LANDAU ASSOCIATES

September 26, 2025

Transmitted via email to: cynthia.dorrough@dnr.ga.gov

Georgia Department of Natural Resources
Environmental Protection Division
4244 International Parkway, Suite 120
Atlanta, GA 30354

Attn: Cynthia Dorrough

Re: Synthetic Minor Source State Implementation Plan Air Permit Application
Serverfarm ATL2 Data Center
Covington, Georgia

Dear Ms. Dorrough:

This letter and its attachments constitute a Synthetic Minor Source State Implementation Plan (SIP) Air Permit Application for Serverfarm's proposed development of the ATL2 data center campus (facility) at 10835 Hazelbrand Road NE in Covington, Georgia.

This application is composed of the following elements to meet the requirements for permitting in the jurisdiction of the Air Protection Branch of the Georgia Environmental Protection Division (GEPD) of the Department of Natural Resources:

- Attachment 1 – Air Permit Application Forms and Supporting Information
  - Application Forms 1.00, 2.00, 2.01, 4.00, and 7.00
  - Vicinity Map and Site Plan
  - Process Flow Diagram
  - Tax Plan Record
  - Equipment Specifications
  - Neighboring Facility Information
- Attachment 2 – Emissions Data
  - Emissions Calculation Summary Tables
  - Microsoft Excel Spreadsheets with Emission Calculations (Electronic)
- Attachment 3 – Regulatory Applicability
  - Regulatory Applicability Summary

- Attachment 4 – Ambient Air Impact Evaluation
  - Summary of Air Dispersion Modeling Methods and Results
  - Air Modeling Files (Electronic)

The ATL2 campus is located in Newton County, which is designated as an attainment area, and as demonstrated by the emissions estimates in Attachment 2, the data center is not a major stationary source. Therefore, this source is not subject to major source permitting requirements. This permit application has been prepared to demonstrate compliance with all applicable state and federal air regulations and emission standards pursuant to the Clean Air Act, especially as set forth for new sources in attainment areas.

The remainder of this letter provides a brief narrative summarizing details of the project and contents of each attachment.

Attachment 1. SIP Permit Application Forms and Supporting Information

Serverfarm has proposed the development of a data center campus in Covington that will be comprised of one building totaling 498,960 square feet. The buildings will house banks of computer servers and will be equipped with stable electrical power delivery systems, air cooling and cleaning systems, and emergency backup diesel power generation capability. The project will also include site infrastructure, such as development of internal roads for traffic egress/access and internal circulation, and parking for employees and visitors, as well as all required utility corridors to support the data center building. A vicinity map, a site plan, and a tax plan record for the proposed development are included in Attachment 1.

From an air quality standpoint, the equipment of interest includes 36 3.3-megawatt (MW) diesel-powered emergency generators and one 2.5-MW diesel-powered emergency generator. Each generator is also equipped with 12,000-gallon capacity diesel belly tanks that store ultra-low sulfur diesel (ULSD) fuel for use by the generators. The capacity is a maximum estimate and the final tank size may be smaller. The data center buildings also include chillers for cooling buildings. However, the chillers are self-contained with no external refrigerant tanks and do not emit drift droplets; therefore, they are not sources of regulated emissions. GEPD application forms, a simplified process flow diagram, and generator specifications are provided in Attachment 1.

Based on Landau's experience estimating emissions from similarly sized belly tanks storing diesel fuel, emission are anticipated to be minimal (e.g., less than 1 ton per year [tpy] of volatile organic compounds [VOCs]).

The generators will be run for the purposes of:

- Startup and commissioning, which is to occur once in each generator's lifetime
- Routine maintenance and testing according to manufacturer recommendations

- Internal system failures
- Emergency use to provide power to the facility when the data center's primary power source is interrupted.

Planned and unplanned generator usage and the resulting emissions of criteria and hazardous air pollutants (HAPs) will be limited so as not to trigger a requirement for the facility to obtain a Title V permit. Additionally, Serverfarm requests a permit limit of less than 500 operating hours per year for each generator in accordance with GEPD Rule 391-3-1-.02(2)(mmm)(4)(v).

Attachment 2. Emissions Data

Serverfarm's generators include a diesel-powered engine that drives an alternator section to produce electricity. Overall emissions from a diesel generator are produced from the diesel engine, and no emissions are produced by the alternator. The terms "generator" and "engine" are used interchangeably in this report. State and federal air quality regulations apply only to the emissions from diesel engines.

Criteria air pollutant, HAP, and greenhouse gas (GHG) emission rates were estimated for all generators based on the technical specifications provided by the manufacturers (Attachment 1), mass balance calculations, and published emission factors from the US Environmental Protection Agency (EPA) AP-42, Fifth Edition, Volume I, Chapters 3.3 and 3.4 for Stationary Internal Combustion Sources (EPA 1996a; b).

During any event for which the emergency generators will supply power to the server system, the generators will operate at the load needed based on the electrical demand. Therefore, the pollutant-specific maximum emission rate under any generator operating load was assumed for calculating the worst-case emission rates.

The proposed generators will be certified by the manufacturer to meet EPA Tier 2 emission standards for non-road diesel engines. The manufacturer-reported not-to-exceed generator emission rates were used to estimate emissions of oxides of nitrogen (NO_X), particulate matter (PM), carbon monoxide (CO), and VOCs. All petroleum hydrocarbons are conservatively considered VOCs for the purpose of these emission estimates. For sulfur dioxide (SO_2) and HAPs with fuel-based emission factors, the emissions from the worst-case operating load of 100 percent was assumed.

Annual GHG emissions were calculated using the emission factors in 40 Code of Federal Regulations (CFR) Part 98. GHG emissions are reported as total carbon dioxide equivalent using the global warming potentials in 40 CFR Part 98, Subpart A.

Serverfarm is proposing to accept a NO_X emission limit of 99.9 tpy to remain below the major source/Title V permitting threshold. Serverfarm will keep records to document operations from each generator, including date and time of operation, operating load, duration of run, and whether runs are for an emergency or nonemergency purpose. These records will be used to track NO_X emissions each month, and on a rolling 12-month basis to demonstrate that facility emissions are continually

equal to or less than 99.9 tpy. For the purpose of NO_X emission tracking, emissions for each run will be calculated based on the manufacturer's not-to-exceed emission rates at 10, 25, 50, 75, and 100 percent load.

NO_X emission recordkeeping will be completed for all generator run scenarios, including nonemergency purposes, which include commissioning and periodic maintenance and readiness testing, as well as emergency use during electric utility outages.

Summary tables presenting diesel generator potential-to-emit for criteria pollutants and HAPs are provided in Attachment 2. Additionally, not-to-exceed emissions data from the manufacturer are provided in Attachment 1. An electronic version of the emission calculations is being provided in Microsoft Excel format.

Attachment 3. Regulatory Applicability

Newton County is designated as in attainment with the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. Based on proposed facility-wide emissions for the facility, the facility is not subject to the Prevention of Significant Deterioration (PSD) program as outlined in 40 CFR § 51.166. Similarly, based on proposed facility-wide emissions, the facility is not subject to the federal Title V operating permit requirements outlined in 40 CFR Parts 70 and 71. Emissions from the facility will remain below Title V thresholds of 100 tpy of CO, NO_X, PM, PM_{10}, $PM_{2.5}$, SO_2 and VOCs, below 25 tpy of HAPs, and below 10 tpy of any one HAP.

Emergency diesel generators are subject to requirements under the New Source Performance Standard (NSPS) Subparts A and IIII, as well as the National Emissions Standards for Hazardous Air Pollutants (NESHAP) Subparts A and ZZZZ. A detailed table of applicability and regulatory requirements is provided as Attachment 3.

The facility is also subject to state requirements as detailed in Georgia Administrative Code (GAC) 391-3-1-.02.

Attachment 4. Ambient Air Impact Evaluation

As required, a Toxic Air Pollutants (TAPs) assessment was conducted for the project. The assessment included the quantification of TAP emissions for comparison against 20 percent of the minimum emission rates (MERs), and an air dispersion modeling assessment with AERMOD of any TAPs that exceed 20 percent of their respective MERs (formaldehyde and benzene). The maximum ground-level concentrations (MGLC) for formaldehyde and benzene were compared to the allowable air concentration (AAC). Attachment 4 includes a summary of the air dispersion modeling methodology and results.

The toxics assessment was conservatively conducted with the generators at 100 percent load because it resulted in the greatest emissions. The annual emission rates assumed each generator would operate the maximum allowable number of hours (500 hours/year/generator).

As shown in Attachment 4, the MGLCs for formaldehyde and benzene are below their respective AACs.

Please contact Mark Brunner (mbrunner@landauinc.com; 206-631-8695) or Kat Baker (kbaker@landauinc.com; 425-329-0305) with any questions or concerns regarding the contents of this permit application.

LANDAU ASSOCIATES, INC.



Kat Baker
Associate



Mark Brunner
Principal

KPB/MWB/kee/san
[\\EDMDATA01\PROJECTS\1484\014\010\R\AIR QUALITY\SIP PERMIT APPLICATION\LANDAU_SIP PERMIT APPLICATION COVER LTR_092625.DOCX]

References

EPA. 1996a. Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Chapter 3.3: Gasoline and Diesel Industrial Engines. AP-42. 5th ed. Office of Air Quality Planning and Standards, US Environmental Protection Agency. October. https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf.

EPA. 1996b. Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Chapter 3.4: Large Stationary Diesel and All Stationary Dual-Fuel Engines. AP-42. Office of Air Quality Planning and Standards, US Environmental Protection Agency. October. https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s04.pdf.

ATTACHMENT 1

SIP Permit Application Forms and Supporting Information

State of Georgia
Department of Natural Resources
Environmental Protection Division
Air Protection Branch

Stationary Source Permitting Program
4244 International Parkway, Suite 120
Atlanta, Georgia 30354
404/363-7000
Fax: 404/363-7100

SIP AIR PERMIT APPLICATION

EPD Use Only

Date Received: 10/3/2025 Application No. 29898

FORM 1.00: GENERAL INFORMATION

1. Facility Information

Facility Name: ATL2 Data Center
AIRS No. (if known): 04-13- 217-00079
Facility Location: Street: 10835 Hazelbrand Rd NE
City: Covington Georgia Zip: 30014 County: Newton
Is this facility a "small business" as defined in the instructions? Yes: ☐ No: ☒

2. Facility Coordinates

Latitude: 33° 37' 19" **NORTH** Longitude: 83° 48' 53" **WEST**
UTM Coordinates: 238876.7 **EAST** 3723777.5 **NORTH** **ZONE** 17

3. Facility Owner

Name of Owner: Serverfarm, LLC
Owner Address Street: 444 N. Nash St
City: El Segundo State: CA Zip: 90245

4. Permitting Contact and Mailing Address

Contact Person: Mark Brunner Title: Principal
Telephone No.: 206-631-8695 Ext. Fax No.:
Email Address: mbrunner@landauinc.com
Mailing Address: Same as: Facility Location: ☐ Owner Address: ☐ Other: ☒
If Other: Street Address: 155 NE 100th St, Ste 302
City: Seattle State: WA Zip: 98125

5. Authorized Official

Name: Sam Brown Title: Chief Development Officer
Address of Official Street: P.O. Box 2156
City: El Segundo State: CA Zip: 90245

This application is submitted in accordance with the provisions of the Georgia Rules for Air Quality Control and, to the best of my knowledge, is complete and correct.

Signature: Date: 9/26/2025

6. Reason for Application: (Check all that apply)

☒ New Facility (to be constructed)

☐ Existing Facility (initial or modification application)

☐ Permit to Construct

☐ Permit to Operate

☐ Change of Location

☐ Permit to Modify Existing Equipment: Affected Permit No.: _____

☐ Revision of Data Submitted in an Earlier Application

Application No.: _____

Date of Original Submittal: _____

7. Permitting Exemption Activities (for permitted facilities only):

Have any exempt modifications based on emission level per Georgia Rule 391-3-1-.03(6)(i)(3) been performed at the facility that have not been previously incorporated in a permit?

☒ **No** ☐ **Yes, please fill out the SIP Exemption Attachment** (See Instructions for the attachment download)

8. Has assistance been provided to you for any part of this application?

☐ **No** ☐ **Yes, SBAP** ☒ **Yes, a consultant has been employed or will be employed.**

If yes, please provide the following information:

Name of Consulting Company: Landau Associates, Inc.

Name of Contact: Mark Brunner

Telephone No.: 206-631-8695 Fax No.: _____

Email Address: mbrunner@landauinc.com

Mailing Address: Street: 155 NE 100th St, Ste 302

City: Seattle State: WA Zip: 98125

Describe the Consultant's Involvement:

Provide consulting services and prepare all air permitting application documents for submittal.

9. Submitted Application Forms: Select only the necessary forms for the facility application that will be submitted.

No. of Forms	Form
1	2.00 Emission Unit List
1	2.01 Boilers and Fuel Burning Equipment
	2.02 Storage Tank Physical Data
	2.03 Printing Operations
	2.04 Surface Coating Operations
	2.05 Waste Incinerators (solid/liquid waste destruction)
	2.06 Manufacturing and Operational Data
	3.00 Air Pollution Control Devices (APCD)
	3.01 Scrubbers
	3.02 Baghouses & Other Filter Collectors
	3.03 Electrostatic Precipitators
1	4.00 Emissions Data
	5.00 Monitoring Information
	6.00 Fugitive Emission Sources
1	7.00 Air Modeling Information

10. Construction or Modification Date

Estimated Start Date: Q1 2026

11. If confidential information is being submitted in this application, were the guidelines followed in the "Procedures for Requesting that Submitted Information be treated as Confidential"?

☐ No ☐ Yes

12. New Facility Emissions Summary

Criteria Pollutant	New Facility	
	Potential (tpy)	Actual (tpy)
Carbon monoxide (CO)	5.37	5.37
Nitrogen oxides (NOx)	98.99	98.99
Particulate Matter (PM) (filterable only)	0.68	0.68
PM <10 microns (PM10)	0.68	0.68
PM <2.5 microns (PM2.5)	0.68	0.68
Sulfur dioxide (SO_2)	0.06	0.06
Volatile Organic Compounds (VOC)	2.69	2.69
Greenhouse Gases (GHGs) (in CO2e)	6,276	6,276
Total Hazardous Air Pollutants (HAPs)	0.06	0.06
Individual HAPs Listed Below:		
Acetaldehyde	0.001	0.001
Acrolein	0.0003	0.0003
Benzene	0.03	0.03
Formaldehyde	0.003	0.003
Naphthalene	0.005	0.005
Toluene	0.01	0.01
Xylenes	0.01	0.01

13. Existing Facility Emissions Summary

Criteria Pollutant	Current Facility		After Modification	
	Potential (tpy)	Actual (tpy)	Potential (tpy)	Actual (tpy)
Carbon monoxide (CO)				
Nitrogen oxides (NOx)				
Particulate Matter (PM) (filterable only)				
PM <10 microns (PM10)				
PM <2.5 microns (PM2.5)				
Sulfur dioxide (SO_2)				
Volatile Organic Compounds (VOC)				
Greenhouse Gases (GHGs) (in CO2e)				
Total Hazardous Air Pollutants (HAPs)				
Individual HAPs Listed Below:				

14. 4-Digit Facility Identification Code:

SIC Code: 7374 SIC Description: Computer Processing and Data Preparation and Processing Services

NAICS Code: 518210 NAICS Description: Data Processing, Hosting, and Related Services

15. Description of general production process and operation for which a permit is being requested. If necessary, attach additional sheets to give an adequate description. Include layout drawings, as necessary, to describe each process. References should be made to source codes used in the application.

The ATL2 Data Center campus is a data center that will have one building to house all computing equipment. The building will be cooled by closed-loop chillers, and 37 diesel-fired generator sets will be located at the facility to provide backup power and for internal system failures. Serverfarm will purchase electricity for the facility from VoltaGrid until it is able to obtain sufficient electricity from the grid.

16. Additional information provided in attachments as listed below:

Attachment A - Cover Letter (and associated attachments 1 through 4)

Attachment B -

Attachment C -

Attachment D -

Attachment E -

Attachment F -

17. Additional Information: Unless previously submitted, include the following two items:

☒ Plot plan/map of facility location or date of previous submittal: Provided as attachment to cover letter

☒ Flow Diagram or date of previous submittal: Provided as attachment to cover letter

18. Other Environmental Permitting Needs:

Will this facility/modification trigger the need for environmental permits/approvals (other than air) such as Hazardous Waste Generation, Solid Waste Handling, Water withdrawal, water discharge, SWPPP, mining, landfill, etc.?

☐ **No** ☒ **Yes, please list below:**

Erosion Control Plan and SWPPP

19. List requested permit limits including synthetic minor (SM) limits.

NOX emission limit of 99.9 tpy calculated based on number of operating hours at each operating load (10/25/50/75/100 percent load) and manufacturer's not-to-exceed emission rates.

20. Effective March 1, 2019, permit application fees will be assessed. The fee amount varies based on type of permit application. Application acknowledgement emails will be sent to the current registered fee contact in the GECO system. If fee contacts have changed, please list that below:

Fee Contact name:

Fee Contact email address:

Fee Contact phone number:

Fee invoices will be created through the GECO system shortly after the application is received. It is the applicant's responsibility to access the facility GECO account, generate the fee invoice, and submit payment within 10 days after notification.

Facility Name: ATL2 Data Center **Date of Application:** September 26, 2025

FORM 2.00 – EMISSION UNIT LIST

Emission Unit ID	Name	Manufacturer and Model Number	Description
A01	Administrative Generator	Baudouin 12M55G4D2/6	Diesel-fired generator to power administrative building
G01	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G02	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G03	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G04	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G05	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G06	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G07	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G08	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G09	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G10	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G11	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G12	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G13	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G14	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G15	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G16	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G17	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G18	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G19	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility

G20	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G21	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G22	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G23	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G24	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G25	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G26	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G27	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G28	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G29	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G30	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G31	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G32	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G33	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G34	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G35	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility
G36	Emergency Generator	Baudouin 16M55G8D2/6	Diesel-fired generator to provide backup power to facility

Facility Name: ATL2 Data Center **Date of Application:** September 26, 2025

FORM 2.01 – BOILERS AND FUEL BURNING EQUIPMENT

Emission Unit ID	Type of Burner	Type of Draft[1]	Design Capacity of Unit (MMBtu/hr Input)	Percent Excess Air	Dates		Date & Description of Last Modification
					Construction	Installation	
A01	Diesel engine		22.3		Q1 2026	Q1 2026	new
G01	Diesel engine		32.1		Q1 2026	Q1 2026	new
G02	Same as G01 above						
G03	Same as G01 above						
…							
G36	Same as G01 above						

[1] This column does not have to be completed for natural gas only fired equipment.

