GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

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NARRATIVE

TO: Cynthia Dorrough

FROM: Bradley Prinsen

DATE: 4/23/2025

Facility Name:	**GA1**
AIRS No.:	157-00077
Location:	Maysville, GA (Jackson County)
Application #:	29627
Date of Application:	March 6, 2025

Background Information

Northern Data US, Inc. proposes to construct a datacenter on a greenfield site at Industrial Road Maysville, Georgia (Jackson County). Jackson County is currently designated as an attainment area for all criteria pollutants. The facility will be developed to include a building for IT infrastructure and support systems and two (2) generator yards (37 emergency generators total) to ensure continuous operation of the data center during power outages.

Purpose of Application

Northern Data submitted Permit Application No. 29627, dated March 6, 2025, for the construction and operation of thirty-six (36) Group 1 diesel-fired emergency generators and (1) Group 2 diesel-fired emergency generator with associated diesel fuel belly tanks to be located at a proposed data center in Maysville, Georgia. The facility is requesting to take a NO_x limit of 24 tpy in order to limit toxic air pollutant (benzene) emissions to below the minimum emissions rate (MER) and will demonstrate compliance by calculating NO_x emissions monthly. GA1 will be classified as a synthetic minor source with respect to Title V and a minor source with respect to PSD. A public advisory was issued due to the construction of new emissions units, which ended on April 11, 2025. No comments were received by the Division.

Equipment List

Source Code	Capacity (MMBtu/hr)	Descriptions	Installation Date	Applicable Requirements
01A	19.2	Diesel-fired Emergency Generator (Group 1)	2025	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) 391-3-1-.02(2)(mmm)
01B	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
01C	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
01D	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
01E	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
01F	19.2	Diesel-fired Emergency Generator (Group 1)	2025	

Source Code	Capacity (MMBtu/hr)	Descriptions	Installation Date	Applicable Requirements
02A	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
02B	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
02C	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
02D	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
02E	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
02F	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
03A	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
03B	19.2	Diesel-fired Emergency Generator (Group 1)	2025	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) 391-3-1-.02(2)(mmm)
03C	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
03D	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
03E	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
03F	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
04A	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
04B	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
04C	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
04D	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
04E	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
04F	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
05A	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
05B	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
05C	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
05D	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
05E	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
05F	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
06A	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
06B	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
06C	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
06D	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
06E	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
06F	19.2	Diesel-fired Emergency Generator (Group 1)	2025	
ADMIN	9.9	Diesel-fired Emergency Generator (Group 2)	2025	

Storage Tanks

Group #	Capacity (gallons)	Contents	Installation Date	Number of Diesel Belly Tanks
Group 1	3,400	Diesel Fuel	2025	36
Group 2	2,000	Diesel Fuel	2025	1

Emissions Summary

The applicant is requesting operational conditions for the emergency generators to limit site-wide NO_x emissions to 24 tons per year on an aggregate, 12-month rolling basis. Complying with this limitation will inherently restrict potential emissions of the highest-emitting hazardous air pollutant (HAP), benzene, to below the minimum emission rating (MER), as well as limit emissions of all other criteria pollutants. In addition to limiting site-wide NOx emissions to 24 tons per year to restrict potential-to-emit emissions of benzene below the MER, the NOx limit is under the major source threshold which will classify the facility as a synthetic minor source with respect to Title V. Each emergency standby generator will not operate for more than 500 hours annually, in addition to meeting further criteria outlined in rule (mmm)8, to qualify as a stationary engine at a data center.

Facility-Wide Emissions
(in tons per year)

Pollutant	Potential Emissions
PM	1.09
PM_{10}	1.19
$PM_{2.5}$	1.19
NOx	24.00
SO_2	1.11
CO	9.69
VOC	1.30
Max. Individual HAP (Benzene)	0.02
Total HAP	0.03
Total GHG (if applicable)	3,263

To calculate potential emissions, the emergency generators are placed in two (2) groups based on their respective heat input/power output. The hourly emissions of the generators in both groups were calculated at loads of 100%, 75%, 50%, and 25% in pounds per hour per generator (lb/hr/gen). The hourly emissions of each criteria pollutant are calculated at each load percentage using the respective power output and pollutant emission factors. The percent load with the maximum hourly emissions for each pollutant is then identified for both engine groups (Ex: NO_x maximum hourly emission value per generator for Group 1 and

2 is at 100% load; However, VOC maximum hourly emission value per generator is at 25% for Group 1 and 100% for Group 2).

