

Facility Name: **Seminole Road Municipal Solid Waste Landfill**
City: Ellenwood
County: DeKalb
AIRS #: 04-13-089-00299

Application No.: TV-633785
Date Application Received: January 27, 2023
Permit No: 4953-089-0299-V-05-0

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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:**

Seminole Road Municipal Solid Waste Landfill

2. Parent/Holding Company Name

DeKalb County

3. Previous and/or Other Name(s)

None

4. Facility Location

4203 CleveMont Road
Ellenwood, Georgia 30294 (DeKalb County)

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

Seminole Road Municipal Solid Waste Landfill is located in DeKalb County. DeKalb County was part of the Atlanta 2015 8-Hour Ozone Nonattainment Area. This nonattainment area was officially redesignated as attainment on October 17, 2022. DeKalb County is currently in attainment for all pollutants.

B. Site Determination

Seminole Road Municipal Solid Waste (MSW) Landfill operates a co-located composting, landfill gas to energy facility, and renewable natural gas processing facility at the landfill. The landfill and co-located operation are considered one site for Title V because they are contiguous and under common control. This Title V permit will cover all operations at the landfill.

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
4953-089-0299-V-04-0	7/31/2018	Title V renewal
4953-089-0299-V-04-0	5/8/2019	Construction of one new tub grinder and removal of two old grinders.

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
4953-089-0299-V-04-0	9/26/2022	Replacement of enclosed flare with a new open flare.

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)

There are no products from this facility. The landfill receives and deposits solid waste into the landfill. The landfill does generate electricity using collected landfill gas and produces pipeline quality gas from landfill gas, but these are byproducts of the landfill's operation.

3. Overall Facility Process Description

Seminole Road Municipal Solid Waste (MSW) Landfill receives municipal and industrial solid waste. The waste is deposited into the landfill, compacted, and covered with fill dirt or other suitable cover, on a daily basis. Landfill gas (LFG) is produced from the decomposition of the buried waste. LFG, which is composed primarily of methane and carbon dioxide, also includes non-methane organic compounds (NMOC). A composting operation is also located at the landfill. The landfill and composting operation are considered one site for Title V because they are contiguous and under common control.

The landfill operates a regulated gas collection and control system (GCCS), two LFG treatment systems (TS1 and TS2), and two open flares (F1 and F3). Treatment system TS1 treats gas for a landfill gas to energy (LFGTE) power station known as the Green Energy Facility. Treatment System TS2 also known as the Renewable Fuels Facility (RFF) produces pipeline quality gas also known as renewable natural gas (RNG). Open Flares F1 and F3 are each rated at 2,100 standard cubic feet per minute (scfm). The flares serve as the backup control devices.

The Green Energy Facility is permitted for three LFG-fired internal combustion (IC) engines (E1, E2, and E3), each capable of generating 1.6 megawatts (MW) of electricity. Note that engine E3 has not yet been constructed.

Tub grinder (GRIN5) is used to grind waste wood in support of the composting operation at the landfill. The tub grinder uses a 950 hp diesel-fired engine.

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

Seminole Road Municipal Solid Waste Landfill is a major source with respect to PSD/NSR regulations because it has potential emissions of carbon monoxide (CO) greater than 250 tons per year PSD major source threshold. Emissions of other PSD regulated pollutants are less than the major source threshold of 250 tons per year. Landfills are not included in the list of 28 source categories that have a 100 tpy threshold to be subject to PSD regulations.

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	Yes			✓
PM ₁₀	Yes			✓
PM _{2.5}	Yes			✓
SO ₂	Yes			✓
VOC	Yes	✓		
NO _x	Yes	✓		
CO	Yes	✓		
TRS				
H ₂ S				
Individual HAP	Yes	✓		
Total HAPs	Yes	✓		

3. MACT Standards

In the narrative for Permit No. 4953-089-0299-V-04-0 (App. No. 45724), the Division determined that Seminole Road Landfill is a major source of HAP emissions. This

determination was primarily based on formaldehyde emissions from the LFG-fired engines (E1, E2, and E3). The formaldehyde emissions were calculated using an emission factor developed by North Carolina of 0.00107 lb/bhp-hr. The formaldehyde emissions from the three engines, which are rated at 2146 horsepower each, is:

$$\begin{aligned} E_{\text{formaldehyde}} &= \left(0.00107 \frac{\text{lb}}{\text{bhp} - \text{hr}} \right) (2146 \text{ hp})(3 \text{ engine}) \left(8760 \frac{\text{hr}}{\text{yr}} \right) \left(\frac{1 \text{ ton}}{2000 \text{ lb}} \right) \\ &= 30.17 \text{ tpy} \end{aligned}$$

As part of the application for this renewal permit, Seminole Road Landfill submitted emissions calculations that indicate that the landfill is an area source of HAP emissions. To help resolve this discrepancy, the Division is requesting a test for formaldehyde on one of the LFG-fired engines (see Condition 4.2.8). This permit and narrative, however, are written under the assumption that the landfill is a major source of HAP emissions.