Facility Name: ATL2 Data Center **Date of Application:** September 26, 2025

FUEL DATA

Emission Unit ID	Fuel Type	Potential Annual Consumption				Hourly Consumption		Heat Content		Percent Sulfur		Percent Ash in Solid Fuel	
		Total Quantity		Percent Use by Season									
		Amount	Units	Ozone Season May 1 - Sept 30	Non-ozone Season Oct 1 - Apr 30	Max.	Avg.	Min.	Avg.	Max.	Avg.	Max.	Avg.
A01	ULSD	10,426	gal	Up to 10,426 gal	Up to 10,426 gal	162.9	108.0		0.137 MMBtu/gal	0.0015%			
G01	ULSD	15,008	gal	Up to 15,008 gal	Up to 15,008 gal	234.5	149.8		0.137 MMBtu/gal	0.0015%			
G02	Same as G01 above												
G03	Same as G01 above												
…													
G36	Same as G01 above												

Fuel Supplier Information						
Fuel Type	Name of Supplier	Phone Number	Supplier Location			
			Address	City	State	Zip
ULSD	TBD			Covington	ATL	

Facility Name: ATL2 Data Center **Date of Application:** September 26, 2025

FORM 4.00 – EMISSION INFORMATION

Emission Unit ID	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
A01		A01	CO	4.96	4.96	0.16	0.16	Manufacturer's NTE
A01		A01	NOX	51.26	51.26	1.64	1.64	Manufacturer's NTE
A01		A01	PM/PM10/PM2.5	0.74	0.74	0.02	0.02	Manufacturer's NTE
A01		A01	SO2	0.03	0.03	0.001	0.001	Manufacturer's NTE
A01		A01	VOC	1.28	1.28	0.04	0.04	Manufacturer's NTE
A01		A01	CO2e	3,698	3,698	118	118	40 CFR Part 98
G01		G01	CO	4.52	4.52	0.14	0.14	Manufacturer's NTE
G01		G01	NOX	84.50	84.50	2.70	2.70	Manufacturer's NTE
G01		G01	PM/PM10/PM2.5	0.57	0.57	0.02	0.02	Manufacturer's NTE
G01		G01	SO2	0.05	0.05	0.002	0.002	Manufacturer's NTE
G01		G01	VOC	2.30	2.30	0.07	0.07	Manufacturer's NTE
G01		G01	CO2e	5,345	5,345	171	171	40 CFR Part 98
Same emission rates apply as G01 above for each generator ID G02 - G36. Refer to Attachment 2 – Emissions Data in the attached letter for detailed emissions information.								

Facility Name: ATL2 Data Center **Date of Application:** September 26, 2025

FORM 7.00 – AIR MODELING INFORMATION: Stack Data

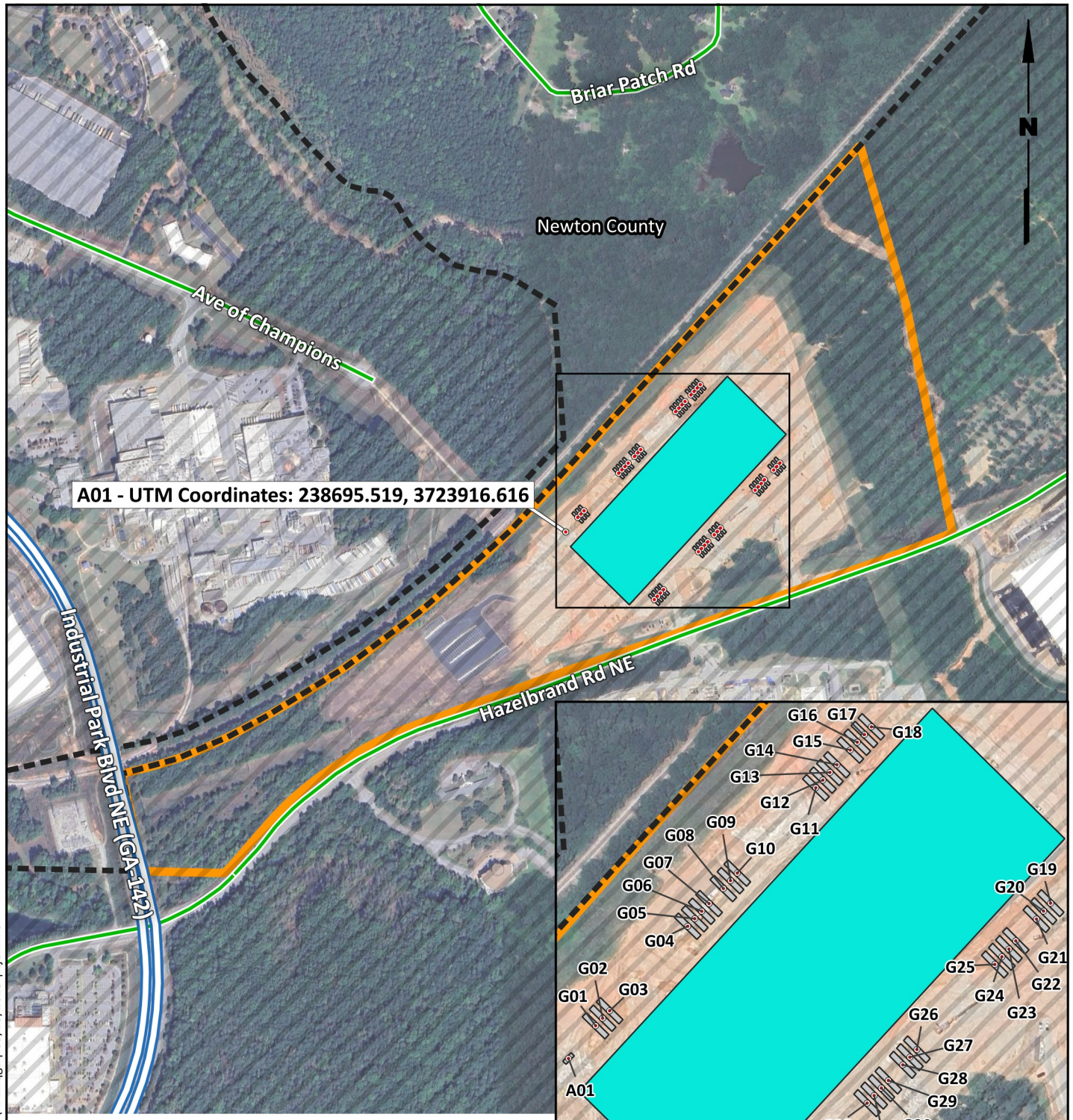
Stack ID	Emission Unit ID(s)	Stack Information			Dimensions of largest Structure Near Stack		Exit Gas Conditions at Maximum Emission Rate			
		Height Above Grade (ft)	Inside Diameter (ft)	Exhaust Direction	Height (ft)	Longest Side (ft)	Velocity (ft/sec)	Temperature (°F)	Flow Rate (acfm)	
									Average	Maximum
A01	A01	16.66	1.96	sky	50	1,240	105.60	952	12,294	19,084
G01	G01	17.52	1.96	sky	50	1,240	144.00	860	16,786	26,025
G02	G02	Same as G01 above								
G03	G03	Same as G01 above								
…	…									
G36	G36	Same as G01 above								

NOTE: If emissions are not vented through a stack, describe point of discharge below and, if necessary, include an attachment. List the attachment in Form 1.00 *General Information*, Item 16.

Facility Name: ATL2 Data Center **Date of Application:** September 26, 2025

FORM 7.00 AIR MODELING INFORMATION: Chemicals Data

Chemical	Potential Emission Rate (lb/hr)	Toxicity	Reference	MSDS Attached
Benzene (A01)	0.0173			☐
Formaldehyde (A01)	0.0018			☐
Benzene (G01-G36; per single generator)	0.0249			☐
Formaldehyde (G01-G36; per single generator)	0.0025			☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐



Legend

- Facility Property Boundary
- Buildings
- Generator Enclosures
- Emissions Sources
- Covington City Limit
- State Route
- Road

0 700 1,400

Scale in Feet

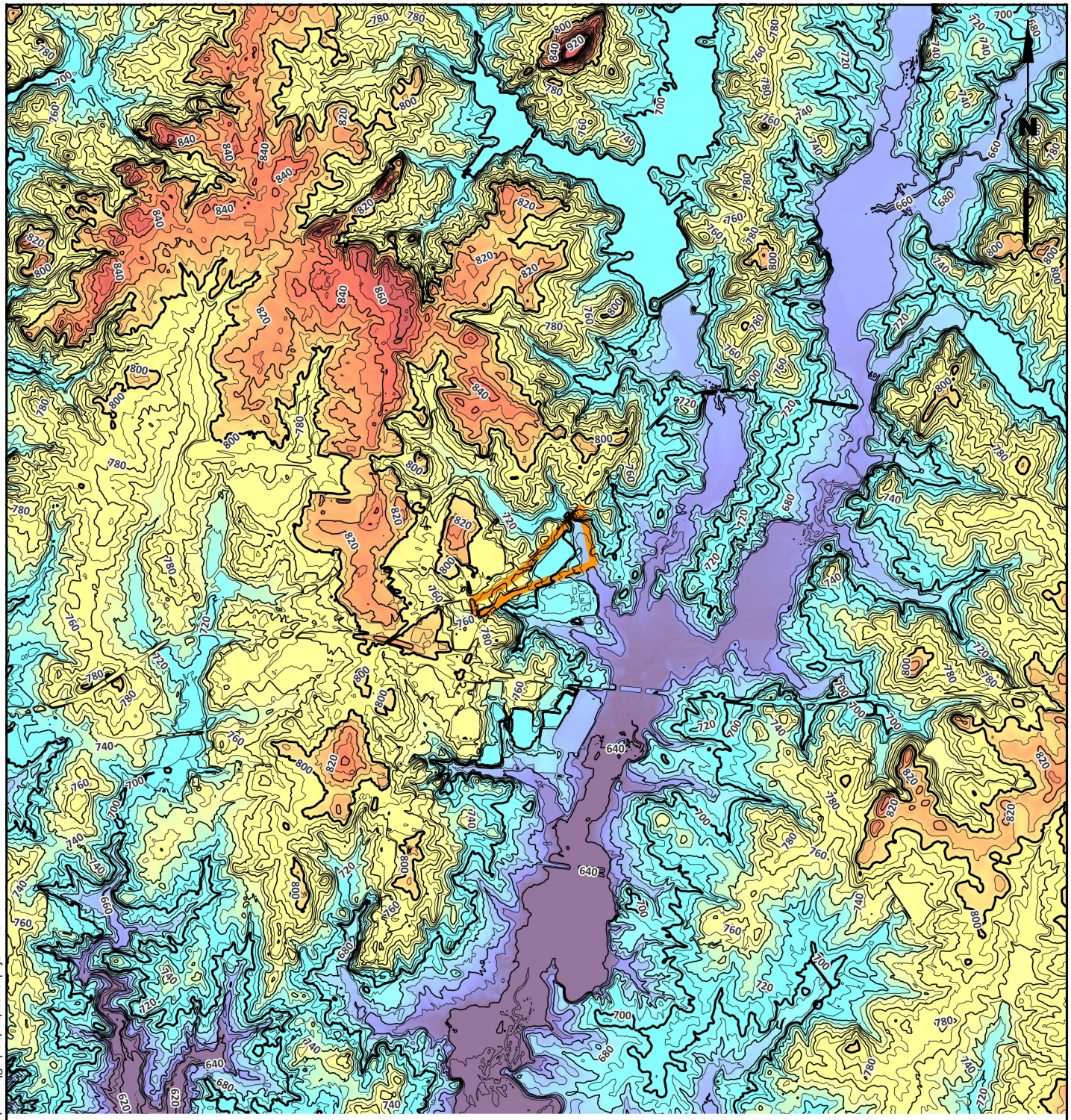
Note:
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: Newton County GIS, Georgia DOT, Basemap from Google Maps (c) 2024

Landau Associates | G:\Projects\1484\014\010\Air\ATL2.qgz | 09/19/2025 | tjenkins

LANDAU ASSOCIATES

ATL2 Data Center Covington, Georgia	**Facility Layout**	Figure **1**



Legend

Facility Property Boundary

Elevation (feet)

640 860

0 5,000 10,000

Scale in Feet

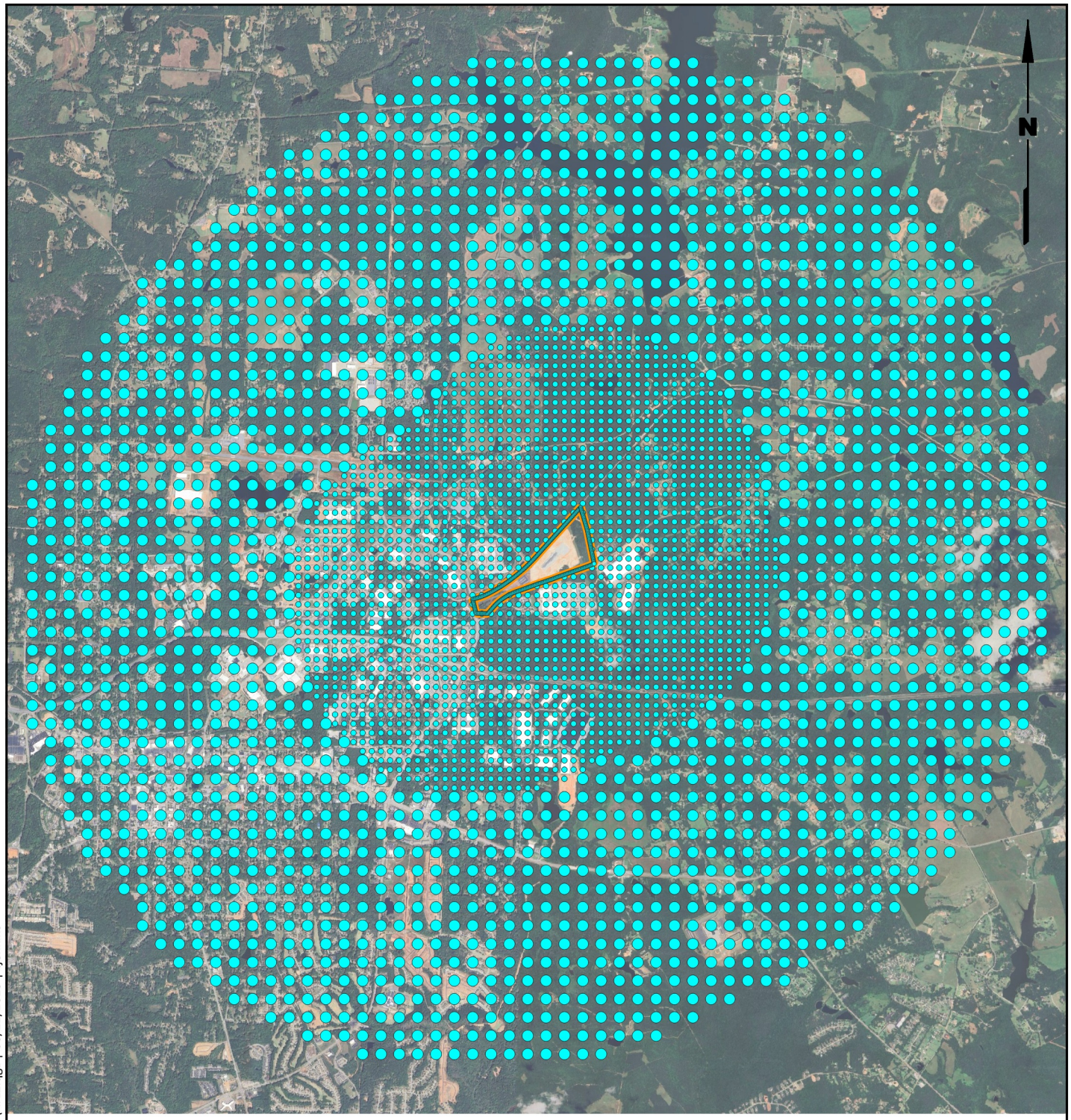
Note:
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: USGS National Elevation Dataset, Basemap from Google Maps (c) 2024

ATL2 Data Center Covington, Georgia	**Topography**	Figure **2**

LANDAU ASSOCIATES

Landau Associates | G:\Projects\1484\014\010\Air\ATL2.qgz | 08/22/2025 | tjenkins



Legend

Facility Property Boundary

Model Receptor Locations

0 5,000 10,000

Scale in Feet

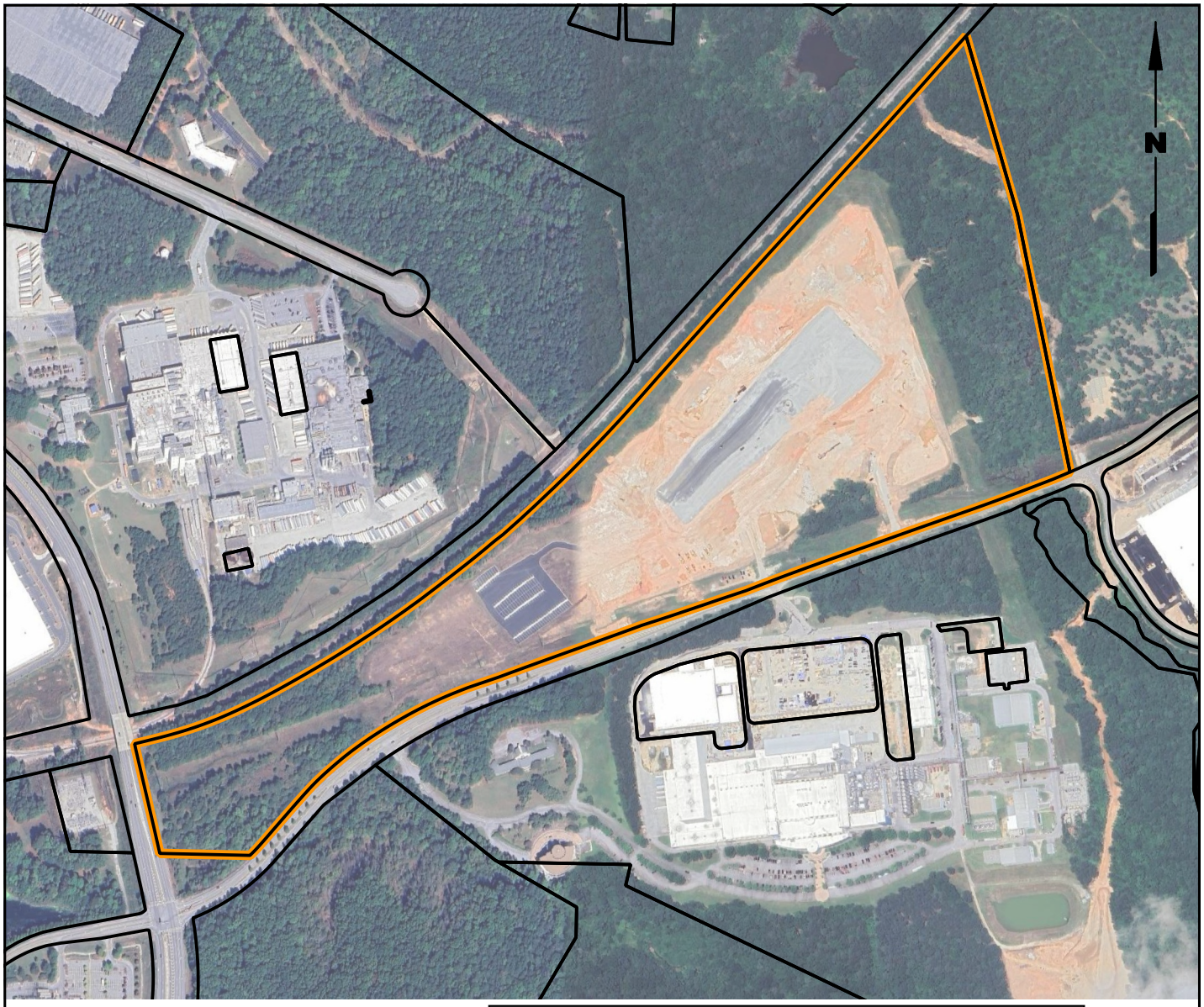
Note:
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: Basemap from Google Maps (c) 2024