After determining the maximum hourly emission rate for each pollutant, the ratio of hourly emissions relative to NO_x is calculated at each load percentage for all criteria and hazardous air pollutants. The ratio at 25% load consistently provides the highest value, and is the ratio used in emission calculations. This functions as safeguard to prevent the facility from exceeding synthetic minor source thresholds. Hourly emissions for the criteria pollutants (NO_x, CO, PM, SO_2, and VOC) are based on emission factors and power output values from the manufacturer's emissions data and specification sheet.

Example calculations for NO_x and CO hourly emissions are provided below, along with a sample determination of the CO- to- NO_x emission ratio and the associated potential to emit (PTE) calculations for CO.

Group 1 Emergency Generator emissions (19.2 MMBtu/hr/engine):

- *Hourly Emissions @ 100% Load:*
  - NO_x (g/hr) = Power × Emission Factor → NO_x (g/hr) ÷ 453.6 g/lb = NO_x emissions in lb/hr/engine

    = **65.49 lb/hr of NO_x**
  - CO (g/hr) = Power × Emission Factor → CO (g/hr) ÷ 453.6 g/lb = CO emissions in lb/hr/engine

    = **3.03 lb/hr of CO**
- *Hourly Emissions @ 25% Load:*
  - NO_x (g/hr) = Power × Emission Factor → NO_x (g/hr) ÷ 453.6 g/lb = NO_x emissions in lb/hr/engine

    = **6.84 lb/hr of NO_x**
  - CO (g/hr) = Power × Emission Factor → CO (g/hr) ÷ 453.6 g/lb = CO emission (lb/hr/engine)

    = **2.76 lb/hr of CO**
- *Ratio of CO emissions to NO_x emissions:*
  - CO emission ratio @ 100% load = CO emissions (lb/hr) ÷ NO_x emissions (lb/hr)

    @ 100% load:
    CO Hourly Emissions = 3.06 lb/hr
    NO_x Hourly Emissions = 65.49 lb/hr

    3.03 lb/hr ÷ 65.49 lb/hr = **0.046 lbs of CO per lb of NO_x at 100% load**
  - CO emission ratio @ 25% load = CO emissions (lb/hr) ÷ NO_x emissions (lb/hr)

@ 25% load:
CO Hourly Emissions = 2.77 lb/hr
NO_x Hourly Emissions = 6.84 lb/hr

2.76 lb/hr ÷ 6.84 lb/hr = **0.40 lbs of CO per lb of NO_x at 25% load**

- *CO Potential to Emit (PTE) in tons per year (tpy):*

  - CO potential emissions (tpy) = 24 tpy NO_x limit × Max. CO emission ratio

    CO emission ratio @ 100% load = 0.046 lbs/lb of NO_x
    CO emission ratio @ 25% load = **0.40** lbs/lb of NO_x

  24 tpy of NO_x × 0.40 lbs/lb of NO_x = **9.69 tpy of CO**

As shown in the calculations above, the highest emission ratio for CO, occurring at 25% load, was used to calculate its potential to emit in tons per year. This methodology applies to all criteria pollutants, hazardous air pollutants (HAPs), and greenhouse gases (GHGs), as 25% load consistently produces the highest emission ratios across all pollutant categories.

The Division notes that operating each generator for 500 hours per year, as allowed under Georgia Rule (mmm)8, causes the facility to exceed the 99 tpy major source threshold. Detailed calculations of potential emissions based on 500 hours of operation per generator are provided below for Group 1 generators, to support this assessment. By accepting a sitewide NO_x limit of 24 tons per year (tpy), the facility limits generator operation to a significantly lower number of hours to maintain compliance with this threshold. Detailed calculations for hours of operation per generator, in accordance with the facility-wide 24 tpy NO_x limit are provided below.

