

Facility Name: **Pine Grove Municipal Solid Waste Landfill**
 City: Columbus
 County: Muscogee
 AIRS #: 04-13-215-00181

Application #: TV-228956
 Date Application Received: April 19, 2018
 Permit No: 4953-215-0181-V-04-0

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Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description**A. Facility Identification**

1. Facility Name:

Pine Grove Municipal Solid Waste Landfill

2. Parent/Holding Company Name

Columbus Consolidated Government

3. Previous and/or Other Name(s)

None

4. Facility Location

7160 Sacerdote Lane
Columbus, Georgia 31907

5. Attainment, Non-attainment Area Location, or Contributing Area

The landfill is located in Muscogee County which is in attainment for all criteria pollutants.

B. Site Determination

The Pine Grove Landfill is owned and operated by Columbus Consolidated Government, which also owns and operates the nearby Schatulga Road Landfill (AIRS No. 215-00177). The landfills are located approximately one mile apart. The property between the landfills is owned by various agencies, including the State of Georgia, the Georgia Building Authority, Muscogee Hospital Authority, and the Columbus Development Authority. Columbus Consolidated Government owns no land that abuts both landfills, and, thus, these landfills are not contiguous. Therefore, Pine Grove Landfill and Schatulga Road Landfill are considered separate sites for the purposes of Title V and the applicability of 40 CFR 60 Subpart WWW.

Prior to 2003, Columbus Consolidated Government owned a parcel of land connecting the Schatulga Road and Pine Grove landfills. Based on this information, the Division had previously determined that the landfills were contiguous and under the same ownership, and, therefore, the landfills were considered one site for the purposes of Title V and the landfill rules. In a letter dated June 21, 1999, the Division informed Columbus Consolidated Government of this fact. Because the landfills were considered one site, and the Pine Grove landfill was constructed in 1998, both landfills were deemed subject to 40 CFR 60 Subpart WWW which regulates new landfills.

In 2003, the parcel of land connecting the two landfills was transferred to the Columbus Development Authority, and thus the two landfills are no longer contiguous. The landfills were then considered separate sites for the purposes of Title V and the landfill rules. Each landfill, therefore, received its own Title V permit.

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
4953-215-0181-V-03-0	November 14, 2013	Title V Renewal

D. Process Description

1. SIC Codes(s)

4953

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

No products are produced. Pine Grove Landfill receives, manages and disposes of solid waste.

3. Overall Facility Process Description

The landfill accepts, manages, and disposes of municipal solid waste (MSW), construction and demolition (C&D) waste, and asbestos. This waste is deposited into the landfill and compacted. The waste is covered with fill dirt or other suitable cover on a daily basis. The landfill produces landfill gas from the decomposition of the organic materials in the deposited waste, which is emitted to the atmosphere. Leachate is collected at the bottom of the landfill and is discharged into a sanitary sewer.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

Pine Grove Landfill is a minor source under PSD regulations. Emissions from all PSD regulated pollutants are less than the major source threshold.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Y			✓
PM ₁₀	Y			✓
PM _{2.5}	Y			✓
SO ₂	Y			✓
VOC	Y			✓
NO _x	Y			✓
CO	Y			✓
TRS	n/a			
H ₂ S	n/a			
Individual HAP	Y			✓
Total HAPs	Y			✓

3. MACT Standards

The Landfill MACT, 40 CFR Part 63 Subpart AAAAA, is applicable to each area source MSW landfill with a design capacity greater than or equal to 2.5 million megagrams (Mg) and 2.5 million cubic meters (m³) and having estimated uncontrolled NMOC emissions exceeding 50 megagrams per year (Mg/yr) or if the landfill is a bioreactor. The MACT standard is not applicable to this landfill site at present because the NMOC emissions are less than the 50 Mg/yr threshold and the landfill is not a bioreactor. Because the landfill's design capacity is greater than 2.5 million Mg and 2.5 million m³, the MACT is potentially applicable in the future if the uncontrolled NMOC emissions ever exceed 50 Mg/yr.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	no
Program Code 8 – Part 61 NESHAP	yes
Program Code 9 - NSPS	yes
Program Code M – Part 63 NESHAP	no
Program Code V – Title V	yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

40 CFR 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills

This rule is applicable to each municipal solid waste landfill that has a design capacity greater than 2.5 million megagrams (Mg) or 2.5 million cubic meters (m³), if the landfill commenced construction, reconstruction or modification on or after May 30, 1991. Since the Pine Grove Landfill was constructed in 1998 and has a design capacity of 6.7 million cubic meters, the facility is currently subject to 40 CFR 60 Subpart WWW – “Standards of Performance for Municipal Solid Waste Landfills.”

