to two on-site gas-to-energy facilities with four Caterpillar 3516 engines each. Each engine can process up to 300 standard cubic feet per minute (scfm) of landfill gas and operates at 1000 ° F. Prairie View also has an open flare for when the engines are down or have reached full capacity.

Leachate is controlled using nine sump pumps. There are also two manholes on-site in Cell 1 which were installed prior to the Resource Conservation and Recovery Act Subtitle D. Approximately 80% of leachate drains into a tank that is hauled to the Waste Management Earthmovers facility for treatment, and the remaining 20% is sent to a nearby treatment facility.

The facility accepts approximately 1,700 tons of waste per day, around 85% of which is typically municipal solid waste. Asbestos is accepted at the facility and an asbestos management plan is followed to determine placement. Refrigerant-containing materials are not accepted.

Staff Interview:

At the time of the inspection, waste had not yet been placed in Cells 8A and 8B, and Cell 5B was actively being filled. Cells 8A and 8B are currently used to provide soil for daily cover at the landfill. Mr. Russell shared that Prairie View is planning to add horizontal wells to Cell 5B this year.

EPA inspectors asked about what areas are monitored during SEM events. Prairie View personnel claimed that every arrow drawn in the surface scan route drawing is a spot monitored during surface emissions monitoring (SEM). Mr. Russell stated that the SEM includes monitoring of areas with vegetative distress and takes a full day to complete. Prairie View personnel stated that they have not been monitoring at penetrations, including gas wells, but that they plan to begin next quarter, prompted by the changes in landfill regulations, which include the Federal Plan Requirements in 40 C.F.R. Part 62 Subpart OOO, and the NESHAP Subpart AAAA updates. They also plan to begin using an SEM5000 TVA for monitoring next quarter.

Approximately 90% of the waste accepted by the landfill is manifested. Random loads are inspected for materials that are not accepted by the landfill, including fridges. Prairie View maintains a load rejection list.

Prairie View personnel claimed that the landfill has not received any odor complaints and hasn't had any gas migration issues detected by the 14 boundary gas probes that surround the facility.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

Four EPA inspectors conducted SEM at Prairie View for approximately 3.5 total hours, traversing the south hill in the morning and early afternoon (Cells 1, 2, and the southern portion of Cell 3), and the north hill later in the afternoon (Cell 4 and the northern portion of Cell 3).

Inspectors used two TVA2020 Toxic Vapor Analyzers and verified each TVA reading that exceeded 500 ppm methane.

While performing SEM on the south hill during the first half of the day, EPA inspectors observed several erosion gullies approximately half a foot deep that spanned the length of the north slope, as shown in IMG-7080. Most of the west slope of the south hill was not yet covered in vegetation and was covered with small erosion gullies, as seen in IMG-7082 and IMG-0085. The southern and eastern slopes of the south hill have been under final cover with a clay cap since 2000. Within this final cap area, inspectors observed a large pooling area (IMG_0087), various areas of distressed vegetation (IMG-0089), a leachate outcropping (IMG-0090), and three exceedances of 500 ppm methane (EL-1, EL-2, EL-12).

Inspectors spent the second half of the SEM on the north hill, specifically on the east slope in Cells 4 and the northern portion of Cell 3. SEM was not performed in Cells 6B, 6C, 7B, and 7C due to time constraints. Inspectors observed many large erosion gullies and distressed vegetation patches on the east slope of the north hill, some of which containing exposed trash, shown in IMG-7087, IMG-7088, IMG-7089, IMG-7090, and IMG-0093. The east slope was lined with several layers of stormwater berms in order to prevent stormwater washouts along the surface of the slope. Prairie View personnel explained that the soil used to create the berms was taken from the areas directly north of the berms, causing the cover in these areas to be incomplete and thinner, shown in IMG-0091 of Exceedance EL-17 in this area.

Various marker and header pipes throughout the landfill appeared to have penetrated the landfill cover and were venting landfill gas to the atmosphere, including at exceedances EL-1 and EL-20 and follow-up point K-11.

Photos and/or Videos: were taken during the inspection. See Appendix A.

Field Measurements: were taken during this inspection. See Appendix B.

RECORDS REVIEW

EPA inspectors were provided with one map of the active, closed, and future development areas of Prairie View, dated 6/2021.