40 CFR 63, Subpart AAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

The Landfill MACT, 40 CFR 63 Subpart AAAA, is applicable for existing landfills as of January 16, 2004. This rule applies to each landfill that received waste after November 6, 1987 that is a major source of HAPs, is co-located with a major source of HAPs, is a bioreactor, or has estimated uncontrolled emissions of NMOC greater than or equal to 50 megagrams per year (Mg/yr). Uncontrolled NMOC emissions from the Seminole Road Landfill are greater than 50 Mg/yr. This landfill, therefore, is subject to The Landfill MACT.

Note that the U.S. EPA promulgated changes to Subpart AAAA on March 26, 2020, that made significant changes to the subpart, including removal of the Startup, Shutdown, and Malfunction (SSM) Plan effective September 27, 2021.

40 CFR 61, Subpart M – NESHAP for Asbestos

Seminole Road 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.

40 CFR Part 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Stationary reciprocating internal combustion engines (RICE) are subject to Subpart ZZZZ if the RICE is located at a major or area source of HAPs. Spark ignition LFG-fired engines E1, E2, and E3 and compression ignition diesel-fired tub grinder GRIN5 are RICE subject to Subpart ZZZZ.

At a major source of HAP emissions, a RICE rated at more than 500 horsepower is considered “existing” if it is constructed before December 19, 2002, and is considered “new” if it is constructed on or after December 19, 2002. Engines E1, E2, and E3 are rated

at 2146 horsepower and GRIN5 is rated at 950 horsepower. Engines E1 and E2 were constructed before December 19, 2002, so they are existing RICE. Engines E3 (which has not yet been constructed) and GRIN5 were constructed after December 19, 2002, so they are new RICE.

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	Yes
Program Code V – Title V	Yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

On August 29, 2016, EPA promulgated 40 CFR 60 Subparts XXX and Cf to regulate emissions from “new” landfills (constructed or modified after July 17, 2014) and establish emission guidelines for “old” landfills. These subparts replaced the requirements of 40 CFR 60 Subpart WWW. On May 21, 2021, EPA promulgated 40 CFR 62 Subpart OOO to provide a federal plan to cover “old” landfills in states where a state plan implementing the requirements of Subpart Cf has not been approved by EPA. Georgia Rule 391-3-1-.02(2)(ggg) was updated to incorporate the requirements of Subpart Cf for the “old” landfills. The updates to Rule (ggg) became effective on April 21, 2024, however, EPA has not yet approved Georgia’s plan implementing the requirements of Subpart Cf. The requirements of Subparts XXX, Cf, and OOO and Georgia Rule (ggg) are similar to the requirements of Subpart WWW which formerly applied.

40 CFR 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 2014.

This Federal Operation Plan OOO 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). Seminole Landfill has a design capacity exceeding 2.5 million cubic meters. The landfill is subject to Federal Plan OOO because it commenced construction before July 17, 2014, has not been modified or reconstructed since July 2014, has accepted waste since November 8, 1987, and is not

subject to an EPA-approved state plan. Once Georgia Rule (ggg) is an EPA-approved state plan, the landfill will no longer be subject to this Federal Operation Plan.

This Plan duplicates most of the requirements of 40 CFR 60 Subparts WWW and XXX.

391-3-1-.02(2)(ggg) – Existing Municipal Solid Waste Landfills

Georgia Rule (ggg) incorporates the emission guidelines in 40 CFR 60 Subpart Cf – “Emission Guidelines and Compliance Times 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 before July 17, 2014, and has accepted waste since November 8, 1987. Seminole Road Landfill commenced its most recent construction before 2014. The landfill is, therefore, subject to Rule (ggg). If the landfill were to commence construction of a future expansion, it would become subject to 40 CFR 60 Subpart XXX and would cease to be subject to Rule (ggg). Because the NMOC emissions from the landfill exceed 34 megagrams per year, the landfill has installed a gas collection and control system.

This subpart duplicates most of the requirements of 40 CFR 60 Subpart WWW, 40 CFR 60 Subpart XXX, and 40 CFR 62 Subpart OOO.

40 CFR 61 Subpart M – NESHAP for Asbestos

Seminole Road Landfill is allowed to accept asbestos-containing waste and is, therefore, subject to the asbestos NESHAP in 40 CFR 61 Subpart M. As long as this MSW Landfill remains active, it is 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 will be required to comply with 40 CFR 61.151 – “Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations”.

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

As stated earlier, Seminole Road Landfill is subject to 40 CFR 63 Subpart AAAA.

C. Compliance Status

The facility permit application did not indicate any non-compliance issue.

D. Permit Conditions

Condition 2.2.1 (Condition 2.2.2 in Permit 4953-089-0299-V-04-0) establishes the applicability of 40 CFR 61 Subparts A and M to the landfill.

Condition 2.2.2 (Condition 2.2.1 in Permit 4953-089-0299-V-04-0) establishes the potential applicability of 40 CFR 63 Subparts A and AAAA to the landfill.