Landau Associates | G:\Projects\1484\014\010\Air\ATL2.qgz | 08/22/2025 | tjenkins

LANDAU ASSOCIATES

ATL2 Data Center Covington, Georgia	**Model Receptor Grid**	Figure **3**



Legend

- Facility Property Boundary
- Newton County Tax Parcels

Tax Summary

Parcel Number	0080000000083000
Account/Realkey	28575
Short Parcel Number	0080 083
Location Address	10835 HAZELBRAND RD
Legal Description	97.46AC HAZELBRAND RD
Class	C5-Commercial
Zoning	M-2 Heavy Industrial
Tax District	COUNTY (District 01)
Acres	97.46
Neighborhood	INDUSTRIAL WAREHOUSE (00793)
Homestead Exemption	No (S0)
Landlot/District	N/A

0 700 1,400

Scale in Feet

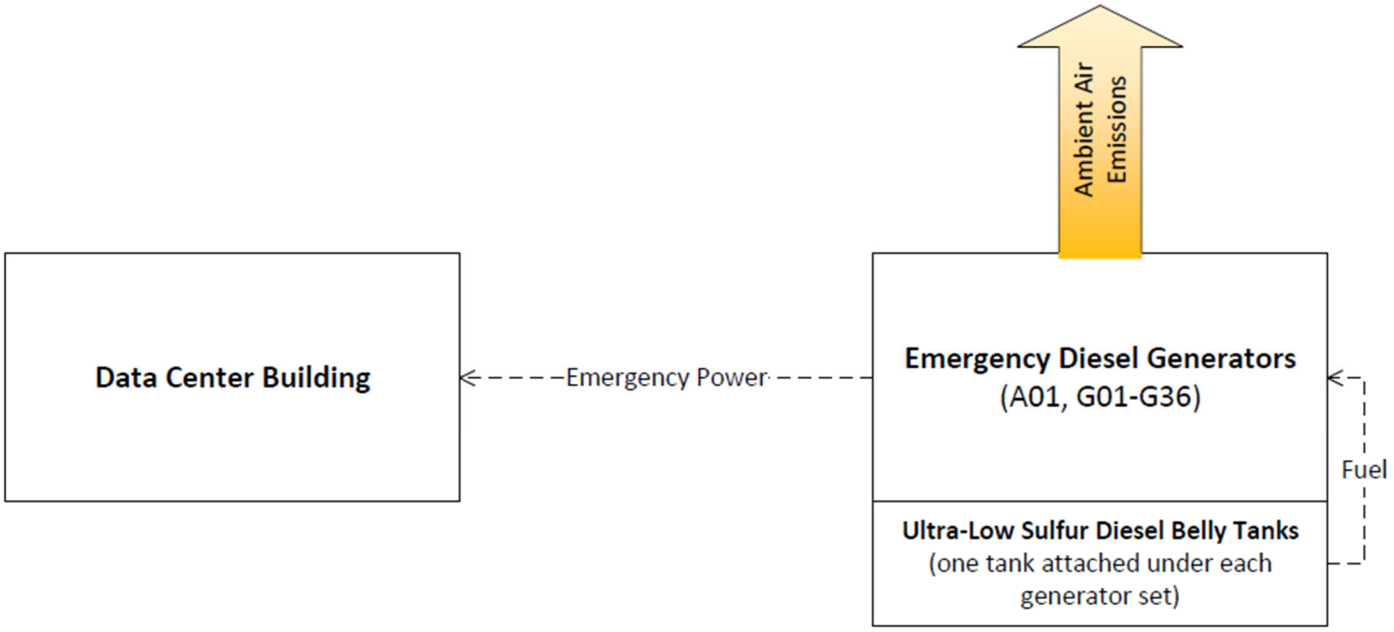
Note:
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: Newton County GIS, Georgia DOT, Basemap from Google Maps (c) 2024

Landau Associates | G:\Projects\1484\014\010\Air\ATL2.qgz | 09/19/2025 | tjenkins

LANDAU ASSOCIATES

ATL2 Data Center Covington, Georgia	**Tax Plan Record**	Figure **4**



Landau Associates | P:\1484\014\010\R\Air Quality\SIP Permit Application\Att 1\A1.2 - Figures\F05 - Simplified Process Flow Diagram.docx | 9/22/25

LANDAU ASSOCIATES	ATL2 Data Center Covington, Georgia	**Simplified Process Flow Diagram**	Figure 5

12M55 Engine NTE Emission Datasheet

Engine basic data

Engine model 12M55G4D2/6

Max. test power @1800rpm (kWm) 2700

N° of Cylinders / Valves ..... 12 / 48

Cylinders arrangement.....V type

Displacement (L) 65.65

Thermodynamic Cycle .....Diesel 4 stroke

Cooling System ..... Liquid (water + 50% antifreeze)

Fuel System..... ..... High Pressure Common Rail

Aspiration.....Turbocharged and Aftercooled

Fuel type..... Diesel

Emission data*

Load	%	100%	75%	50%	25%	10%
Power	kW	2500	1875	1250	625	250
Speed	rpm	1800	1800	1800	1800	1800
Ambient temperature	℃	31.9	32.1	32.1	31.3	31
Exhaust temperature	℃	511	460	422	385	294
Exhaust flow	kg/hr	14,141	13,258	10,660	6,953	5,153
CO	g/(kW.h）	0.9	0.9	0.675	0.855	2.88
NOx	g/(kW.h）	9.3	6.6	5.85	5.7	7.65
HC	g/kW.h）	0.135	0.27	0.465	0.765	2.205
PM	g/（kW.h）	0.06	0.18	0.24	0.345	1.14

*Notes:

NTE data are calculated based on raw emission measurements, applicable under the following boundary conditions:

- **Ambient Temperature**: -40°C to +54°C
- **Altitude**: 0 to 2,500 meters

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)
3.2 (1)

Total Fuel Pump Flow (Combustion + Return) - gph (Lph)
739 (2,800)

Diesel - gph (Lph)	
Percent Load	Standby
25%	49.8 (188.5)
50%	90.2 (341.6)
75%	129.2 (489.0)
100%	162.9 (616.4)

*Fuel supply installation must accommodate fuel consumption rates at 100% load.

16M55 Engine NTE Emission Datasheet

Engine basic data

Engine model 16M55G8D2/6

Max. test power @1800rpm (kWm) 3599

N° of Cylinders / Valves ..... 16 / 64

Cylinders arrangement.....V type

Displacement (L) 87.5

Thermodynamic Cycle .....Diesel 4 stroke

Cooling System ..... Liquid (water + 50% antifreeze)

Fuel System..... ..... High Pressure Common Rail

Aspiration.....Turbocharged and Aftercooled

Fuel type..... Diesel

Emission data*

Load	%	100%	75%	50%	25%	10%
Power	kW	3599	2699	1800	901	360
Speed	rpm	1800	1800	1800	1800	1800
Ambient temperature	℃	21	21	21	21	21
Exhaust temperature	℃	460	416	387	371	302
Exhaust flow	kg/hr	20626	18857	15342	10077	7009
CO	g/(kW.h）	0.57	0.49	0.46	0.73	1.97
NOx	g/(kW.h）	10.65	7.36	5.81	5.02	6.43
HC	g/kW.h）	0.29	0.31	0.41	0.72	1.60
PM	g/（kW.h）	0.05	0.08	0.11	0.20	0.72

*Notes:

NTE data are calculated based on raw emission measurements, applicable under the following boundary conditions:

- **Ambient Temperature**: -15.8°C to +41.4°C
- **Altitude**: 0 to 315 meters

▶ FUEL CONSUMPTION

STANDBY POWER		
LOAD	GAL /hr	L/hr
100%	234.5	887.5
75%	173.4	656.5
50%	121.1	458.3
25%	70	264.9

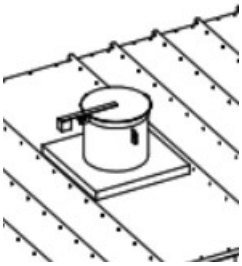
Kat Baker

From: Corbin Dewey <Corbin.Dewey@generac.com>
Sent: Wednesday, August 13, 2025 3:54 PM
To: Kent Wissman
Cc: Mark Brunner; brian.me@sfrdc.com; Kat Baker; tim.b@sfrdc.com; sam@sfrdc.com; D'Avery Brown; Denisse De la Cruz; Ricardo Navarro
Subject: RE: SF ATL2 - Air Permit Strategy
Attachments: Rain Cap.pdf

Categories: Filed in TonicDM, 1484014.010 Serverfarm Realty / Noise Air and As-needed Due Diligence Services for ATL2 Serverfarm Realty Data Center Project

Hi Kent,

We are showing a standard flapper design in the submittal for the exhaust termination:



Attached is the cut sheet that the enclosure manufacturer included in the submittal package.

Let us know if there are further questions/concerns.

Thank you,

Corbin Dewey
Senior Applications Engineer

GENERAC®

P (262) 259-5642 **M** (262) 450-5258
corbin.dewey@generac.com

Generac Power Systems | S45W29290 Highway 59
Waukesha, Wisconsin 53189

From: Kent Wissman <kent.w@sfrdc.com>
Sent: Wednesday, August 13, 2025 3:35 PM
To: Mark Brunner <mbrunner@landauinc.com>; Ricardo Navarro <Ricardo.Navarro@generac.com>; Denisse De la Cruz

BERGARI SOLUTIONS
member of mandersgroup

INNOVATION WITH INTEGRITY

HEAVY DUTY RAINCAPS



Bergari Solutions offers heavy duty carbon steel raincaps for industrial exhaust systems. These raincaps are all welded, counterweighted designs with an integral replaceable metal bushing at the pivot point. Painted with a high temperature black finish.

- Standard models are sized to fit nominal tubing sizes.
- Optional pipe sizes are available.
- Similar models are also available in 304 and 316 grade stainless steel.
- An aluminum thermal spray coat finish is also available as an option.

STANDARD HEAVY DUTY CARBON STEEL RAINCAPS – FOR TUBE SIZES

Part No.	For OD Tube Size
500-000556	3.00
500-000557	3.50
500-000558	4.00
500-000559	4.50
500-000560	5.00
500-000562	6.00
500-000564	8.00
500-000566	10.00
500-000568	12.00
500-000570	14.00
500-000571	16.00
500-000572	18.00
500-000573	20.00

Bergari Solutions, LLC
2605 160th St. W., #102
Rosemount, MN 55068

www.bergari.com
Main Office: 651-423-7128
Mobile: 651-270-6817
Office FAX: 651-554-1674

Separate Source Determination

As requested by GEPD during the pre-application meeting, information is being provided regarding VoltaGrid's proposed facility that is being located adjacent to the southwest of the Serverfarm data center.

VoltaGrid is proposing to construct and operate an electrical generating facility. VoltaGrid will install and operate natural gas-fueled generators to produce electricity. Serverfarm will enter into a contract with VoltaGrid to purchase the electricity as a primary power source for its data center.

Based on GEPD's guidance, it is understood that VoltaGrid and Serverfarm will require separate permits for their facilities since they are considered separate "sources." According to Part 70.2 of Title 40 of the CFR, for two facilities to be considered the same source, all three of the following conditions must apply the following:

- Located on one or more contiguous or adjacent properties
- Belong to the same industrial grouping defined by the Standard Industrial Classification (SIC) code
- Under control of the same person (or persons under common control).

The two facilities will be located on one contiguous property; however, they do not belong to the same industrial grouping, nor are they under common control.

Serverfarm's SIC code is 7374, defined as "computer processing and data preparation and processing services." Whereas VoltaGrid's SIC code is 4911, defined as "electric services."

Additionally, Serverfarm and VoltaGrid's facilities are not considered to be under common control for the following reasons:

- Serverfarm and VoltaGrid are separate companies with no cross ownership or direct control over each other's operations
- The Serverfarm management team will not be able to in any way dictate the operation of VoltaGrid and vice versa
- Each of their respective facilities will retain full responsibility for compliance with all air regulatory obligations
- There will be no sharing of workforces, management, administrative functions, equipment, or pollution control responsibilities.

Based on 40 CFR Part 70.2 and according to guidance outlined in the EPA's Meadowbrook memorandum dated April 30, 2018, it is understood that Serverfarm's and VoltaGrid's facilities are considered separate sources.

ATTACHMENT 2

Emissions Data

Serverfarm - Covington Data Center

Worst-Case Emissions Example Scenario

Criteria Air Pollutants and Hazardous Air Pollutant Emissions

Pollutant	CAS No./ID	Maximum Hourly Emissions per 3.3 MW Generator[a] (lb/hr)	Maximum Hourly Emissions per 2.25 MW Generator[a] (lb/hr)	Facility-Wide Emissions[b] (ton/yr)	Title V Threshold[c] (ton/yr)	Emissions Exceed Title V Threshold? (Yes/No)
CO	CO	4.52	4.96	**5.37**	100	No
NO_X	NOX	84.50	51.26	**98.99**	100	No
PM	PM	0.57	0.74	**0.68**	100	No
PM_{10}	PM10	0.57	0.74	**0.68**	100	No
$PM_{2.5}$	PM2.5	0.57	0.74	**0.68**	100	No
SO_2	SO2	0.05	0.03	**0.06**	100	No
VOC	VOC	2.30	1.28	**2.69**	100	No
HAP (single highest: Benzene)	71-43-2	0.02	0.02	**0.03**	10	No
HAP (total)	HAP	0.05	0.04	**0.06**	25	No
Carbon dioxide equivalent	CO2e	5,345	3,698	**6,276**	--	--

Hazardous Air Pollutant (HAP) and Toxic Air Pollutant (TAP) Emissions

Pollutant	CAS No./ID	Maximum Hourly Emissions per 3.3 MW Generator[a] (lb/hr)	Maximum Hourly Emissions per 2.25 MW Generator[a] (lb/hr)	Facility-Wide Emissions[b] (lb/yr)	MER[d] (lb/yr)	20 Percent of MER[e] (lb/yr)	Emissions Exceed 20 Percent of MER? (Yes/No)
Acetaldehyde	75-07-0	8.10E-04	5.62E-04	**1.90**	1,107	221.43	No
Acrolein	107-02-8	2.53E-04	1.76E-04	**0.59**	85.1	17.02	No
Benzene	71-43-2	2.49E-02	1.73E-02	**58.55**	31.63	6.33	Yes
Formaldehyde	50-00-0	2.53E-03	1.76E-03	**5.95**	22.1	4.42	Yes
Naphthalene	91-20-3	4.18E-03	2.90E-03	**9.81**	729.99	146.00	No
Polycyclic aromatic hydrocarbons, total (includes naphthalene)	PAH	6.81E-03	4.73E-03	**15.99**	--	--	--
Toluene	108-88-3	9.03E-03	6.27E-03	**21.20**	1,216,650	243,330	No
Xylenes	1330-20-7	6.20E-03	4.31E-03	**14.56**	24,333	4,867	No

Notes:

a. Worst-case emission rates at worst-case load for each pollutant.

b. Emissions are calculated based on the following equipment and assumed hours of operation:

36	3.3 MW Baudouin 16M55G8D2/6 generator sets
1	2.25 MW Baudouin Admin Generator set
64	hrs/yr per genset

c. Threshold values for a major stationary source in an ozone attainment county (Newton County) as per 40 Code of Federal Regulations § 70.2.

d. Maximum emission rate (MER) as per Appendix A (June 2025) of the toxic impact assessment guideline.

e. All emission sources are considered POINTCAP sources because the generator stacks are all equipped with raincaps; thus emissions are compared against 20 percent of the MERs.

Serverfarm - Covington Data Center

Toxics Impact Assessment

Stack Parameters[a]

Generator Type	Load (%)	RelH (m)	Diameter (m)	Flow (acfm)	Temp (K)	ExitVel (m/s)
2.25 MW Baudouin Admin Generator	10	5.08	0.60	5,030	567.15	8.48
	25	5.08	0.60	7,875	658.15	13.28
	50	5.08	0.60	12,753	695.15	21.51
	75	5.08	0.60	16,728	733.15	28.21
	100	5.08	0.60	19,084	784.15	32.19
3.3 MW Baudouin 16M55G8D2/6	10	5.34	0.60	6,938	575.15	11.70
	25	5.34	0.60	11,171	644.15	18.84
	50	5.34	0.60	17,430	660.15	29.40
	75	5.34	0.60	22,365	689.15	37.72
	100	5.34	0.60	26,025	733.15	43.89

AERMOD Inputs

Generator Type	SrcID	SrcType[b]	Load[c] (%)	RelH (m)	Temp (K)	ExitVel (m/s)	Diameter (m)
2.25 MW Baudouin Admin Generator	A01	POINTCAP	100	5.08	784.15	32.19	0.60
3.3 MW Baudouin 16M55G8D2/6	G01-G36	POINTCAP	100	5.34	733.15	43.89	0.60

Generator Type	Benzene 1-hr[d] (g/s)	Benzene Annual[e] (g/s)	Formaldehyde 1-hr[d] (g/s)	Formaldehyde Annual[e] (g/s)
2.25 MW Baudouin Admin Generator	2.18E-03	1.24E-04	2.22E-04	1.27E-05
3.3 MW Baudouin 16M55G8D2/6	3.14E-03	1.79E-04	3.19E-04	1.82E-05

Modeling Results

	Maximum Ground Level Concentrations			AAC Comparisons			
Pollutant	15-min[f] (ug/m^3)	1-hr (ug/m^3)	Annual (ug/m^3)	15-min AAC (ug/m^3)	Annual AAC (ug/m^3)	Percent of 15-min AAC (%)	Percent of Annual AAC (%)
Benzene	8.00	6.06	2.07E-02	1600	0.13	0.5%	15.9%
Formaldehyde	0.81	0.62	2.11E-03	245	0.0909	0.3%	2.3%

Notes:

a. Information from manufacturer specifications and/or best conservative estimate of projected construction plans.

b. The model assumes that all generators are POINTCAP sources because the stacks are all equipped with rain caps.

c. The model assumes that all generators are operating at 100 percent load because emission rates are based on heat input rates, which are the highest at 100 percent load.

d. 1-hr emission rate is based on the maximum rated fuel heat input rate of the engine (at 100 percent load).

e. Annual emission rate is conservatively based on the maximum 1-hr emission rate and 500 hrs/yr operations averaged over 8,760 hours per year.

