

Facility Name: **RM Clayton Water Reclamation Center**
City: Atlanta
County: Fulton
AIRS #: 04-13-121-00268

Application #: TV-716555
Date Application Received: December 9, 2022
Permit No: 4952-121-0268-V-04-0

Program	Review Engineers	Review Managers
SSPP	Alexander Lagunas	Cynthia Dorrough
ISMU	Sheridan Finder	Dan McCain
SSCP	Sherry Waldron	William Fleming
Toxics	Sherry Waldron	William Fleming
Permitting Program Manager		Steve Allison

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:

RM Clayton Water Reclamation Center

2. Parent/Holding Company Name

City of Atlanta

3. Previous and/or Other Name(s)

The facility is commonly known and referred to as RM Clayton Water Reclamation Center. No other names were identified.

4. Facility Location

2440 Bolton Road NW
Atlanta, Georgia 30318
Fulton County

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

The facility is located in Fulton County, which is an attainment area.

B. Site Determination

There are no applicable issues with regard to the site determination. There are no other facilities which could possibly be contiguous or adjacent and under common control.

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
4952-121-0268-V-03-0	12/18/2018	Title V Renewal
4952-121-0268-V-03-1	03/28/2019	Construction and operation of two biosolids dry systems and three natural gas-fired hot water boilers

D. Process Description

1. SIC Codes(s)

4952

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)

The facility's final product is water reclaimed from wastewater.

3. Overall Facility Process Description

RM Clayton Water Reclamation Center (WRC) receives and treats wastewater using primary, secondary, and tertiary processes. The treated wastewater, also known as reclaimed water, is discharged into the nearby Chattahoochee River. The remaining solids, in the form of sludge, are thickened and dewatered via centrifuges and then burned in one of two multiple hearth incinerators or dried in the class A biosolids dryers. If sufficient incinerator or dryer capacity is unavailable, the facility is able to dispose of the sludge by shipping it to landfills.

Primary air emissions sources at the facility include two multiples hearth sludge incinerators, two boilers, three emergency power generators, and a digester gas-fired generator. Each of the multiple hearth incinerators has a maximum charging rate of 8.6 tons wet sludge per hour or 2.25 tons dry sludge per hour. The maximum annual sludge throughput is approximately 22,000 dry tons per year. Each incinerator is designed to fire natural gas and digester gas as the auxiliary fuels. Particulate matter, sulfur dioxide, and mercury emissions from each incinerator are controlled by a venturi scrubber and a multi-stage impingement scrubber.

The facility also utilizes the two new 1.93-dry-ton/hour each biosolids dryer systems installed in 2020 for biosolids disposal. Dryers are operating parallel to the incinerator system. Biosolids go through the existing centrifuges, onto the existing belt conveyor, and out of the Dewatering Building into the new wet cake hopper via screw conveyors. The biosolids are pumped from the new wet cake hopper to a new Biosolids Drying Building containing two low-temperature belt sludge dryers. Air heated through heat exchangers to 195 degrees F is circulated over the cake on belts. Each dryer has an internal air recirculation rate of 26,486 cubic feet per minute (cfm). A slip stream of 1,472 cfm (at 122 degrees F) is exhausted from each dryer and sent to a single odor control scrubber. The biosolids cake is dried to about 90% solids, transported in an enclosed

conveyor to the product storage silo, and then loaded into trucks for sale as Class A biosolids. Three natural gas-fired low-NO_x boilers produce hot water for the heat exchangers, with only two of the three boilers needed to operate at any time.

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

RM Clayton Water Reclamation Center is a minor source with respect to PSD. Emissions of each PSD-regulated pollutant are less than the major source threshold of 250 tpy. Water reclamation centers 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	✓			✓
PM ₁₀	✓			✓
PM _{2.5}	✓			✓
SO ₂	✓			✓
VOC	✓			✓
NO _x	✓	✓		
CO	✓	✓		
TRS	✓			✓
H ₂ S	✓			✓
Individual HAP	✓			✓
Total HAPs	✓			✓

3. MACT Standards

The facility is considered an area source of HAPs because it is under the threshold for individual and total HAPs. 40 CFR 63 Subpart ZZZZ is applicable to area sources of HAPs. No other MACT standard is applicable to the facility.

The emergency generators (Source Codes: G1, G2, and G3) and the biogas engine generator (Source Code: BEG1) are subject to 40 CFR 63 Subpart ZZZZ. BEG1 is a *new* RICE at an area

source of HAPs and meets the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ. The emergency generators are subject to the requirements of 40 CFR 63 Subpart ZZZZ.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	n
Program Code 8 – Part 61 NESHAP	y
Program Code 9 - NSPS	y
Program Code M – Part 63 NESHAP	y
Program Code V – Title V	y

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

Not applicable.

C. Compliance Status

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

D. Permit Conditions

Not applicable.