Condition 2.2.3 establishes the applicability of 40 CFR 62 Subparts A and OOO to the landfill. This condition replaces Condition 2.2.1 (in Permit 4953-089-0299-V-04-0) because 40 CFR 60 Subpart WWW is no longer applicable and Condition 3.3.22 (in Permit 4953-089-0299-V-04-2) that initially established the applicability of 40 CFR 62 Subpart OOO.

Condition 2.3.1 established the applicability of 391-3-1-.02(2)(ggg) to the landfill.

Previous Condition 2.3.1, which established the applicability of Georgia Rule (yy) has been deleted because the landfill is no longer subject to this rule. [see Section III.B. of this narrative for an explanation]

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
SRLF	Landfill	40 CFR 61 Subpart A 40 CFR 61 Subpart M 40 CFR 63 Subpart A 40 CFR 63 Subpart AAAA 40 CFR 62 Subpart A 40 CFR 62 Subpart OOO 391-3-1-.02(2)(n) 391-3-1-0.2(2)(ggg)	LGS F1 F3 TS1 TS2	Landfill Gas Collection and Control System (GCCS) Open Flare 1 (2,100 cfm) Open Flare 3 (2,100 cfm) Treatment System 1 (Green Energy Facility) Treatment System 2 (Renewable Fuels Facility)
GRIN5	Tub Grinder	40 CFR 60 Subpart A 40 CFR 60 Subpart IIII 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ 391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	None	None
E1	Caterpillar G3520 Engines used to power a 1.6 MW generator	40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(mmm) NSR Avoidance	None	None
E2	Caterpillar G3520 Engines used to power a 1.6 MW generator	40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(mmm) NSR Avoidance	None	None
E3**	Caterpillar G3520 Engines used to power a 1.6 MW generator	40 CFR 60 Subpart A 40 CFR 60 Subpart JJJJ 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(mmm) NSR Avoidance	None	None

B. Equipment & Rule Applicability**Emission and Operating Caps:**

Tub grinder GRIN5 is limited to 7400 hours per year. This limit results in annual NO_x emission of less than 25 tons per year to avoid the requirements of Georgia Rule (yy) for the tub grinder.

NO_x is limited from the LFG-fired engines E1, E2, and E3 are limited to 0.5 grams per horsepower-hour. This limit was accepted by the landfill to avoid non-attainment new source review (NAA-NSR) [see 4953-089-0299-V-01-5].

Rules and Regulations Assessment:**40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

This Subpart is applicable to a stationary compression ignition internal combustion engine for which construction commences after July 11, 2005 and which is manufactured after April 11, 2006, or a certified fire pump engine manufactured after July 1, 2006, per 40 CFR 60.4200(a)(2). The tub grinder GRIN5 was manufactured after 2005 and is therefore subject to the provisions of Subpart IIII. Subpart IIII includes limits for PM, NO_x, non-methane hydrocarbons (NMHC), CO, and visible emissions. The sulfur content of the diesel fuel oil is limited to 15 ppm. Compliance is demonstrated by purchasing, operating, and maintaining a certified engine.

40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Subpart JJJJ regulates emissions from spark ignition internal combustion engines where construction commences after June 12, 2006, and, for emergency generators, where the engine is manufactured on or after January 1, 2009. Because LFG-fired engine E3 will be manufactured after 2006, this rule applies to engine E3. The emission limits for this engine are listed in Table 1 of Subpart JJJJ.

40 CFR 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 2014.

As stated earlier, 40 CFR 62 Subpart OOO applies until Georgia has an EPA-approved state plan implementing 40 CFR 60 Subpart Cf.

40 CFR 61 Subpart M – NESHAP for Asbestos

As stated earlier, 40 CFR 61 Subpart M applies to the landfill.

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

As stated earlier, 40 CFR 63 Subpart AAAA applies to the landfill.

40 CFR 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

As stated earlier, Subpart ZZZZ applies to LFG-fired engines E1, E2, and E3 and tub grinder GRIN5. Engines E1 and E2 are existing engines. Engine E3 and tub grinder GRIN5 are new engines.

As stated earlier, the landfill is a major source of HAP emissions. Engines E1, E2, and E3 combust 100 percent LFG. These engines do not have any ongoing requirements in Subpart ZZZZ. For engines E1 and E2, existing RICE rated at more than 500 brake horsepower located at a major source of HAP emissions that combusts more than 10 percent landfill gas do not have to meet requirements in Subpart ZZZZ [40 CFR 63.6590(b)(3)(v)]. For engine E3, new RICE rated at more than 500 brake horsepower located at a major source of HAP emissions that combusts more than 10 percent landfill gas do not have to meet requirements in Subpart ZZZZ except an initial notification requirement, an annual reporting requirement, and requirements to monitor fuel usage and keep reports of the fuel usage [40 CFR 63.6590(b)(2)].

For tub grinder GRIN5 which is a compression ignition engine, Subpart ZZZZ includes emission limits in Table 2a, operating limits in Table 2b, and initial test (or other initial compliance determination) in Table 4. Note that the landfill has not yet submitted any initial test results for this tub grinder.

