Edit: Application Tracking

Air Case ID: 12977 Permit Id: 4506

FIN No.: A2164

Company Name: SILVER SLATE, LLC

HA Basin No: 083 **Increment Tracked** ☑

Permit No: AP73744671 * Select a Permit No

Date App. Received: 04/22/2026 *

Permit Writer: Not Assigned (NA) *

Case Type: Class 1 OPTC Revision *

Default ODS Date: 06/06/2026 *

Actual ODS Date:

Date App. to be Closed: 12/06/2026 *

Stop Days: **Actual Date App. to be Closed:** 12/6/2026

App. Incomplete? ☐

Date App. Closed:

Fee Paid ($): 30000 *

Case Description:

Comments:

Flag (For Class 4) : None

Update Cancel

BRIDGEWATER GROUP

TRANSMITTAL

To:

Nevada Division of Environmental Protection
Bureau of Air Pollution Control
Class I Permitting Branch
901 S. Stewart Street, Suite 4001
Carson City, NV 89701

From:

BRIDGEWATER GROUP, INC.
7100 SW HAMPTON ST., SUITE 235
TIGARD, OREGON 97223

Attn: Derek Rizo

Date: April 21, 2026

Re: Silver Slate LLC
Facility ID No. A2164
Permit No. AP7374-4672
Revision of Class I Air Quality Operating Permit to Construct (OPTC) Application

We Are Sending You:

Quantity	Description
1	Cover Letter (with wet signature)
1	Check in the amount of $30,000.00 for permit application fee
1	Application: Attachment 1: Proposed Action Attachment 2: Class I OPTC Application Package (with wet signature)
1	Thumb drive with electronic versions of application and modeling files

If material received is not listed, please notify us at once.

Transmitted by FedEx by:

Kent Norville | Trinity Consultants/Bridgewater Group, Inc.
503-961-5147

eCopy To: Trace Forkan/Silver Slate LLC

Silver Slate LLC
% Corporation Service Company
7400 USA Parkway
McCarran, NV 89437

April 17, 2026

Nevada Division of Environmental Protection
Bureau of Air Pollution Control, Class I Permitting Branch
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249

Re: Revision of Class I Air Quality Operating Permit to Construct Permit
Facility ID No. A2164
Permit No. AP7374-4671

To Whom It May Concern:

This letter transmits Silver Slate LLC's (Silver Slate) application for revising the Class I Operating Permit to Construct (OPTC) at our facility located at 7400 USA Parkway, McCarran, Nevada 89437 (facility). The permit revision application is being submitted to modify the emergency engine emission rates based on better information and to align with the type of source testing being required under our existing permit. Silver Slate is also adding a small Tier 3 emergency generator to support a new logistics center and making a few minor corrections and adjustments. Further, Silver Slate will be submitting under separate cover an Insignificant Activity determination request to obtain approval to install a small diesel fuel storage tank for dispensing fuel to onsite vehicles and/or equipment. We request this be approved under the current Class I permit and not be tied to this permit revision due to timing issues.

The facility will continue to accept Federally enforceable limits to keep the NOx emissions less than 250 tons per year (synthetic minor). Summary level details of the proposed project is provided in Attachment 1 along with proposed permit language which aligns with language in our current Class I operating permit.

Attachment 2 to this letter is the project's Class I OPTC revision application packet including Nevada Department of Environmental Protection (NDEP) forms, environmental evaluation (modeling report), application fees, and the application certification document. Please note that Silver Slate obtained approval of a Request for Confidentiality for this permit action on March 30, 2026. It has been determined that the information submitted with this permit revision application does not need to be maintained as confidential and the approved request is not needed. Only one version of the permit revision application is being submitted.

Thank you for your cooperation in this regard.

Very truly yours,

Brian Dixon
Facility Manager

cc: Mr. Trace Forkan (via email)

Attachment 1

Proposed Actions
Silver Slate LLC
Current Permit: Class I Operating Permit to Construct (OPTC) AP7374-4671, FIN A2164
Action: Revision of Class I OPTC

Purpose

This air permit application is being submitted for a revision to the current OPTC for the following reasons:

1) Current generator emissions are based on the lesser of the NSPS and manufacture supplied emission factors. However, the current OPTC requires source testing for many systems. Current source test practices are substantially different than those used to establish NSPS limits. For example, NSPS methods only consider filterable particulate while Method 5 considers both filterable and condensable particulate. Because of the methodology mismatch, Silver Slate is revising emission factors for the engines to be more reflective what would be expected during a stack test. Specifically, Silver Slate is using the greater of the NSPS and manufacturer-supplied emission factors. To account for condensable PM, Silver Slate is applying a "PM condensable Factor" to the PM emission factors. These emission factors are higher than the values used in the original OPTC application, so Silver Slate is proposing revisions to the emission rates and generator usage conditions.
2) The emissions inventory was reworked to be consistent with the system number in the permit.
3) The release parameters for the fire pumps (System 12) were incorrect and have been updated to the correct values.
4) In the permit application modeling, the System 11 R&D backup emergency generator exhaust was oriented with the exhaust toward the facility. However, the system was built so that the unit was rotated 180 degrees, so the exhaust was away from the facility. Thus, the current modeling was revised to account for this shift.
5) As described in the original OPTC application, the system 11 generator is a Tier 2 unit with additional voluntary controls (SPI ecoCUBE SCR+cDPF). In the previous application, uncontrolled emission rates were used and this revision application continues to use uncontrolled emission rates even though the voluntary controls have been installed.
6) Silver Slate is adding a small 100 kW tier 3 emergency generator (System 14) located next to a new logistics building in proximity of DC2. Thus, the new building and generator were added to the modeling.

As mentioned above, the emission factors proposed for this permit action are higher than those used in the original permit application. For example, in this revision application the NSPS regulated pollutants (NOx, CO, and PM) hourly limits are based on the greater of the manufacturer supplied emission rates and the NSPS emission rates. For annual limits, Silver Slate proposes a cumulative non-emergency annual hourly limit of 6,889 hours for all System 1-10 emergency generators, based on the 250 TPY NOx limit minus the emissions from the other systems and insignificant sources (4.42 TPY), divided by the maximum hourly NOx emission

rate of 71.0 lb/hr. Cumulative daily non-emergency operating hour limits are derived from demonstrating compliance with applicable 24-hr ambient air quality standards as described in the Environmental Evaluation (air dispersion modeling). To ensure compliance with the short-term standards, Silver Slate is proposing limits on the number of daily generator run hours that can occur on any given day. Our modeling analysis included with this application evaluated groups of generators at each data center running continuously for 24 hours. For example, DC1 was evaluated running 8 generators for 24 hours/day for a total of 192 generator run-hours per calendar day and DC3 was evaluated running 11 generators for 24 hours/day for a total of 264 generator-hours per calendar day. Silver Slate is proposing a cumulative daily generator run-hour permit limit that would apply to any combination of generators ran at the facility with the exception of Systems 11, 12 and 14. This limit would be based on the "worst case" cumulative run-hour case or 192 generator run-hours per day.

The following language is provided as an example of permit language with suggested operating hours and emission rate related permit language.

Section V. Specific Operating Conditions

A. System 01

1 Air Pollution Control Equipment (NAC 4458.346(1)) *(Federally Enforceable SIP Requirement)*

a. **Each individual unit in System 01** has no add-on controls.

2 Operating Parameters (NAC 4458.346(1)) *(Federally Enforceable SIP Requirement)*

a. **Each individual unit in System 01** may consume only **diesel and/or HVO.**

b. Hours

(1) **All units in Systems 01 to 10,** may operate a combined total of 192 hours per calendar day of non-emergency use.

(2) **All units in Systems 01 to 10** may operate for a combined 6,889 hours per year of non-emergency use. There is no time limit on operation in emergency situations.

(3) **Each individual unit in System 01** may operate up to a maximum of **100** hours per year of non-emergency use as long as the annual hourly limit is not exceeded. There is no time limit on operation in emergency situations.

3 Emission Limits (NAC 4458.305, NAC 4458.346(1), NAC 4458. 22017) *(Federally Enforceable SIP Requirement)*

a. The discharge of **PM** (particulate matter) to the atmosphere shall not exceed **2.57** pound per hour.

b. The discharge of **PM_{10}** (particulate matter less than or equal to 10 microns in diameter) to the atmosphere shall not exceed **2.57** pound per hour.

c. The discharge of **$PM_{2.5}$** (particulate matter less than or equal to 2.5 microns in diameter) to the atmosphere shall not exceed **2.57** pound per hour.

d. The discharge of **SO_2** (sulfur dioxide) to the atmosphere shall not exceed **0.039** pounds per hour.

e. The discharge of **NOx** (oxides of nitrogen) to the atmosphere shall not exceed **71.0** pounds per hour.

f. The discharge of **CO** (carbon monoxide) to the atmosphere shall not exceed **23.23** pounds per hour.

g. The discharge of **VOCs** (volatile organic compounds) to the atmosphere shall not exceed **2.35** pounds per hour.

h. The opacity from **each individual unit in System 01** shall not equal or exceed **20** percent.

Attachment 2: OPTC Application Package:

Class I Operating Permit to Construct (OPTC) Application Form

Attachment A – Applicable Regulations
Attachment B – Process Narrative
Attachment C – Process Flow Diagram
Attachment D – Detailed Emission Calculations
Attachment E – Environmental Evaluation
Attachment F – Manufacturer's Information and Specifications
Attachment G – Digital Copy of the Application

Class I

Air Quality Operating Permit (AQOP), Operating Permit to Construct (OPTC), and Prevention of Significant Deterioration (PSD)
Application Form

Facility Name: Silver Slate LLC
Existing Facility ID: A2164
Existing Class I AQOP/OPTC: NA (Class II AP7374-4671)
Type of Facility: Data Center
Number of Units (including IA's) in Facility: 184
Number of Units (including IA's) Affected in Action: 173

Application Type:

- ☐ New AQOP
- ☐ Minor Revision of Existing AQOP
- ☐ Significant Revision of Existing AQOP
- ☐ Renewal of Existing AQOP
- ☐ New OPTC
- ☒ Revision of OPTC
- ☐ Rollover OPTC to a New AQOP
- ☐ Rollover OPTC to Existing AQOP
- ☐ Administrative Revision of Existing AQOP
- ☐ New PSD AQOP
- ☐ Major PSD Revision of AQOP
- ☐ New PSD OPTC
- ☐ Major PSD Revision of OPTC

NDEP

Please Submit Application to:
Nevada Division of Environmental Protection
Bureau of Air Pollution Control, Class I Permitting Branch
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249
Phone (775) 687-9349

February 2021
(Ver. 4)

IMPORTANT INFORMATION

- The Application packet contains:
  - General Company Information Form
  - Industrial Process Application Form
  - Combustion Equipment Application Form
  - Storage Silo Application Form
  - Liquid Storage Tanks Application Form
  - Facility-Wide Potential to Emit Table
  - Surface Area Disturbance Form
  - Plant Boundary Coordinates Form
  - Plant Building Parameters Forms
  - Application Certification Document with Required Attachments

- Please see the Guidance Document located at https://ndep.nv.gov/air/permitting/download-permit-forms for additional instructions on how to complete the application.
- The application is available from the Nevada Division of Environmental Protection – Bureau of Air Pollution Control (BAPC) in a Microsoft Word file, or on the internet at https://ndep.nv.gov/air/permitting/download-permit-forms. A printed copy of the application must be submitted (mailed or hand delivered), along with an electronic version.
- The application filing fee required by Nevada Administrative Code (NAC) 445B.327 must be submitted with the completed application. Checks must be made payable to the "Nevada State Treasurer, Environmental Protection" with "BAPC" noted in the memo line. Fees may also be submitted electronically at https://epayments.ndep.nv.gov/.
- This application shall be used for a new, renewal, and revision of Class I sources, including AQOP, OPTC, rollover OPTC, and PSD actions.
- An application for a Class I AQOP, OPTC, and PSD must be signed by the Responsible Official, as defined in NAC 445B.156. The certification document (signature page) is the last page of the application and the original "wet" signature must be provided.
- All items in the application must be addressed. If an item does not apply "N/A" or similar notation must be entered in the appropriate blank. All other information must be provided. Incomplete applications will be returned to the Responsible Official within:
  - 45 days for a new or revision of Class I OPTC. (NAC 445B.3364(1))
  - 30 days for sources subject to permitting requirements set forth in 40 CFR 52.21 applying for a new or revision of Class I PSD OPTC. (NAC 445B.3364(2))
  - 60 days for a new, significant revision, or renewal of Class I AQOP. (NAC 445B.3395(1), NAC 445B.3443(3))
  - 10 working days for a minor revision of Class I AQOP. (NAC 445B.3395(5))
  - 30 days for sources subject to permitting requirements set forth in 40 CFR 52.21 applying for a new of Class I PSD. (NAC 445B.3395(2))
  - 45 days for an administrative revision of Class I OPTC. (NAC 445B.3441(2) and NAC 445B.3364(1))

IMPORTANT INFORMATION (continued)

- For the renewal of a Class I Operating Permit, a **complete** application and corresponding processing fee must be submitted in accordance with NAC 445B.3443(2) at least 240 days prior to the expiration date of the current permit but not earlier than 18 months. The BAPC suggests that the application be submitted well in advance of the timeline outlined in NAC 445B.3443 to ensure the application is deemed complete. The BAPC has 60 days to deem the application complete or incomplete. As stated above, incomplete applications will be returned within 60 days of the receipt of the application. Therefore, the BAPC recommends the application be submitted at least 300 days prior to expiration of the current permit.
- For stationary sources subject to the provisions regarding new source review set forth in United States Code (U.S.C.) Title 42 7501 through 7515, inclusive (nonattainment areas), include all information required by U.S.C. Title 42 7503 pursuant to NAC 445B.3363(2)(b)(3).
- For a proposed new major source or a proposed major modification to an existing stationary source that is subject to the provisions of 40 CFR 52.21, include all information required by 40 CFR 52.21 pursuant to NAC 445B.3368(3)(a).
- For a proposed new major source, or a proposed significant revision to an existing stationary source which is not subject to the provisions of 40 CFR 52.21, include all information as required by NAC 445B.308 through 445B.313, inclusive, pursuant to NAC 445B.3368(3)(b).
- For a proposed new major source or a proposed significant revision to an existing stationary source which is subject to the requirements of U.S.C. Title 42 7412 regarding hazardous air pollutants, include all information required by NAC 445B.308 through 445B.313, inclusive, pursuant to NAC 445B.3368(3)(c).

GENERAL COMPANY INFORMATION FORM

1. **Briefly describe the permitted facility's process and include the Standard Industrial Classification (SIC) number and North American Industry Classification System (NAICS). Add details in the attached Process Narrative.**

   The facility is a data center (SIC Code 7374) and emission units at the facility include emergency generators and fire pump engines fired by ultra-low sulfur distillate (ULSD) fuel, HVO fuel, or a blend of the two.

2. **Company Name and Address that are to appear on the operating permit [NAC 445B.295(1)]:**

   Name: Silver Slate LLC
   Address: 7400 USA Parkway
   City: McCarran
   State: Nevada Zip Code: 89437

3. **Owner's Name and Address [NAC 445B.295(1)]:**

   Name: Silver Slate LLC
   Address: 1600 Amphitheatre Parkway
   City: Mountain View
   State: California Zip Code: 94043

4. **Facility Name and Physical Address, if different from #2 [NAC 445B.295(1)]:**

   Name:
   Address:
   City:
   State: Zip Code:

5. **If records required under the operating permit will be kept at a location other than the facility, specify that location [NAC 445B.295(7)]:**

   Name: Not applicable. Records will be maintained at the facility.
   Address:
   City:
   State: Zip Code:

GENERAL COMPANY INFORMATION FORM (continued)

6. Responsible Official Name, Title and Mailing Address [NAC 445B.295(1)]:

Name:	Brian Dixon
Title:	Facility Manager
Address:	7400 USA Parkway
City:	McCarran
State:	Nevada Zip Code: 89437
Phone Number:	(708) 214-7224
Fax Number:	See email
E-mail Address:	briandixon@google.com

7. Plant Manager or other appropriate Contact Name, Title and Address [NAC 445B.295(1)]:

Name:	See Responsible Official
Title:	
Address:	
City:	
State:	Zip Code:
Phone Number:	
Fax Number:	
E-mail Address:	

8. Location and Driving Directions to the Facility (For Example: From Elko, Nevada, 4 miles south of I-80 at xx Interchange) [NAC 445B.295(8)]:

Hydrographic Basin (HA) Number: HA 83
HA Basin Name: Tracey Segment

Township(s): T19N N; Range(s): R23E E; Section(s): S20

UTM Coordinates for the Front Gate of the Facility (NAD 83, Zone 11):
4375100 m North; 291000 m East;
Nearest City: Sparks, NV
County: Storey County

Driving Directions from nearest city to the Facility:
I-80 E toward Elko for 15.7 miles. Take exit 32 for USA Parkway for 0.2 miles. Turn right onto NV-439 and proceed 7.4 miles.

GENERAL COMPANY INFORMATION FORM (continued)

9. Emission Cap Requested [NAC 445B.070, NAC 445B.296(2), NAC 445B.296(3)]:

☐ Yes ☒ No (If yes, provide details in the attached Process Narrative)

10. **Important note** for completing the Industrial Process, Combustion Equipment, Storage Silo, and Liquid Storage Tank Application Forms: forms need to be included for all permitted emission units and insignificant activities. Provide additional forms as needed. All items in the application must be addressed. If an item does not apply, then "N/A" or similar notation (TDB, unknown, etc.) must be entered in the appropriate blank.

11. Check one that applies:

☐ Major Stationary Source [40 CFR 52.21]

☐ Minor Source [40 CFR 71.2]

☒ New Source Review (NSR) Synthetic Minor Source [40 CFR 49.167]

12. Is the Facility subject to 40 CFR 51.307 and 52.21(p) (i.e., located within 100 km of a Class I Federal Area within Nevada and any adjacent states, for example Jarbidge Wilderness Area) protected by the Regional Haze Program (40 CFR Part 81)?

