



REGION 3

PHILADELPHIA, PA 19103

Report Title: Clean Air Act Inspection of GROWS Landfill
Inspection Date(s): 03/20/2024 - 03/21/2024
Regulatory Program(s): SIP, NSPS, MACT

Company Name: Waste Management
Facility Name: GROWS Landfill
Facility Location: 1000 New Ford Mill Rd
Morrisville, PA 19067

Latitude: 40.159344 **Longitude:** -74.776695
County/Parish: Bucks County

AFS/ICIS-Air Number: PA000252449
Permit Number: 09-00007
NAICS Code: 562212 **SIC:** 4953
DSB ID #: ECAD-53

Facility Representatives*:

Point of Contact

Chris Bolton, Operations Manager

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*Additional facility representatives identified in report body and/or on attached sign in sheet

EPA Inspectors*:

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State/Local Inspectors:

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EPA Lead Inspector

Signature

Alex Everhart

Date

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Supervisor

Signature

Kristen Hall

Date

Table of Contents

I. Introduction	4
A. Summary of the Facility.....	4
B. Inspection Opening Conference.....	5
II. Site Activity/Process Description	5
III. Observations	8
IV. Records Review	9
V. Closing Conference	10
VI. List of Attachments	12

I. Introduction

The United States Environmental Protection Agency (EPA) conducted a Clean Air Act (CAA) inspection at Geological Reclamation Operations and Waste Systems Landfill (GROWS or Facility) to verify compliance with applicable State and Federal regulations. The Pennsylvania Department of Environmental Protection (PADEP) was notified of the inspection on March 4, 2024, via email. On March 19, 2024, EPA notified the Facility of the planned inspection via phone and email. EPA emailed a list of records for review to Chris Bolton, Operations Manager, prior to the inspection (see Attachment 1). These records are listed in the Records Review section of the report.

The inspection included an evaluation of the Facility's processes and its compliance with the CAA. All information included in this report is the result of statements by the Facility representatives, materials shown to the inspectors by the Facility representatives, and/or documents provided by the Facility representatives to the inspectors at the time of, or subsequent to, the inspection. In addition, information gathered prior to the inspection from a review of EPA and State records may be included in Section A. Summary of the Facility.

A. Summary of the Facility

The Facility is located at 1000 New Ford Mill Rd. Morrisville, PA 19067 and is privately owned and operated by Waste Management. The Facility consists of two separate discreet disposal areas, GROWS (Old GROWS) and GROWS North. Both areas have an active Gas Collection and Control System (GCCS) connected to a blower that pulls a vacuum on the landfills to transport the landfill Gas (LFG).

The Facility received its most recent Title V operating permit (09-00007) from PADEP on November 22, 2020.

The landfill is categorized as a major source of volatile organic compounds (VOC) emissions in a marginal ozone nonattainment area (Bucks County) that is specially regulated in which the nonattainment New Source Review trigger values for VOCs and nitrogen oxides (NOx) increases are similar to that of a severe nonattainment area. The Facility is subject to, or potentially subject to the following federal regulations:

- 40 CFR Part 63: Subpart AAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
- 40 CFR Part 60: Subpart Cf – Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills
- 40 CFR 60: Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
- 40 CFR 61: Subpart M – National Emission Standard 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

- 40 CFR Part 60: Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification on or After May 30, 1991, but Before July 18, 2014
- 40 CFR Part 60: Subpart XXX – Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification after July 11, 2014
- 40 CFR Part 63: Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

B. Inspection Opening Conference

At 09:15 AM on March 20, 2024, EPA inspectors arrived at the Facility for a CAA Inspection and conducted a brief opening conference. Waste Management GROWS was represented by Chris Bolton, Operations Manager; Brad McGoldrick, District Manager; and Glen Schultz, Area Director. Also, Bill Laufer, Air Quality Inspector, PADEP was present. EPA inspectors, Alex Everhart and Paul Arnold, EPA observer Steve Ott presented their credentials and identification and explained the purpose of the visit was to conduct a CAA inspection to determine compliance with their permit and any applicable regulations. Additionally, EPA informed the facility representatives of their right to claim any confidential business information (CBI). At that time, Mr. Bolton did not claim any photos or documentation as CBI.