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
INC1	Multiple (10) Hearth Incinerator 1 Manufacturer: Bartlett Snow Pacific 28.8 MMBtu/hr Max. Charge Rate = 2.25 tph Installed in 1971 Last modified in Aug 2003	40 CFR 60 Subpart A 40 CFR 60 Subpart O 40 CFR 61 Subpart A 40 CFR 61 Subpart E 40 CFR Part 64 391-3-1-.02(2)(g) 391-3-1-.02(2)(yy) 391-3-1-.02(2)(tt) 391-3-1-.02(2)(www)	SCRB1	Multi-stage Impingement Scrubber with Venturi Scrubber
INC2	Multiple (10) Hearth Incinerator 2 Manufacturer: Bartlett Snow Pacific 28.8 MMBtu/hr Max. Charge Rate = 2.25 tph Installed in 1971 Last modified in Aug 2003	40 CFR 60 Subpart A 40 CFR 60 Subpart O 40 CFR 61 Subpart A 40 CFR 61 Subpart E 40 CFR Part 64 391-3-1-.02(2)(g) 391-3-1-.02(2)(yy) 391-3-1-.02(2)(tt) 391-3-1-.02(2)(www)	SCRB2	Multi-stage Impingement Scrubber with Venturi Scrubber
B1	Digester Boiler 1 Burnham 4FW-1157-50-lb 9.7 MMBtu/hr Installed in 1987	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(yy) 391-3-1-.02(2)(tt)	None	None
B2	Digester Boiler 2 Burnham 4FW-1157-50-lb 9.7 MMBtu/hr Installed in 1987	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(yy) 391-3-1-.02(2)(tt)	None	None
G1	Emergency Generator 1 Onan 1500DFLE Output: 2,200 HP Installed in Feb 2000	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) 391-3-1-.02(2)(tt)	None	None
G2	Emergency Generator 2 Onan 1500DFLE Output: 2,200 HP Installed in Feb 2000	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) 391-3-1-.02(2)(tt)	None	None
G3	Emergency Generator 3 Onan 1500DFLE Output: 2,200 HP Installed in Feb 2000	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) 391-3-1-.02(2)(tt)	None	None

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
BEG1	Biogas Engine Generator Caterpillar G3520C 2011 Model Year Input: 14.5 MMBtu/hr Output: 2,233 HP Output: 1,600 kWe Installed in March 2012	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)(tt) 391-3-1-.02(2)(mmm)	None	None
SD1	Biosolids Dryer 1 SUEZ STC system Thermal belt dryer 1.93 dry ton per hour	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	None	None
SD2	Biosolids Dryer 2 SUEZ STC system Thermal belt dryer 1.93 dry ton per hour	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	None	None
HWB1	Hot Water Boiler 1 Hurst Series 500: 700 HP 29.4 MMBtu/hr heat input capacity Natural gas-fired boiler	40 CFR 60 Subpart A 40 CFR 60 Subpart Dc 391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(III)	LNB	Low NO _x Burner
HWB2	Hot Water Boiler 2 Hurst Series 500: 700 HP 29.4 MMBtu/hr heat input capacity Natural gas-fired boiler	40 CFR 60 Subpart A 40 CFR 60 Subpart Dc 391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(III)	LNB	Low NO _x Burner
HWB3	Hot Water Boiler 3 Hurst Series 500: 700 HP 29.4 MMBtu/hr heat input capacity Natural gas-fired boiler	40 CFR 60 Subpart A 40 CFR 60 Subpart Dc 391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(III)	LNB	Low NO _x Burner
PS1	Product dried sludge Storage Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	FF	Fabric Filter
TL1	Truck loading	391-3-1-.02(2)(n)	BAG	Baghouse
CT1	Cooling Tower 3,567 gpm design water recirculation rate	391-3-1-.02(2)(n)	None	None

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

B. Equipment & Rule Applicability

Emission and Operating Caps:

The facility had previously accepted the following limits in order to avoid non-attainment area new source review (NAA-NSR). No changes have been made to these limits.

- NO_x emissions from the multiple hearth incinerators (Source Codes: INC1 and INC2) shall not exceed 102.5 tons during any twelve consecutive months.

- Each emergency generator (Source Codes: G1, G2, and G3) is limited to 200 hours per year. They shall not fire any fuel other than distillate fuel oil and shall not contain greater than 0.5% sulfur by weight.
- The digester boilers (Source Codes: B1 and B2) shall not fire any fuel other than natural gas and digester gas.
- The biogas engine generator (Source Code: BEG1) shall not fire any fuel other than digester gas.

Rules and Regulations Assessment:

40 CFR 60 Subpart Dc – “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units”

Applicable to the hot water boilers (Source Codes: HWB1, HWB2, and HWB3).

This subpart applies to steam generating units for which construction, modification, or reconstruction commenced after June 9, 1989 and have a maximum design heat input capacity of 100 MMBtu/hr or less but greater than or equal to 10 MMBtu/hr.

The hot water boilers are rated at 29.4 MMBtu and were constructed after June 9, 1989 and thus are subject to this subpart. There are no applicable SO₂ or PM limits because the hot water boilers will fire natural gas only. This subpart requires the facility to monitor the daily amounts of each type of fuel burned in each boiler, to certify the sulfur content of the fuel, to keep records, and to report sulfur compliance and dates of boiler construction and startup. In lieu of maintaining records of each fuel combusted during each operating day, the facility may elect to maintain records of each fuel combusted during each calendar month because the boilers only fire natural gas.