- *NO_x potential emissions at 500 hours/generator/year (Group 1):*

  - NO_x PTE (tpy) = NO_x emissions (lb/hr) × Hours of Operation × # of generators ÷ 2000 lb/ton

    NO_x emissions = 65.49 lb/hr
    Hours of operation = 500 hr/yr
    # of generators = 36 generators

  65.49 (lb/hr) × 500 hr/yr × 36 generators ÷ 2000 lb/ton = **589.4 tpy of NO_x**

- *Hours of operation/generator at 24 tpy NO_x limit (Group 1):*

NO_x PTE (tpy) = NO_x emissions (lb/hr) × Hours of Operation × # of generators ÷ 2000 lb/ton

NO_x emissions = 65.49 lb/hr
NO_x PTE = 24 tpy
# of generators = 36 generators

65.49 (lb/hr) × Hours of Operation × 36 generators ÷ 2000 lb/ton = 24 tpy of NO_x

Hours of Operation = 24 tpy NO_x × 2000 lb/ton ÷ (65.49 × 36)

Hours of Operation = 20.36 hrs/gen/year

Regulatory Applicability

Federal Rules:

Part 60, Chapter I, Title 40 of the Code of Federal Regulations (40 CFR 60) New Source Performance Standard (NSPS) Subpart A-"General Provisions"

Except as provided in subparts B, Ba, and C of 40 CFR 60, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

GA1 is subject to 40 CFR 60 Subpart IIII, therefore the facility is also subject to the applicable provisions of 40 CFR 60 Subpart A.

Part 60, Chapter I, Title 40 of the Code of Federal Regulations (40 CFR 60) New Source Performance Standard (NSPS) Subpart IIII – "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"

The following sources are subject to NSPS in 40 CFR 60 Subpart IIII:

(2) Owners and operators of stationary compression ignition internal combustion engines (CI ICE) that commence construction after July 11, 2005, where the stationary CI ICE are:

- Manufactured after April 1, 2006, and are not fire pump engines, or
- Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

GA1 proposes to operate the compression ignition internal combustion engines manufactured after April 1, 2006, solely for use as emergency generators. Therefore, all compression ignition internal combustion engines located at the facility are subject to all applicable provisions 40 CFR 60 Subpart IIII.

Part 63, Chapter I, Title 40 of the Code of Federal Regulations (40 CFR 63) National Emissions Standards for Hazardous Air Pollutants (NESHAP) Subpart A "General Provisions"

40 CFR 63 contains national emission standards for hazardous air pollutants (NESHAP) established pursuant to section 112 of the Act as amended November 15, 1990. These standards regulate specific categories of stationary sources that emit (or have the potential to emit) one or more hazardous air pollutants listed in this part pursuant to section 112(b) of the Act. This section explains the applicability of such standards to sources affected by them. The standards in this part are independent of NESHAP contained in 40 CFR Part 61.

The emergency generators at GA-1 are subject to 40 CFR 63 Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines, therefore they are subject to the applicable provisions of 40 CFR 63 Subpart A.

Part 63, Chapter I, Title 40 of the Code of Federal Regulations (40 CFR 63) National Emissions Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ – "Stationary Reciprocating Internal Combustion Engines (RICE MACT)"

The sources subject to NESHAP in 40 CFR 63 Subpart ZZZZ include all emergency engines.

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

- A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differs from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30 and is not used to propel a motor vehicle or a vehicle used solely for competition.
- A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.
- An area source of HAP emissions is a source that is not a major source.

The facility proposes to operate the engines as emergency generators at a facility that has HAP emissions under the major source threshold, classifying it as an area source, therefore all of the emergency generators within the facility are subject to 40 CFR 63 Subpart ZZZZ.

In accordance with 40 CFR 63.6590(c), an affected source that meets any of the criteria in paragraphs (c)(1) through (7) of 40 CFR 63.6590 must meet the requirements of this part by meeting the requirements of 40 CFR 60 Subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part.

The emergency generators within the facility meet the criteria established by 40 CFR 63.6590(c)(1) because the generators are classified as a new or reconstructed stationary RICE located at an area source. The generators will demonstrate compliance with 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII.