If it is determined that the landfill is in fact an area source of HAP emissions, engine E3 and tub grinder GRIN5 will show compliance with Subpart ZZZZ by showing compliance with 40 CFR 60 Subpart IIII or Subpart JJJJ, as applicable [40 CFR 63.6590(c)(1)]. Engines E1 and E2 would be existing RICE at an area source of HAP emissions and would be required to comply with Item 13 of Table 2d of Subpart ZZZZ.

Georgia Rule (b) - Visible Emissions

Rule (b) limits the opacity of visible emissions from any air contaminant source that is subject to some other emission limitation under 391-3-1-.02(2). The opacity of visible emissions from regulated sources may not exceed 40 percent under this general visible emission standard. The LFG-fired engines E1, E2, and E3 and tub grinder GRIN5 are subject to this limit.

Georgia Rule (g) - Sulfur Dioxide

Rule (g) applies to all “fuel burning” sources. The fuel burning sources at the site are LFG-fired engines E1, E2, and E3 and tub grinder GRIN5. The fuel sulfur content limit for fuels burned is 2.5 percent by weight, in accordance with Rule (g)2.

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

Georgia Rule (n) requires the facility to minimize fugitive dust from the landfill. 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.

391-3-1-.02(yy) - Emissions of Nitrogen Oxides from Major Sources

Georgia Rule (yy) limits NOx emissions greater than 25 tons per year from facilities located in DeKalb County. Per 391-3-1-.02(2)(yy)4., emissions from control devices are not subject to Rule (yy), and per 391-3-1-.02(2)(yy)5., emission units subject to Rules (jjj), (lll), (mmm), or (nnn) are also not subject to Rule (yy). Therefore, emissions from the open flares and LFG-fired engines E1, E2, and E3 are not subject to this rule. The only emission unit that is not excluded from this rule is the tub grinder (GRIN5). Condition 3.2.1 limits the hours of operation for the tub grinder so that potential NOx emissions are less than 25 tons per year, and this rule is not applicable.

391-3-1-.02(2)(ggg) – Existing Municipal Solid Waste Landfills

As stated earlier, Rule 391-3-1-.02(2)(ggg) applies to the landfill.

391-3-1-.02(2)(mmm) – NOx Emissions from Stationary Gas Turbines and Stationary Engines used to Generate Electricity

Rule (mmm) applies to stationary engines used to generate electricity whose nameplate capacity is between 100 kilowatts (kW) and 25 megawatts (MW) located in the area around Atlanta including DeKalb County. This rule limits the NOx emissions during the ozone season. LFG-fired engines E1, E2, and E3 are used to generate electricity and are subject to this rule. The landfill has accepted a year-round NOx emission limit of 0.5 grams per hp-hr (Condition 3.4.3) on each of these engines to avoid NSR major source permitting review.

C. Permit Conditions

The conditions in Permit 4953-089-0299-V-04-0 (and its amendments) have been updated to reflect that the landfill is now subject to Georgia Rule (ggg), 40 CFR 62 Subpart OOO, and 40 CFR 63 Subpart AAAA instead of 40 CFR 60 Subpart WWW.

Condition 3.2.1 (3.2.1 in Permit 4953-089-0299-V-04-1) limits hours of operation for tub grinder GRIN5 to 7,400 hours per year to avoid the requirements of Rule (yy).

Landfill

Condition 3.3.1 (updated from Condition 3.3.2 in Permit 4953-089-0299-V-04-0) includes the GCCS requirements from Subpart AAAA.

Condition 3.3.2 (updated from Condition 3.3.3 in Permit 4953-089-0299-V-04-0 and Condition 3.3.24 in Permit 4953-089-0299-V-04-2) requires that the open flares be designed and operated in accordance with 40 CFR 63.11(b).

Condition 3.3.3 (new in this permit) requires that the treatment systems be operated per the requirements of Subpart AAAA.

Condition 3.3.4 (updated from Condition 3.3.1 in Permit 4953-089-0299-V-04-0) contains the bioreactor requirements from 40 CFR 63 Subpart AAAA if liquid (other than leachate) is added to the landfill in a controlled fashion. Note that changes to Subpart AAAA were promulgated on March 26, 2020. This condition has been updated to reflect the new citations in Subpart AAAA.

40 CFR 60 Subpart JJJJ – Engine E3

Condition 3.3.5 (Condition 3.3.7 in Permit 4953-089-0299-V-04-0) establishes the applicability of 40 CFR 60 Subparts A and JJJJ to engine E3.

Condition 3.3.6 (Condition 3.3.8 in Permit 4953-089-0299-V-04-0) includes the emission limits for NO_x, CO, and VOC that apply to engine E3 per Subpart JJJJ.

Condition 3.3.7 (Condition 3.3.9 in Permit 4953-089-0299-V-04-0) requires a maintenance plan and records of maintenance for engine E3 per Subpart JJJJ.