The digester boilers (Source Codes: B1 and B2) have a heat input capacity of less than 10 MMBtu/hr and thus are not subject to this subpart.

40 CFR 60 Subpart O – “Standards of Performance for Sewage Treatment Plants”

Applicable to the incinerators (Source Codes: INC1 and INC2).

This subpart applies to incinerators that combust waste containing more than 10 percent sewage sludge (dry basis) produced by municipal sewage treatment plants or that charges more than 1000 kg (2205 lb) per day municipal sewage sludge (dry basis). These incinerators commenced construction or modification after June 11, 1973.

The facility operates incinerators that combust waste containing more than 10 percent sewage sludge (dry basis) and thus is subject to this subpart.

The incinerators shall not discharge PM at a rate in excess of 0.65 g/kg dry sludge input (1.30 lb/ton dry sludge input) and any gases which exhibit 20 percent opacity or greater, per 40 CFR 60.152. The facility is required to operate a flow-measuring device to determine the mass or volume of sludge

charged to the incinerator, provide access to the sludge charged so that a well-mixed representative grab sample of the sludge can be obtained, and operate a weighing device for determining the mass of any wasted charged to the incinerator, per 40 CFR 60.153(a). The facility has multiple hearth incinerators with wet scrubbing devices and is required to operate a monitoring device that continuously measures and records the pressure drop of the gas flow through the wet scrubbing device and to operate a monitoring device that continuously measures and records the oxygen content of the incinerator exhaust gas, per 40 CFR 60.153(b). Records of the measured pressure drop and measured oxygen content are required, per 40 CFR 60.153(c).

The operation of the monitoring device that continuously measures and records the pressure drop of the gas flow through the wet scrubbing device, the temperature measuring devices at every hearth, and fuel flow to the incinerator, the daily sampling and analysis of the sludge feed, and the recordkeeping of rate of sludge charged, measured temperatures, fuel flow, and content of the sludge are required if the particulate matter emission rate measured during the performance test is more than or equal to 0.75 lb/ton. The PM emission rate from the incinerators has been less than 0.10 lb/ton in the previous 3 years, as determined by performance testing. Accordingly, the facility will be exempt from the monitoring requirements mentioned in this paragraph. However, the monitoring device measuring pressure drop and the collection and analysis of a grab sample are required for the calculating of NO_x emissions. In the case that future performance testing results in a PM emission rate above 0.75 lb/ton dry sludge, the facility will no longer be exempt from those monitoring requirements. The facility generally conducts this monitoring for operational purposes.

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

Applicable to the biogas engine generator (Source Code: BEG1).

This subpart applies to stationary spark ignition internal combustion engines that commence construction after June 12, 2006 and were manufactured after July 1, 2007 with engine power greater than 500 HP.

The biogas engine generator commenced construction after June 12, 2006 and its maximum power is greater than 500HP, and thus is subject to this subpart. The generator is subject to the emission standards found in Table 1 to Subpart JJJJ. The subpart also contains recordkeeping, testing, and reporting requirements.

The emergency generators (Source Codes: G1, G2, and G3) were constructed prior to June 12, 2006 and thus are not subject to this subpart.

40 CFR 60 Subpart LLLL – “Standards of Performance for New Sewage Sludge Incineration Units”

Not applicable.

This subpart applies to sewage sludge incineration units that commenced construction after October 14, 2010 or modification commenced after September 21, 2011.

The incinerators (Source Codes: INC1 and INC2) were constructed prior to October 14, 2010 and thus are not subject to this subpart.

40 CFR 61 Subpart E – “National Emission Standard for Mercury”

Applicable to the incinerators (Source Codes: INC1 and INC2).

This subpart is applicable to stationary sources that incinerate or dry wastewater treatment plant sludge.

The facility incinerates wastewater treatment plant sludge and thus is subject to this subpart. Emissions shall not exceed 3.2 kg (7.1 lb) of mercury per 24-hour period, per 40 CFR 61.52. The facility is required to conduct performance testing, according to 40 CFR 61.53(d) or 61.54. The facility is required to monitor mercury emission at intervals at least once per year if emissions exceed 1.6 kg (3.5 lb) per 25-hour period. If this happens, the facility must also submit an application for permit amendment to reflect these new requirements.

The biosolids dryers (Source Codes: SD1 and SD2) do not meet the definition of a *sludge dryer* because combustion gases are not directly used to reduce moisture content as defined in this subpart and thus these units are not subject to this subpart.

40 CFR 63 Subpart ZZZZ

Applicable to the emergency generators (Source Codes: G1, G2, and G3) and to the biogas engine generator (Source Code: BEG1).

This subpart applies to stationary RICE located at a major or area source of HAP emissions.

The emergency generators and the biogas generators are all stationary RICE located at RM Clayton WRC, an area source of HAP emissions, and thus subject to this subpart.