EPA Inspectors explained to the Facility that the inspection was part of a National Enforcement and Compliance Initiative (NECI) and that the inspection would include an opening meeting, a facility walkthrough, and a records review. The Facility was also informed by EPA inspectors that during the walkthrough, photographs would be taken, and that surface emission monitoring (SEM) would be performed using either an Inficon IRwin Methane Leak Detector or a Toxic Vapor Analyzer TVA2020. EPA informed the facility that immediately following the opening conference EPA inspectors would be performing SEM at the two landfills listed in the GROWS Title V permit. All SEM equipment was calibrated the morning of March 20, 2024, prior to arriving onsite. Records of the calibrations are maintained by EPA.

The opening conference concluded at 09:25 AM.

II. Site Activity/Process Description

Day 2 March 21, 2024

On Day 2 (3/21/24) of the inspection at 9:00 AM EPA and PADEP inspectors met with Chis Bolton to discuss the Facility process and continue the inspection. GROWS is a Facility with two closed landfills that is privately owned and operated by Waste Management. GROWS consists of two separate disposal areas, Old GROWS and GROWS North, operating under one Title V air permit. The normal hours of operation are from 7:00 AM to 5:00 PM Mondays to Fridays. There are five (5) employees that

cover Old GROWS as well as GROWS North and Tullytown Landfill. Old GROWS was opened in the 1960's and was privately owned by a family. In the 1980's Waste Management purchased the landfill and surrounding property. Waste Management currently owns a complex of approximately 6,000 acres which has four separate landfills; Old GROWS, GROWS North, Tulleytown, and Fairless. The following table is a summary of the four Landfills.

Landfill	Approximate Size	Dates Open	Year Closed	Title V Air Permit No.
Old GROWS	310 acres	1960's	2010	09-00007
GROWS North	117 acres	2008	2018	09-00007
Tulleytown	300 acres	1990's	2017	09-00024
Fairless	120 acres	2016	N/A	09-00210

Mr. Bolton stated that the GROWS Title V permit consist of 5 sources; Old GROWS Landfill, Grows North Landfill, Emergency Flare C03, Emergency Flare C05, and Emergency Flare C06. He stated all three Emergency Flares have a flow rating of 5000 SCFM.

Old GROWS Landfill:

Mr. Bolton stated that there are portions of the Old GROWS Landfill that were constructed without a High Density Polyethylene (HDPE) liner system as they were constructed prior to Subtitle D regulations. All areas constructed or closed at Old GROWS after promulgation of Subtitle D regulations were constructed in accordance with the requirements at that time. Mr. Bolton stated that there are approximately 34 million tons of waste in place at the Old GROWS Landfill. Mr. Bolton stated that Old GROWS produces approximately 1,000,000 gallons of leachate per month. Leachate from the Old GROWS Landfill is pumped through a force main directly to the Fairless Wastewater Treatment Plant (WWTP) where it is treated and ultimately discharged to the Delaware River.

The Old GROWS Landfill has and active GCCS with 296 landfill gas collection wells. Mr. Bolton stated that approximately 10% of the wells are horizontal collectors and 36 of the wells are on risers for the leachate system. He stated that 65 wells have pumps installed in them for dewatering the wells. Approximately 50,000 gallons of liquid is removed on a monthly basis and shipped to DELCORA WWTP and/or the Passaic Valley treatment facility. He stated the liquids are sampled once per permit cycle or as needed by the wastewater treatment plant for metals and VOCs. Mr. Bolton stated that the Old GROWS Landfill produces approximately 2100 standard cubic feet per minute (SCFM) of landfill gas. On the day of inspection, the LFG composition was 36% methane and 4% oxygen. He stated that historically the LFG was used at the Exelon Fairless facility in addition to being burned at the flares; however, the Exelon Fairless facility ceased operation in May 2020 so currently all of the LFG is burned via flares. He stated that Waste Management is currently constructing a Renewable Natural Gas (RNG) plant to utilize the LFG. Mr. Bolton stated that Source C03 is the backup emergency flare for the Old GROWS Landfill. He stated that the emergency flare only runs a few hours per month during times of monthly maintenance on the primary flare.