☐ Yes ☒ No

13. Check any of the following that apply to this application:

☐ Involve significant changes to the existing requirements for monitoring, reporting, or recordkeeping.

☐ Require or change a determination of an emission limitation or other standard on a case-by-case basis.

☐ Require or change a visibility or increment analysis.

☐ Require or change a determination of ambient impact for any temporary source.

☐ Establish or change a condition of the operating permit for which there is no a federally enforceable emissions cap and/or an alternative emission limitation pursuant to U.S.C. Title 42 7412(i)(5).

☒ Result in an increase in allowable emissions that exceeds any of the following specified thresholds: Carbon monoxide, 100 tons per year; Nitrogen oxides, 40 tons per year; Sulfur dioxide (SO_2), 40 tons per year; Particulate Matter less than or equal to 10 microns in diameter (PM_{10}), 15 tons per year; Ozone (O_3), 40 tons per year of volatile organic compounds (VOC); Sulfuric acid mist, 7 tons per year; and Hydrogen sulfide (H_2S), 10 tons per year.

☐ Modification pursuant to any provision of U.S.C. Title 42 7401 to 7515, inclusive, or a major modification at an existing major stationary source.

If any of the boxes were checked above, a minor revision may not be made to the Class I Operating Permit pursuant to NAC 445B.3425.

14. Will the Facility be constructed in more than one phase [NAC 445B.3395(17)]?

☐ Yes ☒ No (If yes, provide details in the attached Process Narrative)

GENERAL COMPANY INFORMATION FORM (continued)

15. Will the facility violate any "Applicable requirement" pursuant to NAC 445B.019?
☐ Yes ☒ No

16. Verify facility's compliance status for the following regulations and describe the reason for exemption if applicable:

FEDERALLY ENFORCEABLE REQUIREMENTS			
NAC 445B.225	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.315(3)(h)	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.315(3)(i)	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.315(3)(k)	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
40 CFR 52.21(r)(4)	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.252	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22067	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22093	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22037	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.227	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
40 CFR Parts 60.1-60.19, 61.01-61.19, 61.140-61.157, 63.1-63.15, and 70	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
40 CFR Part 82	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.230	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22017	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*

STATE REQUIREMENTS			
NRS 445B.470	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22013	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.326(1)	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 445B.22087	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*
NAC 459.952-459.95528	☒ Compliant	☐ Not Compliant	☐ Exempt, *Reason for Exemption*

17. Has the facility provided modeling for each non-combustion baghouse individually? (See Testing Determination System for Baghouses Guidance Document)
☐ Yes ☐ No NA – no Baghouses

INDUSTRIAL PROCESS APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: **System 13 Bloom Energy Server**

Emission Unit Description: **Six (6) Bloom Solid Oxide Fuel Cells (ES1-ES9)**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001, PF1.001	PF1.001-PF1.006
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	NA
	Manufacturer		Bloom Energy
	Date Manufactured		TBD
	Model Number		Bloom Energy Server 6.5
	Equipment Dimensions (LxWxH)	feet	29'5" x 4'4" x 8'2"
	Drop Length *if applicable*	feet	
	Drop Height *if applicable*	feet	
	The Drop Height is measured from the ☐ top of the drop length ☐ middle of the drop length ☐ bottom of the Drop Length, in reference to the ground. *Choose one, if applicable*		
	Drop Horizontal Dimension 1 *if applicable*	feet	
	Drop Horizontal Dimension 2 *if applicable*	feet	
	Emissions Released Inside building?	yes/no	No
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	
Operating Parameters	Material Type Processed		Natural Gas
	Batch Process *if applicable*	*unit*/batch	
	Start Time *if operating less than 24 hours/day*	hour:minute	
	End Time *if operating less than 24 hours/day*	hour:minute	
Control Equipment	Manufacturer		NA
	Manufacturer's Guarantee included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	
Stack Parameters	Stack Height	Feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	Feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	Acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

INDUSTRIAL PROCESS APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: **System 13 Bloom ES 6.5 Solid Oxide Fuel Cells (ES1-ES6)**

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☐ Yes ☒ No If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.22033, NAC 445B.22017): ☐ Yes ☒ No If yes, identify regulation and applicability.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   No specific work practices are listed in the regulations for these insignificant activities.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   No specific testing or monitoring is proposed.

5. How will throughput be monitored for this emission unit? Identify if the throughput will be monitored at this emission unit or at another emission unit and the method (e.g. weigh belt).
   No throughput monitoring is being proposed for this insignificant activity.

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 01- Emergency Generators

Emission Unit Description: Fourteen (14) identical diesel-fired emergency generators (S0101-S0114)

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 01
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		MTU
	Date Manufactured		2018 or later
	Model and Serial Number		Model 20V4000G74S, Serial #'s, multiple engines, see site records
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed	month/day/yr	2019-2020
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or HVO
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	NA
	End Time *if operating less than 24 hours/day*	hour:minute	NA
Control Equipment	Manufacturer		NA
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	NA
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 1 Emergency Generators (S0101-S0114)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 2 Emergency Generators
Emission Unit Description: Twelve (12) identical diesel-fired emergency generators (S0115-S0126)

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 2
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		MTU
	Date Manufactured		2022
	Model and Serial Number		Model 20V4000G94S, Serial #'s, multiple engines, see site records
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		2023
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or HVO
	Fuel Flow Meter Installed?	yes/no/NA	no
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 2 Emergency Generators (S0115-S0126)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 3 Emergency Generators
Emission Unit Description: 26 identical diesel-fired emergency generators (S0301-S0326)

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 3
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		Cummins
	Date Manufactured		2024
	Model and Serial Number		Model C3000D6EB, Serial #'s, multiple engines, see site records
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		11/2024
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or HVO
	Fuel Flow Meter Installed?	yes/no/NA	no
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 3 Emergency Generators (S0301-S0326)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 4 Emergency Generators
Emission Unit Description: 36 identical diesel-fired emergency generators (S0201-S0236)

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 4
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		Cummins
	Date Manufactured		2025
	Model and Serial Number		Model C3000D6EB, Serial #'s, multiple engines, see site records
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		1/2026
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or HVO
	Fuel Flow Meter Installed?	yes/no/NA	no
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 4 Emergency Generators (S0201-S0236)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 5 Emergency Generators
Emission Unit Description: 10 identical diesel-fired emergency generators (M0201-M0210)

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 5
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		Cummins
	Date Manufactured		2025
	Model and Serial Number		
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		1/2026
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or HVO
	Fuel Flow Meter Installed?	yes/no/NA	no
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 5 Emergency Generators (M0201-M0210)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 6 Emergency Generators
Emission Unit Description: 36 identical diesel-fired emergency generators (S0401-S0436)

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 6
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		TBD
	Date Manufactured		TBD
	Model and Serial Number		Model TBD, Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		TBD
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or HVO
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 6 Emergency Generators (S0401-S0436)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 7 Emergency Generators
Emission Unit Description: 10 identical diesel-fired emergency generators (M0401-M0410)

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 7
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		TBD
	Date Manufactured		TBD
	Model and Serial Number		Model TBD, Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		TBD
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or HVO
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 7 Emergency Generators (M0401-M0410)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 8 Emergency Generators

Emission Unit Description: Four (4) identical diesel-fired emergency generators (CG0101-CG0104)

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 8
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		Cummins
	Date Manufactured		2018
	Model and Serial Number		Model C3250D6e (QSK95-G9 Engine), Serial # 's, multiple engines, see site records
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed	month/day/yr	2019
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or HVO
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	NA
	End Time *if operating less than 24 hours/day*	hour:minute	NA
Control Equipment	Manufacturer		NA
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	NA
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 8 Emergency Generators (CG0101-CG0104)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 9 Emergency Generators
Emission Unit Description: Three (3) identical diesel-fired emergency generators (CG0105-CG0107)
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 9
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		Cummins
	Date Manufactured		2022
	Model and Serial Number		Model C3250D6e-2022, Serial #'s, multiple engines, see site records
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		2023
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or HVO
	Fuel Flow Meter Installed?	yes/no/NA	no
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 9 Emergency Generators (CG0105-CG0107)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 10 Emergency Generators
Emission Unit Description: 8 identical diesel-fired emergency generators (CG0301-CG0308)
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 02b
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-004-01
	Manufacturer		Cummins
	Date Manufactured		2024
	Model and Serial Number		Model C3250D6e-2023, Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		5/2024
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or VGO
	Fuel Flow Meter Installed?	yes/no/NA	no
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 10 Emergency Generators (CG0301-CG0308)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 11 R&D Backup Emergency Generator
Emission Unit Description: One (1) diesel-fired emergency generators with controls (BG01p)
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 11
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-001-02
	Manufacturer		MTU
	Date Manufactured		06/2021
	Model and Serial Number		Model 20V4000G94S, Serial # 95030502493
	Emissions Released Inside building?	No	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		1/2026
	Cylinder Displacement	liter/cylinder	<10
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4,374,824
	UTM Easting (NAD 83, Zone 11)	m	291,389
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or VGO
	Fuel Flow Meter Installed?	yes/no/NA	no
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		Safety Power SPI ecoCUBE or equivalent
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	Yes, see following pages
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☐ vertical ☐ capped ☒ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 11 R&D Backup Emergency Generator (BG01p)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

Rolls-Royce Solutions America Inc.

MTU 20V4000G74S emissions reduction with SPI ecoCUBE® (SCR+cDPF)

MTU 20V4000G74S emissions reduction with SPI ecoCUBE® (SCR+cDPF) [1]				
Load point	NOx reduction	CO reduction[2]	VOC Reduction	PM Reduction
10%[3]	--	--	--	≥ 85%
25%	95%	≥ 85%	≥ 70%	≥ 85%
50%	95%	≥ 85%	≥ 70%	≥ 85%
75%	95%	≥ 85%	≥ 70%	≥ 85%
100%	95%[4]	≥ 85%	≥ 70%	≥ 85%

Notes Regarding the R&D Backup Emergency Generator:

Silver Slate is proposing to install this Tier 2 stationary emergency generator with add-on controls. The add-on controls are being installed on a voluntary basis. The proposed add-on controls will include selective catalytic reduction (SCR), diesel oxidation catalyst (DOC) and diesel particulate filtration (DPF).

The unit was originally permitted with uncontrolled emissions. Although Silver Slate is installing the add-on control device, Silver Slate is continuing to use uncontrolled emissions until the required source test is completed.

The emission reduction capabilities shown above have been provided by the emergency generator manufacturer and are expected to be achievable by the control system package. As described in the emission calculation section of this application the reduction efficiencies shown above have been reduced by 10% to add control variability and to account for start-up periods as the catalytic systems come up to temperature.

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 12 Fire Pump Engines
Emission Unit Description: Two (2) diesel-fired emergency generators (FP1 & 2)
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	S2.002 S2.003
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-001-02
	Manufacturer		Clarke/John Deere
	Date Manufactured		11/2018
	Model and Serial Number		JU6H-UFADX8/6068HFC48 (SN:PE6068N012015)
	Emissions Released Inside building?	No	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		1/6/2020
	Cylinder Displacement	liter/cylinder	1.13
	EPA Tier #		2
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4,374,435.6
	UTM Easting (NAD 83, Zone 11)	m	290,829.4
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or VGO
	Fuel Flow Meter Installed?	yes/no/NA	no
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☐ vertical ☐ capped ☒ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 12 Fire Pump Engines (FP1& 2)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: System 14 CLC Emergency Generator
Emission Unit Description: One (1) diesel-fired emergency generators (CLC)

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	System 14
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2-02-001-02
	Manufacturer		Cummins
	Date Manufactured		Expected 2026
	Model and Serial Number		C100D6C
	Emissions Released Inside building?	No	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		ECI
	Date Constructed		2026
	Cylinder Displacement	liter/cylinder	4.45
	EPA Tier #		3
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4,374,221.75
	UTM Easting (NAD 83, Zone 11)	m	291,271.8
Operating Parameters /Fuel Usage	Fuel Type		Ultra Low Sulfur Diesel (ULSD) and/or VGO
	Fuel Flow Meter Installed?	yes/no/NA	no
	Sulfur Content	%	0.0015%
	Heat Content	Btu/*unit*	137,000 BTU/gallon
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☒vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: System 14 CLC Emergency Generator (CLC)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).
   See Attachment A for a discussion of applicable federal regulations.

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   Each engine must be installed, configured, operated and maintained according to written manufacturer's instructions. No specific work practices are listed in the regulations.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   Hours of operation of each engine will be monitored.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: Group 1 Small Natural Gas Fired Building Heaters ("RTUs')
Emission Unit Description: Two (2) Roof Top Building Heaters
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☒ **Yes** ☐ **No** If yes, identify exemption regulation: NAC 445B.288.2(e)(1)

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	RTU 1A-F-R-1, RTU 1A-F-R-2
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	NA
	Manufacturer		Johnson Controls (or equivalent)
	Date Manufactured		2018
	Model and Serial Number		YPAL105MVE46BBFSL
	Emissions Released Inside building?	No	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		
	Date Constructed		
	Cylinder Displacement	liter/cylinder	
	EPA Tier #		
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	Neg.
	Heat Content	Btu/*unit*	1020 Btu/ft3
	Start Time *if operating less than 24 hours/day*	hour:minute	Up to 24 hrs
	End Time *if operating less than 24 hours/day*	hour:minute	
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☐ vertical ☐ capped ☒ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: Roof Top Heating Units (RTUs)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☐ **Yes** ☒ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   No specific work practices are listed in the regulations for these emission units.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   No specific testing or monitoring is proposed for the RTUs.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer, if required.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: Group 2 Small Natural Gas Fired Building Heaters ("RTUs')
Emission Unit Description: Two (2) Roof Top Building Heaters
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☒ **Yes** ☐ **No** If yes, identify exemption regulation: NAC 445B.288.2(e)(1)

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	RTU 1A-DC-R-1, RTU 1A-DC-R-2
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	NA
	Manufacturer		Johnson Controls (or equivalent)
	Date Manufactured		2018
	Model and Serial Number		YPAL105MVE46BBFSL
	Emissions Released Inside building?	No	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		
	Date Constructed		
	Cylinder Displacement	liter/cylinder	
	EPA Tier #		
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	Neg.
	Heat Content	Btu/*unit*	1020 Btu/ft3
	Start Time *if operating less than 24 hours/day*	hour:minute	Up to 24 hrs
	End Time *if operating less than 24 hours/day*	hour:minute	
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Stack Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☐ vertical ☐ capped ☒ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: Roof Top Heating Units (RTUs)

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☐ **Yes** ☒ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☒ **Yes** ☐ **No** If yes, identify regulation and applicability.
   See Attachment A for a discussion of state regulations specific to the emission unit.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   No specific work practices are listed in the regulations for these emission units.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   No specific testing or monitoring is proposed for the RTUs.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer, if required.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: HUB Kitchen Related Equipment
Emission Unit Description: Natural gas fired kitchen equipment
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☒ **Yes** ☐ **No** If yes, identify exemption regulation: NAC 445B.288.2(e)(1)

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	KITCH
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	NA
	Manufacturer		Multiple/TBD
	Date Manufactured		TBD
	Model and Serial Number		TBD
	Emissions Released Inside building?	Yes/No	Yes
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		
	Date Constructed		
	Cylinder Displacement	liter/cylinder	
	EPA Tier #		
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	See Attachment E
	UTM Easting (NAD 83, Zone 11)	m	See Attachment E
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	Neg.
	Heat Content	Btu/*unit*	1020 Btu/ft3
	Start Time *if operating less than 24 hours/day*	hour:minute	Up to 24 hrs
	End Time *if operating less than 24 hours/day*	hour:minute	
Control Equipment	Manufacturer		N/A
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	See Attachment E for Release Parameters
	Stack Inside Diameter	feet	
	Stack Temperature	°F	
	Stack Exit Velocity	feet/second	
	Actual Gas Volume Flow Rate	acfm	
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	
	Stack Release Type		☐ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: HUB Kitchen Related Equipment

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☐ **Yes** ☒ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22017): ☐**Yes** ☒ **No** If yes, identify regulation and applicability.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).
   No specific work practices are listed in the regulations for these emission units.

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).
   No specific testing or monitoring is proposed.

5. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by the manufacturer, if required.

6. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

STORAGE SILO APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: NA – The facility is not proposing to install this type of emission unit

Emission Unit Description:

Alternative Operating Scenario: ☐ **Yes** ☐ **No**

Insignificant Activity: ☐ **Yes** ☐ **No** If yes, identify exemption regulation:

Description			Data	
			Silo Loading	**Silo Unloading**
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001, PF1.001		
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*		
	Manufacturer			
	Date Manufactured			
	Model Number			
	Equipment Dimensions (LxWxH)	feet		
	Drop Dimensions (LxWxH) *if applicable*	feet		
	Emissions Released Inside building?	yes/no		
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m		
	UTM Easting (NAD 83, Zone 11)	m		
Operating Parameters	Material Type Processed			
	Batch Process *if applicable*	*unit*/batch		
	Start Time *if operating less than 24 hours/day*	hour:minute		
	End Time *if operating less than 24 hours/day*	hour:minute		
Control Equipment	Manufacturer			
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A		
Stack Parameters	Stack Height	feet		
	Stack Inside Diameter	feet		
	Stack Temperature	°F		
	Stack Exit Velocity	feet/second		
	Actual Gas Volume Flow Rate	acfm		
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm		
	Stack Release Type	☐ vertical ☐ capped ☐ horizontal		

STORAGE SILO APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: NA – The facility is not proposing to install this type of emission unit

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☐ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22033, NAC 445B.22017): ☐ **Yes** ☐ **No** If yes, identify regulation and applicability.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).