The biogas engine generator is a *new* stationary RICE, per this subpart, because it was constructed on or after June 12, 2006. *New* stationary RICE located at an area source meet the requirements of this subpart by meeting the requirements of 40 CFR 60 Subpart IIII, per 40 CFR 63.6590(c). No other requirements from this subpart apply to the biogas engine generator.

The emergency generators are *existing* stationary RICE because they were constructed prior to June 12, 2006. The following apply to *existing emergency generators*:

- Engine maintenance requirements found in Item 4 of Table 2d to Subpart ZZZZ.
- Emission limitations found in Table 2b to Subpart ZZZZ, which none are applicable to the emergency generators.
- Diesel fuel requirements, per 40 CFR 63.6604, if they operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii).
- Operate and maintain in a manner consistent with safety and good air pollution control practices for minimizing emissions, per 40 CFR 63.6605, 40 CFR 63.6625(e), 40 CFR 63.6640(a), and Item 9 of Table 6 of Subpart ZZZZ.

- Installation of a non-resettable hour meter, per 40 CFR 63.6625(f)
- Minimization of the engine's time spent at idle during startup, per 40 CFR 63.6625(h).
- Option of utilizing an oil analysis program, per 40 CFR 63.6625(i).
- Requirements in 40 CFR 63.6640(f) to be considered an *emergency generator*.
- Report containing the requirements listed in Item 4 of Table 8 of Subpart ZZZZ if the emergency generators operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii).
- Recordkeeping requirements, per 40 CFR 63.6655(a).
- Maintenance records, per 40 CFR 63.6655(e).
- Record of the hours of operation that is recorded through a non-resettable hour meter, per 40 CFR 63.6655(f).
- Maintain records as specified in 40 CFR 63.6660.

40 CFR 63 Subpart JJJJJJ – “National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boiler Area Sources”

Not applicable.

This subpart applies to an industrial, commercial, or institutional boiler that is located in an area source of HAPs. *Gas-fired* boilers are not subject to this subpart, per 40 CFR 63.11195(e).

The digester boilers (Source Codes: B1 and B2) and the hot water boilers (Source Codes: HWB1, HWB2, and HWB3) are *gas-fired* industrial boilers located at an area source of HAPs and thus are not subject to this subpart.

40 CFR 64 – “Compliance Assurance Monitoring”

Applicable to the multiple hearth incinerators (Source Codes: INC1 and INC2).

The multiple hearth incinerators are subject to the provisions of 40 CFR 64 because:

- They are located at a major source that is required to obtain a Title V Permit, per 64.2(a).
- They are subject to an emission limitation or standard for the applicable pollutant (PM) emission limit specified in Permit Condition 3.3.3a, per 64.2(a)(1).
- They use control devices (multi-stage impingement scrubbers with venturi scrubbers SCRB1 and SCRB2) to achieve compliance, per 64.2(a)(2).
- Potential pre-controlled emissions of the applicable pollutant (PM) from each unit are at least 100 percent of the PM major source threshold, which is 100 tpy, per 64.2(a)(3).
- They are not otherwise exempt, per 64.2(b).

391-3-1-.02(2)(b) – “Visible Emissions”

Applicable to the emergency generators (Source Codes: G1, G2, and G3), the biogas engine generator (Source Code: BEG1), and the biosolids dryers (Source Codes: SD1 and SD2).

This rule applies to sources that are also subject to some other emission limitation under 391-3-1-.02(2). The emergency generators, the biogas engine generator, and the biosolids dryer have a visible emissions limit of 40 percent opacity.

The digester boilers (Source Codes: B1 and B2) and the hot water boilers (Source Codes: HWB1, HWB2, and HWB3) have a more restrictive condition, per Rule (d), and thus are not subject to this rule. The product dried sludge storage silo (Source Code: PS1), the truck loading (Source Code: TL1), and the cooling tower (Source Code: CT1) have a more restrictive condition, per Rule (n), and thus are not subject to this rule.

391-3-1-.02(2)(c) – “Incinerators”

Not applicable.

This rule applies to incinerators, except for those listed in 391-3-1-.02(2)(c)6 including incinerators subject to Rule (www). The multiple hearth incinerators (Source Codes: INC1 and INC2) are subject to Rule (www) and thus not subject to this rule.

391-3-1-.02(2)(d) – “Fuel Burning Equipment”

Applicable to the digester boilers (Source Codes: B1 and B2) and hot water boilers (Source Codes: HWB1, HWB2, and HWB3).

This rule applies to fuel burning equipment.

The digester boilers and the hot water boilers are fuel burning equipment and thus subject to this subpart. The units must limit their emission of fly ash and/or other particulate matter and visible emissions.

391-3-1-.02(2)(e) – “Particulate Emission from Manufacturing Processes”

Applicable to the biosolids dryers (Source Codes: SD1 and SD2) and the product dried sludge storage silo (Source Code: PS1).

This rule applies to manufacturing processes.

The biosolids dryers and storage silo are considered *new* with respect to this rule and have a PM limit defined by the equations listed in 391-3-1-.02(2)(e)1(i).