500 hrs/yr

f. The 15-min MGLC is scaled from the modeled 1-hr MGLC by a factor of 1.32.

Serverfarm - Covington Data Center

Preliminary Emissions from the Emergency Standby Generators

Parameters

Equipment Type/Name	3.3 MW Baudouin 16M55G8D2/6	
Fuel Type	Diesel	
Maximum Fuel Consumption	234.5 gal/hr	
Maximum Fuel Heat Input	32.1 MMBtu/hr	
Total Number of Generators	36 generators	
Hours of Operation	64 hrs/yr per generator	a

Emissions

				Per Generator		Total
Pollutant	CAS No./ID	Emission Factor		Hourly Emissions (lb/hr)	Annual Emissions (ton/yr)	Annual Emissions (ton/yr)
Criteria Air Pollutants						
CO	CO	4.52 lb/hr	b	4.52	0.14	5.21
NO_X	NOX	84.50 lb/hr	b	84.50	2.70	97.35
PM	PM	0.57 lb/hr	b	0.57	0.018	0.66
PM_{10}	PM10	0.57 lb/hr	c	0.57	0.018	0.66
$PM_{2.5}$	PM2.5	0.57 lb/hr	c	0.57	0.018	0.66
SO_2	SO2	0.05 lb/hr	d	0.05	0.0016	0.06
Hydrocarbons	VOC	2.30 lb/hr	b	2.30	0.074	2.65
Greenhouse Gas (GHG) Pollutants						
Carbon dioxide	CO2	22.50 lb/gal	f	5,277	168.85	6,079
Methane	CH4	9.13E-04 lb/gal	f	0.21	6.85E-03	2.47E-01
Nitrous oxide	N2O	1.83E-04 lb/gal	f	0.04	1.37E-03	4.93E-02
Carbon dioxide equivalent	CO2e	-- --	f	5,345	171.03	6,157
Hazardous Air Pollutants (HAPs)						
Acetaldehyde	75-07-0	2.52E-05 lb/MMBtu	e	8.10E-04	2.59E-05	9.33E-04
Acrolein	107-02-8	7.88E-06 lb/MMBtu	e	2.53E-04	8.10E-06	2.92E-04
Benzene	71-43-2	7.76E-04 lb/MMBtu	e	2.49E-02	7.98E-04	2.87E-02
Formaldehyde	50-00-0	7.89E-05 lb/MMBtu	e	2.53E-03	8.11E-05	2.92E-03
Naphthalene	91-20-3	1.30E-04 lb/MMBtu	e	4.18E-03	1.34E-04	4.81E-03
Polycyclic Aromatic Hydrocarbons (PAH), total (includes naphthalene)	PAH	2.12E-04 lb/MMBtu	e	6.81E-03	2.18E-04	7.85E-03
Toluene	108-88-3	2.81E-04 lb/MMBtu	e	9.03E-03	2.89E-04	1.04E-02
Xylenes	1330-20-7	1.93E-04 lb/MMBtu	e	6.20E-03	1.98E-04	7.14E-03
HAP (total)	HAP	-- --		5.06E-02	1.62E-03	5.83E-02

Notes:

a. Assumed annual operating hours.

b. Not-to-exceed emission factors from specifications provided by the manufacturer at worst-case load.

c. Conservatively assumes that the emission factor for PM equals the emission factors for PM_{10} and $PM_{2.5}$.

d. SO_2 emissions for engines are calculated based on maximum fuel usage and an assumed fuel sulfur content of 15 ppm (ultra-low sulfur diesel).

SO_2 (lb/hr) = [fuel use (gal/hr)] × [fuel density (7.1 lb/gal)] × [fuel sulfur content (15 ppm)] × [molcular weight ratio (64.06 lb-SO_2/32.06 lb-S)]

e. Emission factors from EPA AP-42 Chapter 3.4 Large Stationary Diesel And All Stationary Dual-Fuel Engines (October 1996), Tables 3.4-3 and 3.4-4. The maximum fuel consumption was converted to fuel heat input based on the heating value for diesel fuel as noted in EPA AP-42 Appendix A (Sep. 1985).

Diesel Fuel Heating Value = 137,000 Btu/gal

f. Emission factors from 40 CFR Part 90 Table C-1 and Table C-2 to Subpart C for distillate fuel oil no. 2 using the default high heat value. CO_2e is calculated based on the global warming potential (GWP) for each greenhouse gas as per 40 CFR, Part 98, Subpart A: CO_2 = 1; CH_4 = 25; N_2O = 298.

Serverfarm - Covington Data Center

Preliminary Emissions from the Emergency Standby Generators

Parameters

Equipment Type/Name	2.25 MW Baudouin Admin Generator	
Fuel Type	Diesel	
Maximum Fuel Consumption	162.9 gal/hr	
Maximum Fuel Heat Input	22.3 MMBtu/hr	
Total Number of Generators	1 generator	
Hours of Operation	64 hrs/yr per generator	[a]

Emissions

Pollutant	CAS No./ID	Emission Factor			Per Generator: Hourly Emissions (lb/hr)	Per Generator: Annual Emissions (ton/yr)	Total: Annual Emissions (ton/yr)
Criteria Air Pollutants							
CO	CO	4.96	lb/hr	[b]	4.96	0.16	0.16
NO_X	NOX	51.26	lb/hr	[b]	51.26	1.64	1.64
PM	PM	0.74	lb/hr	[b]	0.74	0.024	0.02
PM_{10}	PM10	0.74	lb/hr	[c]	0.74	0.024	0.02
$PM_{2.5}$	PM2.5	0.74	lb/hr	[c]	0.74	0.024	0.02
SO_2	SO2	0.03	lb/hr	[d]	0.03	0.0011	0.001
Hydrocarbons	VOC	1.28	lb/hr	[b]	1.28	0.041	0.04
Greenhouse Gas (GHG) Pollutants							
Carbon dioxide	CO2	22.50	lb/gal	[f]	3,665	117.30	117
Methane	CH4	9.13E-04	lb/gal	[f]	0.15	4.76E-03	4.76E-03
Nitrous oxide	N2O	1.83E-04	lb/gal	[f]	0.03	9.52E-04	9.52E-04
Carbon dioxide equivalent	CO2e	--	--	[f]	3,698	118.35	118
Hazardous Air Pollutants (HAPs)							
Acetaldehyde	75-07-0	2.52E-05	lb/MMBtu	[e]	5.62E-04	1.80E-05	1.80E-05
Acrolein	107-02-8	7.88E-06	lb/MMBtu	[e]	1.76E-04	5.63E-06	5.63E-06
Benzene	71-43-2	7.76E-04	lb/MMBtu	[e]	1.73E-02	5.54E-04	5.54E-04
Formaldehyde	50-00-0	7.89E-05	lb/MMBtu	[e]	1.76E-03	5.63E-05	5.63E-05
Naphthalene	91-20-3	1.30E-04	lb/MMBtu	[e]	2.90E-03	9.28E-05	9.28E-05
Polycyclic Aromatic Hydrocarbons (PAH), total (includes naphthalene)	PAH	2.12E-04	lb/MMBtu	[e]	4.73E-03	1.51E-04	1.51E-04
Toluene	108-88-3	2.81E-04	lb/MMBtu	[e]	6.27E-03	2.01E-04	2.01E-04
Xylenes	1330-20-7	1.93E-04	lb/MMBtu	[e]	4.31E-03	1.38E-04	1.38E-04
HAP (total)	HAP	--	--		3.51E-02	1.12E-03	1.12E-03

Notes:

a. Assumed annual operating hours.

b. Not-to-exceed emission factors from specifications provided by the manufacturer at worst-case load.

c. Conservatively assumes that the emission factor for PM equals the emission factors for PM_{10} and $PM_{2.5}$.

d. SO_2 emissions for engines are calculated based on maximum fuel usage and an assumed fuel sulfur content of 15 ppm (ultra-low sulfur diesel).

SO_2 (lb/hr) = [fuel use (gal/hr)] × [fuel density (7.1 lb/gal)] × [fuel sulfur content (15 ppm)] × [molcular weight ratio (64.06 lb-SO_2/32.06 lb-S)]

e. Emission factors from EPA AP-42 Chapter 3.4 Large Stationary Diesel And All Stationary Dual-Fuel Engines (October 1996), Tables 3.4-3 and 3.4-4. The maximum fuel consumption was converted to fuel heat input based on the heating value for diesel fuel as noted in EPA AP-42 Appendix A (Sep. 1985).

Diesel Fuel Heating Value = 137,000 Btu/gal

f. Emission factors from 40 CFR Part 90 Table C-1 and Table C-2 to Subpart C for distillate fuel oil no. 2 using the default high heat value. CO_2e is calculated based on the global warming potential (GWP) for each greenhouse gas as per 40 CFR, Part 98, Subpart A: CO_2 = 1; CH_4 = 25; N_2O = 298.

Serverfarm - Covington Data Center

Preliminary Emissions from the Emergency Standby Generators

Parameters

Equipment Type/Name	2.25 MW Baudouin Admin Generator
Fuel Type	Diesel
Maximum Fuel Consumption	162.9 gal/hr
Maximum Fuel Heat Input	22.3 MMBtu/hr
Total Number of Generators	1 generator
Hours of Operation	64 hrs/yr per generator [a]

Emissions

Pollutant	CAS No./ID	Emission Factor			Per Generator: Hourly Emissions (lb/hr)	Per Generator: Annual Emissions (ton/yr)	Total: Annual Emissions (ton/yr)
Criteria Air Pollutants							
CO	CO	4.96	lb/hr	[b]	4.96	0.16	0.16
NO_X	NOX	51.26	lb/hr	[b]	51.26	1.64	1.64
PM	PM	0.74	lb/hr	[b]	0.74	0.024	0.02
PM_{10}	PM10	0.74	lb/hr	[c]	0.74	0.024	0.02
$PM_{2.5}$	PM2.5	0.74	lb/hr	[c]	0.74	0.024	0.02
SO_2	SO2	0.03	lb/hr	[d]	0.03	0.0011	0.001
Hydrocarbons	VOC	1.28	lb/hr	[b]	1.28	0.041	0.04
Greenhouse Gas (GHG) Pollutants							
Carbon dioxide	CO2	22.50	lb/gal	[f]	3,665	117.30	117
Methane	CH4	9.13E-04	lb/gal	[f]	0.15	4.76E-03	4.76E-03
Nitrous oxide	N2O	1.83E-04	lb/gal	[f]	0.03	9.52E-04	9.52E-04
Carbon dioxide equivalent	CO2e	--	--	[f]	3,698	118.35	118
Hazardous Air Pollutants (HAPs)							
Acetaldehyde	75-07-0	2.52E-05	lb/MMBtu	[e]	5.62E-04	1.80E-05	1.80E-05
Acrolein	107-02-8	7.88E-06	lb/MMBtu	[e]	1.76E-04	5.63E-06	5.63E-06
Benzene	71-43-2	7.76E-04	lb/MMBtu	[e]	1.73E-02	5.54E-04	5.54E-04
Formaldehyde	50-00-0	7.89E-05	lb/MMBtu	[e]	1.76E-03	5.63E-05	5.63E-05
Naphthalene	91-20-3	1.30E-04	lb/MMBtu	[e]	2.90E-03	9.28E-05	9.28E-05
Polycyclic Aromatic Hydrocarbons (PAH), total (includes naphthalene)	PAH	2.12E-04	lb/MMBtu	[e]	4.73E-03	1.51E-04	1.51E-04
Toluene	108-88-3	2.81E-04	lb/MMBtu	[e]	6.27E-03	2.01E-04	2.01E-04
Xylenes	1330-20-7	1.93E-04	lb/MMBtu	[e]	4.31E-03	1.38E-04	1.38E-04
HAP (total)	HAP	--	--		3.51E-02	1.12E-03	1.12E-03

Notes:

a. Assumed annual operating hours.

b. Not-to-exceed emission factors from specifications provided by the manufacturer at worst-case load.

c. Conservatively assumes that the emission factor for PM equals the emission factors for PM_{10} and $PM_{2.5}$.

d. SO_2 emissions for engines are calculated based on maximum fuel usage and an assumed fuel sulfur content of 15 ppm (ultra-low sulfur diesel).

SO_2 (lb/hr) = [fuel use (gal/hr)] × [fuel density (7.1 lb/gal)] × [fuel sulfur content (15 ppm)] × [molcular weight ratio (64.06 lb-SO_2/32.06 lb-S)]

e. Emission factors from EPA AP-42 Chapter 3.4 Large Stationary Diesel And All Stationary Dual-Fuel Engines (October 1996), Tables 3.4-3 and 3.4-4. The maximum fuel consumption was converted to fuel heat input based on the heating value for diesel fuel as noted in EPA AP-42 Appendix A (Sep. 1985).

Diesel Fuel Heating Value = 137,000 Btu/gal

f. Emission factors from 40 CFR Part 90 Table C-1 and Table C-2 to Subpart C for distillate fuel oil no. 2 using the default high heat value. CO_2e is calculated based on the global warming potential (GWP) for each greenhouse gas as per 40 CFR, Part 98, Subpart A: CO_2 = 1; CH_4 = 25; N_2O = 298.

Serverfarm - Covington Data Center

Baudouin 12M55G4D2/6 Engine Specs

Engine Model: 12M55G4D2/6
Number of Cylinders: 12
Displacement: 65.65 L
Emission Standard: EPA Tier 2
Max. Diameter of Exhaust Pipe: 23.5 in
Min. Stack Height: 200 in above grade

Fuel Consumption

Load	%	**10%**	**25%**	**50%**	**75%**	**100%**
Fuel Consumption	gal/hr		49.8	90.2	129.2	162.9

Engine Not-To-Exceed (NTE) Emissions

Load	**%**	**10%**	**25%**	**50%**	**75%**	**100%**
Power	kW	250	625	1250	1875	2500
Exhaust Temperature	°C	294	385	422	460	511
Exhaust Flow	kg/hr	5,153	6,953	10,660	13,258	14,141
CO	g/(kW.h)	2.88	0.855	0.675	0.9	0.9
NOx	g/(kW.h)	7.65	5.7	5.85	6.6	9.3
HC	g/(kW.h)	2.205	0.765	0.465	0.27	0.135
PM	g/(kW.h)	1.14	0.345	0.24	0.18	0.06

Note:

NTE data are calculated based on raw emission measurements, applicable under the following boundary conditions:

Ambient Temperature: -40°C to +54°C
Altitude: 0 to 2,500 meters

Converted Rates

Exhaust Temperature	K	567	658	695	733	784
Air Density	kg/m^3	0.603	0.520	0.492	0.466	0.436
Air Density	kg/ft^3	0.017	0.015	0.014	0.013	0.012
Exhaust Flow	acfm	5,030	7,875	12,753	16,728	19,084
CO Emissions	lb/hr	1.59	1.18	1.86	3.72	**4.96**
NOX Emissions	lb/hr	4.22	7.85	16.12	27.28	**51.26**
HC Emissions	lb/hr	1.22	1.05	**1.28**	1.12	0.74
PM Emissions	lb/hr	0.63	0.48	0.66	**0.74**	0.33

Temperture-Adjusted Exhaust Flow Conversion from kg/hr to acfm

ACFM = (kg/hr) / (60 min/hour) / Air Density (kg/m^3) / (35.315 ft^3/m^3)

local atmospheric pressure = 28.9908 in Hg
converted local atmospheric pressure = 98174.21 Pa
specific gas constant for air = 287 J/(kg*K)
conversion factor = 35.315 ft^3/m^3

$$\rho = \frac{P}{R_{specific} \times T}$$

Where:
ρ — Air density (kg/m^3)
P — Absolute pressure (Pascals)
$R_{specific}$ — Specific gas constant for dry air (287.058 J/(kg·K))
T — Absolute temperature (Kelvin)

Diesel Fuel Heating Value = 137000 Btu/gal AP-42 Appendix A (Sep. 1

Serverfarm - Covington Data Center

Preliminary Emissions from the Emergency Standby Generators

Parameters

Equipment Type/Name	3.3 MW Baudouin 16M55G8D2/6
Fuel Type	Diesel
Maximum Fuel Consumption	234.5 gal/hr
Maximum Fuel Heat Input	32.1 MMBtu/hr
Total Number of Generators	36 generators
Hours of Operation	64 hrs/yr per generator [a]

Emissions

Pollutant	CAS No./ID	Emission Factor		Per Generator Hourly Emissions (lb/hr)	Per Generator Annual Emissions (ton/yr)	Total Annual Emissions (ton/yr)
Criteria Air Pollutants						
CO	CO	4.52	lb/hr [b]	4.52	0.14	5.21
NO_X	NOX	84.50	lb/hr [b]	84.50	2.70	97.35
PM	PM	0.57	lb/hr [b]	0.57	0.018	0.66
PM_{10}	PM10	0.57	lb/hr [c]	0.57	0.018	0.66
$PM_{2.5}$	PM2.5	0.57	lb/hr [c]	0.57	0.018	0.66
SO_2	SO2	0.05	lb/hr [d]	0.05	0.0016	0.06
Hydrocarbons	VOC	2.30	lb/hr [b]	2.30	0.074	2.65
Greenhouse Gas (GHG) Pollutants						
Carbon dioxide	CO2	22.50	lb/gal [f]	5,277	168.85	6,079
Methane	CH4	9.13E-04	lb/gal [f]	0.21	6.85E-03	2.47E-01
Nitrous oxide	N2O	1.83E-04	lb/gal [f]	0.04	1.37E-03	4.93E-02
Carbon dioxide equivalent	CO2e	--	-- [f]	5,345	171.03	6,157
Hazardous Air Pollutants (HAPs)						
Acetaldehyde	75-07-0	2.52E-05	lb/MMBtu [e]	8.10E-04	2.59E-05	9.33E-04
Acrolein	107-02-8	7.88E-06	lb/MMBtu [e]	2.53E-04	8.10E-06	2.92E-04
Benzene	71-43-2	7.76E-04	lb/MMBtu [e]	2.49E-02	7.98E-04	2.87E-02
Formaldehyde	50-00-0	7.89E-05	lb/MMBtu [e]	2.53E-03	8.11E-05	2.92E-03
Naphthalene	91-20-3	1.30E-04	lb/MMBtu [e]	4.18E-03	1.34E-04	4.81E-03
Polycyclic Aromatic Hydrocarbons (PAH), total (includes naphthalene)	PAH	2.12E-04	lb/MMBtu [e]	6.81E-03	2.18E-04	7.85E-03
Toluene	108-88-3	2.81E-04	lb/MMBtu [e]	9.03E-03	2.89E-04	1.04E-02
Xylenes	1330-20-7	1.93E-04	lb/MMBtu [e]	6.20E-03	1.98E-04	7.14E-03
HAP (total)	HAP	--	--	5.06E-02	1.62E-03	5.83E-02

Notes:

a. Assumed annual operating hours.

b. Not-to-exceed emission factors from specifications provided by the manufacturer at worst-case load.

c. Conservatively assumes that the emission factor for PM equals the emission factors for PM_{10} and $PM_{2.5}$.

d. SO_2 emissions for engines are calculated based on maximum fuel usage and an assumed fuel sulfur content of 15 ppm (ultra-low sulfur diesel).