CLOSING CONFERENCE

Provided U.S. EPA point of contact to the facility

Requested documents:

EPA inspectors requested the following documents via email on August 3rd, 2021:

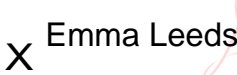
- Cover integrity inspections for 2016 – 2021, as required by 40 C.F.R. § 60.755(c)(5)
- Most recent engines and flare performance tests, if performed or if required by 40 C.F.R. § 60.18
- Gas well data collected in accordance with 40 C.F.R. § 60.755(c)(5) in spreadsheet format for 2016 – 2021

- Gas well installation dates for 2016 – 2021, as required by 40 C.F.R. § 60.758(d)(1)
- GCCS plan (most recent version) and as-built drawing, as required by 40 C.F.R. § 60.752(b)(2)(i)
- SEM reports for 2016 – 2021, following requirements in 40 C.F.R. § 60.755(c)
- Semi-annual reports for 2016 – 2021, as required by 40 C.F.R. § 63.1980
- Submitted applications for all active air permits, such as construction permits and Clean Air Act Permitting Program permits
- Most recent technical drawing of your surface scan route, as required by 40 C.F.R. § 63.753(d)
- Installation dates and locations for stormwater berms for 2016 – 2021, including anything notes in the Design Plan required by 40 C.F.R. § 60.752(b)(2)(i) or the cover integrity reports required by 40 C.F.R. § 60.755(c)(5)
- Records involving leachate outcropping locations and repairs for 2016 – 2021. For example, anything noted in cover integrity reports required by 40 C.F.R. § 60.755(c)(5)
- Any asbestos management plan or map of asbestos placement, such as documentation required in 40 C.F.R. § 60.759(3)(i)
- Down-time logs for engines and flares for 2016 – 2021, as required by 40 C.F.R. § 63.753(f)(3)


Concerns: EPA inspectors noted that there were approximately 30 exceedances of 500 ppm methane found during the SEM, and that the timeline to start re-monitoring these locations could begin when Prairie View received an email from the EPA with the exceedance coordinates. There were also several locations that EPA did not count as exceedances but considered potential concerns for methane leaks. Prairie View agreed to monitor these locations when re-monitoring the exceedances, with the regulatory timeline for re-monitoring beginning on the initial day Prairie View found any exceedances.

EPA inspectors also noted concerns about the leachate outcropping found in the final cover on the south hill.

SIGNATURES


 Digitally signed by Emma Leeds
 Date: 2021.09.10 10:09:30 -05'00'

 Emma Leeds
 Report Author


 Digitally signed by NATHAN FRANK
 Date: 2021.09.15 15:26:38 -05'00'

 Nathan Frank
 Section Chief

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APPENDICES AND ATTACHMENTS

1. Appendix A: Digital Image Log
2. Appendix B: Field Measurement Data

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APPENDIX A: DIGITAL IMAGE LOG

<p>1. Inspector Name: Karina Kuc (Images 1 – 13) and Emma Leeds (14 – 22)</p>	<p>2. Archival Record Location: https://usepa.sharepoint.com/:f:/r/sites/R5_Work/r5erc/ecad/AECAB%20Library/Enf_PrairieView_IN_21/Enf_PrairieView_IN_21_Insp/Digital%20Image%20Log?csf=1&web=1&e=5Qlcse</p>
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Image Number	File Name	Date and Time (EST)	Latitude and Longitude	Description of Image
1	IMG_7079	7/20/21, 11:39 AM		Exceedance K-1 at GW-43B
2	IMG_7080	7/20/21, 11:51 AM		Exceedance K-4 at erosion gully on north slope of south hill, 400 ft E of solidification plant
3	IMG_7081	7/20/21, 12:08 PM		Exceedance K-5 at GW-28TR
4	IMG_7082	7/20/21, 12:17 PM		Exceedance K-6 at GW-23
5	IMG_7084	7/20/21, 3:32 PM		Exceedance K-10 from old vacuum line at GW-44
6	IMG_7085	7/20/21, 3:48 PM		Follow-up point K-11 at top of marker pipe
7	IMG_7086	7/20/21, 4:00 PM		Exceedance K-12 at erosion gully on north hill
8	IMG_7087	7/20/21, 4:00 PM		Exceedance K-12 at erosion gully on north hill
9	IMG_7088	7/20/21, 4:06 PM		Stormwater gully with exposed trash on east slope of north hill
10	IMG_7089	7/20/21, 4:06 PM		Stormwater gully with exposed trash on east slope of north hill
11	IMG_7090	7/20/21, 4:06 PM		Stormwater gully with exposed trash on east slope of north hill
12	IMG_7091	7/20/21, 4:10 PM		Exceedance K-13 at GW-136

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13	IMG_7092	7/20/21, 4:16 PM	Exceedance K-14 at GW-142
14	IMG_0085	7/20/21, 12:29 AM	Exceedance EL-7: erosion on west slope of south hill between cells 5B and 5A, 20 ft NW of GW-15
15	IMG_0086	7/20/21, 12:32 AM	Exceedance EL-8 50 ft downslope SW of GW-15
16	IMG_0087	7/20/21, 12:57 PM	Pooling upslope of GW-10 in final cover area
17	IMG_0088	7/20/21, 3:19 PM	Leachate outcropping on eastern slope of north hill.
18	IMG_0089	7/20/21, 3:20 PM	Exceedance EL-14 20 ft west of GW-49
19	IMG_0090	7/20/21, 3:38 PM	Exceedance EL-15 50 ft NNE of GW-108
20	IMG_0091	7/20/21, 3:41 PM	Light cover at exceedance EL-17, 50 ft SSE of GW-108
21	IMG_0092	7/20/21, 4:05 PM	Exceedance EL-19 at GW-135
22	IMG_0093	7/20/21, 4:07 PM	Stormwater gully with exposed trash on east slope of north hill

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APPENDIX B: FIELD MEASUREMENT DATA

Calibration Data and Instrument Information

TVA A56584 was used by Emma Leeds from approximately 11:00 AM – 1:30 PM, and then by Vicky Mei from approximately 3:00 PM – 4:30 PM.
TVA A56575 was used by Sasha Letuchy from approximately 11:00 AM – 12:00 PM and then again from approximately 3:00 PM – 4:30 PM. Karina Kuc used TVA 56575 from approximately 12:00 PM – 1:30 PM.