391-3-1-.02(2)(g) - “Sulfur Dioxide”

Applicable to the multiple hearth incinerators (Source Codes: INC1 and INC2), the digester boilers (Source Codes: B1 and B2), the emergency generators (Source Codes: G1, G2, and G3), the biogas engine generator (Source Code: BEG1), and the hot water boilers (Source Codes: HWB1, HWB2, and HWB3).

This rule applies to all fuel burning sources. All fuel burning sources below 100 MMBtu shall not burn fuel containing more than 2.5 percent sulfur, by weight.

391-3-1-.02(2)(n) – “Fugitive Dust”

Applicable to the biosolids dryers (Source Codes: SD1 and SD2), the product dried sludge storage silo (Source Code: PS1), the truck loading (Source Code: TL1), and the cooling tower (Source Code: CT1).

391-3-1-.02(2)(tt) – “VOC Emissions from Major Sources”

Applicable to the multiple hearth incinerators (Source Codes: INC1 and INC2), the digester boilers (Source Codes: B1 and B2), the emergency generators (Source Codes: G1, G2, and G3), and the biogas engine generator (Source Code: BEG1).

This rule applies to sources with potential emissions of VOC exceeding 25 tpy in a listed county, including Fulton County.

The facility has VOC emissions exceeding 25 tpy and is required to have reasonably available control technology (RACT). The facility submitted the VOC RACT Plan on April 16, 2012.

391-3-1-.02(2)(yy) – “Emissions of Nitrogen Oxides from Major Sources”

Applicable to the multiple hearth incinerators (Source Codes: INC1 and INC2) and the digester boilers (Source Codes: B1 and B2).

This rule applies to sources with potential emission of nitrogen oxides exceeding 25 tpy in a listed county, including Fulton County.

The facility has NO_x emissions exceeding 25 tpy and is required to have reasonably available control technology (RACT). The facility submitted the NO_x RACT Plan in April 2000.

391-3-1-.02(2)(lll) – “NO_x Emissions from Fuel-Burning Equipment”

Applicable to the hot water boilers (Source Codes: HWB1, HWB2, and HWB3).

This rule applies to fuel-burning equipment with a heat input capacity equal to or greater than 10 MMBtu and less than or equal to 250 MMBtu/hr that is located in one of the listed counties.

The hot water boilers have a heat input capacity of more than 10 MMBtu and less than 250 MMBtu and are located in Fulton County, one of the listed counties, and thus is subject to this rule. The hot water boilers have a NO_x emission limit of 30 ppm at 3% oxygen on a dry basis during the period of May 1 through September 30.

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

Applicable to the emergency generators (Source Codes: G1, G2, and G3) and to the biogas engine generator (Source Code: BEG1).

This rule applies to stationary gas engines used to generate electricity with capacity greater than or equal to 100 KWe and less than or equal to 25 MWe. The emergency generators are not subject to the emission limitations of this rule if they meet the definition of an *emergency generator* according to the rule. The biogas engine generator has a NO_x limit of 80 ppm at 15% O₂ during the months of May 1 through September 30.

391-3-1-.02(2)(rrr) – “NO_x Emissions from Small Fuel-Burning Equipment”

Not applicable.

This rule applies to fuel-burning equipment installed before May 1, 1999 with a maximum heat input capacity of less than 100 MMBtu/hr, located in a listed county if the facility exceeds 25 tpy, and not subject to Rule (jjj) or (lll).

The digester boilers (Source Codes: B1 and B2) have a capacity less than 100 MMBtu/hr, were constructed prior to May 1, 1999, not subject to Rule (jjj) or (lll), and located in Fulton County, one of the listed counties, and thus are subject to this rule. As an alternative to complying with the requirement of this rule, the Permittee may comply with the requirements of Rule (yy), per 391-1-.02(2)(rrr)(3). The digester boilers are included in the NO_x RACT plan of April 2000 as a requirement of Rule (yy) and thus do not have to meet the requirements of Rule (rrr).

391-3-1-.02(2)(www) – “Sewage Sludge Incineration Units” and 40 CFR 60 Subpart MMMM – “Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units”

Applicable to the multiple hearth incinerators (Source Codes: INC1 and INC2).

This rule applies to sewage sludge incineration units that are located at a wastewater treatment facility and that commenced construction on or before October 14, 2010.

The incinerators were constructed prior to October 14, 2010 and thus are subject to this rule. The incinerators must comply with the model rule standards, requirements, and provisions of 40 CFR 60 Subpart MMMM with exceptions specified in 391-3-1-.02(2)(www)2.(ii). Operator training and qualifications requirements are applicable, per 40 CFR 60.5130 through 60.5160. Emission limit and standards for PM, HCl, CO, dioxins, Hg, NO_x, SO₂, Cd, Pb, and fugitive emissions are specified in Table 3, per 40 CFR 60.5165. Operating limits and requirements are specified in Table 4, per 40 CFR 60.5170.

C. Permit Conditions

Conditions 3.2.1 through 3.2.7 have been retained from Permit No. 4952-121-0268-V-03-0/1. They have been reordered to place the NO_x emission standard first. Reference to NAA NSR Avoidance has been removed because Fulton County is now in attainment.