SO_2 (lb/hr) = [fuel use (gal/hr)] × [fuel density (7.1 lb/gal)] × [fuel sulfur content (15 ppm)] × [molcular weight ratio (64.06 lb-SO_2/32.06 lb-S)]

e. Emission factors from EPA AP-42 Chapter 3.4 Large Stationary Diesel And All Stationary Dual-Fuel Engines (October 1996), Tables 3.4-3 and 3.4-4. The maximum fuel consumption was converted to fuel heat input based on the heating value for diesel fuel as noted in EPA AP-42 Appendix A (Sep. 1985).

Diesel Fuel Heating Value = 137,000 Btu/gal

f. Emission factors from 40 CFR Part 90 Table C-1 and Table C-2 to Subpart C for distillate fuel oil no. 2 using the default high heat value. CO_2e is calculated based on the global warming potential (GWP) for each greenhouse gas as per 40 CFR, Part 98, Subpart A: CO_2 = 1; CH_4 = 25; N_2O = 298.

Serverfarm - Covington Data Center

Baudouin 16M55G8D2/6 Engine Specs

Engine Model: 16M55G8D2/6
Number of Cylinders: 16
Displacement: 87.5 L
Emission Standard: EPA Tier 2
Inside Diameter of Exhaust Outlet: 23.50 in
Stack Height: 210.25 in from grade to top of exhaust rain cap

Fuel Consumption

Load	%	**10%**	**25%**	**50%**	**75%**	**100%**
Fuel Consumption	gal/hr		70	121.1	173.4	234.5

Engine Not-To-Exceed (NTE) Emissions (ver.3)

Load	%	**10%**	**25%**	**50%**	**75%**	**100%**
Standby Rating	kWh	360	901	1,800	2,699	3,599
Exhaust Temperature	°C	302	371	387	416	460
Exhaust Flow	kg/hr	7,009	10,077	15,342	18,857	20,626
NOX Emissions	g/kWh	6.43	5.02	5.81	7.36	10.65
PM Emissions	g/kWh	0.72	0.20	0.11	0.08	0.05
CO Emissions	g/kWh	1.97	0.73	0.46	0.49	0.57
HC Emissions	g/kWh	1.6	0.72	0.41	0.31	0.29

Note:

NTE data are calculated based on raw emission measurements, applicable under the following boundary conditions:

Ambient Temperature: -15.5 °C to +41.4 °C
Altitude: 0 to 315 meters

Converted Rates

Fuel Heat Input	MMBtu/hr		9.6	16.6	23.8	32.1
Exhaust Temperature	°K	575	644	660	689	733
Air Density	kg/m^3	0.595	0.531	0.518	0.496	0.466
Air Density	kg/ft^3	0.017	0.015	0.015	0.014	0.013
Exhaust Flow	acfm	6,938	11,171	17,430	22,365	26,025
NOX Emissions	lb/hr	5.10	9.97	23.06	43.79	**84.50**
PM Emissions	lb/hr	**0.57**	0.40	0.44	0.48	0.40
CO Emissions	lb/hr	1.56	1.45	1.83	2.92	**4.52**
HC Emissions	lb/hr	1.27	1.43	1.63	1.84	**2.30**

Temperture-Adjusted Exhaust Flow Conversion from kg/hr to acfm

ACFM = (kg/hr) / (60 min/hour) / Air Density (kg/m^3) / (35.315 ft^3/m^3)

local atmospheric pressure = 28.9908 in Hg
converted local atmospheric pressure = 98174.21 Pa
specific gas constant for air = 287 J/(kg*K)
conversion factor = 35.315 ft^3/m^3

$$\rho = \frac{P}{R_{specific} \times T}$$

Where:
ρ — Air density (kg/m^3)
P — Absolute pressure (Pascals)
$R_{specific}$ — Specific gas constant for dry air (287.058 J/(kg·K))
T — Absolute temperature (Kelvin)

Diesel Fuel Heating Value = 137000 Btu/gal AP-42 Appendix A (Sep. 1

Serverfarm - Covington Data Center

Toxics Impact Assessment

Stack Parameters[a]

Generator Type	Load (%)	RelH (m)	Diameter (m)	Flow (acfm)	Temp (K)	ExitVel (m/s)
2.25 MW Baudouin Admin Generator	10	5.08	0.60	5,030	567.15	8.48
	25	5.08	0.60	7,875	658.15	13.28
	50	5.08	0.60	12,753	695.15	21.51
	75	5.08	0.60	16,728	733.15	28.21
	100	5.08	0.60	19,084	784.15	32.19
3.3 MW Baudouin 16M55G8D2/6	10	5.34	0.60	6,938	575.15	11.70
	25	5.34	0.60	11,171	644.15	18.84
	50	5.34	0.60	17,430	660.15	29.40
	75	5.34	0.60	22,365	689.15	37.72
	100	5.34	0.60	26,025	733.15	43.89

AERMOD Inputs

Generator Type	SrcID	SrcType[b]	Load[c] (%)	RelH (m)	Temp (K)	ExitVel (m/s)	Diameter (m)
2.25 MW Baudouin Admin Generator	A01	POINTCAP	100	5.08	784.15	32.19	0.60
3.3 MW Baudouin 16M55G8D2/6	G01-G36	POINTCAP	100	5.34	733.15	43.89	0.60

Modeling Results

	Maximum Ground Level Concentrations			AAC Comparisons			
Pollutant	15-min[f] (ug/m^3)	1-hr (ug/m^3)	Annual (ug/m^3)	15-min AAC (ug/m^3)	Annual AAC (ug/m^3)	Percent of 15-min AAC (%)	Percent of Annual AAC (%)
Benzene	8.00	6.06	2.07E-02	1600	0.13	0.5%	15.9%
Formaldehyde	0.81	0.62	2.11E-03	245	0.0909	0.3%	2.3%

Notes:

a. Information from manufacturer specifications and/or best conservative estimate of projected construction plans.

b. The model assumes that all generators are POINTCAP sources because the stacks are all equipped with rain caps.

c. The model assumes that all generators are operating at 100 percent load because emission rates are based on heat input rates, which are the highes

d. 1-hr emission rate is based on the maximum rated fuel heat input rate of the engine (at 100 percent load).

e. Annual emission rate is conservatively based on the maximum 1-hr emission rate and 500 hrs/yr operations averaged over 8,760 hours per year.

500 hrs/yr

f. The 15-min MGLC is scaled from the modeled 1-hr MGLC by a factor of 1.32.

Serverfarm - Covington Data Center

Worst-Case Emissions Example Scenario

Criteria Air Pollutants and Hazardous Air Pollutant Emissions

Pollutant	CAS No./ID	Maximum Hourly Emissions per 3.3 MW Generator[a] (lb/hr)	Maximum Hourly Emissions per 2.25 MW Generator[a] (lb/hr)	Facility-Wide Emissions[b] (ton/yr)	Title V Threshold[c] (ton/yr)	Emissions Exceed Title V Threshold? (Yes/No)
CO	CO	4.52	4.96	**5.37**	100	No
NO_X	NOX	84.50	51.26	**98.99**	100	No
PM	PM	0.57	0.74	**0.68**	100	No
PM_{10}	PM10	0.57	0.74	**0.68**	100	No
$PM_{2.5}$	PM2.5	0.57	0.74	**0.68**	100	No
SO_2	SO2	0.05	0.03	**0.06**	100	No
VOC	VOC	2.30	1.28	**2.69**	100	No
HAP (single highest: Benzene)	71-43-2	0.02	0.02	**0.03**	10	No
HAP (total)	HAP	0.05	0.04	**0.06**	25	No
Carbon dioxide equivalent	CO2e	5,345	3,698	**6,276**	--	--

Hazardous Air Pollutant (HAP) and Toxic Air Pollutant (TAP) Emissions

Pollutant	CAS No./ID	Maximum Hourly Emissions per 3.3 MW Generator[a] (lb/hr)	Maximum Hourly Emissions per 2.25 MW Generator[a] (lb/hr)	Facility-Wide Emissions[b] (lb/yr)	MER[d] (lb/yr)	20 Percent of MER[e] (lb/yr)	Emissions Exceed 20 Percent of MER? (Yes/No)
Acetaldehyde	75-07-0	8.10E-04	5.62E-04	**1.90**	1,107	221.43	No
Acrolein	107-02-8	2.53E-04	1.76E-04	**0.59**	85.1	17.02	No
Benzene	71-43-2	2.49E-02	1.73E-02	**58.55**	31.63	6.33	Yes
Formaldehyde	50-00-0	2.53E-03	1.76E-03	**5.95**	22.1	4.42	Yes
Naphthalene	91-20-3	4.18E-03	2.90E-03	**9.81**	729.99	146.00	No
Polycyclic aromatic hydrocarbons, total (includes naphthalene)	PAH	6.81E-03	4.73E-03	**15.99**	--	--	--
Toluene	108-88-3	9.03E-03	6.27E-03	**21.20**	1,216,650	243,330	No
Xylenes	1330-20-7	6.20E-03	4.31E-03	**14.56**	24,333	4,867	No

Notes:

a. Worst-case emission rates at worst-case load for each pollutant.

b. Emissions are calculated based on the following equipment and assumed hours of operation:

36	3.3 MW Baudouin 16M55G8D2/6 generator sets
1	2.25 MW Baudouin Admin Generator set
64	hrs/yr per genset

c. Threshold values for a major stationary source in an ozone attainment county (Newton County) as per 40 Code of Federal Regulations § 70.2.

d. Maximum emission rate (MER) as per Appendix A (June 2025) of the toxic impact assessment guideline.

e. All emission sources are considered POINTCAP sources because the generator stacks are all equipped with raincaps; thus emissions are compared against 20 percent of the MERs.

Appendix A - List of TAP, AAC, and MER (June 2025)

https://epd.georgia.gov/air-protection-branch-technical-guidance-0/toxic-impact-assessment-guideline

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
630206	1,1,1,2-tetrachloroethane	C	Annual	7.40E-06	IRIS RBAC			1.80E-03
594729	1,1-dichloro-1-nitroethane		24-hr	2.86E+01	NIOSH TWA	6000	OSHA CL	1.39E+03
76142	1,2-dichlorotetrafluoroethane; Fluorocarbon 114		24-hr	1.67E+04	OSHA PEL			8.11E+05
26471625	2,4/2,6toluene diisocyanate mixture (TDI)		Annual	7.00E-02	IRIS RfC			1.70E+01
504290	2-aminopyridine		24-hr	4.76E+00	OSHA PEL			2.32E+02
620111	3-amyl acetate; See Pentyl acetate		24-hr	1.25E+03	OSHA PEL	52500	ACGIH CL	6.08E+04
75070	acetaldehyde	B2	Annual	4.55E+00	IRIS RBAC	4500	ACGIH CL	1.11E+03
64197	acetic acid					3700	ACGIH STEL	5.46E+04
108247	acetic anhydride		24-hr	4.76E+01	OSHA	1251.5	ACGIH	2.32E+03
67641	acetone	D	24-hr	5.71E+03	OSHA PEL	178200	ACGIH STEL	2.78E+05
75868	acetone cyanohydrin as CN		24-hr	1.19E+01	OSHA PEL	500	NIOSH CL	5.79E+02
75058	acetonitrile	D	24-hr	1.67E+02	OSHA PEL	10100	ACGIH STEL	8.13E+03
98862	acetophenone	D	24-hr	1.17E+02	ACGIH TWA			5.69E+03
79276	acetylene tetrabromide		24-hr	3.33E+01	OSHA	141.4	ACGIH	1.62E+03
107028	acrolein		Annual	3.50E-01	CA OEHHA-REL	23	ACGIH STEL	8.51E+01
79061	acrylamide	B2	Annual	1.00E-01	IRIS RBAC			2.34E+01
79107	acrylic acid		Annual	1.00E+00	IRIS RfC			2.43E+02
107131	acrylonitrile (vinyl cyanide)	B1	Annual	1.47E-01	IRIS RBAC	2170	OSHA CL	3.58E+01
309002	aldrin (aldrex; HHDN; drinox)		24-hr	5.95E-01	OSHA	5	ACGIH	2.90E+01
107186	allyl alcohol					950	ACGIH STEL	1.40E+04

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
107051	allyl chloride	C	Annual	1.00E+00	IRIS RfC	600	ACGIH STEL	2.43E+02
106923	allyl glycidyl ether (AGE)					4500	OSHA CL	6.64E+04
2179591	allyl propyl disulfide					1800	ACGIH STEL	2.66E+04
319846	alpha-Hexachlorocyclohexane (alpha-HCH)	B2	Annual	1.80E-03	IRIS RBAC			4.38E-01
98839	alpha-methylstyrene	B2	24-hr	5.76E+02	ACGIH TWA	48000	OSHA CL	2.80E+04
86884	alpha-naphthylthiourea (ANTU)		24-hr	7.14E-01	OSHA	30	ACGIH	3.48E+01
1344281	alumina; see Particulates not otherwise regulated		24-hr	3.57E+01	OSHA PEL			1.74E+03
7664417	ammonia		Annual	1.00E+02	IRIS RfC	2400	ACGIH STEL	2.43E+04
7773060	ammonium sulfamate		24-hr	1.19E+01	OSHA			5.79E+02
628637	amyl acetate (n-)		24-hr	1.25E+03	OSHA	26600	ACGIH	6.08E+04
626380	amyl acetate (sec-)		24-hr	1.55E+03	OSHA	53.1	ACGIH	7.83E+02
62533	aniline	B2	Annual	1.00E+00	IRIS RfC			2.43E+02
29191524	anisidine (ortho and para isomers)		24-hr	1.19E+00	OSHA PEL			5.79E+01
1309644	antimony trioxide (as Sb)		Annual	2.00E-01	IRIS RfC			4.87E+01
7440360	antimony, elemental & compounds (as Sb)		Annual	2.40E-01	IRIS RfC			5.84E+01
140578	aramite	B2	Annual	7.10E-06	IRIS RBAC			1.73E-03
7440382	arsenic, inorganic compounds (as As)	A	Annual	2.33E-04	IRIS RBAC	0.2	NIOSH CL	5.67E-02
7784421	arsine		Annual	5.00E-02	IRIS RfC	0.2	NIOSH 15-min	2.95E+00
1332214	asbestos (fibers/cm3)	A	Annual	4.00E-06	IRIS RBAC			9.73E-04
86500	azinphos methyl (guthion)		24-hr	4.76E-01	OSHA	20	ACGIH	2.32E+01
151564	aziridine (ethylene imine)					8.81	ACGIH	1.30E+02
103333	azobenzene	B2	Annual	3.10E-05	IRIS RBAC			7.54E-03

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
7440393	barium		24-hr	1.19E+00	OSHA PEL			5.79E+01
7727437	barium sulfate, total dust; no asbestos & < 1% crystalline silica		24-hr	1.19E+01	OSHA			5.79E+02
17804352	benomyl		24-hr	1.19E+00	OSHA			5.79E+01
71432	benzene	A	Annual	1.30E-01	IRIS RBAC	1600	OSHA STEL	3.16E+01
92875	benzidine	A	Annual	2.00E-05	IRIS RBAC			4.87E-03
94360	benzoyl peroxide		24-hr	1.19E+00	OSHA	50	ACGIH	5.79E+01
100447	benzyl chloride	B2	24-hr	1.23E+01	OSHA PEL	500	NIOSH CL	5.99E+02
7440417	beryllium, elemental	B1	Annual	4.00E-03	IRIS RBAC	0.5	OSHA CL	9.73E-01
126998	beta-chloroprene (2-chloro-1,3-butadiene)		24-hr	2.14E+02	OSHA PEL			1.04E+04
319857	beta-Hexachlorocyclohexane (beta-HCH)	B2	Annual	5.30E-04	IRIS RBAC			1.29E-01
92524	biphenyl (diphenyl)	D	24-hr	2.40E+00	OSHA PEL			1.17E+02
117817	bis(2-ethylhexyl)phthalate (DEHP)		24-hr	1.19E+01	OSHA PEL	1000	NIOSH CL	5.79E+02
111444	bis(chloroethyl) ether		24-hr	2.14E+02	OSHA	2900	ACGIH	1.04E+04
542881	bis(chloromethyl) ether (BCME)	A	Annual	1.60E-05	IRIS RBAC			3.89E-03
1304821	bismuth telluride		24-hr	2.38E+01	NIOSH TWA			1.16E+03
1303862	boron oxide		24-hr	3.57E+01	OSHA PEL			1.74E+03
7637072	boron trifluoride (boron fluoride)					300	OSHA CL	4.43E+03
7726956	bromine					130	ACGIH STEL	1.92E+03
108861	bromobenzene		Annual	6.00E+01	IRIS RfC			1.46E+04
74975	bromochloromethane		24-hr	2.50E+03	OSHA	105800	ACGIH	1.22E+05
74964	bromoethane		24-hr	2.12E+03	OSHA	22000	ACGIH	1.03E+05
75252	bromoform	B2	Annual	9.00E+00	IRIS RBAC			2.19E+03

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
74839	bromomethane (methyl bromide)	D	Annual	5.00E+00	IRIS RfC	8000	OSHA CL	1.22E+03
106990	butadiene (1,3-)	A	Annual	3.00E-02	IRIS RBAC	1100	OSHA CL	7.30E+00
71363	butanol (n-) (syn: n-butyl alcohol)	D	24-hr	7.14E+02	OSHA PEL	15200	ACGIH CL	3.48E+04
78922	butanol (sec-) (syn: sec-butyl alcohol)		24-hr	7.26E+02	NIOSH	45.5	NIOSH	6.71E+02
75650	butanol (tert-) (syn: tert-butyl alcohol)		24-hr	7.14E+02	OSHA			3.48E+04
111762	butoxyethanol (2-) (syn: BGBE; ethylene glycol monobutyl ether)		Annual	1.30E+04	IRIS RfC			3.16E+06
123864	butyl acetate (n-)		24-hr	1.69E+03	OSHA PEL	95000	ACGIH STEL	8.23E+04
105464	butyl acetate (sec-)		24-hr	2.26E+03	OSHA			1.10E+05
540885	butyl acetate (tert-)		24-hr	2.26E+03	OSHA			1.10E+05
1189851	butyl chromate (tert-) (as Cr)		24-hr	2.38E-03	NIOSH	0.01	ACGIH	1.16E-01
2426086	butyl glycidyl ether (n-) (syn: BGE)		24-hr	6.43E+02	OSHA	16000	ACGIH	3.13E+04
109795	butyl mercaptan (butanethiol)		24-hr	8.33E+01	OSHA	184.4	ACGIH	2.72E+03
109739	butylamine (n-) (syn: 1-aminobutane)					1500	OSHA CL	2.21E+04
98511	butyltoluene (p-tert-)		24-hr	1.43E+02	OSHA	12.1	NIOSH	1.78E+02
7440439	cadmium, elemental and compounds	B1	Annual	5.56E-03	IRIS RBAC	30	OSHA CL	1.35E+00
1317653	calcium carbonate (total dust)		24-hr	3.57E+01	OSHA PEL			1.74E+03
156627	calcium cyanamide		24-hr	1.20E+00	ACGIH TWA			5.84E+01
1305620	calcium hydroxide		24-hr	1.19E+01	NIOSH TWA			5.79E+02
1305788	calcium oxide		24-hr	1.19E+01	ACGIH TWA			5.79E+02
1344952	calcium silicate (synthetic): see Particulates not otherwise		24-hr	2.38E+01	NIOSH TWA			1.16E+03
7778189	calcium sulfate; see Particulates not otherwise regulated		24-hr	2.38E+01	NIOSH TWA			1.16E+03
76222	camphor, synthetic		24-hr	4.76E+00	OSHA	1867.4	ACGIH	2.32E+02