Part 60, Chapter I, Title 40 of the Code of Federal Regulations (40 CFR 60) New Source Performance Standard (NSPS) Subpart Kb – "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)"

The diesel fuel storage tanks located at the facility are not subject to NSPS in 40 CFR 60 Subpart Kb:

In accordance with 40 CFR 60.1106(a), the sources subject to subpart (Kb) are each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification commenced after July 23, 1984, and on or before October 4, 2023.

All the diesel fuel storage tanks at the facility are below the 75 cubic meter (m^3) capacity threshold, therefore the facility is not subject to the requirements of subpart (Kb).

State Rules:

Georgia Rules for Air Quality Control (GRAQC) 391-3-1-.02(2)(b) – "Visible Emissions"

This rule limits opacity to 40 percent from any air contaminant source, except as provided in other more restrictive or specific rules or subdivisions of the regulation. All the permitted sources are subject to this regulation.

GRAQC 391-3-1-.02(2)(g) – "Sulfur Dioxide"

This rule regulates the sulfur content of fuel. For a fuel burning source with a heat input capacity less than 100 MMBTU/hr, the regulation limits the fuel sulfur content to less than 2.5 percent, by weight. All emergency generators within the facility are subject to this regulation.

GRAQC 391-3-1-.02(2)(n) – "Fugitive Dust"

This rule requires facilities to take reasonable precautions to limit fugitive dust from becoming airborne. Further, opacity from fugitive dust source, such as roads and the handling of dusty materials, are limited to 20% opacity. The applicant will comply with the requirements of this rule, including during periods of construction, through appropriate mitigative measures.

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

This rule limits emissions of NO_x from stationary gas turbines and stationary engines used to generate electricity whose nameplate capacity is greater than or equal to 100 kilowatts (kWe) and is less than or equal to 25 megawatts (MWe), to less than 80 ppm at 15% O_2, dry basis for stationary engines installed or modified on or after April 1, 2000.

GA1 proposes to construct and operate generators with a nameplate capacity of 2,200 kW (Group 1) and 1,000 kW (Group 2), which is within the applicability range of Georgia Rule (mmm). Therefore, this regulation is applicable to all proposed emergency generator engines.

GA1 is classified as a datacenter, therefore it is eligible for exemption from the NO_x emission standard in subparagraph 1 of this rule, if the Permittee meets all of the criteria outlined in (mmm)8.

(i) Operate only for routine testing and maintenance, when electric power from the local utility is not available, or during internal system failures;

(ii) Total annual operation for the engine is less than 500 hours per year;

(iii) Operation for routine testing and maintenance during the months of May through September occurs only between 10 p.m. to 4 a.m. Operation for routine testing and maintenance during the months of January through April and October through December may be done during any time of day; and

(iv) The facility maintains records of all operation, including the reason for the operation.

In the event the engines cannot meet the criteria outlined in Georgia Rule (mmm)8 to qualify as a 'stationary engine at a data center,' they are subject to the NO_x emissions limitations of paragraph one (1) of Georgia Rule (mmm).

GRAQC 391-3-1-.02(2)(d) – "Fuel Burning Equipment"

Rule (d) provides standards for particulate matter emissions and visible emissions from fuel-burning equipment. Fuel-burning equipment is defined as "equipment the primary purchase of which is the production of thermal energy from the combustion of any fuel" The proposed emergency generators do not meet this definition of fuel-burning equipment and, therefore, are not subject to the limitations in Rule (d).

GRAQC 391-3-1-.02(2)(bb) – "Petroleum Liquid Storage"

This regulation provides standards for petroleum liquid storage vessels with capacities greater than 40,000 gallons storing a petroleum liquid with a true vapor pressure greater than 1.52 psia. None of the diesel belly storage tanks will have capacities exceeding this volume threshold. Further, the vapor pressure for diesel fuel is less than the applicability threshold. Therefore, the provisions of Rule (bb) do not apply.