LIQUID STORAGE TANK APPLICATION FORM
CLASS I OPERATING PERMIT

System Number and Name: NA – The facility is not proposing to install this type of emission unit

Emission Unit Description:

Alternative Operating Scenario: ☐ **Yes** ☐ **No**

Insignificant Activity: ☐ **Yes** ☐ **No** If yes, identify exemption regulation:

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001, PF1.001	
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	
	Manufacturer		
	Date Manufactured		
	Model Number		
	Heated Tank	yes/no	
	Shell Height	feet	
	Shell Diameter	feet	
	Maximum Liquid Height	feet	
	Average Liquid Height	feet	
	Capacity of Tank	gallons	
	Shell Color		
	Shell Condition	good/poor	
	Roof Type (Cone, Dome, External, or Internal Floating Roof)		
	Roof Height	feet	
	Roof Color		
	Cone Roof Slope		
	Dome Roof Radius	feet	
	True Vapor Pressure of Liquid	psig	
	Reid Vapor Pressure of Liquid	psig	
	Orientation of Tank	Horizontal/Vertical	
	Submerged Fill [NAC 445B.22093(3)]	yes/no	
	Equipment Dimensions (LxWxH)	feet	
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	
	UTM Easting (NAD 83, Zone 11)	m	

LIQUID STORAGE TANK APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: NA – The facility is not proposing to install this type of emission unit

Description			Data
Operating Parameters	Material Type		
	Operating Time per Year	hour/year	
	Maximum Throughput	gallon/month	
	Maximum Throughput	gallon/year	
Control Equipment	Type of Control		
	Control Efficiency	%	
	Pollutant(s) Controlled		
	Manufacturer		
	Manufacturer's Guarantee Included?	yes/NA	
Volatile Organic Compounds (VOC) Emissions	Emission Limit	ton/year	
Other Pollutants	Emission Factor (with units)	*(insert unit)*	
	Emission Factor Reference		
	Emission Limit	pound/hour	
	Emission Limit	ton/year	

LIQUID STORAGE TANK APPLICATION FORM
CLASS I OPERATING PERMIT (continued)

Emission Unit Description: NA – The facility is not proposing to install this type of emission unit

1. Subject to a Federal Regulation specific to the emission unit (e.g. 40 CFR Part 60, 61, 63, 64, 76, or other): ☐ **Yes** ☐ **No** If yes, identify regulation and applicability and include required analysis or plans (e.g. siting analysis or Continuous Assurance Monitoring (CAM) plans).

2. Subject to a State Regulation specific to the emission unit (e.g. NAC 445B.2203, NAC 445B.22047, NAC 445B.22033, NAC 445B.22017, NAC 445B.3363(1)(g):
   ☐ **Yes** ☐ **No** If yes, identify regulation and applicability.

3. Identify standards for work practices which affect emissions for all regulated air pollutants (e.g. At all times, including startup, shutdown and malfunction).

4. Identify and describe compliance and performance testing with reference to any applicable test methods, monitoring devices, compliance plan, or other activities required to determine compliance with an applicable requirement (e.g. Emissions from this unit will be monitored by CEMS and/or COMS for the specific pollutant(s) (NO_X, CO, etc.)).

INDUSTRIAL PROCESS AND STORAGE SILO DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Throughput			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:												Uncontrolled	
									PM					
									PM_{10}					
									$PM_{2.5}$					
													Controlled	
									PM					
									PM_{10}					
									$PM_{2.5}$					
	System No. & Name:												Uncontrolled	
									PM					
									PM_{10}					
									$PM_{2.5}$					
													Controlled	
									PM					
									PM_{10}					
									$PM_{2.5}$					
	System No. & Name:												Uncontrolled	
									PM					
									PM_{10}					
									$PM_{2.5}$					
													Controlled	
									PM					
									PM_{10}					
									$PM_{2.5}$					
	System No. & Name:												Uncontrolled	
									PM					
									PM_{10}					
									$PM_{2.5}$					
													Controlled	
									PM					
									PM_{10}					
									$PM_{2.5}$					
	System No. & Name:												Uncontrolled	
									PM					
									PM_{10}					
									$PM_{2.5}$					
													Controlled	
									PM					
									PM_{10}					
									$PM_{2.5}$					

*Exact format may be changed, but requested information is still required.

COMBUSTION EQUIPMENT DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Power Output		Controls		Emissions						References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Amount	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)		
System No. & Name:													**Uncontrolled**						
	See Attachment D for Emission Calculations												PM						
													PM_{10}						
													$PM_{2.5}$						
													SO_2						
													NO_X						
													CO						
													VOC						
													Pb						
													Hg						
													H_2S						
													Controlled						
													PM						
													PM_{10}						
													$PM_{2.5}$						
													SO_2						
													NO_X						
													CO						
													VOC						
													Pb						
													Hg						
													H_2S						
System No. & Name:													**Uncontrolled**						
													PM						
													PM_{10}						
													$PM_{2.5}$						
													SO_2						
													NO_X						
													CO						
													VOC						
													Pb						
													Hg						
													H_2S						
													Controlled						
													PM						
													PM_{10}						
													$PM_{2.5}$						
													SO_2						
													NO_X						
													CO						
													VOC						
													Pb						
													Hg						
													H_2S						

*Exact format may be changed, but requested information is still required.

GREENHOUSE GASES (GHG) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
System No. & Name:																
											CO_2					
											CH_4					
											N_2O					
System No. & Name:																
											CO_2					
											CH_4					
											N_2O					
System No. & Name:																
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											N_2O					
System No. & Name:																
											CO_2					
											CH_4					
											N_2O					
System No. & Name:																
											CO_2					
											CH_4					
											N_2O					

*Exact format may be changed, but requested information is still required.

HAZARDOUS AIR POLLUTANTS (HAPS) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:															

*Exact format may be changed, but requested information is still required.

FACILITY-WIDE POTENTIAL TO EMIT TABLE
(FOR ALL SOURCES INCLUDING INSIGNIFICANT ACTIVITIES)
(POUND/HOUR AND TON/YEAR)

Pollutant	Facility-Wide Potential to Emit (pound/hour)	Facility-Wide Potential to Emit (ton/year)
Total Particulate Matter (PM)	64.8	3.01
Total PM_{10}	64.8	3.01
Total $PM_{2.5}$	64.8	3.01
Total Sulfur Dioxide (SO_2)	6.58	0.25
Total Carbon Monoxide (CO)	579.5	24.63
Total Oxides of Nitrogen (NO_X)	7182.6	250
Total Volatile Organic Compounds (VOC)	192.0	7.76
Total Lead (Pb)	2.02E-06	8.84E-06
Total Hydrogen Sulfide (H_2S)	0	0
Total Sulfuric Acid Mist (H_2SO_4)	0	0
Total Hazardous Air Pollutants (HAPs)	6.94	0.23
Total Greenhouse Gases (CO_{2e})	728382.0	32352.5
Other Regulated Pollutants (Specify)		

REVISION TABLE

Please complete the table below if this application is for a Minor/Significant **Revision** of an existing Class I Air Quality Operating Permit. Add more columns if needed for any other applicable regulated pollutants. All Potential To Emit (PTE) values must be in tons per year (TPY) [NAC 445B.3425 and NAC 445B.344]

Description	Pollutants									
	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	CO	VOC	HAPs	CO_{2e}	Other
Permitted Facility-Wide PTE (TPY)	3.01	3.01	3.01	0.25	250	24.63	7.76	0.23	32352.5	
Proposed Facility-Wide PTE (TPY)	8.44	8.44	8.44	0.17	250	96	15.76	0.17	18918.83	
Change in Facility-Wide PTE (TPY)	5.43	5.43	5.43	-0.08	0.00	71.05	8.00	-0.06	-13433.67	

SURFACE AREA DISTURBANCE FORM

NA – The Facility is not applying for a SAD permit with this permit application

1. Total Acres of the Facility Site: Click or tap here to enter text.
2. Total Acres Disturbed: Click or tap here to enter text.
3. Add Surface Area Disturbance location as Township(s), Range(s) and Section
   Click or tap here to enter text.
4. NAC 445B.22037 requires fugitive dust to be controlled (regardless of the size or amount of acreage disturbed), and requires an ongoing program, using best practical methods, to prevent particulate matter from becoming airborne. All activities which have the potential to adversely affect the local air quality must implement all appropriate measures to limit controllable emissions. Appropriate measures for dust control may consist of a phased approach to acreage disturbance rather than disturbing the entire area all at once; using wet suppression through such application methods as water trucks or water spray systems to control wind-blown dust; the application of soil binding agents or chemical surfactant to roadways and areas of disturbed soil; as well as the use of wind-break or wind limiting fencing designed to limit wind erosion soils.
5. If the Surface Area Disturbance is greater than 5 acres, please check each box that applies for Best Management Practices (BMPs) used for controlling dust on project's disturbed areas:
   - ☐ Water trucks
   - ☐ Graveling/paving of roadway storage areas and staging areas
   - ☐ Dust palliatives
   - ☐ Posting and limiting vehicle speeds to 10-15 miles per hour
   - ☐ Ceasing operations during high wind events
   - ☐ Fencing or berming to prevent unauthorized access to disturbed areas
   - ☐ Application of water sprays on material storage piles on a regular basis
   - ☐ Covering material storage piles with tarpaulin or geo-textiles; tenting
   - ☐ Use of overhead water spray racks or water hoses
   - ☐ Track-out controls (graveled entranced, exit area, and street sweeping)
   - ☐ Landscape preservation and impact avoidance
   - ☐ Wind fence
   - ☐ Pre-watering of areas to be disturbed (including all unpaved onsite roads and staging areas)
   - ☐ Inform all subcontractors (including truck drivers) of their responsibilities for the control of fugitive dust while they are on the project site
   - ☐ Training of equipment operators to recognize fugitive dust generation and having the authority to shut down operations until water truck arrives and sprays water on the disturbed areas
   - ☐ Other Applicable BMPs: Click or tap here to enter text.
   - ☐ Other Applicable BMPs: Click or tap here to enter text.
   - ☐ If using water trucks, list how many water trucks are used and their capacity in gallons: Click or tap here to enter text.

PLANT BOUNDARY COORDINATES FORM

Corner Number	UTM Easting	UTM Northing
1	291128	4375179
2	291523	4374771
3	291543	4374772
4	292646	4374162
5	292884	4374040
6	293214	4373921
7	293203	4373893
8	293353	4373785
9	293423	4373614
10	293400	4373441
11	293415	4373437
12	293388	4373336
13	293373	4373345
14	293320	4373217
15	291991	4373247
16	291789	4373164
17	291705	4373430
18	291393	4373256
19	291142	4373179
20	290897	4372986
21	290591	4372985
22	290386	4373339
23	289183	4373978
24	289184	4374052

PLANT BUILDING PARAMETERS FORM
See Attachment E

Building Parameters
Building Name: _____ **Building Tier :** _____
Roof Height (ft): _____ **Building Diameter (ft):** _____

Building UTM Coordinates

UTM Easting	UTM Northing	UTM Easting	UTM Northing

Building Parameters
Building Name: _____ **Building Tier :** _____
Roof Height (ft): _____ **Building Diameter[4] (ft):** _____

Building UTM Coordinates

UTM Easting	UTM Northing	UTM Easting	UTM Northing

APPLICATION CERTIFICATION DOCUMENT

(With Required Attachments)

Please check all applicable boxes below to indicate the information provided in your application submittal:

- ☒ Cover Page
- ☒ General Company Information Form
- ☐ Compliance Plan
- ☐ Industrial Process Application Form(s)
- ☒ Combustion Equipment Application Form(s)
- ☐ Storage Silo Application Form(s)
- ☐ Liquid Storage Tank Application Form(s)
- ☐ Manufacturer's Guarantee
- ☒ Facility-Wide Potential to Emit Table
- ☒ Revision Table
- ☐ Surface Area Disturbance Form
- ☒ Plant Boundary Coordinates Form **Also see Attachment E – Environmental Evaluation (AERMOD Air Dispersion Modeling)**
- ☒ Plant Building Parameters Form **See Attachment E – Environmental Evaluation (AERMOD Air Dispersion Modeling)**
- ☒ Detailed Emission Calculations (for all emission units including IA units) – **See Attachment D**
- ☐ Source Testing Data (if referenced in calculations)
- ☒ Process Narrative (revision applications must include a description of the revision) - **See Attachment B**
- ☒ Process Flow Diagram(s) - **See Attachment C**
- ☒ Site Plan(s) showing the locations (UTM coordinates), dimensions, and heights of buildings on the site **See Attachment E – Environmental Evaluation (AERMOD Air Dispersion Modeling)**
- ☒ Maps: **See Attachment E – Environmental Evaluation (AERMOD Air Dispersion Modeling)**
  - ☒ Vicinity Map of where the facility is located in the State
  - ☒ Area Map of the Facility (including location of all emission units, building locations (with UTMs), location of front gate, and fence line/site boundary (with UTMs))
- ☒ Environmental Evaluation (AERMOD Air Dispersion Modeling Report and Electronic Input Files) (NAC 445B.310, NAC 445B.311) **See Attachment E – Environmental Evaluation (AERMOD Air Dispersion Modeling)**
- ☒ Manufacturer's Guarantee *if applicable* - **See Attachment F**
- ☒ Equipment Specifications *if applicable*- **See Attachment F**
- ☐ TANKs Modeling Output *if applicable*
- ☒ Application Fee Attached or Electronically Submitted
- ☒ Digital Copy of Application on CD or Thumb Drive- **See Attachment H**
- ☒ Application Certification Document with Original Responsible Official Signature

APPLICATION CERTIFICATION DOCUMENT (CONTINUED)

(With Required Attachments)

PLEASE NOTE THE FOLLOWING REQUIREMENTS WHICH APPLY TO PERMIT APPLICANTS DURING THE APPLICATION PROCESS:

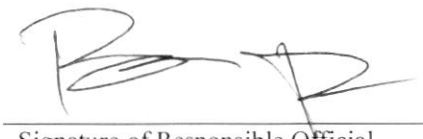
A. A permit applicant must submit supplementary facts or corrected information upon discovery. (NAC 445B.297(1)(b))

B. A permit applicant is required to provide any additional information which the Director requests in writing within the time specified in the Director's request. (NAC 445B.297(1)(c))

C. Submission of fraudulent data or other information may result in prosecution for an alleged criminal offense. (NRS 445B.470)

CERTIFICATION:

I certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete.



Signature of Responsible Official

Brian Dixon Site Facility Manager

Print or Type Name and Title

4/17/26

Date

Federal Regulations

All emergency generators (Systems 1 to 11, and 14) and two fire pump engines (System 12) at the facility are subject to the requirements of 40 CFR 60 Subpart A, 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ.

a) 40 CFR 60 Subpart A–General Provisions. This regulation outlines applicability and lists the requirements sources must meet with regards to notification and recordkeeping (§60.7), performance testing (§60.8) and monitoring (§60.13).

b) 40 CFR 60 Subpart IIII-Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). The emergency generators present at the facility are new CI ICEs manufactured in the year 2007 or later, located at an area source of HAP emissions and operated according to the definition of an emergency stationary ICE under 40 CFR 60.4219. The emergency generators shall be limited to the operating provisions specified in 40 CFR 60.4211(f), Subpart IIII.

   The fire pump engines are new engines manufactured 2006 or later with a displacement of less than 30 liters per cylinder and, as such, must operate in compliance according to section §60.4211(c).

c) 40 CFR 63 Subpart ZZZZ-National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The engines at the facility are subject to 40 CFR 63 Subpart ZZZZ. The facility will meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII.

State Regulations

All combustion emission units at the facility (emergency generators, fire pumps and roof top heating units) are subject to the following unit specific state regulations:

a) NAC 445B.22017. Visible emissions: Maximum opacity; determination and monitoring of opacity. No owner or operator may cause or permit the discharge into the atmosphere from any emission unit which is of an opacity equal to or greater than 20 percent. Opacity must be determined by one of the methods specified in the rule.

b) NAC 445B.2202. Visible emissions: Exceptions for stationary sources. The provisions of NAC 445B.22017 do not apply to emissions of stationary diesel-powered engines during warm-up for not longer than 15 minutes to achieve operating temperatures [NAC 445B.2202.4].

c) NAC 445B.2203. Emissions of particulate matter: Fuel-burning equipment. No person may cause or permit PM10 emissions resulting from the combustion of fuel in fuel-burning equipment in excess of the quantity set forth by formulas in the regulation.

d) NAC 445B.22047. Sulfur emissions: Fuel-burning equipment. No person may cause or permit the emission of compounds of sulfur caused by the combustion of fuel in fuel-burning equipment in excess of the quantity calculated by the use of the formulas in the regulation.

Process Narrative

Silver Slate LLC operates a data center facility located in the Tahoe-Reno Industrial Center at 7400 USA Parkway, McCarran, Nevada 89434. Silver Slate has permitted two data centers at the facility. Silver Slate is proposing to construct two more data centers at the facility

The emission units used at the facility include ultra-low sulfur diesel (ULSD) fired emergency backup generators, firewater pump engines, small natural gas-fired building heaters. The building heaters, referred to as roof top units or RTUs are insignificant activities pursuant to NAC 445B.288.2(e)(1).

The facility will use emergency generators during emergency periods when its normal power is not available. The emergency generators will fire ultra-low sulfur diesel (ULSD) fuel and/or Hydrotreated Vegetable Oil (HVO) and will be used for limited periods for non-emergency use (to include generator maintenance and testing) as authorized pursuant to 40 CFR §60.4211, and will not be used for peak shaving purposes. HVO fuel is entirely compatible with diesel engines because it is very similar in its chemical composition and is therefore a drop-in replacement for the fossil fuel.

The emergency generators and fire water pump engines are subject to and will be compliant with emission standards applicable to emergency engines under 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The emergency engines will also be subject to 40 CFR Part 63 Subpart ZZZZ, however, compliance with the aforementioned Subpart IIII is all that is necessary to satisfy Subpart ZZZZ requirements per 40 CFR §63.6590(c).

The emergency generators, firewater pump engine and insignificant RTUs are sources of criteria pollutants, hazardous air pollutants and greenhouse gases.