40 CFR 60 Subpart IIII – Tub Grinder GRIN5

Condition 3.3.8 (Condition 3.3.10 in Permit 4953-089-0299-V-04-1) establishes the applicability of 40 CFR 60 Subparts A and IIII to tub grinder GRIN5)

Condition 3.3.9 (Condition 3.3.11 in Permit 4953-089-0299-V-04-1) includes the emission limits for PM, NO_x, NMHC, and CO that apply to tub grinder GRIN5 per Subpart IIII.

Condition 3.3.10 (Condition 3.3.12 in Permit 4953-089-0299-V-04-1) includes the fuel sulfur limit for the fuel burned in tub grinder GRIN5 per Subpart IIII.

Condition 3.3.11 (Condition 3.3.13 in Permit 4953-089-0299-V-04-1) includes the visible emissions limits that apply to tub grinder GRIN5 per Subpart IIII.

Condition 3.3.12 (Condition 3.3.14 in Permit 4953-089-0299-V-04-1) requires that the tub grinder GRIN5 be operated and maintained in accordance with the manufacturer's written instructions. This requirement is due to Subpart IIII.

40 CFR 63 Subpart ZZZZ – Engines E1, E2, and E3 and Tub Grinder GRIN5

Condition 3.3.13 (Conditions 3.3.15 and 3.3.19 in Permit 4953-089-0299-V-04-1) establishes the applicability of 40 CFR 63 Subparts A and ZZZZ to the engines E1, E2, and E3 and tub grinder GRIN5.

Condition 3.3.14 (Condition 3.3.17 in Permit 4953-089-0299-V-04-1) requires good operational practices for engines E1, E2, and E3 and tub grinder GRIN5 per Subpart ZZZZ. Note: if it is determined that the landfill is in fact an area source of HAP emissions, this requirement may be deleted for E3 and GRIN5.

Condition 3.3.15 (Condition 3.3.20 in Permit 4953-089-0299-V-04-1) includes the emission and operational limits that apply to tub grinder GRIN5 per Subpart ZZZZ. Note: if it is determined that the landfill is in fact an area source of HAP emissions, this requirement may be deleted.

Condition 3.3.16 (Condition 3.3.21 in Permit 4953-089-0299-V-04-1) includes an operational limit for tub grinder GRIN5 per Subpart ZZZZ. Note: if it is determined that the landfill is in fact an area source of HAP emissions, this requirement may be deleted.

Condition 3.3.17 (Condition 3.2.2 in Permit 4953-089-0299-V-04-0) requires the facility to burn only LFG in engines E1, E2, and E3. Because these engines fire exclusively LFG, they are exempt from most requirements of Subpart ZZZZ.

NOTE: if it is determined that the landfill is an area source of HAP emissions, the requirements of Conditions 3.3.15 and 3.3.16 are no longer required. Additionally, engine E3 and tub grinder GRIN5 can be removed from Condition 3.3.14. Engines E1 and E2, however, will need to comply with the requirements in Item 13 in Table 2d of Subpart ZZZZ and Item 9 in Table 6 of Subpart ZZZZ.

State Rules

Condition 3.4.1 (Condition 3.4.1 5 in Permit 4953-089-0299-V-04-0) limits the sulfur content of the fuel fired in engines E1, E2, and E3 to 2.5 percent by weight, per Georgia Rule (g).

Condition 3.4.2 (Condition 3.4.2 in Permit 4953-089-0299-V-04-0) limits the opacity of visible emissions from engines E1, E2, and E3 to less than 40 percent per Georgia Rule (b).

Condition 3.4.3 (Condition 3.4.3 5 in Permit 4953-089-0299-V-04-0) limits the NO_x emission rates from any engine powering a generator to less than 0.5 g/bhp-hr. This is a NSR avoidance limit. This emission limit subsumes the Rule (mmm) emission limit of 80 ppm at 15 percent oxygen

Conditions 3.4.4 and 3.4.5 (Conditions 3.4.4 and 3.4.5 in Permit 4953-089-0299-V-04-0) limit fugitive dust and its opacity, in accordance with Rule (n).

Conditions in previous permits that have been removed from this permit

Conditions 3.3.16 and 3.3.18 were revoked by Permit 4953-089-0299-V-04-1.

Condition 3.3.4, which required a treatment system operating plan, has been superseded by the newer requirements of 40 CFR 63 Subpart AAAA, 40 CFR 62 Subpart OOO, and Georgia Rule (ggg).

The requirement to implement a SSM Plan has been removed from Subpart AAAA, so Condition 3.3.5 is no longer needed.

Enclosed Flare F2 has been removed, so the requirements of Condition 3.3.6 are no longer needed.

Condition 3.3.22, which established the applicability of 40 CFR 62 Subpart OOO, has been moved to Condition 2.2.3 of the permit.

The requirements of Condition 3.2.23 are contained in new permit Condition 3.3.1f.