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
63252	carbaryl (Sevin)		24-hr	1.19E+00	OSHA	5	ACGIH	5.79E+01
1333864	carbon black		24-hr	8.30E+00	OSHA PEL			4.04E+02
75150	carbon disulfide		Annual	7.00E+02	IRIS RfC	5400	OSHA CL	7.97E+04
56235	carbon tetrachloride (tetrachloromethane)	B2	Annual	6.67E-01	IRIS RBAC	15670	OSHA CL	1.62E+02
9004346	cellulose (paper fiber); see Particulates not otherwise		24-hr	2.38E+01	NIOSH TWA			1.16E+03
1306383	cerium oxide and cerium compounds		Annual	9.00E-01	IRIS RfC			2.19E+02
57749	chlordane		24-hr	1.19E+00	OSHA	50	ACGIH	5.79E+01
12789036	chlordane (Technical)	B2	Annual	1.40E-04	IRIS RBAC			3.41E-02
55720995	chlorinated diphenyl oxide		24-hr	1.19E+00	OSHA	50	ACGIH	5.79E+01
7782505	chlorine	D	24-hr	3.60E+00	ACGIH TWA	300	OSHA CL	1.75E+02
10049044	chlorine dioxide		Annual	2.00E-01	IRIS RfC	90	OSHA STEL	4.87E+01
7790912	chlorine trifluoride (chlorine fluoride)					40	OSHA CL	5.90E+02
75683	chloro-1,1-difluoroethane (1-) (syn: HCFC-142b)		Annual	5.00E+04	IRIS RfC			1.22E+07
600259	chloro-1-nitropropane (1-)		24-hr	2.38E+01	NIOSH TWA			1.16E+03
107200	chloroacetaldehyde					300	OSHA CL	4.43E+03
532274	chloroacetophenone (2-) (syn: phenacyl chloride)		Annual	3.00E-02	IRIS RfC			7.30E+00
108907	chlorobenzene	D	24-hr	8.33E+02	OSHA PEL			4.05E+04
2698411	chlorobenzylidene malononitrile (o-)					39	ACGIH CL	5.75E+02
75456	chlorodifluoromethane		Annual	5.00E+04	IRIS RfC	437500	NIOSH STEL	6.45E+06
53469219	chlorodiphenyl (42% chlorine-PCB)		24-hr	2.38E+00	OSHA	100	ACGIH	1.16E+02
11097691	chlorodiphenyl (54% chlorine-PCB)		24-hr	1.19E+00	OSHA	50	ACGIH	5.79E+01
67663	chloroform (trichloromethane)	A<-B2	Annual	4.35E-01	IRIS RBAC	24000	NIOSH STEL	1.06E+02

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
74873	chloromethane (methyl chloride)		Annual	9.00E+01	IRIS RfC	41400	OSHA CL	2.19E+04
76062	chloropicrin (nitrotrichloromethane)		24-hr	1.67E+00	OSHA	67.2	ACGIH	8.11E+01
13530682	chromic Acid and chromates		24-hr	2.38E-03	NIOSH TWA			1.16E-01
18540299	chromium (VI), elemental & compounds (as Cr)	A	Annual	5.55E-05	IRIS RBAC	10	OSHA CEIL	1.35E-02
7440473	chromium II & III compounds (as Cr2O3)	D	24-hr	1.20E+00	OSHA PEL			5.84E+01
18540299	chromium(VI) Mist	A	Annual	5.55E-05	IRIS RBAC			1.35E-02
18540299	chromium(VI) particulate		Annual	1.00E-01	IRIS Rfc			2.43E+01
2971906	clopidol		24-hr	2.38E+01	NIOSH TWA	2000	NIOSH CL	1.16E+03
7440484	cobalt, elemental & compounds as Co		24-hr	2.40E-01	OSHA PEL			1.17E+01
8007452	coke oven emissions	A	24-hr	2.00E-03	IRIS RBAC			9.73E-02
7440508	copper (dusts and mists; as Cu)	D	24-hr	2.40E+00	OSHA PEL			1.17E+02
136787	crag Herbicide		24-hr	2.38E+01	NIOSH TWA			1.16E+03
1319773	cresol (cresylic acid; all isomers)		24-hr	5.24E+01	OSHA	2000	ACGIH	2.55E+03
108394	cresol (m-) (syn: 3-methylphenol)	C	24-hr	5.20E+01	OSHA PEL			2.53E+03
95487	cresol (o-) (syn: 2-methylphenol)	C	24-hr	5.20E+01	OSHA PEL			2.53E+03
106445	cresol (p-) (syn: 4-methylphenol)	C	24-hr	5.20E+01	OSHA PEL			2.53E+03
123739	crotonaldehyde; beta-methylacrolein		24-hr	1.43E+01	OSHA PEL	90	ACGIH CL	6.95E+02
98828	cumene	D	Annual	4.00E+02	IRIS RfC			9.73E+04
506774	cyanogen chloride (chlorine cyanide)					75	ACGIH CL	1.11E+03
110827	cyclohexane	D	Annual	6.00E+03	IRIS RfC			1.46E+06
108930	cyclohexanol		24-hr	4.76E+02	OSHA PEL			2.32E+04
108941	cyclohexanone		24-hr	4.76E+02	OSHA PEL	20000	ACGIH STEL	2.32E+04

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
110838	cyclohexene		24-hr	2.42E+03	OSHA PEL			1.18E+05
542927	cyclopentadiene		24-hr	4.76E+02	OSHA	162000	ACGIH	2.32E+04
17702419	decaborane		24-hr	7.14E-01	OSHA	5	ACGIH	3.48E+01
8065483	demeton (Systox)		24-hr	2.38E-01	OSHA	5	ACGIH	1.16E+01
123422	diacetone alcohol (4-hydroxy-4-methyl-2-pentanone)		24-hr	5.71E+02	OSHA PEL			2.78E+04
334883	diazomethane		24-hr	9.52E-01	OSHA	34.3	ACGIH	4.64E+01
19287457	diborane		24-hr	1.19E+00	OSHA	50	ACGIH	5.79E+01
96128	dibromo-3-chloropropane (1,2-) (syn: CBCP)		Annual	2.00E-01	IRIS RfC			4.87E+01
106934	dibromoethane (1,2-) (syn: ethylene dibromide)	A	Annual	1.67E-02	IRIS RBAC	23050	OSHA CL	4.06E+00
107664	dibutyl phosphate		24-hr	1.19E+01	OSHA	500	ACGIH	5.79E+02
84742	dibutyl phthalate	D	24-hr	1.19E+01	OSHA PEL			5.79E+02
118525	dichloro-5,5-dimethyl hydantoin (1,3-)		24-hr	4.76E-01	OSHA PEL	40	NIOSH STEL	2.32E+01
95501	dichlorobenzene (1,2-)	D	24-hr	3.57E+02	ACGIH TWA	30000	OSHA CL	1.74E+04
106467	dichlorobenzene (1,4-)		Annual	8.00E+02	IRIS RfC			1.95E+05
75718	dichlorodifluoromethane		24-hr	1.18E+04	OSHA PEL			5.74E+05
50293	dichlorodiphenyltrichloroethane (DDT)		24-hr	2.38E+00	OSHA	100	ACGIH	1.16E+02
75343	dichloroethane (1,1-) (syn: ethylidene dichloride)	C	24-hr	9.52E+02	OSHA PEL			4.63E+04
107062	dichloroethane (1,2-) (syn: ethylene dichloride)	B2	Annual	3.85E-01	IRIS RBAC	40500	OSHA CL	9.37E+01
75354	dichloroethylene (1,1-) (syn: vinylidene chloride)	C	Annual	2.00E+02	IRIS RfC	7900	ACGIH STEL	4.87E+04
540590	dichloroethylene (1,2-) (includes cis- & trans- isomers; syn:		24-hr	1.88E+03	OSHA PEL			9.15E+04
94757	dichlorophenoxyacetic acid, salts & esters (syn: 2,4-D, salts &		24-hr	2.38E+01	OSHA PEL			1.16E+03
78875	dichloropropane (1,2-) (syn: propylene dichloride)		Annual	4.00E+00	IRIS RfC	51700	ACGIH STEL	9.73E+02

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
542756	dichloropropene (1,3-)	B2	Annual	2.00E+00	IRIS RBAC			4.87E+02
62737	dichlorovos (DDVP)		Annual	5.00E-01	IRIS RfC			1.22E+02
102545	dicyclopentadienyl iron dust		24-hr	2.38E+01	NIOSH TWA			1.16E+03
60571	dieldrin (dieldrex; octolox; quintox)		24-hr	5.95E-01	OSHA	10	ACGIH	2.90E+01
111422	diethanolamine		24-hr	4.80E+00	ACGIH TWA			2.34E+02
109897	diethylamine					4500	ACGIH STEL	6.64E+04
100378	diethylaminoethanol (2-)		24-hr	1.19E+02	OSHA PEL			5.79E+03
75616	difluorodibromomethane		24-hr	2.05E+03	OSHA	85800	ACGIH	9.97E+04
75376	difluoroethane (1,1-)		Annual	4.00E+04	IRIS RfC			9.73E+06
2238075	diglycidyl ether (DGE)					280	OSHA CL	4.13E+03
108838	diisobutyl ketone (2,6-dimethyl-4-heptanone)		24-hr	6.90E+02	OSHA PEL			3.36E+04
108189	diisopropylamine		24-hr	4.76E+01	OSHA	2069.5	ACGIH	2.32E+03
109875	dimethoxymethane (methylal)		24-hr	7.38E+03	OSHA	311000	ACGIH	3.59E+05
127195	dimethyl acetamide		24-hr	8.33E+01	OSHA	3562.4	ACGIH	4.06E+03
77781	dimethyl sulfate	B2	24-hr	1.19E+01	OSHA PEL			5.79E+02
300765	dimethyl-1,2-dibromo-2,2-dichloroethyl phosphate		24-hr	7.14E+00	OSHA	100	ACGIH	3.48E+02
124403	dimethylamine		24-hr	4.29E+01	OSHA	922.3	ACGIH	2.09E+03
1300738	dimethylaminobenzene (xylidine)		24-hr	2.36E-02	NIOSH			1.15E+00
121697	dimethylaniline (N,N-) (syn: dimethyl phenylamine)					5000	ACGIH STEL	7.38E+04
119937	dimethylbenzidine (3,3-)					2	NIOSH CL	2.95E+01
68122	dimethylformamide		Annual	3.00E+01	IRIS RfC			7.30E+03
57147	dimethylhydrazine (1,1-)		24-hr	2.38E+00	OSHA PEL	15	NIOSH CL	1.16E+02

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
534521	dinitro-o-cresol (4,6-)		24-hr	4.76E-01	OSHA PEL			2.32E+01
25321146	dinitrotoluene		24-hr	3.60E+00	OSHA PEL			1.75E+02
121142	dinitrotoluene (2,4-)	B2	24-hr	3.60E+00	OSHA PEL			1.75E+02
123911	dioxane (1,4-) (syn: 1,4-diethylene dioxide)	B2	24-hr	8.57E+02	OSHA TWA	360	NIOSH CL	5.31E+03
101688	diphenylmethane-4,4'-diisocyanate (MDI)	D	Annual	6.00E-01	IRIS RfC	20	OSHA CL	1.46E+02
34590948	dipropylene glycol methyl ether		24-hr	1.43E+03	OSHA PEL	90000	ACGIH STEL	6.95E+04
12415348	emery; see Particulates not otherwise regulated		24-hr	3.57E+01	OSHA PEL			1.74E+03
72208	endrin (hexadrin; mendrin; endrex)		24-hr	2.38E-01	OSHA	10	ACGIH	1.16E+01
106898	epichlorohydrin (1-chloro-2,3-epoxypropane)		Annual	1.00E+00	IRIS RfC			2.43E+02
106887	epoxybutane (1,2-)		Annual	2.00E+01	IRIS RfC			4.87E+03
64175	ethanol		24-hr	4.50E+03	ACGIH TWA			2.19E+05
141435	ethanolamine (2-aminoethanol)					1500	ACGIH STEL	2.21E+04
110805	ethoxyethanol (2-) (syn: cellosolve; EGEE)		Annual	2.00E+02	IRIS RfC			4.87E+04
111159	ethoxyethyl acetate (2-) (syn: ethylene glycol monoethyl		24-hr	6.43E+00	NIOSH TWA			3.13E+02
141786	ethyl acetate		24-hr	3.33E+03	OSHA PEL			1.62E+05
140885	ethyl acrylate		24-hr	2.38E+02	OSHA	20000	ACGIH	1.16E+04
541855	ethyl amyl ketone (5-methyl-3-heptanone)		24-hr	3.10E+02	OSHA	5200	ACGIH	1.51E+04
100414	ethyl benzene	D	Annual	1.00E+03	IRIS RfC	54300	ACGIH STEL	2.43E+05
106354	ethyl butyl ketone (3-heptanone)		24-hr	5.48E+02	OSHA	23300	ACGIH	2.67E+04
75003	ethyl chloride		Annual	1.00E+04	IRIS RfC			2.43E+06
60297	ethyl ether (diethyl ether)		24-hr	2.86E+03	OSHA	180000	ACGIH	1.39E+05
109944	ethyl formate		24-hr	7.14E+02	OSHA	30300	ACGIH	3.48E+04

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
75081	ethyl mercaptan (ethanethiol)		24-hr	3.10E+00	ACGIH TWA	2500	OSHA CL	1.51E+02
2104645	ethyl p-nitrophenyl benzenethiophosphonate (EPN)		24-hr	1.19E+00	OSHA	132.2	ACGIH	5.79E+01
78104	ethyl silicate		24-hr	2.02E+03	OSHA	85000	ACGIH	9.85E+04
75047	ethylamine					2760	ACGIH STEL	4.07E+04
107073	ethylene chlorohydrin (2-chloroethanol)					330	ACGIH CL	4.87E+03
107211	ethylene glycol		24-hr	4.14E+02	NIOSH LD50	10000	ACGIH CL	2.01E+04
628966	ethylene glycol dinitrate					100	OSHA CL	1.48E+03
75218	ethylene oxide (oxirane)	A	Annual	3.30E-04	IRIS RBAC	900	OSHA STEL	8.00E-02
107153	ethylenediamine		24-hr	5.95E+01	OSHA	2458	ACGIH	2.90E+03
14484641	ferbam; ferric N,N-dimethylthiocarbamate		24-hr	2.38E+01	NIOSH TWA			1.16E+03
12604589	ferrovanadium dust		24-hr	2.38E+00	OSHA PEL	300	NIOSH STEL	1.16E+02
16984488	fluoride dust		24-hr	5.95E+00	OSHA PEL			2.90E+02
7782414	fluorine		24-hr	4.76E-01	OSHA	155.4	ACGIH	2.32E+01
50000	formaldehyde	A	Annual	9.09E-02	IRIS RBAC	245	OSHA STEL	2.21E+01
64186	formic acid		24-hr	2.14E+01	OSHA	940.7	ACGIH	1.04E+03
98011	furfural		24-hr	4.80E+01	OSHA PEL			2.34E+03
98000	furfuryl alcohol		24-hr	4.76E+02	OSHA	40000	ACGIH	2.32E+04
58899	gamma-hexachlorocyclohexane (lindane)		24-hr	1.19E+00	OSHA	50	ACGIH	5.79E+01
56815	glycerol (glycerin)		24-hr	1.19E+01	OSHA PEL			5.79E+02
556525	glycidol (2,3-epoxy-1-propanol)		24-hr	3.57E+02	OSHA	6100	ACGIH	1.74E+04
7782425	graphite, natural respirable dust		24-hr	5.95E+00	NIOSH TWA			2.90E+02
13397245	gypsum Dust		24-hr	2.38E+01	NIOSH TWA			1.16E+03

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
76448	heptachlor		24-hr	1.19E+00	OSHA	50	ACGIH	5.79E+01
1024573	Heptachlor epoxide	B2	Annual	2.10E-03	IRIS RBAC			5.11E-01
142825	heptane (n-)	D	24-hr	4.76E+03	OSHA PEL	200000	ACGIH STEL	2.32E+05
118741	hexachlorobenzene	B2	Annual	2.00E-02	IRIS RBAC			4.87E+00
77474	hexachlorocyclopentadiene	D	Annual	2.00E-01	IRIS RfC			4.87E+01
57653857	hexachlorodibenzo-p-dioxin (HxCDD)	B2	Annual	2.00E+00	IRIS Rfc			4.87E+02
67721	hexachloroethane	C	Annual	2.50E+01	IRIS RBAC			6.08E+03
1335871	hexachloronaphthalene		24-hr	4.76E-01	OSHA	20	ACGIH	2.32E+01
822060	hexamethylene diisocyanate (1,6-)		Annual	1.00E-02	IRIS RfC	14	NIOSH STEL	2.43E+00
110543	hexane (n-)		Annual	7.00E+02	IRIS RfC	17600	ACGIH STEL	1.70E+05
108849	hexyl acetate (sec-)		24-hr	7.14E+02	OSHA			3.48E+04
302012	hydrazine/hydrazine sulfate	B2	Annual	2.00E-03	IRIS RBAC	4	NIOSH CL	4.87E-01
10035106	hydrogen bromide		24-hr	2.38E+01	OSHA	661.7	ACGIH	1.16E+03
7647010	hydrogen chloride		Annual	2.00E+01	IRIS RfC	700	OSHA CL	4.87E+03
74908	hydrogen cyanide	D	Annual	8.00E-01	IRIS RfC	500	ACGIH CL	1.95E+02
7664393	hydrogen fluoride (hydrofluoric acid; as F)		24-hr	5.84E+00	OSHA PEL	245	ACGIH STEL	2.84E+02
7722841	hydrogen peroxide		24-hr	3.33E+00	OSHA	139	ACGIH	1.62E+02
7783075	hydrogen selenide (as Se)		24-hr	4.76E-01	OSHA	16.5	ACGIH	2.32E+01
7783064	hydrogen sulfide		Annual	2.00E+00	IRIS RfC	2790	OSHA CL	4.87E+02
2148878	hydrogen sulfide		Annual	2.00E+00	IRIS RBAC			4.87E+02
123319	hydroquinone (dihydroxybenzene)		24-hr	4.80E+00	OSHA PEL	200	ACGIH TWA	2.34E+02
7553562	iodine					100	OSHA CL	1.48E+03