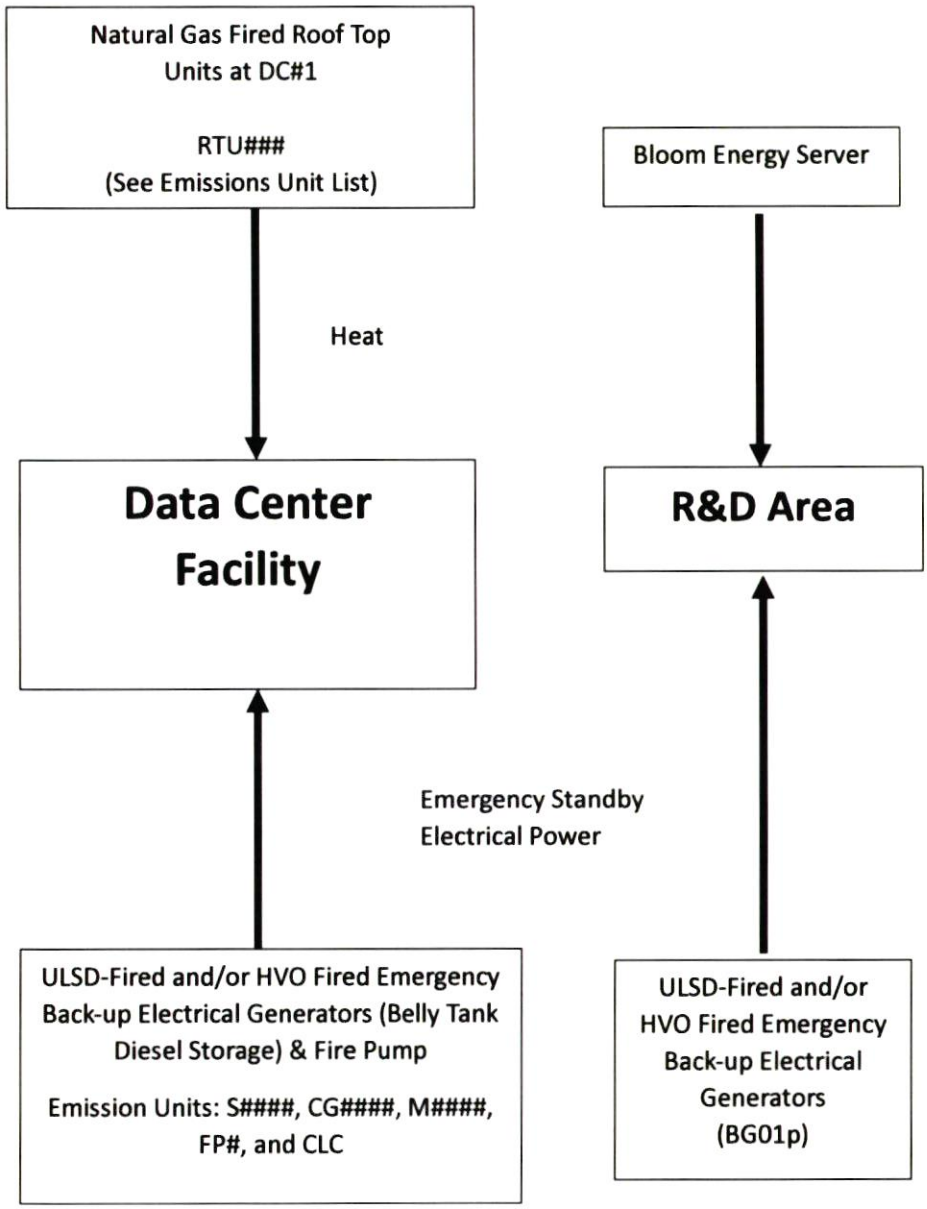


Figure C-1
Process Flow Diagram

Current permit generator emissions are based on the lesser of the NSPS and manufacture supplied emission factors. However, the current OPTC requires source testing for many systems. Current source test practices are substantially are different than those used to establish NSPS limits. For example, NSPS methods only consider filterable particulate while Method 5 considers both filterable and condensable particulate. Because of the methodology mismatch, Silver Slate is revising emission factors for the engines to be more reflective of what would be expected during a stack test. Specifically, Silver Slate is using the greater of the NSPS and manufacturer-supplied emission factors. To account for condensable PM, Silver Slate is applying a "PM Condensable Factor" to the PM emission factors. These emission factors are higher than the values used in the original Class I OPTC application, so Silver Slate is proposing revisions to the emission rates and generator usage conditions.

As described in Attachment 1 Silver Slate is proposing a cumulative non-emergency annual run hour limit for Systems 01-10 emergency engines of 6,889 hours per year to limit the facility-wide potential to emit to 250 tons per year of NOx inclusive of emissions from the emergency engines and insignificant activities.

Attachment D presents two sets of emission calculations. Table D-1 calculates emissions for each of the emergency engines systems with each individual engine operating up to it's NSPS (40 CFR Part 60 Subpart IIII) limit of 100 hours per year. Accordingly, Table D-1 presents the potential to emit of each of the individual engines and engine systems as constrained by only the NSPS run hour limitation.

Because not all emergency engines can run at their NSPS limit without exceeding 250 tpy of NOx, Table D-2 determines the facility-wide potential to emit of pollutant other than NOx by constraining cumulative engine run hours to the aforementioned 6,889 hours per year and individual engine run hours to 100 hours per year. This limit only applies to Systems 01-10. Systems 11, 12, and 14 are each allowed 100 hours/year. Those emissions are included in the 250 tpy allotment. For the System 01-10 generators, the evaluation determines the facility wide PTE by ranking each generator system with the highest emitting generator (for each regulated pollutant other than NOx) and calculating emissions based on up to 100 hours per year per generator of operation until the 6,889 cumulative site wide run hour limit is met.

Table D-1 (2026 Permit Emission Factor Update)

System 01 Emergency Generators: MTU 20V4000G74S

Emission Unit IDs: S0101-S0114

Number of Units: 14
Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor 1.5

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 1 Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 1 Generator	Potential Emissions All Group 1 Generator	Potential Emissions Single Group 1 Generator	Potential Emissions All Group 1 Generators
Power	kWm	3010	2258	1505	752.5	301	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/kWh	10.70	7.56	6.16	5.33	20.69	71.0	37.6	20.4	8.8	13.7	71.0	6.4	42.5	71.0	71.00	994.1	3.55	49.7
CO	g/kWh	2.36	2.52	2.19	7.26	23.10	15.7	12.5	7.3	12.0	15.3	15.66	3.5	23.2	23.2	23.23	325.2	1.16	16.3
VOC	g/kWh	0.15	0.32	0.44	0.97	3.54	1.0	1.6	1.5	1.6	2.3	2.35	NA	NA	2.3	2.35	32.9	0.12	1.6
PM	g/kWh	0.26	0.26	0.20	0.58	2.36	1.7	1.3	0.7	1.0	1.6	1.73	0.2	1.3	1.7	2.57	36.0	0.13	1.8
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.039	0.031	0.022	0.012	0.005	0.039	NA	NA	0.039	0.039	0.6	0.0020	0.0276
Fuel Consumption	gal/hr	186.0	146.0	104.0	55.3	22.9													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

Fuel use values at 25% and 10% load are extrapolated values based on Manufacturer provided fuel use values at 100%, 75% and 50% loads

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 1 Generator (maximum)	Potential Emissions All Group 1 Generator (maximum)	Potential Emissions Single Group 1 Generator	Potential Emissions All Group 1 Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	4.3	59.7	0.21	3.0
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4185.8	58601.0	209.25	2929.5
GHG-N20	2.47E-05	mtCO2e/gal	(1)	10.1	141.8	0.51	7.1
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.020	0.28	1.01E-03	0.0141
Toluene	2.81E-04	lb/MMBtu	(2)	0.007	0.10	3.66E-04	0.0051
Xylenes	1.93E-04	lb/MMBtu	(2)	0.005	0.07	2.51E-04	0.0035
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.03	1.03E-04	0.0014
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.01	3.28E-05	0.0005
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.00	1.03E-05	0.0001
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.006	0.08	2.76E-04	0.0039
Total HAPs	1.57E-03			0.041	0.57	2.05E-03	0.0287

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 2 Emergency Generators: MTU 20V4000G94S

Emission Unit IDs: S0115-S0126

Number of Units: 12
Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor 1.5

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 1a Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 1a Generator	Potential Emissions All Group 1a Generator	Potential Emissions Single Group 1a Generator	Potential Emissions All Group 1a Generators
Power	kWm	3490	2617	1745	872	349	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/kWh	8.03	7.16	6.24	5.52	19.59	61.8	41.3	24.0	10.6	15.1	61.8	6.4	49.2	61.8	61.78	741.4	3.09	37.1
CO	g/kWh	1.22	1.35	1.13	2.81	12.83	9.4	7.8	4.3	5.4	9.9	9.87	3.5	26.9	26.9	26.93	323.2	1.35	16.2
VOC	g/kWh	0.24	0.36	0.60	1.39	6.31	1.8	2.1	2.3	2.7	4.9	4.86	NA	NA	4.9	4.86	58.3	0.24	2.9
PM	g/kWh	0.094	0.140	0.121	0.352	2.405	0.7	0.8	0.5	0.7	1.9	1.85	0.2	1.5	1.9	2.76	33.1	0.14	1.7
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.0479	0.0365	0.0252	0.0143	0.0057	0.048	NA	NA	0.048	0.048	0.6	0.0024	0.0288
Fuel Use	gal/hr	226.0	172.0	119.0	67.5	27.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

10% load fuel use rate extrapolated from the 25% load rate provided by manufacturer

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 1a Generator (maximum)	Potential Emissions All Group 1a Generator (maximum)	Potential Emissions Single Group 1a Generator	Potential Emissions All Group 1a Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	5.2	62.2	0.26	3.1
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	5086.0	61031.5	254.25	3051.0
GHG-N20	2.47E-05	mtCO2e/gal	(1)	12.3	147.7	0.62	7.4
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.025	0.29	1.23E-03	0.0147
Toluene	2.81E-04	lb/MMBtu	(2)	0.009	0.11	4.45E-04	0.0053
Xylenes	1.93E-04	lb/MMBtu	(2)	0.006	0.07	3.05E-04	0.0037
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.03	1.25E-04	0.0015
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.01	3.99E-05	0.0005
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.00	1.25E-05	0.0001
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.007	0.08	3.35E-04	0.0040
Total HAPs	1.57E-03			0.050	0.60	2.49E-03	0.0299

(1) 40 CFR 98 TbL C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 3 Emergency Generators: Cummins C3000D6EB - QSK78-G37

Emission Unit IDs: S0301-S0326

Number of Units: 36
Max. Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor **1.5**

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 1b Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 1b Generator	Potential Emissions All Group 1b Generator	Potential Emissions Single Group 1b Generator	Potential Emissions All Group 1b Generators
Power	hp-hr	3991	3031	2071	1110	534	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/hp-hr	7.04	4.94	4.70	4.83	5.90	61.9	33.0	21.5	11.8	6.9	61.9	6.4	42.0	61.9	61.94	2229.9	3.10	111.5
CO	g/hp-hr	0.20	0.20	0.40	1.00	3.40	1.8	1.3	1.8	2.4	4.0	4.00	3.5	23.0	23.0	22.96	826.7	1.15	41.3
VOC	g/hp-hr	0.12	0.14	0.19	0.37	0.99	1.1	0.9	0.9	0.9	1.2	1.17	NA	NA	1.2	1.17	42.0	0.06	2.1
PM	g/hp-hr	0.02	0.04	0.06	0.14	0.18	0.2	0.3	0.3	0.3	0.2	0.34	0.2	1.3	1.3	1.96	70.4	0.10	3.5
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.039	0.031	0.022	0.013	0.007	0.039	NA	NA	0.0	0.039	1.4	0.0020	0.0702
Fuel Use	gal/hr	184.0	147.0	104.0	61.0	35.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 1b Generator (maximum)	Potential Emissions All Group 1b Generator (maximum)	Potential Emissions Single Group 1b Generator	Potential Emissions All Group 1b Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	4.2	151.9	0.21	7.6
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4140.8	149068.0	207.00	7452.1
GHG-N20	2.47E-05	mtCO2e/gal	(1)	10.0	360.8	0.50	18.0
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.020	0.72	9.99E-04	0.0360
Toluene	2.81E-04	lb/MMBtu	(2)	0.007	0.26	3.62E-04	0.0130
Xylenes	1.93E-04	lb/MMBtu	(2)	0.005	0.18	2.49E-04	0.0089
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.07	1.02E-04	0.0037
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.02	3.25E-05	0.0012
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.01	1.01E-05	0.0004
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.005	0.20	2.73E-04	0.0098
Total HAPs	1.57E-03			0.041	1.46	2.03E-03	0.0730

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 4 Emergency Generators: Cummins C3000D6EB - QSK78-G37

Emission Unit IDs: S0201-S0236

Number of Units: 36

Max. Operating Hrs. per Generator 100 hr/yr

ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor **1.5**

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 1b Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 1b Generator	Potential Emissions All Group 1b Generator	Potential Emissions Single Group 1b Generator	Potential Emissions All Group 1b Generators
Power	hp-hr	3991	3031	2071	1110	534	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/hp-hr	7.04	4.94	4.70	4.83	5.90	61.9	33.0	21.5	11.8	6.9	61.9	6.4	42.0	61.9	61.94	2229.9	3.10	111.5
CO	g/hp-hr	0.20	0.20	0.40	1.00	3.40	1.8	1.3	1.8	2.4	4.0	4.00	3.5	23.0	23.0	22.96	826.7	1.15	41.3
VOC	g/hp-hr	0.12	0.14	0.19	0.37	0.99	1.1	0.9	0.9	0.9	1.2	1.17	NA	NA	1.2	1.17	42.0	0.06	2.1
PM	g/hp-hr	0.02	0.04	0.06	0.14	0.18	0.2	0.3	0.3	0.3	0.2	0.34	0.2	1.3	1.3	1.96	70.4	0.10	3.5
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.039	0.031	0.022	0.013	0.007	0.039	NA	NA	0.0	0.039	1.4	0.0020	0.0702
Fuel Use	gal/hr	184.0	147.0	104.0	61.0	35.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 1b Generator (maximum)	Potential Emissions All Group 1b Generator (maximum)	Potential Emissions Single Group 1b Generator	Potential Emissions All Group 1b Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	4.2	151.9	0.21	7.6
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4140.8	149068.0	207.00	7452.1
GHG-N20	2.47E-05	mtCO2e/gal	(1)	10.0	360.8	0.50	18.0
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.020	0.72	9.99E-04	0.0360
Toluene	2.81E-04	lb/MMBtu	(2)	0.007	0.26	3.62E-04	0.0130
Xylenes	1.93E-04	lb/MMBtu	(2)	0.005	0.18	2.49E-04	0.0089
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.07	1.02E-04	0.0037
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.02	3.25E-05	0.0012
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.01	1.01E-05	0.0004
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.005	0.20	2.73E-04	0.0098
Total HAPs	1.57E-03			0.041	1.46	2.03E-03	0.0730

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 5 Emergency Generators: Cummins C3000D6EB - QSK78-G37

Emission Unit IDs: M0201-M0210

Number of Units: 10
Max. Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor **1.5**

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 1b Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 1b Generator	Potential Emissions All Group 1b Generator	Potential Emissions Single Group 1b Generator	Potential Emissions All Group 1b Generators
Power	hp-hr	3991	3031	2071	1110	534	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/hp-hr	7.04	4.94	4.70	4.83	5.90	61.9	33.0	21.5	11.8	6.9	61.9	6.4	42.0	61.9	61.94	619.4	3.10	31.0
CO	g/hp-hr	0.20	0.20	0.40	1.00	3.40	1.8	1.3	1.8	2.4	4.0	4.00	3.5	23.0	23.0	22.96	229.6	1.15	11.5
VOC	g/hp-hr	0.12	0.14	0.19	0.37	0.99	1.1	0.9	0.9	0.9	1.2	1.17	NA	NA	1.2	1.17	11.7	0.06	0.6
PM	g/hp-hr	0.02	0.04	0.06	0.14	0.18	0.2	0.3	0.3	0.3	0.2	0.34	0.2	1.3	1.3	1.96	19.6	0.10	1.0
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.039	0.031	0.022	0.013	0.007	0.039	NA	NA	0.0	0.039	0.4	0.0020	0.0195
Fuel Use	gal/hr	184.0	147.0	104.0	61.0	35.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 1b Generator (maximum)	Potential Emissions All Group 1b Generator (maximum)	Potential Emissions Single Group 1b Generator	Potential Emissions All Group 1b Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	4.2	42.2	0.21	2.1
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4140.8	41407.8	207.00	2070.0
GHG-N20	2.47E-05	mtCO2e/gal	(1)	10.0	100.2	0.50	5.0
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.020	0.20	9.99E-04	0.0100
Toluene	2.81E-04	lb/MMBtu	(2)	0.007	0.07	3.62E-04	0.0036
Xylenes	1.93E-04	lb/MMBtu	(2)	0.005	0.05	2.49E-04	0.0025
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.02	1.02E-04	0.0010
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.01	3.25E-05	0.0003
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.00	1.01E-05	0.0001
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.005	0.05	2.73E-04	0.0027
Total HAPs	1.57E-03			0.041	0.41	2.03E-03	0.0203

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 6 Emergency Generators: TBD worst case emissions

Emission Unit IDs: S0401-S0436

Number of Units: 36
Max. Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 1c Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 1c Generator	Potential Emissions All Group 1c Generator	Potential Emissions Single Group 1 Generator	Potential Emissions All Group 1c Generators
Power	hp-hr						lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/hp-hr						0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0	71.00	2556.2	3.55	127.8
CO	g/hp-hr						0.0	0.0	0.0	0.0	0.0	0.00	3.5	0.0	0.00	26.93	969.5	1.35	48.5
VOC	g/hp-hr						0.0	0.0	0.0	0.0	0.0	0.00	NA	NA	0.0	4.86	174.8	0.24	8.7
PM	g/hp-hr						0.0	0.0	0.0	0.0	0.0	0.00	0.2	0.0	0.00	1.13	40.7	0.06	2.0
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.047	0.036	0.026	0.014	0.008	0.047	NA	NA	0.047	0.048	1.7	0.0024	0.0863
Fuel Use	gal/hr	221.0	169.0	123.0	68.0	38.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

PM emission factor based on permit limit and emissions testing at a similar facility.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 1c Generator (maximum)	Potential Emissions All Group 1c Generator (maximum)	Potential Emissions Single Group 1c Generator	Potential Emissions All Group 1c Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	5.1	182.4	0.25	9.1
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4973.4	179043.7	248.63	8950.6
GHG-N20	2.47E-05	mtCO2e/gal	(1)	12.0	433.3	0.60	21.7
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.024	0.86	1.20E-03	0.0432
Toluene	2.81E-04	lb/MMBtu	(2)	0.009	0.31	4.35E-04	0.0156
Xylenes	1.93E-04	lb/MMBtu	(2)	0.006	0.21	2.99E-04	0.0107
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.09	1.22E-04	0.0044
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.03	3.90E-05	0.0014
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.01	1.22E-05	0.0004
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.007	0.24	3.28E-04	0.0118
Total HAPs	1.57E-03			0.049	1.75	2.43E-03	0.0877

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

No EDS sheets as derived from other Cummins EDS sheets.