Condition 3.2.1 sets the NO_x emission standard for the multiple hearth incinerators (Source Codes: INC1 and INC2), per Rule (yy).

Condition 3.2.2 permits only the firing of natural gas, digester gas, and sewage sludge in INC1 and INC2, per Rule (yy).

Condition 3.2.3 permits only the firing of natural gas and digester gas in the digester boiler (Source Codes: B1 and B2), per Rule (g) and (yy) and Avoidance of 40 CFR 63 Subpart JJJJJ.

Condition 3.2.4 permits only the firing of distillate fuel oil in the emergency generators (Source Codes: G1, G2, and G3), per Rule (g).

Condition 3.2.5 permits only the firing of digester gas in the biogas engine generator (Source Code: BEG1), per Rule (g).

Condition 3.2.6 permits only the firing of natural gas in the hot water boilers (Source Codes: HWB1, HWB2, and HWB3), per Rule (g) and Avoidance of 40 CFR 63 Subpart JJJJJ.

Condition 3.2.7 limits the hours of operation of G1, G2, and G3 as emergency generators, per Rule (mmm).

Conditions 3.3.1 through 3.3.16 except for Condition 3.3.12 have been retained from Permit No. 4952-121-0268-V-03-0/1. Condition 3.3.12 is new to the permit. Conditions have been reordered and grouped per applicable subpart. Condition 3.3.17 in the current permit has been moved to the SIP subsection.

Condition 3.3.1 establishes the applicability of 40 CFR 60 Subpart A and Dc to HWB1, HWB2, and HWB3.

Condition 3.3.2 establishes the applicability of 40 CFR 60 Subpart A and O to INC1 and INC2.

Condition 3.3.3 sets the PM and visible emissions standards for INC1 and INC2, per 40 CFR 60 Subpart O.

Condition 3.3.4 establishes the applicability of 40 CFR 60 Subpart JJJJ to BEG1.

Condition 3.3.5 sets the NO_x, CO, and VOC emission standards for BEG1, per 40 CFR 60 Subpart JJJJ.

Condition 3.3.6 requires the operation of BEG1 in a manner consistent with good air pollution control practice, per 40 CFR 60 Subpart JJJJ.

Condition 3.3.7 establishes the applicability of 40 CFR 61 Subpart A and E to INC1 and INC2.

Condition 3.3.8 establishes the mercury standard for INC1 and INC2, per 40 CFR 61 Subpart E.

Condition 3.3.9 prevents any changes in method of operation of INC1 and INC2 without estimating the resultant increase in mercury emissions, per 40 CFR 61 Subpart E.

Condition 3.3.10 establishes the applicability of 40 CFR 63 Subpart A and ZZZZ to G1, G2, and G3 and the biogas engine generator (Source Code: BEG1).

Condition 3.3.11 sets the maintenance schedule for G1, G2, and G3, per 40 CFR 63 Subpart ZZZZ.

Condition 3.3.12 sets the limit of sulfur content and cetane index or aromatic content for the diesel fuel fired in G1, G2, and G3, per 40 CFR Subpart ZZZZ.

Condition 3.3.13 requires the operation and maintenance of G1, G2, and G3 according to the engine manufacturer's written instructions, per 40 CFR Subpart ZZZZ.

Condition 3.3.14 details the operation of G1, G2, and G3 during startup, per 40 CFR 63 Subpart ZZZZ.

Condition 3.3.15 permits an oil analysis program to extend the oil change requirements in Condition 3.3.11, per 40 CFR 63 Subpart ZZZZ.

Condition 3.3.16 details the operation of G1, G2, and G3 to be considered emergency generators under 40 CFR 63 Subpart ZZZZ.

Conditions 3.4.1 through 3.4.9 have been retained from Permit No. 4952-121-0268-V-03-0/1. The conditions have been reordered in order as they appear in the Georgia Rules.

Condition 3.4.1 sets the visible emissions standard for G1, G2, and G3; BEG1; and the biosolid dryers (Source Codes: SD1 and SD2), per Rule (b).

Condition 3.4.2 sets the PM and visible emission standards for B1 and B2 and HWB1, HWB2, and HWB3, per Rule (d).

Condition 3.4.3 sets the PM emission standard for SD1 and SD2 and the product dried sludge storage (Source Code: PS1), per Rule (e).

Condition 3.4.4 sets the requirement to minimize fugitive dust, per Rule (n) and the opacity standard for PS1.

Condition 3.4.5 requires the employment of good combustion practices and an annual tune-up on INC1 and INC2 and BEG1, per Rule (tt) and the VOC RACT plan of October 2012.

Condition 3.4.6 requires the employment of good combustion practices and the operation of the multi-stage impingement scrubbers (Source Codes: SCRB1 and SCRB2) on the INC1 and INC2, per Rule (yy) and the NO_x RACT plan of April 2000.

Condition 3.4.7 requires an annual tune-up of B1 and B2, per Rule (yy) and the NO_x RACT plan of April 2000.

Condition 3.4.8 establishes the NO_x emission standard for HWB1, HWB2, and HWB3 during the period of May 1 to September 30, per Rule (III).