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
1309371	iron oxide fume		24-hr	2.38E+01	OSHA PEL			1.16E+03
123922	isoamyl acetate		24-hr	1.25E+03	OSHA	26600	ACGIH	6.08E+04
123513	isoamyl alcohol (primary and secondary)		24-hr	8.57E+02	OSHA	36000	ACGIH	4.17E+04
110190	isobutyl acetate		24-hr	1.67E+03	OSHA PEL			8.11E+04
78831	isobutyl alcohol (isobutanol)		24-hr	7.14E+02	OSHA PEL			3.48E+04
78591	isophorone	C	24-hr	3.33E+02	OSHA PEL	2800	ACGIH CL	1.62E+04
108214	isopropyl acetate		24-hr	2.26E+03	OSHA PEL	118500	ACGIH STEL	1.10E+05
67630	isopropyl alcohol (isopropanol)		24-hr	2.33E+03	OSHA PEL	98000	ACGIH STEL	1.14E+05
108203	isopropyl ether		24-hr	5.00E+03	OSHA	104000	ACGIH	2.43E+05
4016142	isopropyl glycidyl ether (IGE)		24-hr	5.71E+02	OSHA	23700	ACGIH	2.78E+04
75310	isopropylamine		24-hr	2.86E+01	OSHA	1208.6	ACGIH	1.39E+03
1332587	kaolin; (respirable dust containing no		24-hr	2.38E+01	NIOSH TWA			1.16E+03
463514	ketene		24-hr	2.14E+00	OSHA	85.9	ACGIH	1.04E+02
7439921	lead, elemental, inorganic compounds(as Pb)	B2	24-hr	1.20E-01	OSHA PEL			5.84E+00
7580678	lithium hydride		24-hr	5.95E-02	OSHA	2.5	ACGIH	2.90E+00
546930	magnesite Dust		24-hr	2.38E+01	NIOSH TWA			1.16E+03
1309484	magnesium oxide fume		24-hr	3.57E+01	OSHA PEL			1.74E+03
121755	malathion, total dust		24-hr	3.57E+01	OSHA	1351.3	ACGIH	1.74E+03
108316	maleic anhydride		24-hr	2.38E+00	OSHA PEL			1.16E+02
7439965	manganese, elemental & compounds (as Mn)	D	Annual	5.00E-02	IRIS RfC	500	OSHA CL	1.22E+01
7439976	mercury, alkyl compounds (as Hg)	D	Annual	3.00E-01	IRIS RfC	10	OSHA CL	7.30E+01
7439976	mercury, elemental & inorganic compounds (as Hg)		Annual	3.00E-01	IRIS RfC	10	OSHA CL	7.30E+01

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
	mercury, organic compounds except akyl & aryl (as Hg)					10	OSHA CL	1.48E+02
141797	mesityl oxide		24-hr	2.38E+02	OSHA	6018.4	ACGIH	1.16E+04
72435	methoxychlor		24-hr	3.57E+01	OSHA	1000	ACGIH	1.74E+03
109864	methoxyethanol (2-) (syn: methyl cellosolve)		Annual	2.00E+01	IRIS RfC			4.87E+03
79209	methyl acetate	C	24-hr	4.76E+02	OSHA PEL	75750	ACGIH TLV	2.32E+04
74997	methyl acetylene (propyne)		24-hr	3.93E+03	OSHA	164000	ACGIH	1.91E+05
96333	methyl acrylate	D	24-hr	8.33E+01	OSHA PEL			4.05E+03
67561	methyl alcohol (methanol)		Annual	2.00E+04	IRIS RfC	32800	ACGIH STEL	3.01E+04
110496	methyl cellosolve acetate		24-hr	1.19E+00	NIOSH TWA			5.79E+01
78933	methyl ethyl ketone (2-butanone)		Annual	5.00E+03	IRIS RfC	88500	ACGIH STEL	1.22E+06
107313	methyl formate		24-hr	5.95E+02	OSHA	12300	ACGIH	2.90E+04
60344	methyl hydrazine (monomethyl hydrazine)		24-hr	4.50E-02	ACGIH TWA	35	OSHA CL	2.19E+00
74884	methyl iodide (iodomethane)		24-hr	6.70E+01	OSHA PEL			3.26E+03
110123	methyl isoamyl ketone		24-hr	1.13E+03	OSHA	93400	ACGIH	5.50E+04
108112	methyl isobutyl carbinol (methyl amyl alcohol)		24-hr	2.38E+01	OSHA	1045	ACGIH	1.16E+03
108101	methyl isobutyl ketone (hexone)		Annual	3.00E+03	IRIS RfC	30700	ACGIH STEL	4.53E+05
624839	methyl isocyanate		24-hr	1.19E-01	OSHA	4.67	ACGIH	5.79E+00
74931	methyl mercaptan (methanethiol)		24-hr	2.40E+00	ACGIH TWA	2000	OSHA CL	1.17E+02
80626	methyl methacrylate		Annual	7.00E+02	IRIS RfC			1.70E+05
110430	methyl n-amyl ketone		24-hr	1.11E+03	OSHA PEL			5.39E+04
591786	methyl n-butyl ketone (2-hexanone)		Annual	3.00E+01	IRIS RfC	4100	ACGIH STEL	7.30E+03
107879	methyl propyl ketone (2-pentanone)		24-hr	1.26E+03	NIOSH TWA	53000	ACGIH STEL	6.14E+04

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
1634044	methyl tert-butyl ether		Annual	3.00E+03	IRIS RfC			7.30E+05
74895	methylamine		24-hr	2.86E+01	OSHA PEL	1900	ACGIH STEL	1.39E+03
108872	methylcyclohexane		24-hr	4.76E+03	OSHA PEL			2.32E+05
25639423	methylcyclohexanol		24-hr	1.12E+03	OSHA	23400	ACGIH	5.45E+04
583608	methylcyclohexanone		24-hr	1.10E+03	OSHA	22900	ACGIH	5.33E+04
101144	methylene bis 2-chloroaniline (4,4-) (syn: MOCA)		24-hr	2.60E-01	ACGIH TWA			1.27E+01
75092	methylene chloride (dichloromethane)	B2	Annual	2.13E+01	IRIS RBAC	43460	OSHA CL	5.18E+03
7439987	molybdenum, insoluble cmpds & dusts (as Mo)		24-hr	3.57E+01	OSHA			1.74E+03
100618	monomethyl aniline		24-hr	2.14E+01	OSHA	219.2	ACGIH	1.04E+03
110918	morpholine		24-hr	1.67E+02	OSHA PEL	10500	NIOSH STEL	8.11E+03
108383	m-Xylenes		Annual	1.00E+02	IRIS RfC	65500	NIOSH STEL	2.43E+04
100743	n- Ethylmorpholine		24-hr	5.48E+01	NIOSH TWA			2.67E+03
8030317	Naphtha, coal tar		24-hr	9.52E+02	OSHA PEL			4.64E+04
91203	naphthalene		Annual	3.00E+00	IRIS RfC	7500	ACGIH STEL	7.30E+02
13463393	nickel carbonyl (as Ni)	B2	24-hr	1.70E-02	OSHA PEL			8.27E-01
	nickel refinery dust	A	Annual	4.00E-03	IRIS RBAC			9.73E-01
12035722	nickel subsulfide (as Ni)	A	Annual	2.00E-03	IRIS RBAC			4.87E-01
7440020	nickel, elemental & compounds (as Ni)	A	24-hr	7.94E-01	OSHA PEL			3.86E+01
54115	nicotine		24-hr	1.20E+00	OSHA PEL			5.84E+01
1929824	nitrapyrin (2-chloro-6-(trichloromethyl)pyridine)		24-hr	2.38E+01	NIOSH TWA	2000	NIOSH STEL	1.16E+03
7697372	nitric acid		24-hr	1.20E+01	OSHA PEL	1000	ACGIH STEL	5.84E+02
10102439	nitric oxide; NO		24-hr	7.14E+01	OSHA PEL			3.48E+03

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
100016	nitroaniline (p-)		24-hr	7.14E+00	NIOSH			3.48E+02
98953	nitrobenzene	D	24-hr	1.20E+01	OSHA PEL			5.84E+02
100005	nitrochlorobenzene (p-)		24-hr	2.38E+00	OSHA			1.16E+02
79243	nitroethane		24-hr	7.38E+02	OSHA PEL			3.59E+04
10102440	nitrogen dioxide		24-hr	7.14E-01	ACGIH TWA	180	NIOSH STEL	3.48E+01
7783542	nitrogen trifluoride		24-hr	6.90E+01	OSHA PEL			3.36E+03
55630	nitroglycerin					200	OSHA CL	2.95E+03
75525	nitromethane		24-hr	5.95E+02	OSHA PEL			2.90E+04
108032	nitropropane (1-)		24-hr	2.14E+02	OSHA PEL			1.04E+04
79469	nitropropane (2-)		Annual	2.00E+01	IRIS RfC			4.87E+03
62759	nitrosodimethylamine (N-)	B2	Annual	7.10E-04	IRIS RBAC			1.73E-01
88722	nitrotoluene, o, m, p Isomer		24-hr	2.62E+01	NIOSH TWA			1.27E+03
55185	n-nitrosodiethylamine	B2	Annual	4.30E-02	IRIS RBAC			1.05E+01
924163	n-nitroso-di-n-butylamine	B2	Annual	1.60E-03	IRIS RBAC			3.89E-01
930552	n-nitrosopyrrolidine	B2	Annual	1.40E-02	IRIS RBAC			3.41E+00
2234131	octachloronaphthalene		24-hr	2.38E-01	OSHA	10	ACGIH	1.16E+01
20816120	osmium tetroxide		24-hr	4.76E-03	OSHA	0.16	ACGIH	2.32E-01
144627	oxalic acid		24-hr	2.38E+00	OSHA	100	ACGIH	1.16E+02
7783417	oxygen difluoride		24-hr	2.38E-01	OSHA	11	ACGIH	1.16E+01
95476	o-Xylenes		Annual	1.00E+02	IRIS RfC	65500	NIOSH STEL	2.43E+04
56382	parathion		24-hr	2.38E-01	OSHA	5	ACGIH	1.16E+01
19624227	pentaborane		24-hr	2.38E-02	OSHA	1.2	ACGIH	1.16E+00

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
1321648	pentachloronaphthalene		24-hr	1.19E+00	OSHA	50	ACGIH	5.79E+01
87865	pentachlorophenol	B2	24-hr	1.20E+00	OSHA PEL			5.84E+01
115775	pentaerythritol, respirable fraction		24-hr	3.57E+01	OSHA	1000	ACGIH	1.74E+03
109660	pentane		24-hr	7.02E+03	OSHA PEL	180000	NIOSH CL	3.42E+05
594423	perchloromethyl mercaptan		24-hr	1.90E+00	OSHA	76	ACGIH	9.27E+01
7616946	perchloryl fluoride		24-hr	3.21E+01	OSHA	1257.7	ACGIH	1.56E+03
108952	phenol	D	24-hr	4.52E+01	OSHA PEL	6000	NIOSH CL	2.20E+03
101848	phenyl ether, vapor		24-hr	1.67E+01	OSHA	1.6	ACGIH	2.36E+01
122601	phenyl glycidyl ether (PGE)		24-hr	1.43E+02	OSHA	0.613	NIOSH	9.04E+00
106503	phenylenediamine (p-)		24-hr	2.38E-01	OSHA			1.16E+01
100630	phenylhydrazine		24-hr	5.24E+01	OSHA	0.0618	NIOSH	9.12E-01
7786347	phosdrin (mevinphos)		24-hr	2.38E-02	NIOSH	0.0275	NIOSH	4.06E-01
75445	phosgene (carbonyl chloride)		Annual	3.00E-01	IRIS RfC	80	NIOSH CL	7.30E+01
7803512	phosphine		Annual	3.00E-01	IRIS RfC	100	NIOSH STEL	7.30E+01
7664382	phosphoric acid		Annual	1.00E+01	IRIS RfC	300	ACGIH STEL	2.43E+03
7723140	phosphorus	D	24-hr	2.40E-01	OSHA PEL			1.17E+01
10026138	phosphorus pentachloride		24-hr	2.38E-01	OSHA			1.16E+01
1314803	phosphorus pentasulfide		24-hr	2.38E+00	OSHA	0.3	NIOSH	4.43E+00
7719122	phosphorus trichloride		24-hr	3.57E+00	NIOSH	0.3	NIOSH	4.43E+00
85449	phthalic anhydride		24-hr	1.43E+01	NIOSH			6.95E+02
1918021	picloram Total Dust		24-hr	3.57E+01	OSHA PEL			1.74E+03
88891	picric acid (2,4,6-trinitrophenyl)		24-hr	2.38E-01	OSHA	0.03	NIOSH	4.43E-01

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
83261	pindone (2-pivalyl-1,3-indandione)		24-hr	2.38E-01	OSHA			1.16E+01
26499650	plaster of Paris; calcium sulfate hemihydrate;		24-hr	2.38E+01	NIOSH TWA			1.16E+03
7440064	platinum		24-hr	2.38E+00	NIOSH TWA			1.16E+02
151508	potassium cyanide (as CN)		24-hr	1.19E+01	OSHA PEL	500	OSHA CL	5.79E+02
1310583	potassium hydroxide					200	ACGIH CL	2.95E+03
74986	propane		24-hr	4.29E+03	OSHA PEL			2.09E+05
123386	propionaldehyde		Annual	8.00E+00	IRIS RfC			1.95E+03
109604	propyl acetate (n-)		24-hr	2.00E+03	OSHA PEL	105000	ACGIH STEL	9.73E+04
71238	propyl alcohol (n-) (propanol)		24-hr	1.19E+03	OSHA PEL	62500	ACGIH STEL	5.79E+04
627134	propyl nitrate (n-)		24-hr	2.62E+02	OSHA	10700	ACGIH	1.27E+04
107982	propylene glycol monomethyl ether		Annual	2.00E+03	IRIS RfC	54000	ACGIH STEL	4.87E+05
75569	propylene oxide (1,2-epoxypropane)	B2	Annual	2.70E+00	IRIS RBAC			6.57E+02
75558	propyleneimine (1,2-) (syn: 2-methyl aziridine)		24-hr	1.19E+01	OSHA	0.00211	NIOSH	3.11E-02
106423	p-Xylenes		Annual	1.00E+02	IRIS RfC	65500	NIOSH STEL	2.43E+04
8003347	pyrethrum		24-hr	1.19E+01	OSHA			5.79E+02
110861	pyridine		24-hr	3.57E+01	OSHA			1.74E+03
7440166	rhodium, metal		24-hr	2.38E-01	OSHA PEL			1.16E+01
299843	ronnel		24-hr	2.38E+01	NIOSH			1.16E+03
83794	rotenone		24-hr	1.19E+01	OSHA			5.79E+02
7783791	selenium Hexafluoride		24-hr	9.52E-01	OSHA PEL			4.64E+01
7782492	selenium, elemental & compounds (as Se)	D	24-hr	4.80E-01	OSHA PEL			2.34E+01
409212	silicon carbide		24-hr	2.38E+01	NIOSH TWA			1.16E+03

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
7440213	silicon; see Particulates not otherwise regulated		24-hr	2.38E+01	NIOSH TWA			1.16E+03
7440224	silver, metal and soluble cmpds. (as Ag)	D	24-hr	2.40E-02	OSHA PEL			1.17E+00
62748	sodium fluoroacetate		24-hr	1.19E+00	OSHA			5.79E+01
1310732	sodium hydroxide		24-hr	4.80E+00	OSHA PEL	200	ACGIH CL	2.34E+02
7803523	stibine		24-hr	2.38E-01	OSHA			1.16E+01
8052413	stoddard solvent		24-hr	8.33E+02	NIOSH	180,000	NIOSH	2.66E+03
7789062	strontium chromate	A1	24-hr	1.20E-03	ACGIH TWA			5.84E-02
57249	strychnine		24-hr	3.57E-01	OSHA			1.74E+01
100425	styrene (phenylethylene; vinyl benzene)		Annual	1.00E+03	IRIS RfC	85200	OSHA CL	2.43E+05
2551624	Sulfur hexafluoride		24-hr	1.43E+04	OSHA PEL			6.95E+05
10025679	sulfur monochloride		24-hr	1.43E+01	OSHA	0.552	NIOSH	8.14E+00
5714227	sulfur pentafluoride		24-hr	5.95E-01	OSHA	0.0104	NIOSH	1.53E-01
7664939	sulfuric acid		24-hr	2.40E+00	OSHA PEL	300	ACGIH STEL	1.17E+02
2699798	sulfuryl fluoride		24-hr	4.76E+01	OSHA	4,000	NIOSH	5.90E+01
7440257	tantalum, metal and oxide dust		24-hr	1.19E+01	OSHA	1	NIOSH	1.48E+01
608731	technical Hexachlorocyclohexane (t-HCH)	B2	Annual	5.10E-04	IRIS RBAC			1.24E-01
7783804	tellurium hexafluoride		24-hr	4.76E-01	OSHA PEL			2.32E+01
3383968	temephos Total Dust		24-hr	2.38E+01	NIOSH TWA			1.16E+03
76120	tetrachloro-1,2-difluoroethane (1,1,2,2-)		24-hr	9.93E+03	OSHA PEL			4.83E+05
76119	tetrachloro-2,2-difluoroethane (1,1,1,2-)		24-hr	9.93E+03	OSHA PEL			4.83E+05
1746016	tetrachlorodibenzo-p-dioxin (2,3,7,8-)		24-hr	1.50E-03	NIOSH LD50			7.30E-02
79345	tetrachloroethane (1,1,2,2-)	C	Annual	1.70E+00	IRIS RBAC			4.14E+02