Mr. Bolton stated that they utilize a third-party contractor, Carlson Environmental Consultants (CEC), to perform the well field monitoring at the Old GROWS landfill. In addition to the well field monitoring, CEC also performs the quarterly SEM. Mr. Bolton stated that there are approximately 30 wells at the Old GROWS landfill that are approved to operate at a higher operating value (HOV) temperature than allowed in the regulations (145°F). One set of wells was approved in 2006 and another set was approved in 2015. He stated that numerous wells operate under an alternative operating plan (AOP) that was submitted to PADEP. EPA inspectors asked for copies of all HOV's and AOP's along with approvals from PADEP for the Old GROWS Landfill and Mr. Bolton stated that he would gather the documents and submit them to EPA. He stated that LFG wells were last installed at the Old GROWS Landfill in January 2022 and the next modification to the GCCS is planned for April of 2024. He stated that approximately 20 wells will be replaced.

GROWS North:

Mr. Bolton stated that the entire GROWS North Landfill is a completely HDPE lined landfill. He stated that there are approximately 14 million tons of waste in place at the GROWS North Landfill and that GROWS North produces approximately 400,000 gallons of leachate per month. GROWS North has one 1.6-million-gallon leachate storage tank and that approximately half of the leachate from GROWS North is pumped directly through a forced main to the Fairless WWTP and the other half goes to the storage tank and is then pumped directly through a forced main to the Fairless wastewater treatment plant.

GROWS North has 290 LFG extraction wells and approximately 12 of the wells are horizontal collectors and 10 to 15 of the wells are connected to risers on leachate system. Mr. Bolton stated that 50 LFG wells have pumps installed for dewatering the wells and approximately 50,000 gallons of liquid is removed on a monthly basis and shipped to DELCORA WWTP and/or the Passaic Valley treatment facility. He stated that typically the landfill produces approximately 1600 CFM of methane. On the day of inspection, the LFG composition was 49% methane and 1% oxygen. He stated that historically the LFG was used at the Exelon Fairless facility in addition to being burned at the flares; however, the Exelon Fairless facility ceased operation in May 2020 so currently all of the LFG is burned via flares. As mentioned previously, Waste Management is constructing a RNG plant to utilize the LFG. Mr. Bolton stated that Source C05 is the primary backup emergency flare for the GROWS North Landfill and that's C06 serves as a backup for C05. He stated that the emergency flare C05 only runs a few hours a month during times of monthly maintenance on the primary flare and that C06 is only operated for testing purposes. Mr. Bolton stated that they utilize a contractor, CEC, to perform the well field monitoring at the GROWS North landfill. In addition to the well field monitoring, CEC also performs all quarterly SEM and follow up monitoring. Mr. Bolton stated that there are five (5) approved HOVs for temperature for wells at the GROWS North Landfill. He stated the two of the wells have exceeded their approved HOV temperatures and are operating under an AOP. EPA inspectors asked for copies of all HOV's and AOP's along with approvals from PADEP for the GROWS North Landfill and Mr. Bolton stated that he would gather the documents and submit them to EPA. He also stated that the LFG was last expanded at the

GROWS North Landfill in December 2023 when four LFG wells were installed. He stated that no further modification to the GCCS is planned at this time.

III. Observations

Day 1 March 20, 2024

Immediately following the opening conference at 09:25 AM on March 20, 2024, EPA inspectors (Alex Everhart and Paul Arnold) EPA Observer (Steve Ott) and PADEP Inspector (Bill Laufer) were taken to the Old GROWS Landfill by Mr. Bolton who was joined by his contractor, Kyle Byrne of CEC to take upwind and downwind methane readings with the Inficon IRwin methane detector prior to starting the SEM of the Old Grows landfill. Following the measurement of the upwind (0 PPM) and downwind (1 PPM) locations the SEM commenced near extraction well 85A at 10:35 AM. The EPA inspection team walked a serpentine path starting at MW85A and monitored approximately 40 separate landfill surface penetrations. One exceedance of the regulatory limit of 500 PPM, as defined in 40 CFR 63.1958(d)(1) was detected at LFG well 19A (695 PPM) during the SEM. The inspection team completed the serpentine path around the Old GROWS Landfill at 1:06 PM.

Mr. Bolton then took the Inspection team to the North GROWS Landfill and arrived at 1:27 PM to begin the SEM. The inspection team walked a serpentine path starting at Temperature Probe N2 and monitored approximately 60 separate landfill surface penetrations. Two exceedances of 500 PPM regulatory limit were detected at LFG well N-1 (1,381 PPM) and N -107 (30,500 PPM) during the SEM. The EPA inspection team completed the serpentine path around the North GROWS Landfill at 2:46 PM.