Calibration gas expiration data

Calibration Gas	Lot Number	Expiration Date
Zero grade	1486172	May 2026
500 ppm	304-402110297-1	May 11, 2025
1,960 ppm	304-402110299-1	May 11, 2025
10,000 ppm	304-402110298-1	May 11, 2025

TVA calibration beginning at 8:55 AM

TVA	Reading for 500 ppm	Reading for 1,960 ppm	Reading for 10,000 ppm
A56575	463	1,915	9,910
A56584	498	1,885	9,954

TVA response times using 500 ppm calibration gas beginning at 8:55 AM

TVA	Response time (s)
A56575	4.43
A56584	4.08

Bump check with 500 ppm methane calibration gas at 4:45 PM

TVA	Reading (ppm)
A56575	500
A56584	492

Background Concentrations

TVA	Downwind (ppm)	Upwind (ppm)
A56575	-1.1	-0.9
A56584	-8.7	-8.2

The downwind reading was taken near the eastern border of the landfill at 41.50329, -86.16989 at 4:30 PM. The upwind reading was taken near the western border of the landfill at 41.50203, -86.17541 at 4:35 PM.

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Surface Emissions Monitoring Data

Exceedance measurements from US EPA SEM survey

Exceedance ID	Latitude, Longitude	Description	Reading 1	Reading 2
EL1	41.497084, -86.167078	Header pipes 10 ft south of Manhole 1	842	779
EL2	41.498579, -86.16756	GW-30	1.40%	6600
EL3	41.499695, -86.167876	GW-84	799	701
EL4	41.498793, -86.168848	GW 32TR	5200	888
EL5	41.498822, -86.168842	Erosion 15 ft north of GW-32TR	700	1300
EL6	41.498884, -86.169962	Exposed trash on west slope of south hill	2000	1700
EL7	41.49738, -86.170845	Erosion on west slope of south hill between cells 5B and 5A, 20 ft NW of GW-15	1200	1000
EL8	41.497257, -86.17092	50 ft SW downslope of GW-15	668	700
EL9	41.496907, -86.171015	20 ft SW downslope of GW-117	590	600
EL10	41.496208, -86.170981	Erosion 200 ft SW downslope of GW-13	800	600
EL12	41.496148, -86.167516	25 ft NW upslope of GW-3, final cover dead vegetation	1000	2000
EL14	41.502804, -86.170546	20 ft W upslope of GW-49	1500	1400
EL15	41.501177, -86.170656	50 ft NNE of GW-108	610	1200
EL16	41.501087, -86.17069	GW-108	8000	2300
EL17	41.500937, -86.170655	50 ft SSE of GW-108	700	2000
EL18	41.500066, -86.169854	GW-38, also elevated readings 10ft W of GW-108	635	1800
EL19	41.500704, -86.171404	GW-135	5040	1500
EL20	41.501481, -86.171647	Marker pipe, also elevated readings 10 ft north	995	700
K1	41.499275, -86.168718	GW-43B	1%	2.10%
K4	41.4992, -86.169392	N hill 400 ft E of solidification plant	617	4.90%
K5	41.498543, -86.169803	GW-28TR	1900	1200
K6	41.497854, -86.170283	GW-23	1.70%	3000
K8	41.496657, -86.170724	GW-13	2000	1300
K9	41.495957, -86.17064	GW-9TR	1%	1.03%
K10	41.501337, -86.170867	Old vacuum line at GW-44	1200	700
K12	41.500507, -86.171028	Erosion gully on N hill	2200	1200
K13	41.501216, -86.17156	GW-136	780	888
K14	41.501437, -86.171966	GW-142	1500	2.80%

Follow-up locations from US EPA SEM survey

ID	Latitude, Longitude	Location Description
EL-11	41.495517, -86.169157	GW-6
K-7	41.497024, -86.170959	GW-117
K-11	41.50031, -86.170337	Top of marker pipe

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Prairie View personnel confirmed that they would re-monitor the above follow-up locations and correct any exceedances found as needed.

Map of GPS Path, Exceedances, and Follow-up Points



The purple path was taken by Emma Leeds and Vicky Mei with TVA A56584. The yellow path was taken by Sasha Letuchy and Karina Kuc with TVA A56575. Unlabeled red arrows indicate locations with TVA readings that exceeded 500 ppm methane, and three additional follow-up points.