GRAQC 391-3-1-.02(2)(vv) – "Volatile Organic Liquid Handling and Storage"

Rule (vv) provides standards for volatile organic liquids handling and storage operations that occur at facilities within certain Atlanta metropolitan area counties. The regulation is only applicable for stationary storage tanks with a capacity greater than 4,000 gallons located at a facility subject to other sate-specific VOC requirements. Although the storage capacity of each diesel belly tank at the facility exceeds the 4,000-gallon applicability threshold, Jackson County is not among the counties governed by this regulation. Furthermore, the facility will not be subject to another state-specific VOC requirement. As such, the proposed diesel belly storage tanks will not be regulated under the provisions of Rule (vv).

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

Rule (yy) prohibits the emission of NO_x from any source to exceed the levels specified in (yy)2 unless such source has been approved by the Director as meeting the appropriate requirement for all reasonably available control technology (RACT) in controlling NO_x emissions. For facilities located in Jackson County, the potential NO_x emissions cannot exceed 25 tons per year without submitting a demonstration of appropriate RACT to the Division for approval.

Potential NO_x emissions from the facility will exceed 25 tons per year, however per GRAQC 391-3-1-.02(2)(yy)(5), the requirements of this rule do not apply to individual equipment at the source which are subject to (jjj), (lll), (mmm), or (nnn). The proposed emergency generators will be subject to Rule (mmm); therefore, as the proposed emergency generators will be the only sources of NO_x at the facility, the provisions of Rule (yy) will not apply.

Permit Conditions

Permit Condition 2.1 requires the facility to limit NO_x emissions to 24 tpy annually in order to avoid further Air Toxics Guideline requirements for benzene and the limitation is below the major source threshold with respect to Title V, classifying the source as a synthetic minor source.

Permit Condition 2.2 requires the Permittee to comply with NSPS Subpart A and Subpart IIII for the operation of the emergency generators.

Permit Condition 2.3 requires the facility to fuel the emergency generators with distillate fuel oil that has a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or maximum aromatic content of 35 percent (by volume).

Permit Condition 2.4 outlines the limits for diesel generators emissions of non-methane hydrocarbons and nitrogen oxides (NMHC+NOx), hydrocarbons (HC), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM) in accordance with 40 CFR 60 Subpart IIII.

Permit Condition 2.5 lists the criteria for the engines to be classified as emergency generators under 40 CFR 60 Subpart IIII.

Permit Condition 2.6 establishes the visible emissions limit during acceleration and lugging mode for the emergency generators, per 40 CFR 60 Subpart IIII.

Permit Condition 2.7 requires the Permittee to comply with all applicable provisions of NESHAP Subpart A and Subpart ZZZZ for the operation of the emergency generators.

Permit Condition 2.8 limits opacity from the emergency generators to 40 percent to ensure compliance with Georgia Rule (b).

Permit Condition 2.9 requires the facility to fire distillate fuel oil in the emergency generators that meets the specifications for fuel oil No. 1 and 2 as defined by ASTM D396.

Permit Condition 2.10 establishes operating limits for the emergency generators to the criteria outlined in rule (mmm)8. If the generators ever fail to meet the criteria outlined in Georgia Rule (mmm)8 to qualify as a stationary engine at a data center.

Permit Condition 3.1 requires the Permittee to take all reasonable precautions to prevent fugitive dust from becoming airborne during installation or construction.

Permit Condition 3.2 limits the percent opacity from any fugitive dust source to 20 percent.

Permit Condition 4.1 requires the Permittee to operate the emergency generators according to the manufacturer’s written specifications, instructions or procedures developed by the Permittee that are approved by the engine manufacturer over the entire life of the engine.

Permit Condition 5.1 requires the continuous operation of any continuous monitoring system required by the Division and installed by the Permittee except during calibration checks, zero and span adjustments or period of repair. Any maintenance performed on any continuous monitoring system should be conducted expeditiously.

Permit Condition 5.2 requires the Permittee to install a non-resettable continuous monitoring system for each emergency generator to track and record the cumulative hours of operation during emergency service as well as non-emergency service and to record the reason the generator was in operation.

Permit Condition 5.3 requires the Permittee to verify that each shipment of fuel oil received for the emergency generators is distillate oil, No. 2 diesel fuel, or another very low sulfur diesel fuel.

Permit Condition 6.1 provides guidelines for performance and compliance testing.