Following the SEM at North GROWS, the EPA inspection team was led to the GROWS North flare yard. C06 was observed and was not in operation at the time of the inspection. One Cummins emergency generator was observed in the GROWS North flare yard, Mr. Bolton stated that all of the emergency generators are covered under the Fairless Landfill Title V Permit. Mr. Bolton stated that flare C06 is set to be decommissioned once the RNG facility goes active. He stated that C06 is only used a few hours a year to verify that it can operate. The flowmeter at C06 was observed and displayed zero instantaneous flow and a total flow of 270,960,128 SCF. The inspection team was then taken to the Fairless ULE yard which houses emergency flares C03 and C05. Neither C03 nor C05 were in operation at the time of inspection. Mr. Bolton stated that all of the gas was being burned in the flares that are in the Fairless Title V permit. EPA inspectors verified that the flow meters read zero instantaneous flow. One CAT generator was observed in the Fairless ULE Yard and Mr. Bolton stated that it was covered by the Fairless Permit. EPA inspectors asked how the facility monitors gas quality of the LFG and Mr. Bolton stated that reading are taken once per day at the header with a portable gas analyzer. While in the Fairless ULE flare yard approximately 2,200 SCFM was flowing from Old GROWS Landfill and 1370 SCFM was flowing from GROWS North Landfill.

The walkthrough concluded at 03:30 PM on March 20, 2024.

IV. Records Review

Day 2 March 21, 2024

The records review commenced immediately after the facility/process description on March 21, 2024, at 10:20 AM. EPA inspectors reviewed documents requested in the March 19, 2024, email to Mr. Bolton (see Attachment 1). Some records were provided at the time of the inspection by Mr. Bolton; however, Mr. Bolton agreed to provide the remainder of the records after the inspection. Below are the records requested and what was provided:

1. Facility plot plan which depicts the entire landfill surface and the existing gas collection system;
A hard copy of this was provided during the inspection.
2. Facility map showing the Serpentine path for SEM monitoring;
A hard copy of this was provided during the inspection.
3. Facility map showing each penetration monitored as required by 40 CFR 63 AAAA.
A hard copy of this was provided during the inspection.
4. Site map showing all of the permitted landfill cells;
A hard copy of this was provided during the inspection.
5. The amount of waste in place (tons) in each cell and the total waste in place (tons);
This information was provided electronically after the inspection.
6. Copy of the NMOC emission rate report which includes the NMOC emission (Mg/yr) rate and supporting calculations, include copies of any Tier II site specific testing;
This information was provided electronically after the inspection.
7. Provide a record of the facility's actual annual air emissions, from January 1, 2019 through December 31, 2023, for all regulated air pollutants (NO_x, SO_x, CO, VOCs, HAPs, and PM);
This information was provided electronically after the inspection.
8. Provide a listing of all onsite flares, generators and/or all other internal combustion sources. For each combustion unit onsite provide:
 - a. The make and model;
 - b. The date of installation;
 - c. Size or rating (MMBtu/hr, HP, kW, etc.);
 - d. Fuel combusted monthly since 2018 to present (gallons, MMcf, etc.);
 - e. Provide any temperature or flow monitoring records for the existing flares since 2020.

This information was discussed during the inspection.

9. Copies of any performance tests conducted on any source to determine emission rates, concentrations or compliance since 2000;

During the inspection EPA reviewed electronic copies of the following performance test reports;

- 10/10/19 CO3 Flare test report indicated that CO3 failed the performance test for SO2
- 2/20-21/2020 CO5 Flare test report indicated that it passed for SO2
- 5/24/17 CO6 Flare test report indicated that it failed SO2

10. Identify any periods when the GCCS was not operable or was out of service since 2019 to present;

This information was provided electronically after the inspection.

11. Records of monthly wellhead pressure, temperature, Nitrogen or Oxygen monitoring since 2019 to the present;

This information was provided electronically after the inspection.

12. Any initial notifications, notifications of compliance status, or periodic reports submitted to EPA or PADEP pursuant to 40 CFR Part 60 Subpart WWW, 40 CFR Part 62 Subpart OOO, or 40 CFR Part 63 Subpart MACT AAAA since 2018;

This information was provided electronically after the inspection.

13. Copy of the SEM monitoring plan and SEM monitoring records for since 2019;

This information was provided electronically after the inspection.

14. Copies of all Title V Annual/Semiannual compliance certifications from 2019 to 2023.

This information was provided electronically after the inspection.