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 7 Emergency Generators: TBD worst case emissions

Emission Unit IDs: M0401-M0410

Number of Units: 10
Max. Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 1c Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 1c Generator	Potential Emissions All Group 1c Generator	Potential Emissions Single Group 1 Generator	Potential Emissions All Group 1c Generators
Power	hp-hr						lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/hp-hr						0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0	71.00	710.0	3.55	35.5
CO	g/hp-hr						0.0	0.0	0.0	0.0	0.0	0.00	3.5	0.0	0.00	26.93	269.3	1.35	13.5
VOC	g/hp-hr						0.0	0.0	0.0	0.0	0.0	0.00	NA	NA	0.0	4.86	48.6	0.24	2.4
PM	g/hp-hr						0.0	0.0	0.0	0.0	0.0	0.00	0.2	0.0	0.00	1.13	11.3	0.06	0.6
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.047	0.036	0.026	0.014	0.008	0.047	NA	NA	0.047	0.048	0.5	0.0024	0.0240
Fuel Use	gal/hr	221.0	169.0	123.0	68.0	38.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

PM emission factor based on permit limit and emissions testing at a similar facility.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 1c Generator (maximum)	Potential Emissions All Group 1c Generator (maximum)	Potential Emissions Single Group 1c Generator	Potential Emissions All Group 1c Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	5.1	50.7	0.25	2.5
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4973.4	49734.3	248.63	2486.3
GHG-N20	2.47E-05	mtCO2e/gal	(1)	12.0	120.4	0.60	6.0
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.024	0.24	1.20E-03	0.0120
Toluene	2.81E-04	lb/MMBtu	(2)	0.009	0.09	4.35E-04	0.0043
Xylenes	1.93E-04	lb/MMBtu	(2)	0.006	0.06	2.99E-04	0.0030
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.02	1.22E-04	0.0012
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.01	3.90E-05	0.0004
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.00	1.22E-05	0.0001
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.007	0.07	3.28E-04	0.0033
Total HAPs	1.57E-03			0.049	0.49	2.43E-03	0.0243

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

No EDS sheets as derived from other Cummins EDS sheets.

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 8 Emergency Generators: Cummins C3250D6e

Emission Unit IDs: CG0101-CG0104

Number of Units: 4
Max. Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor **1.5**

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 2 Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 2 Generator	Potential Emissions All Group 2 Generator	Potential Emissions Single Group 2 Generator	Potential Emissions All Group 2 Generators
Power	Hp	4456	3342	2228	1114	446	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/hp-hr	6.00	5.30	3.70	3.80	6.10	58.9	39.0	18.2	9.3	6.0	58.9	6.4	46.9	58.9	58.94	235.8	2.95	11.8
CO	g/hp-hr	1.10	0.50	1.10	2.30	7.20	10.8	3.7	5.4	5.6	7.1	10.81	3.5	25.6	25.6	25.64	102.6	1.28	5.1
VOC	g/hp-hr	0.10	0.22	0.26	0.39	1.04	1.0	1.6	1.3	1.0	1.0	1.62	NA	NA	1.6	1.62	6.5	0.08	0.3
PM	g/hp-hr	0.15	0.18	0.33	0.63	0.73	1.5	1.3	1.6	1.5	0.7	1.62	0.2	1.5	1.6	2.42	9.7	0.12	0.5
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.0469	0.0358	0.0261	0.0144	0.0081	0.047	NA	NA	0.047	0.047	0.2	0.0023	0.0094
Fuel Use	gal/hr	221.0	169.0	123.0	68.0	38.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 2 Generator (maximum)	Potential Emissions All Group 2 Generator (maximum)	Potential Emissions Single Group 2 Generator	Potential Emissions All Group 2 Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	5.1	20.3	0.25	1.0
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4973.4	19893.7	248.63	994.5
GHG-N20	2.47E-05	mtCO2e/gal	(1)	12.0	48.1	0.60	2.4
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.024	0.10	1.20E-03	0.0048
Toluene	2.81E-04	lb/MMBtu	(2)	0.009	0.03	4.35E-04	0.0017
Xylenes	1.93E-04	lb/MMBtu	(2)	0.006	0.02	2.99E-04	0.0012
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.01	1.22E-04	0.0005
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.00	3.90E-05	0.0002
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.00	1.22E-05	0.0000
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.007	0.03	3.28E-04	0.0013
Total HAPs	1.57E-03			0.049	0.19	2.43E-03	0.0097

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 9 Emergency Generators: Cummins C3250D6e-2022

Emission Unit IDs: CG0105-CG0107

Number of Units: 3
Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor **1.5**

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 2a Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 2a Generator	Potential Emissions All Group 2a Generator	Potential Emissions Single Group 2a Generator	Potential Emissions All Group 2a Generators
Power	Hp	4376	3308	2241	1173	446	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/hp-hr	6.76	5.46	4.13	4.34	4.80	65.2	39.8	20.4	11.2	4.7	65.2	6.4	46.0	65.2	65.2	195.7	3.26	9.8
CO	g/hp-hr	0.40	0.20	0.40	1.00	3.60	3.9	1.5	2.0	2.6	3.5	3.86	3.5	25.2	25.2	25.18	75.5	1.26	3.8
VOC	g/hp-hr	0.12	0.17	0.31	0.51	0.61	1.2	1.2	1.5	1.3	0.6	1.53	NA	NA	1.5	1.53	4.6	0.08	0.2
PM	g/hp-hr	0.08	0.12	0.20	0.42		0.8	0.9	1.0	1.1	0.0	1.09	0.2	1.4	1.4	2.93	8.8	0.15	0.4
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.0448	0.0346	0.0255	0.0146	0.0081	0.045	NA	NA	0.045	0.045	0.1	0.0022	0.0067
Fuel Use	gal/hr	211.0	163.0	120.0	69.0	38.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

Fuel use and emission factors values at 10% load based on Sys2 10% load. These engines are the same size but different model years.

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 2a Generator (maximum)	Potential Emissions All Group 2a Generator (maximum)	Potential Emissions Single Group 2a Generator	Potential Emissions All Group 2a Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	4.84	14.5	0.24	0.7
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4748.4	14245.2	237.38	712.1
GHG-N20	2.47E-05	mtCO2e/gal	(1)	11.5	34.5	0.57	1.7
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.023	0.07	1.15E-03	0.0034
Toluene	2.81E-04	lb/MMBtu	(2)	0.008	0.02	4.15E-04	0.0012
Xylenes	1.93E-04	lb/MMBtu	(2)	0.006	0.02	2.85E-04	0.0009
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.01	1.17E-04	0.0003
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.00	3.72E-05	0.0001
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.00	1.16E-05	0.0000
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.006	0.02	3.13E-04	0.0009
Total HAPs	1.57E-03			0.046	0.14	2.32E-03	0.0070

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 10 Emergency Generators: Cummins C3250D6e - QSK95-G9 - 2023

Emission Unit IDs: CG0301-CG0308

Number of Units: 8
Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor **1.5**

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 2b Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 2b Generator	Potential Emissions All Group 2b Generator	Potential Emissions Single Group 2b Generator	Potential Emissions All Group 2b Generators
Power	Hp	4428	3353	2277	1202	556	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/hp-hr	6.75	5.30	4.04	4.02	5.58	65.9	39.2	20.3	10.7	6.8	65.9	6.4	46.6	65.9	65.9	527.2	3.29	26.4
CO	g/hp-hr	0.40	0.40	0.32	1.00	2.80	3.9	3.0	1.6	2.6	3.4	3.90	3.5	25.5	25.5	25.48	203.8	1.27	10.2
VOC	g/hp-hr	0.12	0.17	0.32	0.48	1.04	1.2	1.3	1.6	1.3	1.3	1.61	NA	NA	1.6	1.61	12.9	0.08	0.6
PM	g/hp-hr	0.06	0.10	0.14	0.22	0.28	0.6	0.7	0.7	0.6	0.3	0.74	0.2	1.5	1.5	2.17	17.4	0.11	0.9
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.0448	0.0346	0.0255	0.0151	0.0089	0.045	NA	NA	0.045	0.045	0.4	0.0022	0.0179
Fuel Use	gal/hr	211.0	163.0	120.0	71.0	42.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 2b Generator (maximum)	Potential Emissions All Group 2b Generator (maximum)	Potential Emissions Single Group 2b Generator	Potential Emissions All Group 2b Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	4.84	38.7	0.24	1.9
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4748.4	37987.1	237.38	1899.0
GHG-N20	2.47E-05	mtCO2e/gal	(1)	11.5	91.9	0.57	4.6
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.023	0.18	1.15E-03	0.0092
Toluene	2.81E-04	lb/MMBtu	(2)	0.008	0.07	4.15E-04	0.0033
Xylenes	1.93E-04	lb/MMBtu	(2)	0.006	0.05	2.85E-04	0.0023
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.02	1.17E-04	0.0009
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.01	3.72E-05	0.0003
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.00	1.16E-05	0.0001
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.006	0.05	3.13E-04	0.0025
Total HAPs	1.57E-03			0.046	0.37	2.32E-03	0.0186

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 11 Emergency Generator: MTU 20V4000G94S

Emission Unit IDs: BG01p

Number of Units: 1
Max. Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor **1.5**

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 3 Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 3 Generator	Potential Emissions All Group 3 Generator	Potential Emissions Single Group 3 Generator	Potential Emissions All Group 3 Generators
Power	kWm	3490	2617	1745	872	349	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/kWh	8.03	7.16	6.24	5.52		61.8	41.3	24.0	10.6	0.0	61.8	6.4	49.2	61.8	61.8	61.8	3.09	3.09
CO	g/kWh	1.22	1.35	1.13	2.81		9.4	7.8	4.3	5.4	0.0	9.39	3.5	26.9	26.9	26.9	26.9	1.35	1.3
VOC	g/kWh	0.24	0.36	0.60	1.39		1.8	2.1	2.3	2.7	0.0	2.67	NA	NA	2.7	2.7	2.7	0.13	0.1
PM	g/kWh	0.094	0.140	0.121	0.352		0.7	0.8	0.5	0.7	0.0	0.81	0.2	1.5	1.5	2.3	2.29	0.11	0.11
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515	0.001515	0.0439	0.0333	0.0231	0.0127	0.0064	0.044	NA	NA	0.044	0.044	0.04	0.0022	0.0022
Fuel Use	gal/hr	207.0	157.0	109.0	60.0	30.0													

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

Fuel use values at 25% and 10% load are extrapolated values based on Manufacturer provided fuel use values at 100%, 75% and 50% loads

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 3 Generator (maximum)	Potential Emissions All Group 3 Generator (maximum)	Potential Emissions Single Group 3 Generator	Potential Emissions All Group 3 Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	4.75	4.7	0.24	0.2
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	4658.4	4658.4	232.88	232.9
GHG-N20	2.47E-05	mtCO2e/gal	(1)	11.3	11.3	0.56	0.6
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.022	0.02	1.12E-03	0.0011
Toluene	2.81E-04	lb/MMBtu	(2)	0.008	0.01	4.07E-04	0.0004
Xylenes	1.93E-04	lb/MMBtu	(2)	0.006	0.01	2.80E-04	0.0003
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.002	0.00	1.14E-04	0.0001
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.001	0.00	3.65E-05	0.0000
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.00	1.14E-05	0.0000
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.006	0.01	3.07E-04	0.0003
Total HAPs	1.57E-03			0.046	0.05	2.28E-03	0.0023

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 12: Fire Pump Engine - Clarke/John Deere Model: JU6H-UFADX8/6068HFC48

Emission Unit IDs: FP1 & 2

Number of Units: 2
Max. Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor **1.5**

Criteria Pollutants		100% load
Power	kW	235
NOx	gm/kW-hr	3.61
CO	gm/kW-hr	0.6
VOC	gm/kW-hr	0.08
PM	gm/kW-hr	0.20
SO2	gm/kW-hr	0.0074
Fuel Use	gal/hr	14.6

Potential Emissions Single Group 4	Potential Emissions All Group 4 Generator	Potential Emissions Single Group 4 Generator	Potential Emissions All Group 4 Generators
lb/hr	lb/hr	tpy	tpy
1.87	3.7	0.09	0.187
0.31	0.6	0.02	0.031
0.041	0.1	0.00	0.004
0.154	0.3	0.01	0.015
0.0038	0.0	0.0002	0.00038

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

Fuel use values at 25% and 10% load are extrapolated values based on Manufacturer provided fuel use values at 100%, 75% and 50% loads

PM emission factor based on Oregon DEQ Combustion Emissions Factors Tool

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 4 Generator (maximum)	Potential Emissions All Group 4 Generator (maximum)	Potential Emissions Single Group 4 Generator	Potential Emissions All Group 4 Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	0.33	0.7	0.02	0.0
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	328.6	657.1	16.43	32.9
GHG-N20	2.47E-05	mtCO2e/gal	(1)	0.8	1.6	0.04	0.1
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.002	0.0032	7.93E-05	0.0002
Toluene	2.81E-04	lb/MMBtu	(2)	0.001	0.0011	2.87E-05	0.0001
Xylenes	1.93E-04	lb/MMBtu	(2)	0.0004	0.0008	1.97E-05	0.0000
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.0002	0.0003	8.06E-06	0.0000
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.0001	0.0001	2.58E-06	0.0000
Acrolein	7.88E-06	lb/MMBtu	(2)	0.0000	0.0000	8.05E-07	0.0000
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.0004	0.0009	2.17E-05	0.0000
Total HAPs	1.57E-03			0.003	0.01	1.61E-04	0.0003

(1) 40 CFR 98 Tbl. C-1, C-2
(2) AP-42 Table 3.4-3
MT = Metric Tons

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 13: Solid Oxide Fuel Cells

Emission Point: ES01-09

Unit Capacity	0.325	MW
Number of Units	6	
Annual Operating Hours	8760	
Annual Operating Capacity	100%	
Total Capacity	1.95	MW

Criteria Pollutants(1,2)			Hourly Potential Emissions		Annual Potential Emissions
Pollutant	Emission Factor (lb/MW-hr)		lb/hr		tpy
NOx	0.003		0.0059		0.03
CO	0.013		0.025		0.11
VOC	0.01		0.020		0.09
PM	0.0182		0.035		0.16
SO2	0		0.000		0.00
Greenhouse Gases(1)					
CO2e	833		1624.350		7114.65
Hazardous Air Pollutants (HAPs)(3)					
Benzene	0.0000162		3.16E-05		1.38E-04
Propene	0.0000336		6.55E-05		2.87E-04
Methanol	0.0000931		1.82E-04		7.95E-04
Tetrahydrofuran	0.0000226		4.41E-05		1.93E-04
1,2,3-Trimethylbenzene	0.0000187		3.65E-05		1.60E-04
Xylenes	0.00000533		1.04E-05		4.55E-05
Total HAPs	0.00018953		3.70E-04		1.62E-03

(1) Emission factors from The Bloom EnergyServer 6.5 Datasheet

(2) PM emission factor from Bloom Energy Compliance Emissions Test

(3) HAP emission factors from Bloom Energy Compliance Emissions Test

Table D-1 (Con't) (2026 Permit Emission Factor Update)

System 14 Emergency Generator: CLC Cummins C100D6C

Emission Unit IDs: CLC

Number of Units: 1
Operating Hrs. per Generator 100 hr/yr
ULSD Heating Value 140,000 Btu/gal

PM Condensable Factor **1.5**

Criteria Pollutants		100% load	75% load	50% load	25% load	10% load	100% load	75% load	50% load	25% load	10% load	Potential Emissions Single Group 2b Generator (EDS)	NSPS Tier 2 Emission Factor	NSPS Tier 2 Emissions	Greater of NSPS and EDS	Emission Rates* Potential Emissions Single Group 2b Generator	Potential Emissions All Group 2b Generator	Potential Emissions Single Group 2b Generator	Potential Emissions All Group 2b Generators
Power	Hp	176	132	88	44		lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	g/kw-hr	lb/hr		lb/hr	lb/hr	tpy	tpy
NOx	g/hp-hr	3.84	2.73	2.22	2.31		1.49	0.79	0.43	0.22	0.0	1.5	6.4	1.9	1.9	1.9	1.9	0.09	0.09
CO	g/hp-hr	0.52	0.36	0.52	0.76		0.20	0.10	0.10	0.07	0.0	0.20	3.5	1.0	1.0	1.01	1.0	0.051	0.051
VOC	g/hp-hr	0.03	0.03	0.06	0.10		0.01	0.01	0.01	0.01	0.0	0.01	NA	NA	0.0	0.01	0.0	0.001	0.001
PM	g/hp-hr	0.05	0.04	0.23	0.16		0.02	0.01	0.04	0.02	0.0	0.04	0.2	0.1	0.06	0.09	0.1	0.004	0.004
SO2	lb/MMBtu	0.001515	0.001515	0.001515	0.001515		0.0019	0.0015	0.0010	0.0006	0.0000	0.002	NA	NA	0.002	0.002	0.0	0.0001	0.0001
Fuel Use	gal/hr	8.9	6.9	4.8	2.8														

SO2 emission factor from AP-42 Table 3.4-1 and 0.0015% S fuel

*Proposed permit emission rates are based on the greater of engine manufacturer supplied emission factors or the applicable emission factors provided in 40 CFR Part 60 Subpart IIII.