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

The conditions in Permit 4953-089-0299-V-04-0 (and its amendments) have been updated to reflect that the landfill is now subject to Georgia Rule (ggg), 40 CFR 62 Subpart OOO, and 40 CFR 63 Subpart AAAA instead of 40 CFR 60 Subpart WWW.

Condition 4.2.1 (updated from Condition 4.2.15 in Permit 4953-089-0299-V-04-2) requires an initial performance test for any new open flares.

The landfill is not allowed to remove its GCCS or the control devices until the landfill ceases to accept waste (closes), the GCCS has been in operation at least 15 years, and the NMOC emission rate falls below 50 megagrams per year. The exact procedures for demonstrating that the NMOC emission rate has fallen to a sufficiently low level are found in 40 CFR 60.1959(c) and 60.1957(b). Condition 4.2.2 (updated from Condition 4.2.1 in Permit 4953-089-0299-V-04-0) contains these requirements.

Engines E1, E2, and E3

Condition 4.2.3 (Condition 4.2.2 in Permit 4953-089-0299-V-04-0) requires the facility to conduct NOx emission performance testing on engines E1 and E2 any time they have been rebuilt or swapped out (like-for-like), to demonstrate compliance with the limit in Condition 3.4.3. The condition also requires the Permittee to monitor engine manifold temperature, manifold pressure, ignition timing, and engine load during each test.

Condition 4.2.4 (Condition 4.2.3 in Permit 4953-089-0299-V-04-0) requires the facility to establish the maximum manifold temperature and the acceptable range for engines E1, E2, and E3. The ranges established shall be used for reporting excursions as specified in Condition 6.1.7.

Condition 4.2.5 (Condition 4.2.4 in Permit 4953-089-0299-V-04-0) requires the facility to perform an initial performance test on engine E3 for NO_x, CO and VOC emissions to demonstrate compliance with the limits in Permit Conditions 3.3.6 and 3.4.3. The tests are to be conducted at peak load as well as the minimum expected load point. Performance tests are required anytime the engine has been rebuilt or swapped out (like for like). The condition also requires the Permittee to monitor engine manifold temperature, manifold pressure, ignition timing, and engine load during each test. Note that this engine has not yet been constructed.

Condition 4.2.6 (Condition 4.2.5 in Permit 4953-089-0299-V-04-0) requires the facility repeat the performance testing for NO_x, CO and VOC every 8760 hours or three calendar year, whichever occurs first, for engine E3, per the requirements of 40 CFR 60 Subpart JJJJ.

Condition 4.2.7 (Condition 4.2.6 in Permit 4953-089-0299-V-04-0) specifies the procedures to be followed for conducting performance testing on engine E3 as required by 40 CFR 60 Subpart JJJJ for CO, NO_x, and VOC emissions.

Condition 4.2.8 (new in this permit) requires a one-time test for formaldehyde on one of the LFG-fired engines (E1 or E2). The results of this test will help show if the landfill is an area source of HAP emissions.

Tub Grinder GRIN5

Condition 4.2.9 (updated from Condition 4.2.7 in Permit 4953-089-0299-V-04-1) requires the initial performance test or other compliance demonstration on tub grinder GRIN5 per the requirements of 40 CFR 63 Subpart ZZZZ. Note that this condition was modified to remove the deadline from the original permit because this date has passed and the test (or other compliance demonstration) and not been conducted.

Condition 4.2.10 (Condition 4.2.8 in Permit 4953-089-0299-V-04-1) requires subsequent tests on tub grinder GRIN5 per the requirements of Subpart ZZZZ.

Conditions 4.2.11 through 4.2.15 (Conditions 4.2.9 through 4.2.13 in Permit 4953-089-0299-V-04-1) include the procedures required by Subpart ZZZZ for conducting tests on tub grinder GRIN5.

Condition 4.2.16 (Condition 4.2.14 in Permit 4953-089-0299-V-04-1) requires that operating parameter values be reestablished if changes are made to a catalyst on tub grinder GRIN5 per the requirements of Subpart ZZZZ.

NOTE: if it is determined that the landfill is an area source of HAP emissions, the requirements of Conditions 4.2.9 through 4.2.16 are no longer 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

The Seminole Road Landfill is subject to Georgia Rule (ggg), 40 CFR 62 Subpart OOO, and 40 CFR 63 Subpart AAAA. The landfill uses open flares to control NMOC and uses a landfill gas treatment system to produce pipeline gas and treated LFG for three engines to produce electricity. For open flares, monitoring for the continuous presence of a flame is required. The landfill is also required to monitor for the flow to the control devices (open flare and treatment system) by installing a continuous (at least one reading every 15 minutes) flow monitoring device and visually check any bypass lines present. A site-specific monitoring plan is required for the treatment system.

For each wellhead in the collection system, the landfill is required to install a sample port and a temperature measuring device or access port. Once each month, the landfill is required to determine the gauge pressure, the temperature, and oxygen or nitrogen concentration in each wellhead. Excessive pressure or temperature must be reported as an exceedance. For each exceedance, corrective action and re-monitoring must be conducted on a prescribed schedule.