40 CFR Part 61 Subpart M – NESHAP for Asbestos

Pine Grove Landfill indicated that they are permitted to accept asbestos-containing waste. If the facility ever accepts asbestos waste for disposal, the facility will be subject to the asbestos NESHAP in 40 CFR 61 Subpart M. If so, as long as this landfill remains active, it would be required to comply with the provisions of 40 CFR 61.154 – “Standard for Active Waste Disposal Sites”, including all reporting and record keeping requirements. Upon closure, the facility would be required to comply with 40 CFR 61.151 – “Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations,” if asbestos waste has been accepted.

40 CFR Part 63 Subpart AAAA – National Emission Standards for Municipal Solid Waste Landfills

This rule applies to each landfill that received waste after November 6, 1987, that is a major source, is co-located with a major source, or is subject to the control requirements of 40 CFR 60 Subpart WWW. This landfill is currently not subject to this rule because the landfill is not currently required by 40 CFR 60 Subpart WWW to install and operate a landfill gas collection and control system (GCCS). When the control requirements of Subpart WWW become applicable, the landfill will become subject to Subpart AAAA. The facility must then comply with the requirements of this NESHAP by the date on which the landfill is required to install a GCCS. If the facility begins adding liquids, other than leachate, in a controlled fashion to the waste mass, that would trigger the Subpart AAAA provisions for a bioreactor. If the facility becomes subject to Subpart AAAA, it will be also be subject to Subpart A, the NESHAP General Provisions.

C. Compliance Status

The facility did not indicate any noncompliance issues within the application.

D. Permit Conditions

Permit Condition 2.1 establishes the applicability of 40 CFR 60 Subparts A and WWW to the landfill.

Permit Condition 2.2 establishes the applicability of 40 CFR 61 Subparts A and M to the landfill.

Permit Condition 2.3 establishes the applicability of 40 CFR 63 Subparts A and AAAA to the landfill.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
LF01	Pine Grove Landfill	40 CFR 60 Subpart A 40 CFR 60 Subpart WWW 40 CFR 61 Subpart A 40 CFR 61 Subpart M 40 CFR 63 Subpart A** 40 CFR 63 Subpart AAAA** 391-3-1-.02(2)(n)	2.2.1, 2.2.2, 2.2.3, 3.3.1, 3.4.1, 3.4.2, 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.2.7, 6.2.8, 6.2.9, 6.2.10, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 7.6.1	N/A	None

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards and corresponding permit conditions are intended as a compliance tool and may not be definitive.

**40 CFR Part 63 requirements are not currently applicable but could become applicable during the permit term if the facility is required to install a GCCS or becomes a bioreactor.

B. Equipment & Rule Applicability

Emission and Operating Caps:

None applicable.

Rules and Regulations Assessment:

40 CFR 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills

Since this landfill was constructed after the NSPS Subpart WWW effective date (May 30, 1991) and it has a design capacity greater than 2.5 million cubic meters, it is subject to the New Source Performance Standards (NSPS) 40 CFR 60 Subpart WWW – Standards of Performance for MSW Landfills. This rule requires that the landfill calculate annual nonmethane organic compound (NMOC) emissions estimates.

When the annual NMOC emission estimate exceeds 50 Mg, a gas control and collection system (GCCS) must be designed and installed per the requirements of Subpart WWW. Because the landfill is currently calculating NMOC emissions using Tier 2 procedures, the landfill will have the option to conduct Tier 3 testing to determine the site-specific methane generation constant and recalculate the NMOC emission rate. If a recalculation of the NMOC emission rate using Tier 3 variables is equal to or greater than 50 megagrams/year, the landfill will then be required to install a GCCS.

Georgia Rule 391-3-1-.02(2)(n) – Fugitive Emissions

This rule requires the facility to minimize fugitive dust from the facility. This includes using water or chemicals for controlling dust on construction operations, grading of roads, and the clearing of land; covering at all times, when in motion, open bodied trucks transporting material likely to give rise to airborne dust; application of suitable material on dirt roads, materials, stockpiles, and other similar surfaces.

Also per this rule, a landfill may not discharge fugitive dust, which exhibits opacity equal to or greater than 20 percent.

C. Permit Conditions

Permit Condition 3.3.1 is a standard condition for uncontrolled landfills and establishes bioreactor requirements according to 40 CFR 63 Subpart AAAA.

Permit Condition 3.4.1 outlines the requirements for controlling fugitive emissions.

Permit Condition 3.4.2 limits fugitive dust emissions opacity from the MSW landfill to less than 20 percent.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

Subpart WWW specifies in 40 CFR 60.754 the procedures for an uncontrolled landfill to determine annual NMOC emissions. These procedures require a calculation based on the landfill's recorded waste acceptance rates, NMOC concentration, and methane generation rate constant in a three-tiered approach using equations specified in Subpart WWW.