PM emissions are multiplied by the "PM Condensable Factor" to account for additional condensable fraction.

Greenhouse Gases (MT/yr)				Potential Emissions Single Group 2b Generator (maximum)	Potential Emissions All Group 2b Generator (maximum)	Potential Emissions Single Group 2b Generator	Potential Emissions All Group 2b Generators
				lb/hr	lb/hr	tpy	tpy
GHG-CH4	1.04E-05	mtCO2e/gal	(1)	0.20	0.2	0.01	0.0
GHG-CO2	1.02E-02	mtCO2e/gal	(1)	200.3	200.3	10.01	10.0
GHG-N20	2.47E-05	mtCO2e/gal	(1)	0.5	0.5	0.02	0.0
Hazardous Air Pollutants (HAPs) (tpy)							
Benzene	7.76E-04	lb/MMBtu	(2)	0.001	0.00	4.83E-05	0.0000
Toluene	2.81E-04	lb/MMBtu	(2)	0.000	0.00	1.75E-05	0.0000
Xylenes	1.93E-04	lb/MMBtu	(2)	0.000	0.00	1.20E-05	0.0000
Formaldehyde	7.89E-05	lb/MMBtu	(2)	0.000	0.00	4.92E-06	0.0000
Acetaldehyde	2.52E-05	lb/MMBtu	(2)	0.000	0.00	1.57E-06	0.0000
Acrolein	7.88E-06	lb/MMBtu	(2)	0.000	0.00	4.91E-07	0.0000
Total PAH Incl. Naphthalene	2.12E-04	lb/MMBtu	(2)	0.000	0.00	1.32E-05	0.0000
Total HAPs	1.57E-03			0.002	0.00	9.81E-05	0.0001

(1) 40 CFR 98 Tbl. C-1, C-2

(2) AP-42 Table 3.4-3

MT = Metric Tons

Table D-1 (Con't)

Insignificant Activity Natural Gas-Fired Equipment

Group 1 Natural Gas Fired Building Heaters (RTUs) - PTE Emissions

RTU 1A-F-R-1, RTU 1A-F-R-2

Group 1 RTUs # of Units	2	
Rating	0.294	MMBtu/hr
HHV Natural Gas	1,020	Btu/ft3
Annual Operating Hours	8760	
Annual Operating Capacity	100%	
Annual Natural Gas Usage	2.5	MMCF/yr-unit
Annual Natural Gas Usage	2575.4	MMBtu/yr-unit

Criteria Pollutants(1)		Potential Emissions Single Group 1 RTU	Potential Emissions All Group 1 RTUs	Potential Emissions Single Group 1 RTU	Potential Emissions All Group 1 RTUs
Pollutant	Emission Factor (lb/MMCF)	lb/hr	lb/hr	tpy	tpy
NOx	100	0.029	0.06	0.13	0.25
CO	84	0.024	0.05	0.1060	0.21
VOC	5.5	0.0016	0.0032	0.0069	0.014
PM	7.6	0.0022	0.0044	0.010	0.019
SO2	0.6	0.00017	0.00035	0.00076	0.0015
Lead	0.0005	0.00000014	0.0000003	0.0000006	0.0000013
Greenhouse Gases(2)					
CO2e	53.1148	34.43	68.87	150.8	301.6
Hazardous Air Pollutants (HAPs)(3)					
Benzene	0.008	0.00000231	0.0000046	0.0000101	0.0000202
Formaldehyde	0.017	0.00000490	0.0000098	0.0000215	0.0000429
Total PAHs (exlc. Napth.)	0.0001	0.00000003	0.0000001	0.0000001	0.0000003
Naphthalene	0.0003	0.00000009	0.0000002	0.0000004	0.0000008
Acetaldehyde	0.0043	0.00000124	0.0000025	0.0000054	0.0000109
Acrolein	0.0027	0.00000078	0.0000016	0.0000034	0.0000068
Ethyl benzene	0.0095	0.00000274	0.0000055	0.0000120	0.0000240
Hexane	0.0063	0.00000182	0.0000036	0.0000080	0.0000159
Toluene	0.0366	0.00001055	0.0000211	0.0000462	0.0000924
Xylene	0.0272	0.00000784	0.0000157	0.0000343	0.0000687
Total HAPs		0.00003	0.00006	0.00014	0.00028

(1) Emission factor from EPA, AP-42, Tables 1.4-1 and 1.4-2

(2) Emission factor from EPA, 40 CFR Part 98, Subpart C, (EF in kg/MMBtu)

(3) Emission factor from California Reporting Procedures for AB2588 Facilities Reporting their Quadrennial Air Toxic Emission Inventory in the Annual Emission Reporting Program, Appendix B-1, Table B-1.

Table D-1 (Con't)

Insignificant Activity Natural Gas-Fired Equipment

Group 2 Natural Gas Fired Building Heaters (RTUs) - PTE Emissions

RTU 1A-DC-R-1, RTU 1A-DC-R-2

Group 2 RTUs # of Units	2	
Rating	0.900	MMBtu/hr
HHV Natural Gas	1,020	Btu/ft3
Annual Operating Hours	8760	
Annual Operating Capacity	100%	
Annual Natural Gas Usage	7.7	MMCF/yr-unit
Annual Natural Gas Usage	7884.0	MMBtu/yr-unit

Criteria Pollutants(1)		Potential Emissions Single Group 2 RTU	Potential Emissions All Group 2 RTUs	Potential Emissions Single Group 2 RTU	Potential Emissions All Group 2 RTUs
Pollutant	Emission Factor (lb/MMCF)	lb/hr	lb/hr	tpy	tpy
NOx	100	0.088	0.18	0.39	0.77
CO	84	0.074	0.15	0.32	0.65
VOC	5.5	0.0049	0.010	0.021	0.04
PM	7.6	0.0067	0.013	0.029	0.059
SO2	0.6	0.00053	0.0011	0.0023	0.0046
Lead	0.0005	0.00000044	0.0000009	0.0000019	0.000004
Greenhouse Gases(2)					
CO2e	53.1148	105.41	210.81	461.7	923.4
Hazardous Air Pollutants (HAPs)(3)					
Benzene	0.008	0.00000706	0.0000141	0.0000309	0.000062
Formaldehyde	0.017	0.00001500	0.0000300	0.0000657	0.000131
Total PAHs (exlc. Napth.)	0.0001	0.00000009	0.0000002	0.0000004	0.000001
Naphthalene	0.0003	0.00000026	0.0000005	0.0000012	0.000002
Acetaldehyde	0.0043	0.00000379	0.0000076	0.0000166	0.000033
Acrolein	0.0027	0.00000238	0.0000048	0.0000104	0.000021
Ethyl benzene	0.0095	0.00000838	0.0000168	0.0000367	0.000073
Hexane	0.0063	0.00000556	0.0000111	0.0000243	0.000049
Toluene	0.0366	0.00003229	0.0000646	0.0001414	0.000283
Xylene	0.0272	0.00002400	0.0000480	0.0001051	0.000210
Total HAPs		0.00010	0.00020	0.00043	0.00087

(1) Emission factor from EPA, AP-42, Tables 1.4-1 and 1.4-2

(2) Emission factor from EPA, 40 CFR Part 98, Subpart C, (EF in kg/MMBtu)

(3) Emission factor from California Reporting Procedures for AB2588
Facilities Reporting their Quadrennial Air Toxic Emission Inventory in the
Annual Emission Reporting Program, Appendix B-1, Table B-1.

Table D-1 (Con't)

Insignificant Activity Natural Gas-Fired Equipment

Natural Gas Fired Kitchen Related Equipment - PTE Emissions

Includes water heaters, ovens, broilers

Cumulative Rating	1.730	MMBtu/hr
HHV Natural Gas	1,020	Btu/ft3
Annual Operating Hours	0	
Annual Operating Capacity	100%	
Annual Natural Gas Usage	0.0	MMCF/yr-unit
Annual Natural Gas Usage	0.0	MMBtu/yr-unit

Criteria Pollutants(1)		Potential Emission - Kitchen Related Equipment	Potential Emission - Kitchen Related Equipment
Pollutant	Emission Factor (lb/MMCF)	lb/hr	tpy
NOx	100	0.170	0.00
CO	84	0.142	0.00
VOC	5.5	0.009	0.00
PM	7.6	0.013	0.00
SO2	0.6	0.0010	0.0000
Lead	0.0005	0.0000008	0.0000000
Greenhouse Gases(2)			
CO2e (EF in kg/MMBtu))	53.1148	202.61	0.0
Hazardous Air Pollutants (HAPs)(3)			
Benzene	0.008	0.0000136	0.0000
Formaldehyde	0.017	0.0000288	0.0000
Total PAHs (exlc. Napth.)	0.0001	0.0000002	0.0000
Naphthalene	0.0003	0.0000005	0.0000
Acetaldehyde	0.0043	0.0000073	0.0000
Acrolein	0.0027	0.0000046	0.0000
Ethyl benzene	0.0095	0.0000161	0.0000
Hexane	0.0063	0.0000107	0.0000
Toluene	0.0366	0.0000621	0.0000
Xylene	0.0272	0.0000461	0.0000
Total HAPs		0.00019	0.00000

(1) Emission factor from EPA, AP-42, Tables 1.4-1 and 1.4-2

(2) Emission factor from EPA, 40 CFR Part 98, Subpart C, (EF in kg/MMBtu)

(3) Emission factor from California Reporting Procedures for AB2588 Facilities Reporting their Quadrennial Air Toxic Emission Inventory in the Annual Emission Reporting Program, Appendix B-1, Table B-1.

Table D-2 (04/08/2026)

Source Wide - Estimated Annual PTE Emissions (tpy)

NOx Hour Limit to stay under 250 TPY	((249 TPY-(Sys11-14)-IS)*2000)/49.2	6889 hours
	Sys11 Engine Nox	3.09 TPY
	Sys12 Engine Nox	0.19
	Sys13 ES	0.03
	Sys14 Engine Nox	0.09
	IS =Insignif. Source NOx	1.03 TPY

Hourly Emission Rate (lb/hr)

Description	System	PM	Sox	CO	VOC	Total HAPs	GHG
System 01 Emergency Generators: MTU 20V4000G74S	Sys1	2.57	0.0395	23.23	2.35	0.04	4200.18
System 2 Emergency Generators: MTU 20V4000G94S	Sys2	2.76	0.0479	26.93	4.86	0.05	5103.45
System 3 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys3	1.96	0.0390	22.96	1.17	0.04	4155.02
System 4 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys4	1.96	0.0390	22.96	1.17	0.04	4155.02
System 5 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys5	1.96	0.0390	22.96	1.17	0.04	4155.02
System 6 Emergency Generators: TBD worst case emissions	Sys6	1.13	0.0479	26.93	4.86	0.05	4990.54
System 7 Emergency Generators: TBD worst case emissions	Sys7	1.13	0.0479	26.93	4.86	0.05	4990.54
System 8 Emergency Generators: Cummins C3250D6e	Sys8	2.42	0.0469	25.64	1.62	0.05	4990.54
System 9 Emergency Generators: Cummins C3250D6e-2022	Sys9	2.93	0.0448	25.18	1.53	0.05	4764.72
System 10 Emergency Generators: Cummins C3250D6e - QSK95-G9 - 2023	Sys10	2.17	0.0448	25.48	1.61	0.05	4764.72
System 11 Emergency Generator: MTU 20V4000G94S	Sys11	2.29	0.0439	26.93	2.67	0.05	4674.40
System 12: Fire Pump Engine - Clarke/John Deere Model: JU6H-UFADX8/60(	Sys12	0.15	0.0038	0.31	0.04	0.00	329.69
System 13: Solid Oxide Fuel Cells	Sys13	0.04	0.0000	0.03	0.02	0.00	1624.35
System 14 Emergency Generator: CLC Cummins C100D6C	Sys14	0.09	0.0019	1.01	0.01	0.00	329.69

Emission Rate Rank

Description		PM rank	Sox rank	CO rank	VOC rank	Total HAPs rank	GHG rank
System 01 Emergency Generators: MTU 20V4000G74S	Sys1	3	7	7	4	7	7
System 2 Emergency Generators: MTU 20V4000G94S	Sys2	2	1	1	1	1	1
System 3 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys3	6	8	8	8	8	8
System 4 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys4	6	8	8	8	8	8
System 5 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys5	6	8	8	8	8	8
System 6 Emergency Generators: TBD worst case emissions	Sys6	9	1	1	1	2	2
System 7 Emergency Generators: TBD worst case emissions	Sys7	9	1	1	1	2	2
System 8 Emergency Generators: Cummins C3250D6e	Sys8	4	4	4	5	2	2
System 9 Emergency Generators: Cummins C3250D6e-2022	Sys9	1	5	6	7	5	5
System 10 Emergency Generators: Cummins C3250D6e - QSK95-G9 - 2023	Sys10	5	5	5	6	5	5
System 11 Emergency Generator: MTU 20V4000G94S	Sys11						
System 12: Fire Pump Engine - Clarke/John Deere Model: JU6H-UFADX8/60(	Sys12						
System 13: Solid Oxide Fuel Cells	Sys13						
System 14 Emergency Generator: CLC Cummins C100D6C	Sys14						

Generator Count

Description		PM	Sox	CO	VOC	Total HAPs	GHG
System 01 Emergency Generators: MTU 20V4000G74S	Sys1	14	0	0	12	0	0
System 2 Emergency Generators: MTU 20V4000G94S	Sys2	12	12	12	12	12	12
System 3 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys3	29	0	0	0	0	0
System 4 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys4	0	0	0	0	0	0
System 5 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys5	0	0	0	0	0	0
System 6 Emergency Generators: TBD worst case emissions	Sys6	0	36	36	36	36	36
System 7 Emergency Generators: TBD worst case emissions	Sys7	0	10	10	10	10	10
System 8 Emergency Generators: Cummins C3250D6e	Sys8	4	4	4	0	4	4
System 9 Emergency Generators: Cummins C3250D6e-2022	Sys9	3	3	0	0	0	0
System 10 Emergency Generators: Cummins C3250D6e - QSK95-G9 - 2023	Sys10	8	5	8	0	8	8
System 11 Emergency Generator: MTU 20V4000G94S	Sys11						
System 12: Fire Pump Engine - Clarke/John Deere Model: JU6H-UFADX8/60(	Sys12						
System 13: Solid Oxide Fuel Cells	Sys13						
System 14 Emergency Generator: CLC Cummins C100D6C	Sys14						
	Hours	6889	6889	6889	6889	6889	6889

Pollutant PTE (TPY)

Description		PM (TPY)	Sox (TPY)	CO (TPY)	VOC (TPY)	HAPs (TPY)	GHG (TPY)
System 01 Emergency Generators: MTU 20V4000G74S	Sys1	1.80	0.0000	0.00	1.40	0.00	0.00
System 2 Emergency Generators: MTU 20V4000G94S	Sys2	1.65	0.0288	16.16	2.91	0.03	3062.07
System 3 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys3	2.82	0.0000	0.00	0.00	0.00	0.00
System 4 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys4	0.00	0.0000	0.00	0.00	0.00	0.00
System 5 Emergency Generators: Cummins C3000D6EB - QSK78-G37	Sys5	0.00	0.0000	0.00	0.00	0.00	0.00
System 6 Emergency Generators: TBD worst case emissions	Sys6	0.00	0.0863	48.47	8.74	0.09	8982.97
System 7 Emergency Generators: TBD worst case emissions	Sys7	0.00	0.0240	13.46	2.43	0.02	2495.27
System 8 Emergency Generators: Cummins C3250D6e	Sys8	0.48	0.0094	5.13	0.00	0.01	998.11
System 9 Emergency Generators: Cummins C3250D6e-2022	Sys9	0.44	0.0067	0.00	0.00	0.00	0.00
System 10 Emergency Generators: Cummins C3250D6e - QSK95-G9 - 2023	Sys10	0.87	0.0109	10.05	0.00	0.02	1879.68
System 11 Emergency Generator: MTU 20V4000G94S	Sys11	0.11	0.0022	1.35	0.13	0.00	232.88
System 12: Fire Pump Engine - Clarke/John Deere Model: JU6H-UFADX8/60(	Sys12	0.02	0.0004	0.03	0.00	0.00	32.85
System 13: Solid Oxide Fuel Cells	Sys13	0.16	0.0000	0.11	0.09	0.00	0.00
System 14 Emergency Generator: CLC Cummins C100D6C	Sys14	0.00	0.0001	0.05	0.00	0.00	10.01
Insignificant sources		0.08	0.0062	0.86	0.06	0.00	1224.99
	Total	8.44	0.175	95.68	15.76	0.17	18918.83

Pollutant	Facility-Wide Potential to Emit (lb/hr)	Facility-Wide Potential to Emit (tpy)
Total Particulate Matter (PM)	320.0	8.44
Total PM_{10}	320.0	8.44
Total $PM_{2.5}$	320.0	8.44
Total Sulfur Dioxide (SO_2)	7.27	0.17
Total Carbon Monoxide (CO)	4181.0	95.68
Total Oxides of Nitrogen (NO_x)	11107.4	249
Total Volatile Organic Compounds (VOC)	436.8	15.76
Total Lead (Pb)	2.02E-06	5.13E-06
Total Hydrogen Sulfide (H_2S)	0	0
Total Sulfuric Acid Mist (H_2SO_4)	0	0
Total Hazardous Air Pollutants (HAPs)	7.50	0.17
Total Greenhouse Gases (CO_{2e})	768508.84	18918.83

ENVIRONMENTAL EVALUATION AIR DISPERSION MODELING REPORT FOR THE SILVER SLATE DATA CENTER CLASS I OPTC APPLICATION REVISION

PREPARED FOR: Silver Slate LLC Class I OPTC Permit Application

PREPARED BY: Kent Norville, Bridgewater Group/Trinity Consultants

DATE: April 17, 2026

Silver Slate LLC is operating a data center facility located in the Tahoe-Reno Industrial Center at 7400 USA Parkway, McCarran, Nevada 89437 in Storey County, Nevada. The project site is shown in Figures 1 and 2 and is located at N 39° 29.84 latitude and W 119° 26.00 longitude. Silver Slate has Facility ID A2164 and received a Class I Operating Permit to Construct (OPTC) permit (AP7374-4671) for the facility in December 2025.