Once per quarter, the landfill is required to monitor methane concentrations on the surface of the landfill. Excessive concentrations (more than 500 ppm above background concentration) will require reporting of an exceedance, corrective action, and re-monitoring on a prescribed schedule. A program to monitor for cover integrity and making repairs, on a monthly basis, is also required.

The conditions in Permit 4953-089-0299-V-04-0 have been updated to reflect that the landfill is now subject to Georgia Rule (ggg), 40 CFR 62 Subpart OOO, and 40 CFR 63 Subpart AAAA instead of 40 CFR 60 Subpart WWW.

Condition 5.2.1 (updated from Condition 5.2.1 in Permit 4953-089-0299-V-04-0 and Condition 5.2.17 in Permit 4953-089-0299-V-04-2) contains the requirements to monitor (1) presence of a flame on an open flare, (2) flow rate of each open flare, (3) flow rate to each treatment system, (4) operating parameters on engines E1, E2, and E3, (5) a hours meter on engines E1, E2, and E3 and tub grinder GRIN5, and (6) fuel flow monitoring on engines E1, E2, and E3.

Landfill

Conditions 5.2.2 through 5.2.7 (updated from Conditions 5.2.2 through 5.2.6 in Permit 4953-089-0299-V-04-0) contain the requirements for wellhead monitoring for temperature, pressure, and oxygen or nitrogen. Conditions 5.2.8 and 5.2.9 (updated from Conditions 5.2.7 and 5.2.8 in Permit 4953-089-0299-V-04-0) contain the requirements for surface methane monitoring. Condition 5.2.10 (updated from Condition 5.2.9 in Permit 4953-089-0299-V-04-0) contains a requirement to monitor landfill cover integrity.

Conditions 5.2.11 and 5.2.12 (new in this permit) require monitoring of any LFG well whose temperature exceeds 145 degrees Fahrenheit per the requirements of 40 CFR 63 Subpart AAAA.

Condition 5.2.13 (new in this permit) requires a treatment system monitoring plan that meets the requirements of 40 CFR 63 Subpart AAAA.

Engines E1, E2, and E3

Condition 5.2.14 (Condition 5.2.10 in Permit 4953-089-0299-V-04-0) contains a plan with the recording frequency for monitoring the manifold temperature, manifold pressure, ignition timing, and engine load for engines E1, E2, and E3.

Condition 5.2.15 (Condition 5.2.11 in Permit 4953-089-0299-V-04-0) requires a NO_x measurement to demonstrate compliance with Georgia Rule (mmm) for engines E1, E2, and E3 during the period from May 1 through September 30 of each year.

Tub Grinder GRIN5

Condition 5.2.16 (Condition 5.2.14 in Permit 4953-089-0299-V-04-0) indicates that if the facility elects to install a CEMS, the CEMS shall be install, operate, and maintain to monitor CO and either O₂ or CO₂ according to the requirements in paragraphs (a)(1) through (4) of 40 CFR 63.6625(a).

Condition 5.2.17 (Condition 5.2.15 in Permit 4953-089-0299-V-04-0) indicates that if the facility is required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of 40 CFR 63 Subpart ZZZZ, the facility has to install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (8) of 40 CFR 63.6625(b).

Condition 5.2.18 (Condition 5.2.16 in Permit 4953-089-0299-V-04-0) requires the facility to demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies according to Table 5 of 40 CFR 63 Subpart ZZZZ. Also requires the facility to submit the notification of compliance status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.6645.

NOTE: if it is determined that the landfill is an area source of HAP emissions, the requirements of Conditions 5.2.16 through 5.2.18 are no longer required.

Conditions in previous permits that have been removed from this permit

Condition 5.2.12 required records for enclosed flare F2. This enclosed flare has been removed, so this condition is no longer required.

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

Seminole Road Landfill is subject to Georgia Rule (ggg), 40 CFR 62 Subpart OOO, and 40 CFR 63 Subpart AAAA which requires the landfill to keep accessible records of design capacity and waste in place and may exclude areas containing non-degradable waste from the GCCS if sufficient records are kept. The landfill accepts asbestos-containing waste and is, therefore, subject to 40 CFR 61 Subpart M. The landfill is required to comply with 40 CFR 61.154 and, upon closure, submit records of asbestos disposal locations and quantities. Subpart AAAA also contains bioreactor requirements (if applicable). As noted earlier, a SSM plan is no longer required effective September 27, 2021.

The conditions in Permit 4953-089-0299-V-04-0 have been updated to reflect that the landfill is now subject to Georgia Rule (ggg) and 40 CFR 63 Subpart AAAA instead of 40 CFR 60 Subpart WWW.

Condition 6.1.8 (new in this permit) specifies that exceedances of operational standards are not deviations of Subpart AAAA provided all required corrective actions are performed as specified in the permit and Subpart AAAA. Note that 40 CFR 60 Subpart WWW, 40 CFR 62 Subpart OOO, and Georgia Rule (ggg) all have equivalent requirements for their operational standards.