V. Closing Conference

Day 2 March 21, 2024

After the records review, EPA inspectors, Mr. Bolton and Mr. Laufer had a brief closing conference to ask additional questions and discuss observations. The EPA inspectors noted that the investigation is on-going, and any areas of concern identified in the final report do not necessarily reflect a violation or deviation, rather, they are areas that will require further investigation. EPA also noted that they would issue an inspection report within 60 days, with a copy to the State. Simultaneously, EPA will perform a

detailed review of records and may have additional questions. The inspection concluded at 11:15 AM on March 21, 2024.

The following have been identified as areas of concern during the inspection. They are issues that require either further investigation by EPA or additional information or explanation from Waste Management.

- EPA observed three exceedances during SEM monitoring on March 20, 2024. These exceedances and informed Mr. Bolton that they should be treated as official SEM exceedance and all timelines and remedial actions as specified in 40 CFR 63.1960(c)(4) should be followed.
- Numerous wells are operating under an Alternative Operating Plan and/or HOVs. The Alternative Operating Plans and HOVs along with approval from PADEP shall be submitted to EPA to determine compliance with the approved alternatives.
- Two emergency generators are located at GROWS and are used in conjunction with emergency flares that are associated with the GROWS Title V permit; however, they are not included in the GROWS Title V permit. EPA will follow up to ensure these generators are accounted for in the Fairless Landfill Title V permit as stated by the Facility during the inspection.

VI. List of Attachments

- Attachment 1: Email correspondence to Chris Bolton of records requested to review during inspection
- Attachment 2: Photo Log
- Attachment 3: Inspector Sign-in Sheet

Everhart, Alex

From: Everhart, Alex
Sent: Tuesday, March 19, 2024 4:26 PM
To: cbolton1@WM.com
Cc: Arnold, Paul; wlaufer@pa.gov; Ott, Steven
Subject: GROWS Landfill Clean Air Act Inspection
Attachments: EPA Records request GROWS LF.pdf

Hi Chris,

As a follow up to our call we (Myself and 2 other EPA personnel and an Inspector from PADEP) plan to meet you around 9:00 am at 200 Bordentown Rd, Tullytown PA 19007. We will have the appropriate PPE (Safety Toe Boots, Hi Vis Vest, Safety Glasses and Hard Hats) with us. I have attached a list of documents/records we would like to see as part of the inspection. If you could please have the maps I listed in 1-4 printed (this may be all on 1 map if you have one showing all these) for us when we start tomorrow that would be great. If anything comes up between now and tomorrow morning feel free to reach out at the contact info below.

Thanks!



Alex Everhart

Enforcement Inspector

Air Section – Air & RCRA Branch

Enforcement & Compliance Assurance Division

US EPA Mid-Atlantic Region

Phone: 215-814-2114

Email: Everhart.Alex@epa.gov

14. Copies of all Title V Annual/Semiannual compliance certifications from 2019 to 2023.



Photo Number: 1

Photo Description: View from well 85a towards Fairless landfill



Photo Number: 2

Photo Description: Temperature probe TP06



Photo Number: 3

Photo Description: Grows Clay Cap, well 19 (WW19)



Photo Number: 4

Photo Description: Ground near 19A



Photo Number: 5

Photo Description: Flag next to 19A



Photo Number: 6

Photo Description: Grows North temperature probe #2



Photo Number: 7

Photo Description: Temp Probe 1



Photo Number: 8
Photo Description: N107



Photo Number: 9

Photo Description: Fairless Hills Flairs



Photo Number: 10

Photo Description: Flare C05 (left) and C03 (right)



Photo Number: 11

Photo Description: Gas pipeline from GROWS



Photo Number: 12

Photo Description: Gas flow rate meter to flare



Photo Number: 13

Photo Description: Flare 3 flow meter (SCFM)



Photo Number: 14

Photo Description: Flare ULE meter (SCFM)

Inspection Sign-In Sheet

Facility: WM grows LF

Date: 3/20/24

Name	Affiliation	Title	Phone Number & Email
Alex Everhart	EPA	Enforcement Inspector	215-814-2114 Everhart.Alex@EPA.gov
Chris Bolton	WM	Operations Manager	215-907-0374 cbolton@wm.com
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Kyle Byrne	CEC.	OM Director	813-569-9063 kbyrne@cecenvi.com

Inspection Sign-In Sheet

Facility: W.M. GROWS

Date: 3/21/24

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