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
127184	tetrachloroethylene (perchloroethylene)		24-hr	1.61E+03	OSHA PEL	135600	OSHA CL	7.86E+04
1335882	tetrachloronaphthalene		24-hr	4.76E+00	OSHA			2.32E+02
78002	tetraethyl lead (as Pb)		24-hr	7.14E+00	OSHA			3.48E+02
107493	tetraethyl pyrophosphate (TEPP)		24-hr	1.19E-01	OSHA			5.79E+00
811972	tetrafluoroethane (1,1,1,2-) (syn: HFC-134a)		Annual	8.00E+04	IRIS RfC			1.95E+07
109999	tetrahydrofuran		24-hr	1.41E+03	OSHA PEL	73700	ACGIH STEL	6.84E+04
75741	tetramethyl lead (as Pb)		24-hr	1.79E-01	OSHA			8.69E+00
3333526	tetramethyl succinonitrile		24-hr	7.14E+00	OSHA			3.48E+02
509148	tetranitromethane		24-hr	1.90E+01	OSHA			9.27E+02
137268	thiram		24-hr	1.19E+01	OSHA			5.79E+02
21651194	tin, organic compounds		24-hr	2.38E-01	OSHA PEL	20	ACGIH STEL	1.16E+01
13463677	titanium dioxide (total dust)		24-hr	3.57E+01	OSHA PEL			1.74E+03
108883	toluene	D	Annual	5.00E+03	IRIS RfC	113000	OSHA CL	1.22E+06
584849	toluene-2,4-diisocyanate		Annual	7.00E-02	IRIS RfC	14	OSHA CL	1.70E+01
95534	toluidine (o-)		24-hr	5.24E+01	OSHA PEL			2.55E+03
8001352	toxaphene (chlorinated camphene)	B2				100	ACGIH STEL	1.48E+03
126738	tributyl phosphate		24-hr	5.24E+00	OSHA			2.55E+02
76131	trichloro-1,2,2-trifluoroethane (1,1,2-)					959000	ACGIH STEL	1.41E+07
120821	trichlorobenzene (1,2,4-)	D	24-hr	5.20E+01	NIOSH LD50	4000	ACGIH CL	2.53E+03
71556	trichloroethane (1,1,1-) (syn: methyl chloroform)	D	24-hr	4.52E+03	OSHA PEL	245000	ACGIH STEL	2.20E+05
79005	trichloroethane (1,1,2-)	C	Annual	6.25E+00	IRIS RBAC			1.52E+03
79016	trichloroethylene		Annual	2.00E+00	IRIS RBAC	107500	OSHA CL	4.87E+02

CAS Number	Substance Name	Weight of Evidence Classification	Long Term Averaging Period	Long Term AAC (µg/m3)	Long Term Data Source	15-min AAC (µg/m3)	Short Term Data Source	MER (1) (lb/yr)
1321659	trichloronaphthalene		24-hr	1.19E+01	OSHA			5.79E+02
88062	trichlorophenol (2,4,6-)	B2	Annual	3.00E+00	IRIS RBAC			7.30E+02
93765	trichlorophenoxyacetic acid (2,4,5-)		24-hr	2.38E+01	OSHA PEL			1.16E+03
96184	trichloropropane (1,2,3-)		Annual	3.00E-01	IRIS RfC			7.30E+01
121448	triethylamine		Annual	7.00E+00	IRIS RfC	1200	ACGIH STEL	1.70E+03
75638	trifluorobromomethane		24-hr	1.45E+04	OSHA			7.07E+05
118967	trinitrotoluene (2,4,6-) (syn: TNT)		24-hr	1.19E+00	NIOSH TWA			5.79E+01
78308	triorthocresyl phosphate		24-hr	2.38E-01	OSHA			1.16E+01
115866	triphenyl phosphate		24-hr	7.14E+00	OSHA			3.48E+02
8006642	turpentine		24-hr	1.33E+03	OSHA			6.49E+04
1314621	vanadium pentoxide, fume as V2O5		24-hr	1.20E-01	ACGIH TWA	10	OSHA CL	5.84E+00
108054	vinyl acetate		Annual	2.00E+02	IRIS RfC	5280	ACGIH STEL	4.87E+04
593602	vinyl bromide		Annual	3.00E+00	IRIS RfC			7.30E+02
75014	vinyl chloride (syn: chloroethylene)	A1	Annual	2.30E-01	IRIS RBAC	1280	OSHA STEL	5.60E+01
25013154	vinyl toluene		24-hr	1.14E+03	OSHA			5.56E+04
81812	warfarin		24-hr	2.38E-01	OSHA			1.16E+01
1330207	xylene (o-, m-, p-isomers)		Annual	1.00E+02	IRIS RfC	65500	ACGIH STEL	2.43E+04
7646857	zinc chloride fume		24-hr	2.38E+00	OSHA PEL	200	ACGIH STEL	1.16E+02
13530659	zinc chromate, as Cr		24-hr	2.38E-03	NIOSH TWA			1.16E-01
1314132	zinc oxide, fume		24-hr	1.20E+01	OSHA PEL	1000	ACGIH STEL	5.84E+02
557051	zinc Stearete		24-hr	2.38E+01	NIOSH TWA			1.16E+03
7440677	zirconium compounds		24-hr	1.19E+01	OSHA			5.79E+02

Note

1. MER applicable to point source emissions only. Volume and Area sources should not use MER for screening purposes.

ATTACHMENT 3

Regulatory Applicability

REGULATORY APPLICABILITY SUMMARY

Equipment/Process	Citation	Applicable?	Requirements
Facility	40 CFR § 51.166, § 52.21 GAC 391-3-1-.02(7)	No	**Prevention of Significant Deterioration** Facility-wide emissions will remain below PSD thresholds of 250 tpy of any regulated new source review pollutant.
Facility	40 CFR Part 70 GAC 391-3-1-.03(10)	No	**Title V** Facility-wide emissions will remain below Title V thresholds of 100 tpy of any criteria pollutant, 25 tpy of total HAPs, and 10 tpy of a single HAP.
Emergency Diesel Generators	40 CFR Part 60 Subpart IIII GAC 391-3-1-.02(8)	Yes	**NSPS IIII** The engines will meet Tier-2 emission standards for new nonroad compression ignition engines. The engines will combust only ultra-low sulfur diesel fuel and will not have any add-on control devices. The engines are defined as emergency stationary internal combustion engines and will operate no more than 100 hours per year for maintenance checks and readiness testing. The engines will not be used for peak shaving, non-emergency demand response, or to generate income for the facility to an electric grid.
Emergency Diesel Generators	40 CFR Part 63 Subpart ZZZZ GAC 391-3-1-.02(9)	Yes	**NESHAP ZZZZ** A new stationary RICE located at an area source must meet requirements of the part by meeting the requirements of 40 CFR Part 60, Subpart IIII.
Facility-Wide	GAC 391-3-1-.02(2)(b)	Yes	**Visible Emissions** Except as may be provided in other more restrictive or specific rules or subdivisions of this Chapter, no person shall cause, let, suffer, permit, or allow emissions from any air contaminant source the opacity of which is equal to or greater than 40 percent.

Equipment/Process	Citation	Applicable?	Requirements
Emergency Diesel Generators	GAC 391-3-1-.02(2)(d)	Yes	**Fuel-Burning Equipment** No person shall cause, let, suffer, permit, or allow the emission of fly ash and/or other particulate matter from any fuel-burning equipment constructed after January 1, 1972, in amounts equal to or exceeding $$P = 0.5\left(\frac{10}{R}\right)^{0.5} = 0.5\left(\frac{10}{32.1}\right)^{0.5} = 0.28\ lb/MMBtu\ heat\ input$$ No person shall cause, let, suffer, permit, or allow the emission from any fuel-burning equipment constructed or extensively modified after January 1, 1972, visible emissions the opacity of which is equal to or greater than 20 percent except for one 6-minute period per hour of not more than 27 percent opacity.
Emergency Diesel Generators	GAC 391-3-1-.02(2)(g)	Yes	**Sulfur Dioxide** All fuel-burning sources below 100 million BTUs of heat input per hour shall not burn fuel containing more than 2.5 percent sulfur, by weight. The generators will combust only ultra-low sulfur diesel fuel containing no more than 0.0015 percent sulfur, by weight.
Diesel Fuel Belly Tanks	GAC 391-3-1-.02(2)(bb)	No	**Petroleum Liquid Storage** Tanks are fixed-roof storage vessels with a maximum capacity of 10,000 gallons storing only ultra-low sulfur diesel fuel with a true vapor pressure of less than 1.52 pounds per square inch absolute (psia).
Diesel Fuel Handling and Storage	GAC 391-3-1-.02(2)(vv)	Yes	**Volatile Organic Liquid Handling and Storage** No person subject to other VOC requirements contained in other subsections of this Rule may transfer or cause or allow the transfer of any volatile organic liquid other than gasoline from any delivery vessel into a stationary storage tank of greater than 4,000 gallons, unless the tank is equipped with submerged fill pipes. All tanks will be equipped with submerged fill pipes.

Equipment/Process	Citation	Applicable?	Requirements
Emergency Diesel Generators	GAC 391-3-1-.02(2)(mmm)	Yes	**NOx Emissions from Stationary Gas Turbines and Stationary Engines used to Generate Electricity** These engines are defined as “emergency stationary engines at data centers” defined under GAC 391-3-1-.02(2)(mmm)4.(v). The engines will operate only for routine testing and maintenance, when electric power from the local utility is not available, or during internal system failures. Total annual operation of each engine will be less than 500 hours per year. Operation for routine testing and maintenance only during the months of May through September will occur between 10:00 p.m. to 4:00 a.m. The facility will maintain records of all operations, including the reason.

ATTACHMENT 4

Ambient Air Impact Evaluation

Air Dispersion Modeling Methods and Results

A4.1-1 Introduction

This section presents the methodology and results of the ambient air quality impact assessment of TAPs and an assessment of compliance with the minimum emission rate (MER) and Acceptable Ambient Concentrations (AACs). Copies of the electronic modeling files prepared in support of the project will be provided to GEPD via a file transfer site. The assessment follows the methodology from GEPD Guideline for Ambient Impact Assessment of Toxic Air Pollutants (GEPD 2017).

As discussed in the following subsections, the modeled ambient impacts expected from project emissions are either less than the MERs or less than the AACs.

A4.1-2 Air Dispersion Modeling

Air dispersion modeling was conducted in general accordance with the EPA's Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule (EPA 2005). The AERMOD modeling system was used in accordance with the EPA's Revision to the Guideline on Air Quality Models (EPA 2005) to estimate ambient pollutant concentrations beyond the site property boundary.

Ambient air impacts were modeled for all TAPs for which compliance was not demonstrated via emissions threshold screening. The most recent version of AERMOD (Version v24142) was used at the time the modeling was completed. AERMOD requires input from several pre-processors (described below) for meteorological parameters, downwash parameters, and terrain heights. AERMOD uses data from pre-processor programs (i.e., meteorology and terrain) as well as emission estimates and physical exhaust release point characteristics to predict ambient concentrations attributable to the proposed project. The model calculates concentrations based on various averaging times (e.g., 1 hour, 24 hours, annual, etc.) for a defined network of receptors; these concentrations are used to assess compliance with regulations that use ambient concentrations as criteria.

The AERMOD model was used to estimate the short-term (i.e., 15-minute) and long-term (i.e., annual average) impacts of benzene and formaldehyde whose emissions exceeded their respective MERs as discussed in "First Tier Screening of Toxic Air Pollutant Impacts."

Building Downwash Input Parameters

Building downwash occurs when the aerodynamic turbulence in the wake of buildings or structures causes exhaust from an elevated source (i.e., a stack) to mix with winds and be rapidly conveyed toward the ground, resulting in elevated ground-level pollutant concentrations. The software program Building Profile Input Program-Plume Rise Model Enhancements (BPIP PRIME) was used to determine whether exhaust from emission units would be affected by nearby building structures. In general, a stack is considered to be affected by a given structure if the height of the stack is less than the height defined by the EPA's Good Engineering Practice (GEP) stack height methodology.

Air Dispersion Modeling Methods and Results

GEP stack height is defined as the height of the nearby structure(s) measured from the ground-level elevation at the base of the stack plus 1.5 times the lesser dimension, height, or projected width of the nearby structure(s). All exhaust stacks at the facility will be less than the calculated GEP heights and, therefore, influenced by building downwash. To account for this potential building downwash, parameters calculated by BPIP PRIME were provided as inputs to AERMOD. A summary of buildings and structures is provided in Table 1. Figure 1 shows the facility site plan with the labeled buildings and stack locations.

Table 1. Building and Structure Information

Building/Structure Description	Quantity	Length (feet)	Width (feet)	Height (feet)
Data Center Building	1	1,211.5	432.5	50
Primary Generator Enclosures	36	73.3	13.9	13.1
Admin Generator Enclosure	1	27.3	10.6	12.7

Terrain Height Input Parameters

The digital elevation model (DEM) data source used to determine terrain heigh input parameters for AERMOD was the National Elevation Dataset (NED) in 1/3 arc-second resolution. Due to significant differences between the available NED data and the post-construction terrain, the post-construction onsite terrain and the NED data were merged. This was accomplished by first building a DEM grid from the ATL2 Grading Plan dated August 15, 2025, which was provided to Landau as topographic contours in DWG file format. These contours were used to create a terrain grid using the Geographic Information System (GIS) software and then combined with the NED original data. Outside of the property boundary, the NED data remains unchanged. The revised DEM grid is provided along with the electronic modeling files and a Figure 2 includes a topographic map of the facility and surrounding area.

Receptor Grid

To include the effects of terrain on calculated ambient concentrations, AERMOD requires information about the surrounding terrain. The American Meteorological Society (AMS)/EPA Regulatory Model Terrain pre-processor (AERMAP, Version 24142) was used to obtain the hill height scale and the base elevation for each receptor.

The receptor grid spacing increases with distance from the facility, as listed below:

- 10-meter (m) spacing along the property boundary
- 100-m spacing from the property boundary to 2,000 m
- 200-m spacing from 2,000 m to 5,000 m.

AERMAP requires the use of topographic data to estimate surface elevations above mean sea level. Digital topographic data, in the form of NED files, for the analysis region were obtained from the US Geological Survey national map downloader website (USGS 2025) and processed for use in AERMOD. The NED used for this project have a resolution of approximately 10 m (⅓ arc-second).

Air Dispersion Modeling Methods and Results

The implementation of AERMAP produces a receptor file (*.rec) that contains the calculated terrain elevations and hill height scales for each receptor. A separate *.rec file produced for each receptor spacing group was used as an input file provided to AERMOD.

Meteorological Data

Consistent with GEPD guidance, the 5-year metrological data that was used in the modeling simulation was downloaded from the GEPD website[1] on August 6, 2025. The GEPD processed meteorological files using AERMET (v24142), AERSURFACE (v20060), and AERMINUTE (v15272). The consecutive 5 years (2019–2023) of meteorological data were generated with 1-minute wind data for all ASOS stations. The following data set was used:

- **Surface Station:** Hartsfield-Jackson Atlanta International Airport (KATL)
- **Upper Air Station:** GA/Peachtree City-Falcon Field, GA (KFFC)
- **Processing Option:** ADJ_U* (adjust surface friction velocity for low wind/stable conditions).

The KATL station was selected because it was the Automated Surface Observing Systems (ASOS) station assigned to Newton County.

Rural vs Urban Classification

The selection of rural or urban dispersion coefficients followed the land use classification procedure outlined in Section 7.2.1.1.b of the Guideline on Air Quality Models 40 CFR 51, Appendix W (EPA 2024) and the example of rural versus urban determination provided by Kim Byeong with GEPD on August 8, 2025.

Categories 23 and 24 of National Land Cover Database (NLCD) 2021 are considered as “urban.” The percentage of urban NLCD pixels for urban areas is 13.46%, which means 86.54% of the area is rural and the rural classification was used. See “ATL2.aersurface.log” provided within the electronic modeling files for a detailed breakdown of the NLCD percentages.

Emission Unit Release Parameters

Modeled sources for this analysis consisted of 37 emergency generators. Release parameters used for the modeling are summarized in Table 2. The release parameters correspond to generator operation at 100 percent, which results in the greatest emission rate. The stack parameters were provided by the generator vendor and are included in Attachment 2. Note the final stack height and diameter may vary from what is provided; however, these represent the minimum and maximum height and diameter, respectively.

[1] Georgia AERMET Meteorological Data | Environmental Protection Division

Air Dispersion Modeling Methods and Results

The generators exhaust will have a rain cap installed (see vendor specification in Attachment 2). At low velocities, the rain cap can partially obstruct the exhaust flow, while at high velocities (such as at 100 percent load), the rain cap opens fully and the stack is unobstructed. To account for the variation in obstruction at various loads, this assessment conservatively assumed the generators' exhausts were POINTCAP sources.

Table 2. Release Parameters

Generator Type	Emissions Source ID	Stack Height (m)	Stack Diameter (m)	Temperature (K)	Exit Velocity (m/s)
2.25 MW Baudouin Admin/House Generator	A01	5.08	0.6	784.15	32.19
3.3 MW Baudouin 16M55G8D2/6	G01-G36	5.34	0.6	733.15	43.89

Abbreviations and Acronyms:

K = Kelvin
m/s = meters per second
g/s = grams per second

First-Tier Screening of Toxic Air Pollutant Impacts

A first-tier TAP assessment includes a comparison of expected maximum emission rates with the MER. For each TAP with an emission rate that exceeds the MER, a comparison of predicted maximum ambient concentrations with the AAC is performed. Table 3 shows the facility-wide emission rates for each TAP expected to be released by the facility and compares each emission rate with the corresponding MER. For this assessment, because the generator stacks are conservatively assumed to be a capped source, comparison to 20 percent of the MER is required. As shown in Attachment 2, maximum facility-wide emissions of formaldehyde and benzene are expected to be greater than their corresponding MERs, so an ambient impact analysis was completed for those TAPs.

The modeled emission rates for formaldehyde and benzene are included in Attachment 2. The annual emission rate in grams per second was calculated assuming 500 hours/year/generator of operation and then divided by 8,760 hours per year to determine the annual average rate.

Predicted Toxic Air Pollutant Ambient Concentrations

The first-tier ambient concentration screening analyses are summarized in Table 3. These screening analyses were conducted for TAPs with expected maximum emission rates that exceed 20 percent of the applicable MERs (see Table 2). As shown in Table 3, all maximum ground level concentrations (MGLC) are less than the applicable AACs.

Table 3: Results for Toxic Air Pollutant Analysis

TAP	CAS No.	Averaging Period	MGLC (µg/m³)	AAC (µg/m³)	Below AAC?
Formaldehyde	50-00-0	1-hour	0.6	--	--
		15-min [(a)]	0.8	245	Yes
		annual	2.11E-03	0.0909	Yes
Benzene	71-43-2	1-hour	6	--	--
		15-min[(a)]	8	1600	Yes
		annual	0.002	0.13	Yes

Notes:

(a) The 15-minute MGLC is scaled from the modeled 1-hour MGLC by a factor of 1.32 (consistent with GEPD Toxics Guidelines).

Abbreviations and Acronyms:

µg/m³ = micrograms per cubic meter

* * * * *

References

EPA. 2005. Revision to the Guideline on Air Quality Models : Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule. US Environmental Protection Agency.

EPA. 2024. Guideline on Air Quality Models 40 CFR 51, Appendix W. US Environmental Protection Agency. Revised November 29.

GEPD. 2017. GEPD Guideline for Ambient Impact Assessment of Toxic Air Pollutants. Georgia Environmental Protection Division.

USGS. 2025. The National Map Data Download Application. https://www.usgs.gov/tools/download-data-maps-national-map. US Geological Survey.