Permit Condition 6.2 establishes compliance standards that include maintenance, performance testing, and record keeping if the Permittee operates outside the emergency generator's manufacturer emission-related instructions or emission-related settings.

Permit Condition 7.1 requires the Permittee to notify the division before startup.

Permit Condition 7.2 requires the maintenance and retention of hours of operation for emergency generators in the facility for both emergency and non-emergency service as recorded on the non-resettable hour meter.

Permit Condition 7.3 requires the Permittee to use the records in Permit Condition 7.2 to calculate NO_x emissions from the emergency generators monthly. The Permittee is also required to notify the Division if the twelve-month rolling total exceeds 24 tpy.

Permit Condition 7.4 requires the Permittee to use monthly non-emergency service operating data to calculate and record the twelve-month rolling total of the non-emergency service operating time for the emergency generators each year and notify the Division of exceedance.

Permit Condition 7.5 requires the Permittee to keep a copy of the manufacturer's operating and maintenance instructions, or instructions approved by the engine manufacturer for the emergency generators.

Permit Condition 7.6 outlines record keeping requirements to verify each diesel fuel shipment received for the emergency generators complies with Permit Condition 2.9.

Permit Condition 7.7 requires the Permittee to demonstrate compliance with the applicable emission standards in 40 CFR 60 Subpart IIII for the emergency generators.

Permit Condition 7.8 requires the Permittee to submit an annual report if the emergency generators are operated outside the specifications in 40 CFR 60.4211(f)(3)(i).

Permit Condition 8.1 grants the Division the right to amend the Permit as deemed necessary.

Permit Condition 8.2 requires the Permittee to pay an annual fee to the Division.

Toxic Impact Assessment

Emissions from the construction and operation of the emergency generators will result in the emission of several hazardous air pollutants (HAPs). To ensure pollutants, specifically benzene, remain below the minimum emission rating (MER) and to avoid toxic impact assessment modeling requirements, the facility has requested a sitewide NO_x limit of 24 tons per year (tpy). The facility compared the emergency generators' potential HAP emissions to their respective MERs, which are presented in Table 1 below. Potential to emit is calculated based on emission factors from US EPA's AP-42 Section 3.4, "Large Stationary Diesel and All Stationary Dual-fuel Engines," tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4.

Table 1: Comparison of Facility-Wide Tap Emissions to Georgia MER

CAS Number	Pollutant Name	Total PTE (lb/yr)	MER(1) (lb/yr)	PTE > MER (Y/N)
71432	Benzene	30.96	31.63	No
108883	Toluene	11.21	1,216,650.00	No
1330207	Xylene (o-, m-, p-isomers)	7.70	24,333.00	No
50000	Formaldehyde	3.15	267.00	No
75070	Acetaldehyde	1.01	1,107.15	No
107028	Acrolein	0.31	4.87	No
91203	Naphthalene	5.19	729.99	No

As shown in the table above, all HAPs remain below the MER, and no further modeling is required. The potential to emit for each pollutant was conservatively calculated using the ratio of each HAP to NO_x emissions and is a worst-case scenario. Example calculations for benzene are presented below.

- *Group 1 Benzene Potential Emissions (lb/yr):*

  - Benzene emissions(lb/hr) = 24 tpy NO_x limit × Max. Benzene emission ratio × 2000 lbs/ton

    Benzene emission ratio @ 100% load = .000227 lbs/lb of NO_x
    Benzene emission ratio @ 75% load = .000417 lbs/lb of NO_x
    Benzene emission ratio @ 50% load = .000411 lbs/lb of NO_x
    Benzene emission ratio @ 25% load = **.000645 lbs/lb of NO_x**

24 tpy of NO_x × .000645 lbs/lb of NO_x = 0.01548 tpy × 2000 lbs/ton = **30.96 lbs/year of Benzene**

Summary & Recommendations

I recommend that Permit No. 7374-157-0077-S-01-0 be issued to GA1 for the construction and operation of 37 diesel-fired standby generators at a greenfield site located in Jackson County. The facility will be a synthetic minor source with respect to Title V and PSD, taking a limit of 24 tpy for NO_x to ensure pollutant emissions stay below major source thresholds and modeling. The Public Advisory period ended April 11, 2025.

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.//