For Tier 1, the landfill uses the default NMOC concentration and methane generation rate constant specified in Subpart WWW. If the Tier 1 NMOC emission rate exceeds 50 Mg/yr, the landfill may choose to use Tier 2 which is to determine the site-specific NMOC concentration. If the Tier 2 NMOC emission rate exceeds 50 Mg/yr, the landfill may choose to use Tier 3 which is to determine the site-specific methane generation rate constant. **Pine Grove Landfill currently calculates its NMOC emission rate using Tier 2. The most recent Tier 2 testing occurred in February 2017, which indicated a NMOC concentration of 224 ppm hexane.**

Condition 4.2.1 states that the facility must determine the NMOC emission rate using the equations in Condition 4.2.2 and constants in Condition 4.2.3.

Condition 4.2.4 states the sampling procedures to be followed for collecting samples to determine NMOC concentration when using Tier 2 or Tier 3 values for calculating NMOC emissions.

Condition 4.2.5 establishes when the next Tier 2 sampling test is required.

V. Monitoring Requirements**A. General Monitoring Requirements**

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

Not applicable.

C. Compliance Assurance Monitoring (CAM)

Not Applicable

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

B. Specific Record Keeping and Reporting Requirements

The Landfill NSPS, 40 CFR 60 Subpart WWW requires uncontrolled landfills to determine their NMOC emission rate annually. If the NMOC emissions exceed 50 megagrams per year, the landfill must either calculate emissions at a higher tier (e.g., move from Tier 2 to Tier 3) or submit a Collection and Control System (GCCS) Design Plan that has been prepared by a Professional Engineer. The landfill is no longer required to calculate annual NMOC emissions once a landfill gas collection system meeting the requirements of Subpart WWW is being used. Subpart WWW also requires the landfill to keep accessible records of design capacity and waste in place and may exclude areas containing nondegradable waste from the GCCS if sufficient records are kept.

Landfills that accept asbestos-containing waste are subject to 40 CFR 61 Subpart M. These landfills are required to comply with 40 CFR 61.154 and, upon closure, submit records of asbestos disposal locations and quantities.

The Landfill MACT, 40 CFR 63 Subpart AAAA is triggered if the landfill becomes a bioreactor (as defined in Subpart AAAA). The landfill becomes a bioreactor if any liquid other than leachate is added in a controlled fashion to the waste unless the moisture in the waste remains less than 40 percent.

Permit Conditions 6.2.1 through 6.2.3 contain the requirements for submitting annual NMOC emission rate reports and the procedures to be taken when a NMOC emission rate report exceeds 50 megagrams per year (i.e., calculate emissions by a higher tier or submit a GCCS design plan).

Permit Condition 6.2.4 states that a NMOC emission report is not required after a GCCS, which meets the requirements of Subpart WWW, has been installed.

Permit Condition 6.2.5 requires that the facility keep records of the maximum design capacity of the landfill, the current amount of solid waste in place, and the year-by-year waste acceptance rate.

Permit Conditions 6.2.6 and 6.2.7 contain requirements from 40 CFR 61 Subpart M which are applicable if the landfill accepts asbestos-containing waste.

Permit Conditions 6.2.8 and 6.2.9 contains requirements for excluding areas of the landfill from the GCCS design, when it is required, which contain nondegradable waste or are nonproductive.

Permit Condition 6.2.10 requires implementing their dust suppression plan to ensure that the landfill complies with Georgia Rule (n).

Permit Conditions 6.2.11 through 6.2.13 contain requirements, which are applicable if the landfill adds any liquid (other than leachate) to the landfill. The landfill may become subject to the bioreactor requirements in 40 CFR 63 Subpart AAAA if liquids (other than leachate) are added.

Permit Condition 6.2.14 requires a report when the landfill stops accepting waste in order to close the landfill.

VII. Specific Requirements

A. Operational Flexibility

Not applicable.

B. Alternative Requirements

Not applicable.

C. Insignificant Activities

See Permit Application on GEOS website.
See Attachment B of the permit

D. Temporary Sources

When the following activities occur, the Permittee is required to maintain records relating to these activities:

- a) Construction of Landfill Cell
- b) Capping (Closure) of Landfill Cell

E. Short-Term Activities

Not applicable.

F. Compliance Schedule/Progress Reports

Not applicable.

G. Emissions Trading

Not applicable.

H. Acid Rain Requirements

Not applicable.

I. Stratospheric Ozone Protection Requirements

The standard permit condition pursuant to 40 CFR 82 Subpart F has been included in the Title V Permit. These Title VI requirements apply to all air conditioning and refrigeration units containing ozone-depleting substances regardless of the size of the unit or of the source.

J. Pollution Prevention

Not applicable.

K. Specific Conditions

Not applicable.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//