Condition 3.4.9 establishes the NO_x emission standard for BEG1 during the period of May 1 to September 30, per Rule (mmm).

Conditions 3.4.10 through 3.4.19 apply to the multiple hearth incinerators (Source Codes: INC1 and INC2), per Rule (www) and 40 CFR 60 Subpart MMMM.

Condition 3.4.10 establishes the applicability of Rule (www) to INC1 and INC2.

Condition 3.4.11 establishes the applicability of 40 CFR 60 Subpart MMMM, except those specified in Rule (www), to INC1 and INC2.

Condition 3.4.12 sets operator criteria for the operation of the multiple hearth incinerators.

Condition 3.4.13 details the criteria to obtain and maintain incinerator operator qualification.

Condition 3.4.14 sets the emission limits and standards for the multiple hearth incinerators.

Condition 3.4.15 sets the operating limits for the multiple hearth incinerators, including combustor chamber temperature, pressure drop in the scrubber, scrubber scrubbant flow rate, and scrubbant pH.

Condition 3.4.16 sets the operating limits for the fugitive emission monitoring plan.

Condition 3.4.17 establishes the applicability of new operating limits, as determined after performance tests.

Condition 3.4.18 establishes applicability of the emission limits and standards and operating standards at all times the multiple hearth incinerators are operating and during periods of malfunction.

Condition 3.4.19 requires the annual inspection of air pollution control devices.

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

Conditions 4.2.1 through 4.2.9 have been retained from Permit No. 4952-121-0268-V-03-0/1. Conditions 4.2.4 and 4.2.5 of the current permit have been combined.

Condition 4.2.1 requires a performance test on the biogas engine generator (Source Code: BEG1) to demonstrate compliance with Condition 3.3.5, per 40 CFR 60 Subpart JJJ.

Condition 4.2.2 details the conditions for the performance testing and contains the equations to calculate emissions from BEG1, per 40 CFR 60 Subpart JJJ.

Condition 4.2.3 requires the implementation of the monitoring requirements of 40 CFR 61.55(a) if the facility's tested mercury emissions exceed 1,600 grams per 24-hour periods. The facility is also required to submit a permit application to reflect these requirements in the permit, per 40 CFR 61 Subpart E.

Condition 4.2.4 requires annual performance tests to demonstrate compliance with the standards of Condition 3.4.14, per Rule (www) and PTM 2.130.

Condition 4.2.5 requires performance tests after a process change, per Rule (www) and PTM 2.130.

Condition 4.2.6 states the criteria to conduct performance tests less frequently than annually, per Rule (www) and PTM 2.130.

Condition 4.2.7 states the criteria for each performance test, per Rule (www) and PTM 2.130. References to test methods already mentioned in Condition 4.1.3 and notification already mentioned in 4.2.2 were excluded.

Condition 4.2.8 establishes the parameter set points for the operating limits of the combustion chamber operating temperature, pressure drop across each scrubber, scrubbant flow rate, and scrubbant pH, per Rule (www) and PTM 2.130.

Condition 4.2.9 confirms the operating limits determined in Condition 4.2.8, per Rule (www) and PTM 2.130.

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

Conditions 5.2.1 through 5.2.11 have been retained from Permit No. 4952-121-0268-V-03-0/1. Conditions have been reordered to group conditions applicable to the same unit together. Condition 5.2.13 of the current permit has been incorporated into Condition 5.2.1. Condition 5.2.8 of the current permit has been removed as the initial performance evaluations have already been performed.

Condition 5.2.1 requires the operation of:

- Belt scale or sludge-flow monitoring device on the multiple hearth incinerators (Source Codes: INC1 and INC2), per 40 CFR 60 Subpart O and Rule (www)
- Differential pressure indicators, per 40 CFR 60 Subpart O and Rule (www)
- Oxygen-monitoring devices, per 40 CFR 60 Subpart O
- Temperature-measuring devices at each hearth, per 40 CFR 60 Subpart O, if PM emission rate exceeds 0.75 lb/dry ton of sludge input
- Fuel meters, per 40 CFR 60 Subpart O, if PM emission rate exceeds 0.75 lb/dry ton of sludge input
- Scrubbant flow-monitoring devices, per Rule (www)
- Temperature-measuring devices at the combustor chamber (or afterburner chamber), per Rule (www)
- pH-measuring devices, per Rule (www)
- Devices to determine bypass of the scrubbers
- Fuel meters for natural gas and digester gas for the incinerators
- Non-resettable hour meters for the emergency generators (Source Codes: G1, G2, and G3), per 40 CFR 63 Subpart ZZZZ
- Natural gas consumption meters on the water boilers (Source Codes: HWB1, HWB2, and HWB3), per 40 CFR 60 Subpart Dc

Condition 5.2.2 requires access for a grab sample of the sludge, per 40 CFR 60 Subpart O.

Condition 5.2.3 requires the analysis of the grab sample daily to determine cake solid content and volatile solids percent, and specific weight of wet sludge, per 40 CFR 60 Subpart O.

Condition 5.2.4 lists INC1 and INC2 as the affected units under CAM Rule, per 40 CFR 64.