This air permit application is being submitted for a revision to the current OPTC for the following reasons:

1) Current generator emissions are based on the lesser of the NSPS and manufacture supplied emission factors. However, the current OPTC requires source testing for many systems. Current source test practices are substantially are different than those used to establish NSPS limits. For example, NSPS methods only consider filterable particulate while Method 5 considers both filterable and condensable particulate. Because of the methodology mismatch, Sliver Slate is revising emission factors for the engines to be more reflective of what would be expected during a stack test. Specifically, Silver Slate is using the greater of the NSPS and manufacturer-supplied emission factors. To account for condensable PM, Sliver Slate is applying a "PM Condensable Factor" to the PM emission factors. These emission factors are higher than the values used in the original OPTC application, so Silver Slate is proposing revisions to the emission rates and generator usage conditions.

2) The release parameters for the fire pumps (System 12) were incorrect and have been updated to the correct values.

3) In the permit application modeling, the System 11 R&D backup emergency generator exhaust was oriented with the exhaust toward the facility. However, the system was built with the unit was rotated 180 degrees, so the exhaust was away from the facility. Thus, the current modeling was revised to account for this shift.

4) As described in the original OPTC application, the System 11 generator is a Tier 2 unit with additional voluntary controls (SPI ecoCUBE SCR+cDPF). In the previous application, uncontrolled emission rates were used and this revision application continues to use uncontrolled emission rates even though the voluntary controls have been installed.

6) Silver Slate is adding a small 100 kW tier 3 emergency generator (System 14) located next to a new Central Logistics Center (CLC) building in proximity of DC2. Thus, the new building and generator were added to the modeling.

As mentioned above, the emission factors proposed for this permit action are higher than those used in the original permit application. For example, in this revision application the NSPS regulated pollutants (NOx, CO, and PM) hourly limits are based on the greater of the manufacturer supplied emission rates and the NSPS emission rates. For annual limits, Silver Slate proposes a cumulative non-emergency annual hourly limit of 6,889 hours for all System 1-10 emergency generators, based on the 250 TPY NOx limit minus the emissions from the other systems and insignificant sources (4.42 TPY), divided by the maximum hourly NOx emission rate of 71.0 lb/hr. Cumulative daily non-emergency operating hour limits are derived from demonstrating compliance with applicable 24-hr ambient air quality standards as described in the Environmental Evaluation (air dispersion modeling). To ensure compliance with the short-term standards, Silver Slate is proposing limits on the number of daily generator run hours that can occur on any given day. Our modeling analysis included with this application evaluated groups of generators at each data center running continuously for 24 hours. For example, DC1 was evaluated running 8 generators for 24 hours/day for a total of 192 generator run-hours per day and DC3 was evaluated running11 generators for 24 hours/day for a total of 264 generator-hours/day. Silver Slate is proposing a cumulative daily generator run-hour permit limit that would apply to any combination of generators ran at the facility with the exception of Systems 11, 12 and 14. This limit would be based on the "worst case" cumulative run-hour case or 192 generator run-hours per day.

Figure 1. Location of the Silver Slate Project

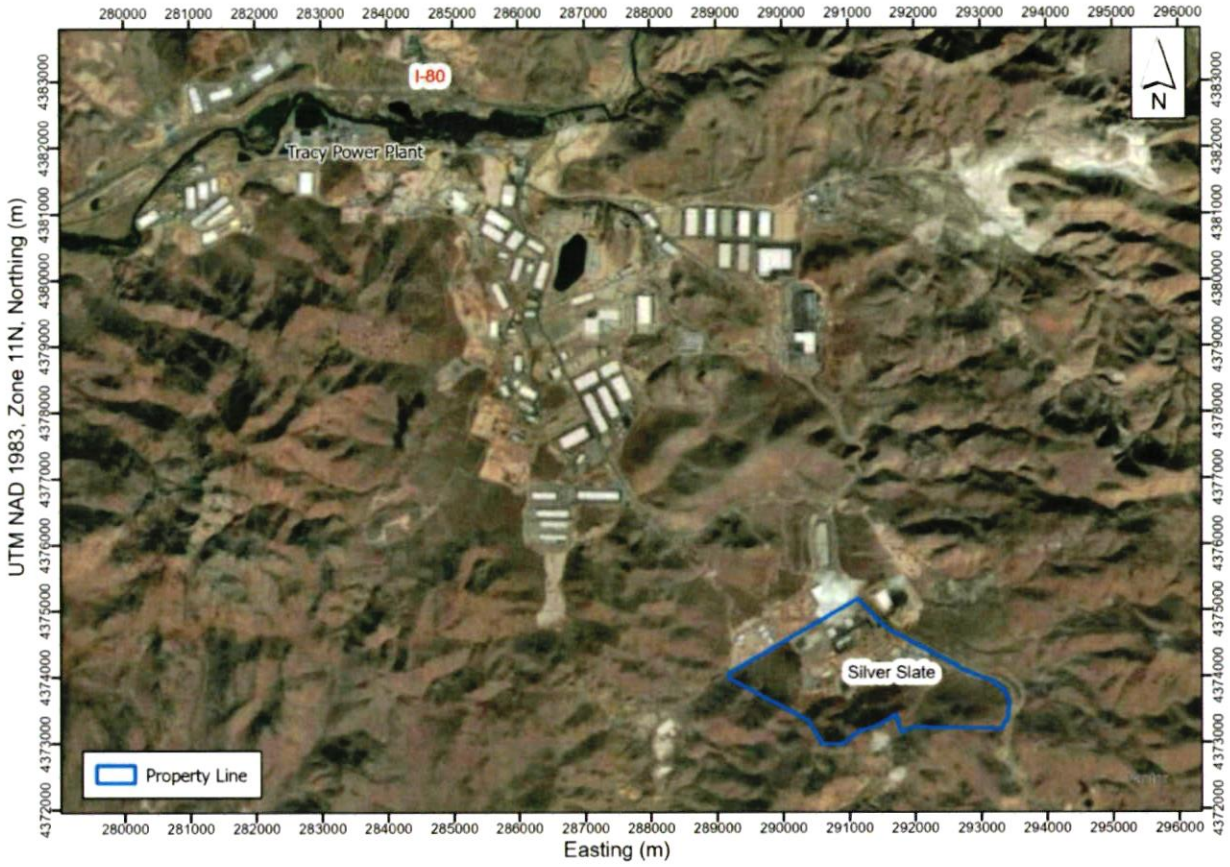
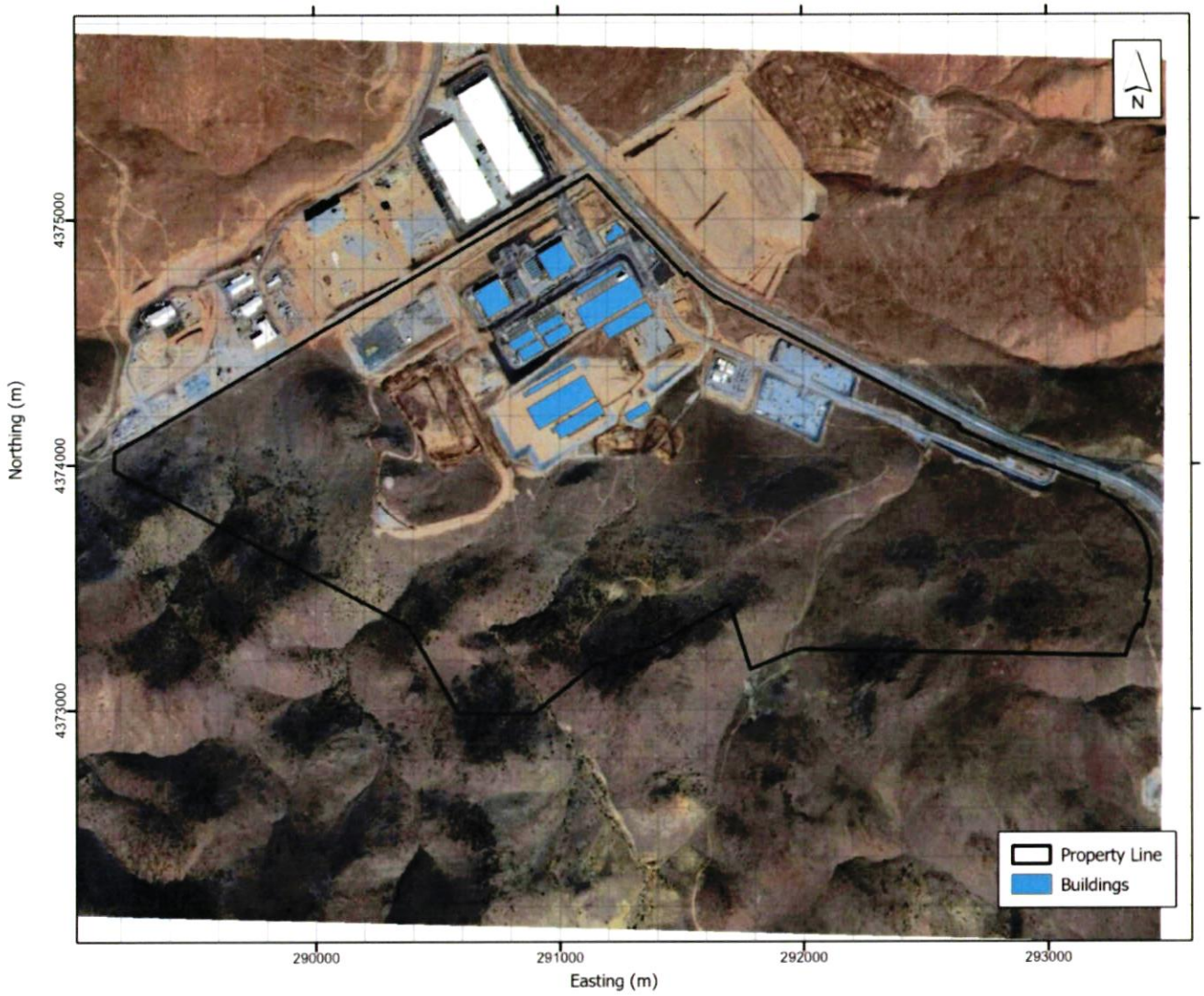


Figure 2. Project Layout



Site Description

Figure 3 shows a detailed site layout of the stacks and buildings. The currently permitted project has four data center buildings (DC#1 to DC#4), each with a support building ("MCU") and dry cooling towers. DC#1 has 33 emergency generators (26 associated with the data center and 7 with the MCUs). DC#2 and #4 have 46 emergency generators (36 associated with the data center and 10 with the MCUs). DC#3 has 34 emergency generators (26 associated with the data center and 8 with the MCUs).

The cooling towers are a dry flow variety and thus do not have emissions. DC#1 has four natural gas-fired Roof Top Units (RTUs) for building heating and cooling. The RTUs are insignificant activities pursuant to NAC 445B.288.2(e)(1). All of the other DCs have electric RTU's instead of gas-fired units. The natural gas kitchen unit and the two emergency fire pumps are also included.

The R&D project is located northwest of DC#4. Emission sources for the R&D project include an additional emergency generator (BG01p) and six 325-kW Bloom Energy Server 6.5 (ES) solid oxide fuel cells. The ES units are non-combustion fuel cells, which use natural gas, to provide power to the R&D project. The ES units operate continuously and have low emissions.

As mentioned, Silver Slate is adding a small 100 kW tier 3 emergency generator (System 14) located next to a new logistics building in proximity of DC2. Thus, the new building and generator were added to the modeling.

Generator System Updates

Table 1 shows the difference generator groups. The new DC#2 generators will be the same make and model as the DC#3 DC generators. For DC#4, a worst-case (all EG types) emission rates were used as the actual generators for this DC are not known. System 11 is a R&D emergency generator. This engine is being permitted as a Tier 2 engine with no added controls, but voluntary controls have been installed. System 12 are the two fire water pumps. System 14 is a new

Table 1. Generator Types

System (Stack IDs)	Make/Model	Number of Units	Max Power	Unit
System 1 (S0101-S0114)	MTU 20V4000G74S	14	3009	kWm
System 2 (S0115-S0126)	MTU 20V4000G94S	12	3490	kWm
System 3 (S0301-S0326)	Cummins C3000D6EB	26	3984	Hp
System 4 (S0201-S0236)	Cummins C3000D6EB	26	3984	Hp
System 5 (M0201-S0210)	Cummins C3000D6EB	10	3984	Hp
System 6 (S0401-S0436)	TBD	36	Max	Hp
System 7 (M0401-S0410)	TBD	10	Max	Hp
System 8 (CG0101-CG0104)	Cummins C3250D6e	4	4456	Hp
System 9 (CG0105-CG0107)	Cummins C3250D6e -2022	3	4376	Hp
System 10 (CG0301-CG0308)	Cummins C3250D6e -2023	8	4428	Hp
System 11 (BG01P)	MTU 20V4000G94S	1	3490	kWm
System 12 (FP1, FP2)	JU6H-UFADX8/6068HFC48	2	235	kW
System 14 (CLC)	Cummins C100D6C	1	100	kW

Site Layout

The buildings are identified in Figure 3 and the building heights are provided in Table 2. Building elevations and heights are based on updated grading information provided by Silver Slate. The stacks are shown in Figure 4 and the stack coordinates, elevations, and heights is shown in Table 3.

Figure 3. Building Locations

Table 2. Building Elevations and Heights

Building ID	Description	Elevation (ft)	Elevation (m)	Height (ft)	Height (m)
DC01	Data Center 1	5095	1552.9	54.7	16.7
DP01	Data Center 1 Penthouse	5095	1552.9	77.5	23.6
DC03	Data Center 3	5095	1552.9	54.7	16.7
DP03	Data Center 3 Penthouse	5095	1552.9	77.5	23.6
EN0101-EN0108	DC01 EG Enclosure 1-8	5095	1552.9	16.5	5.0
PL0101-PL0108	DC01 EG Plenum 1-8	5095	1552.9	40.0	12.2
EN0301-EG0308	DC03 EG Enclosure 1-8	5095	1552.9	16.5	5.0
MCU01	Support Building 1	5138	1566.0	31.8	9.7
MCU03	Support Building 3	5138	1566.0	31.8	9.7
CE0101-CE0107	MCU1 EG1-7 Housing N	5138	1566.0	16.5	5.0
CF0101-CF0107	MCU1 EG1-7 Housing S	5138	1566.0	16.5	5.0
CP0101-CP0104	MCU1 EG1-4 Plenum	5138	1566.0	44.3	13.5
CE0301-CE0308	MCU3 EG1-8 Housing N	5138	1566.0	16.5	5.0
CF0301-CF0308	MCU3 EG1-8 Housing S	5138	1566.0	16.5	5.0
Dryc01	Dry Cooler 1	5138	1566.0	28.5	8.7
DryC03	Dry Cooler 3	5138	1566.0	28.5	8.7
AA03	Aux Building 3	5138	1566.0	15.0	4.6
Tank	Fire Pump Tank	5138	1566.0	47.0	14.3
HUB	HUB Building	5094	1552.6	36.8	11.2
DC02	Data Center 2	5221	1591.3	35.0	10.7
Dry02	Dry Cooler 2	5221	1591.3	49.0	14.9
EYD02	Electrical Yard Enclosure 2	5221	1591.3	16.5	5.0
AYD02	Combined El. Yard Encl. 2	5221	1591.3	16.5	5.0
MYD02	Dual Mechanical Yard Encl. 2	5221	1591.3	16.5	5.0
MYD02	Dual Mechanical Yard Plenum. 2	5221	1591.3	49.0	14.9
MYD02a1-8	Single MY enclosures 2, 1-8	5221	1591.3	16.5	5.0
MPD02a1-8	Single MY plenums 2 1-8	5221	1591.3	49.0	14.9
DC04	Data Center 4	5144	1567.8	35.0	10.7
MG04	Dry Cooler 4	5144	1567.8	49.0	14.9
EYD04	Electrical Yard Enclosure 4	5144	1567.8	16.5	5.0
AYD04	Combined El. Yard Encl. 4	5144	1567.8	16.5	5.0
MYD04	Dual Mechanical Yard Encl. 4	5144	1567.8	16.5	5.0
MYD04	Dual Mechanical Yard Plenum. 4	5144	1567.8	49.0	14.9
MYD04a1-8	Single MY enclosures 4, 1-8	5144	1567.8	16.5	5.0
MPD04a1-8	Single MY plenums 4 1-8	5144	1567.8	49.0	14.9
BERTH	R&D Gen Enclosure	5129	1563.2	9.5	2.9
CLCENC	CLC Generator Enclosure	5196	1583.7	6.4	2.0
CLCBLDG	CLC Building	5196	1583.7	27.5	8.4