Landfill

Condition 6.2.1 (updated from Condition 6.2.15 in Permit 4953-089-0299-V-04-0) requires a closure report when the landfill ceases accepting waste.

Condition 6.2.2 (updated from Condition 6.2.8 in Permit 4953-089-0299-V-04-0) requires a report when the landfill removes or ceases to operate control equipment.

Condition 6.2.3 (updated from Condition 6.2.1 in Permit 4953-089-0299-V-04-0) 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.

Condition 6.2.4 (updated from Condition 6.2.9 in Permit 4953-089-0299-V-04-0) requires records of the GCCS components.

Condition 6.2.5 (updated from Condition 6.2.10 in Permit 4953-089-0299-V-04-0) requires records of existing and planned collectors in the GCCS.

Condition 6.2.6 (updated from Condition 6.2.11 in Permit 4953-089-0299-V-04-0) requires records of GCCS exceedances.

Condition 6.2.7 (new in this permit) requires a report when a required GCCS corrective actions take longer than prescribed in Subpart AAAA. This is a new requirement in Subpart AAAA.

Condition 6.2.8 (updated from Condition 6.2.16 in Permit 4953-089-0299-V-04-0) requires records of continuous presence of a flame in the open flares.

Condition 6.2.9 (new in this permit) requires records of periods when the GCCS or control devices are not operating. This is a new requirement in Subpart AAAA.

Conditions 6.2.10 and 6.2.11 (updated from Conditions 6.2.4 and 6.2.5 in Permit 4953-089-0299-V-04-0) contains requirements for excluding areas of the landfill from the GCCS design, when it is required, due to the area being nonproductive of LFG or which contain non-degradable waste.

Conditions 6.2.12 and 6.2.13 (updated from Conditions 6.2.2 and 6.2.3 in Permit 4953-089-0299-V-04-0) contain requirements from 40 CFR 61 Subpart M which are applicable if the landfill accepts asbestos-containing waste.

Conditions 6.2.14 through 6.2.16 (updated from Conditions 6.2.12 through 6.2.14 in Permit 4953-089-0299-V-04-0) 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.

Condition 6.2.17 (new in this permit) requires records and an annual report if the landfill has employed leachate recirculation in the last 10 years. This is a new requirement from Rule (ggg) and 40 CFR 62 Subpart OOO.

Condition 6.2.18 (updated from Conditions 6.2.6 and 6.2.27 in Permit 4953-089-0299-V-04-0) requires records demonstrating implementation of their dust suppression plan to ensure that the landfill complies with Georgia Rule (n).

Conditions 6.2.19 and 6.2.20 (new in this permit) contain record keeping requirements for enhanced temperature monitoring for any LFG well that exceeds 145 degrees Fahrenheit. This is a new requirement from Subpart AAAA.

Condition 6.2.21 requires the landfills keep records of each failure to meet applicable standards during any startup or shutdown. This is a new requirement from Subpart AAAA.

Tub Grinder GRIN5

Condition 6.2.22 (Condition 6.2.18 in Permit 4953-089-0299-V-04-1) requires recording operating hours of tub grinder GRIN5.

Permit Condition 6.2.23 (Condition 6.2.19 in Permit 4953-089-0299-V-04-0) contains the requirements for fuel oil certification.

Permit Conditions 6.2.24 and 6.2.25 (Conditions 6.2.22 and 6.2.23 in Permit 4953-089-0299-V-04-0) require the facility to demonstrate compliance with the requirements of NSPS Subpart IIII by purchasing, operating, and maintaining records required for certified engines.

Engines E1, E2, and E3

Permit Conditions 6.2.26 and 6.2.27 (Conditions 6.2.24 and 6.2.25 in Permit 4953-089-0299-V-04-0) contain the notification and recordkeeping requirements for engine E3 per 40 CFR 60 Subpart JJJJ.

Permit Condition 6.2.28 (Condition 6.2.26 in Permit 4953-089-0299-V-04-0) contains the recordkeeping maintenance requirements for engines E1 and E2 per 40 CFR 63 Subpart ZZZZ.

Conditions in previous permits that have been removed from this permit

Condition 6.2.7 required a SSM plan. As noted earlier, the SSM plan is no longer required for landfills.

Condition 6.2.17 required records of the LFG flow rate and combustion temperature of Enclosed Flare F2. This enclosed flare has been removed.

Conditions 6.2.20 and 6.2.21 required records that are not required by Georgia Rule (ggg) or 40 CFR 63 Subpart AAAA.

VII. Specific Requirements

A. Operational Flexibility

None Applicable

B. Alternative Requirements

None Applicable

C. Insignificant Activities

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

D. Temporary Sources

None Applicable

E. Short-Term Activities

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
- c) GCCS construction

F. Compliance Schedule/Progress Reports

None Applicable

G. Emissions Trading

None Applicable

H. Acid Rain Requirements

None 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. The facility has equipment that is subject to Title VI of the 1990 Clean Air Act Amendments.

J. Pollution Prevention

None Applicable

K. Specific Conditions

None 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.//