Condition 5.2.5 details the performance criteria under CAM Rule, per 40 CFR 64. The pressure drop across the scrubbers and the scrubbant flow rates are used as the CAM indicators.

Condition 5.2.6 requires the analysis of the grab sample daily to determine moisture content, per Rule (www).

Condition 5.2.7 details the monitoring criteria for the parameters listed in Condition 5.2.1b, f, g, and h (differential pressure indicator, scrubbant flow-monitoring device, and temperature-measuring device, and pH-measuring device, respectively).

Condition 5.2.8 requires the operation of the continuous parameter monitoring system of Condition 5.2.7 according to the monitoring plan of Condition 6.2.12, per Rule (www).

Condition 5.2.9 requires the operation of a device to measure the use of a bypass stack if a bypass stack is equipped, per Rule (www).

Condition 5.2.10 requires the monitoring of NO_x emissions from the biogas engine generator (Source Code: BEG1) by performing a test measurement.

Condition 5.2.11 requires the monitoring of NO_x emissions from the hot water boilers (Source Codes: HWB1, HWB2, and HWB3) by performing a tune-up on each boiler.

C. Compliance Assurance Monitoring (CAM)

Permit Conditions 5.2.6 and 5.2.7 include the CAM requirements for PM emissions from the multiple hearth incinerators. The facility uses pressure drop across SCRB1 and SCRB2 and scrubbant flow rates as CAM indicators.

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

Conditions 6.2.1 through 6.2.24 except for Condition 6.2.8 have been retained from Permit No. 4952-121-0268-V-03-0/1. The conditions have been reordered to group conditions applicable to the same unit together. Condition 6.2.8 has been removed as Fulton County is now in attainment. Similarly, the emission statement formerly required in Condition 6.1.8 has been removed for the same reason.

Condition 6.2.1 calculates the amount of dry sludge burned in the multiple hearth incinerators (Source Codes: INC1 and INC2) daily and monthly.

Condition 6.2.2 requires the determination of the amount of natural gas and digester gas fired in each incinerator daily and monthly.

Condition 6.2.3 requires calculating the total 12-month NO_x emissions from the incinerators using the data from Conditions 6.2.1 and 6.2.2.

Condition 6.2.4 requires records of the NO_x emissions calculated in Condition 6.2.3.

Condition 6.2.5 requires the submittal of a report containing data from Condition 6.2.4.

Condition 6.2.6 requires the submittal of a semi-annual report with records of the operation, maintenance, and calibration of the incinerators, per 40 CFR 60 Subpart O.

Condition 6.2.7 requires the submittal of a semiannual report if the average PM emission rate from the incinerators exceeds the threshold of 0.75 lb/ton of dry sludge input, per 40 CFR 60 Subpart O.

Condition 6.2.8 requires records of mercury emission test results.

Condition 6.2.9 requires records of operator training and review, per Rule (www).

Condition 6.2.10 requires the notification to the Division if a qualified operator is not accessible and the submittal of a status report until a qualified operator is accessible, per Rule (www).

Condition 6.2.11 requires the notification to the Division when the facility resumes operation, upon being shutdown by the Division for failure to provide an accessible qualified operator, per Rule (www).

Condition 6.2.12 details the requirements of the site-specific monitoring plan for each continuous monitoring system, per Rule (www).

Condition 6.2.13 requires the implementation and maintenance of the monitoring plan specifying ash handling operating procedures, per Rule (www).

Condition 6.2.14 requires the update and re-submittal of the monitoring plans required by Conditions 6.2.12 and 6.2.13 if there are any changes in the monitoring procedures or there is a process change, per Rule (www).

Condition 6.2.15 requires records of the daily average sewage sludge feed rate and moisture content daily, per Rule (www).

Condition 6.2.16 lists the records required to be maintained, per Rule (www).

Condition 6.2.17 requires the submittal of an annual compliance report and lists the requirements, per Rule (www). The annual submittal deadline of February 28 is now specified, consistent with current practice.

Condition 6.2.18 requires the submittal of a semi-annual deviation report and lists the requirements, per Rule (www).

Condition 6.2.19 requires submittal of other notifications and associated submittal deadlines, per Rule (www).

Condition 6.2.20 requires record of the natural gas burned in the hot water boilers (Source Codes: HWB1, HWB2, and HWB3) daily, per 40 CFR 60 Subpart Dc.

Condition 6.2.21 requires records of all notifications associated with 40 CFR 60 Subpart JJJJ and maintenance for the biogas engine generator (Source Code: BEG1).

Condition 6.2.22 requires the record of the hours of operation for the emergency generators (Source Codes: G1, G2, and G3), per 40 CFR 63 Subpart ZZZZ.

Condition 6.2.23 requires records to demonstrate compliance and records of maintenance, per 40 CFR 63 Subpart ZZZZ.

Condition 6.2.24 requires verification that shipments of distillate fuel oil comply with Condition 3.2.4.

VII. Specific Requirements

A. Operational Flexibility

- Not applicable.

B. Alternative Requirements

- No applicable.

C. Insignificant Activities

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

D. Temporary Sources

- Not applicable.

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

- Not applicable.

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.//