Figure 4. Stack Locations

Table 3. Stack Coordinates, Elevations, and Heights

Model ID	Type	UTM X (m)	UTM Y (m)	Elevation (ft)	Elevation (m)	Height (ft)	Height (m)
Data Center 1							
S0101	POINT	290811.9	4374765.6	5095	1552.9	40.0	12.19
S0102	POINT	290816.4	4374758.0	5095	1552.9	40.0	12.19
S0103	POINT	290821.1	4374749.8	5095	1552.9	40.0	12.19
S0104	POINT	290823.3	4374746.1	5095	1552.9	40.0	12.19
S0105	POINT	290827.6	4374738.8	5095	1552.9	40.0	12.19
S0106	POINT	290829.7	4374735.1	5095	1552.9	40.0	12.19
S0107	POINT	290834.0	4374727.7	5095	1552.9	40.0	12.19
S0108	POINT	290836.1	4374724.0	5095	1552.9	40.0	12.19
S0109	POINT	290840.4	4374716.6	5095	1552.9	40.0	12.19
S0110	POINT	290842.6	4374712.9	5095	1552.9	40.0	12.19
S0111	POINT	290846.9	4374705.6	5095	1552.9	40.0	12.19
S0112	POINT	290849.0	4374701.9	5095	1552.9	40.0	12.19
S0113	POINT	290853.3	4374694.5	5095	1552.9	40.0	12.19
S0114	POINT	290855.5	4374690.8	5095	1552.9	40.0	12.19
S0115	POINT	290827.6	4374753.6	5095	1552.9	16.5	5.03
S0116	POINT	290829.8	4374749.9	5095	1552.9	16.5	5.03
S0117	POINT	290834.1	4374742.5	5095	1552.9	16.5	5.03
S0118	POINT	290836.2	4374738.9	5095	1552.9	16.5	5.03
S0119	POINT	290840.5	4374731.5	5095	1552.9	16.5	5.03
S0120	POINT	290842.6	4374727.8	5095	1552.9	16.5	5.03
S0121	POINT	290846.9	4374720.4	5095	1552.9	16.5	5.03
S0122	POINT	290849.1	4374716.7	5095	1552.9	16.5	5.03
S0123	POINT	290853.4	4374709.4	5095	1552.9	16.5	5.03
S0124	POINT	290855.5	4374705.7	5095	1552.9	16.5	5.03
S0125	POINT	290859.8	4374698.3	5095	1552.9	16.5	5.03
S0126	POINT	290862.0	4374694.6	5095	1552.9	16.5	5.03
RTU01F1	POINT	290673.6	4374686.2	5095	1552.9	52.1	15.88
RTU01DC1	POINT	290697.2	4374695.4	5095	1552.9	52.3	15.94
RTU01DC2	POINT	290699.7	4374691.2	5095	1552.9	52.3	15.94
RTU01F2	POINT	290740.0	4374736.5	5095	1552.9	52.1	15.88
Data Center 3							
S0301	POINT	290886.3	4374829.6	5095	1552.9	16.5	5.03
S0302	POINT	290888.5	4374826.0	5095	1552.9	16.5	5.03
S0303	POINT	290892.8	4374818.6	5095	1552.9	16.5	5.03
S0304	POINT	290894.9	4374814.9	5095	1552.9	16.5	5.03
S0305	POINT	290899.2	4374807.5	5095	1552.9	16.5	5.03
S0306	POINT	290901.3	4374803.8	5095	1552.9	16.5	5.03
S0307	POINT	290905.6	4374796.4	5095	1552.9	16.5	5.03
S0308	POINT	290907.8	4374792.8	5095	1552.9	16.5	5.03

Model ID	Type	UTM X (m)	UTM Y (m)	Elevation (ft)	Elevation (m)	Height (ft)	Height (m)
S0309	POINT	290912.1	4374785.4	5095	1552.9	16.5	5.03
S0310	POINT	290914.2	4374781.7	5095	1552.9	16.5	5.03
S0311	POINT	290918.5	4374774.3	5095	1552.9	16.5	5.03
S0312	POINT	290920.7	4374770.6	5095	1552.9	16.5	5.03
S0313	POINT	290925.4	4374762.5	5095	1552.9	16.5	5.03
S0314	POINT	290929.9	4374754.8	5095	1552.9	16.5	5.03
S0315	POINT	290879.8	4374825.9	5095	1552.9	16.5	5.03
S0316	POINT	290882.0	4374822.2	5095	1552.9	16.5	5.03
S0317	POINT	290886.3	4374814.8	5095	1552.9	16.5	5.03
S0318	POINT	290888.4	4374811.1	5095	1552.9	16.5	5.03
S0319	POINT	290892.7	4374803.7	5095	1552.9	16.5	5.03
S0320	POINT	290894.8	4374800.0	5095	1552.9	16.5	5.03
S0321	POINT	290899.1	4374792.7	5095	1552.9	16.5	5.03
S0322	POINT	290901.3	4374789.0	5095	1552.9	16.5	5.03
S0323	POINT	290905.6	4374781.6	5095	1552.9	16.5	5.03
S0324	POINT	290907.7	4374777.9	5095	1552.9	16.5	5.03
S0325	POINT	290912.0	4374770.5	5095	1552.9	16.5	5.03
S0326	POINT	290914.2	4374766.9	5095	1552.9	16.5	5.03
MCU 1							
CG0101	POINT	290802.1	4374525.9	5138	1566.0	44.3	13.50
CG0102	POINT	290814.2	4374532.9	5138	1566.0	44.3	13.50
CG0103	POINT	290826.2	4374539.9	5138	1566.0	44.3	13.50
CG0104	POINT	290838.3	4374547.0	5138	1566.0	44.3	13.50
CG0105	POINT	290850.3	4374554.0	5138	1566.0	16.5	5.03
CG0106	POINT	290862.4	4374561.0	5138	1566.0	16.5	5.03
CG0107	POINT	290874.4	4374568.0	5138	1566.0	16.5	5.03
MCU 3							
CG0301	POINT	290903.8	4374585.1	5138	1566.0	16.5	5.03
CG0302	POINT	290915.9	4374592.1	5138	1566.0	16.5	5.03
CG0303	POINT	290928.0	4374599.2	5138	1566.0	16.5	5.03
CG0304	POINT	290940.1	4374606.2	5138	1566.0	16.5	5.03
CG0305	POINT	290952.2	4374613.3	5138	1566.0	16.5	5.03
CG0306	POINT	290964.4	4374620.3	5138	1566.0	16.5	5.03
CG0307	POINT	290976.5	4374627.4	5138	1566.0	16.5	5.03
CG0308	POINT	290988.6	4374634.4	5138	1566.0	16.5	5.03
Fire Pumps							
FP1	POINTHOR	290829.4	4374435.6	5138	1566.0	10.0	3.05
FP2	POINTHOR	290829.4	4374435.6	5138	1566.0	10.0	3.05
HUB							
HKITCH	VOLUME	291237.0	4374935.7	5095	1552.9	18.4	5.61

Model ID	Type	UTM X (m)	UTM Y (m)	Elevation (ft)	Elevation (m)	Height (ft)	Height (m)
Data Center 2							
S0201	POINT	290859.1	4374293.6	5221	1591.3	16.5	5.03
S0202	POINT	290862.5	4374295.6	5221	1591.3	16.5	5.03
S0203	POINT	290875.5	4374303.1	5221	1591.3	16.5	5.03
S0204	POINT	290878.9	4374305.1	5221	1591.3	16.5	5.03
S0205	POINT	290884.4	4374308.4	5221	1591.3	16.5	5.03
S0206	POINT	290887.9	4374310.3	5221	1591.3	16.5	5.03
S0207	POINT	290899.8	4374317.3	5221	1591.3	16.5	5.03
S0208	POINT	290903.2	4374319.3	5221	1591.3	16.5	5.03
S0209	POINT	290909.1	4374322.7	5221	1591.3	16.5	5.03
S0210	POINT	290912.5	4374324.6	5221	1591.3	16.5	5.03
S0211	POINT	290918.3	4374328.1	5221	1591.3	16.5	5.03
S0212	POINT	290921.7	4374330.0	5221	1591.3	16.5	5.03
S0213	POINT	290933.2	4374336.7	5221	1591.3	16.5	5.03
S0214	POINT	290936.6	4374338.7	5221	1591.3	16.5	5.03
S0215	POINT	290942.4	4374342.1	5221	1591.3	16.5	5.03
S0216	POINT	290945.8	4374344.1	5221	1591.3	16.5	5.03
S0217	POINT	290951.8	4374347.6	5221	1591.3	16.5	5.03
S0218	POINT	290955.3	4374349.6	5221	1591.3	16.5	5.03
S0219	POINT	290961.1	4374353.0	5221	1591.3	16.5	5.03
S0220	POINT	290971.8	4374359.3	5221	1591.3	16.5	5.03
S0221	POINT	290975.3	4374361.3	5221	1591.3	16.5	5.03
S0222	POINT	290981.0	4374364.6	5221	1591.3	16.5	5.03
S0223	POINT	290984.5	4374366.5	5221	1591.3	16.5	5.03
S0224	POINT	290990.3	4374370.0	5221	1591.3	16.5	5.03
S0225	POINT	290993.7	4374372.0	5221	1591.3	16.5	5.03
S0226	POINT	291005.2	4374378.6	5221	1591.3	16.5	5.03
S0227	POINT	291008.6	4374380.6	5221	1591.3	16.5	5.03
S0228	POINT	291014.4	4374384.0	5221	1591.3	16.5	5.03
S0229	POINT	291017.8	4374386.0	5221	1591.3	16.5	5.03
S0230	POINT	291023.6	4374389.4	5221	1591.3	16.5	5.03
S0231	POINT	291027.1	4374391.3	5221	1591.3	16.5	5.03
S0232	POINT	291039.0	4374398.3	5221	1591.3	16.5	5.03
S0233	POINT	291042.5	4374400.3	5221	1591.3	16.5	5.03
S0234	POINT	291048.2	4374403.7	5221	1591.3	16.5	5.03
S0235	POINT	291051.7	4374405.7	5221	1591.3	16.5	5.03
S0236	POINT	291057.5	4374409.1	5221	1591.3	16.5	5.03
M0201	POINT	290976.5	4374133.0	5221	1591.3	50.0	15.24
M0202	POINT	290979.9	4374134.9	5221	1591.3	50.0	15.24
M0203	POINT	291051.9	4374123.4	5221	1591.3	50.0	15.24
M0204	POINT	291070.9	4374134.5	5221	1591.3	50.0	15.24

Model ID	Type	UTM X (m)	UTM Y (m)	Elevation (ft)	Elevation (m)	Height (ft)	Height (m)
M0205	POINT	291089.2	4374145.2	5221	1591.3	50.0	15.24
M0206	POINT	291108.0	4374156.1	5221	1591.3	50.0	15.24
M0207	POINT	291126.6	4374166.9	5221	1591.3	50.0	15.24
M0208	POINT	291145.2	4374177.8	5221	1591.3	50.0	15.24
M0209	POINT	291163.8	4374188.8	5221	1591.3	50.0	15.24
M0210	POINT	291191.4	4374204.7	5221	1591.3	50.0	15.24
Data Center 4							
S0401	POINT	291060.3	4374699.7	5144	1567.8	16.5	5.03
S0402	POINT	291063.7	4374701.7	5144	1567.8	16.5	5.03
S0403	POINT	291076.7	4374709.2	5144	1567.8	16.5	5.03
S0404	POINT	291080.1	4374711.2	5144	1567.8	16.5	5.03
S0405	POINT	291085.6	4374714.4	5144	1567.8	16.5	5.03
S0406	POINT	291089.1	4374716.4	5144	1567.8	16.5	5.03
S0407	POINT	291101.0	4374723.4	5144	1567.8	16.5	5.03
S0408	POINT	291104.4	4374725.4	5144	1567.8	16.5	5.03
S0409	POINT	291110.2	4374728.7	5144	1567.8	16.5	5.03
S0410	POINT	291113.7	4374730.7	5144	1567.8	16.5	5.03
S0411	POINT	291119.5	4374734.1	5144	1567.8	16.5	5.03
S0412	POINT	291122.9	4374736.1	5144	1567.8	16.5	5.03
S0413	POINT	291134.3	4374742.8	5144	1567.8	16.5	5.03
S0414	POINT	291137.8	4374744.7	5144	1567.8	16.5	5.03
S0415	POINT	291143.5	4374748.2	5144	1567.8	16.5	5.03
S0416	POINT	291147.0	4374750.1	5144	1567.8	16.5	5.03
S0417	POINT	291153.0	4374753.7	5144	1567.8	16.5	5.03
S0418	POINT	291156.5	4374755.7	5144	1567.8	16.5	5.03
S0419	POINT	291162.3	4374759.0	5144	1567.8	16.5	5.03
S0420	POINT	291173.0	4374765.4	5144	1567.8	16.5	5.03
S0421	POINT	291176.5	4374767.3	5144	1567.8	16.5	5.03
S0422	POINT	291182.2	4374770.6	5144	1567.8	16.5	5.03
S0423	POINT	291185.7	4374772.6	5144	1567.8	16.5	5.03
S0424	POINT	291191.5	4374776.1	5144	1567.8	16.5	5.03
S0425	POINT	291194.9	4374778.1	5144	1567.8	16.5	5.03
S0426	POINT	291206.4	4374784.7	5144	1567.8	16.5	5.03
S0427	POINT	291209.8	4374786.7	5144	1567.8	16.5	5.03
S0428	POINT	291215.6	4374790.1	5144	1567.8	16.5	5.03
S0429	POINT	291219.0	4374792.0	5144	1567.8	16.5	5.03
S0430	POINT	291224.8	4374795.5	5144	1567.8	16.5	5.03
S0431	POINT	291228.3	4374797.4	5144	1567.8	16.5	5.03
S0432	POINT	291240.2	4374804.4	5144	1567.8	16.5	5.03
S0433	POINT	291243.6	4374806.4	5144	1567.8	16.5	5.03
S0434	POINT	291249.4	4374809.8	5144	1567.8	16.5	5.03

Model ID	Type	UTM X (m)	UTM Y (m)	Elevation (ft)	Elevation (m)	Height (ft)	Height (m)
S0435	POINT	291252.9	4374811.8	5144	1567.8	16.5	5.03
S0436	POINT	291258.7	4374815.2	5144	1567.8	16.5	5.03
M0401	POINT	291177.7	4374539.1	5144	1567.8	50.0	15.24
M0402	POINT	291181.1	4374541.0	5144	1567.8	50.0	15.24
M0403	POINT	291253.1	4374529.5	5144	1567.8	50.0	15.24
M0404	POINT	291272.1	4374540.6	5144	1567.8	50.0	15.24
M0405	POINT	291290.4	4374551.3	5144	1567.8	50.0	15.24
M0406	POINT	291309.1	4374562.2	5144	1567.8	50.0	15.24
M0407	POINT	291327.8	4374573.0	5144	1567.8	50.0	15.24
M0408	POINT	291346.4	4374583.9	5144	1567.8	50.0	15.24
M0409	POINT	291365.0	4374594.9	5144	1567.8	50.0	15.24
M0410	POINT	291392.5	4374610.8	5144	1567.8	50.0	15.24
Central Logistical Center (CLC)							
CLC	POINT	291271.8	4374221.8	5196	1583.7	6.4	2.0
R&D							
BG01P	POINT	291413.5	4374820.0	5128.8	1563.2	9.5	2.90
ES1	VOLUME	291387.9	4374822.3	5128.8	1563.2	8.2	2.49
ES2	VOLUME	291386.1	4374821.1	5128.8	1563.2	8.2	2.49
ES3	VOLUME	291384.3	4374819.9	5128.8	1563.2	8.2	2.49
ES4	VOLUME	291390.5	4374818.5	5128.8	1563.2	8.2	2.49
ES5	VOLUME	291388.7	4374817.3	5128.8	1563.2	8.2	2.49
ES6	VOLUME	291386.8	4374816.1	5128.8	1563.2	8.2	2.49
ES7	VOLUME	291393.0	4374814.8	5128.8	1563.2	8.2	2.49
ES8	VOLUME	291391.1	4374813.6	5128.8	1563.2	8.2	2.49
ES9	VOLUME	291389.4	4374812.3	5128.8	1563.2	8.2	2.49

Source Characterization

Generators

For this evaluation, the following operating conditions were used.

- To stay below the 250 tons per year NOx limit, all System 01-10 emergency generators combined will operate no more than 6,889 hours per year for non-emergency operations. System 11, 12, and 14 are assumed to operated up to 100 hours/year.
- Any individual emergency generator may operate up to 100 hours per year for non-emergency purposes, as long as the annual hour limit is not exceeded. Other than NOx, it was assumed all generators will operate up to 100 hours/year.
- For most maintenance activities, Silver Slates expects the emergency generators will operate less than an hour per month.
- Silver Slate has had the need to run larger groups of generators for up to 24 hours for electrical system testing and Integrated Systems Testing (IST). To evaluate this condition, blocks of generators associated with a data center were run together for 24-

hours. The size of the block was determined such that the standard and increment were not exceeded. For each data center, four blocks of generators were evaluated as shown in Table 4 below. Blocks were configured with groups of generators in lines or clusters. The block with the highest concentrations were used in the analysis.

Table 4: DC Generator Blocks

Gen Blocks	Block 1	Block 2	Block 3	Block 4
DC#1 (8 gens)	S0101-S0108	S0115-S0122	S0103-S0106 S0115-S0118	CG0101-CG0107 S0114
DC#3 (11 gens)	S0301-S0311	S0315-S0325	S0301-S0306 S0315-S0319	CG0301-CG0308 S0312-S0314
DC#2 (23 gens)	S0201-S0223	S0214-S0236	M0201-M0210 S0224-S0236	M0205-M0210 S0220-S0236
DC34 (12 gens)	S0401-S0412	S0425-S0436	M0401-M0410 S0435-S0436	M0405-M0410 S0431-S0436

Each generator was modeled independently so that no merged plume effects were considered. Generalized exhaust parameters for the data center and MCU (Systems 01-10) generators were provided by Silver Slate and are considered representative of operating conditions and are shown in Table 5.

There are several stack/plenum configurations. All of the plenum exhausts vent upwards with the generators exhaust at or just above the plenum exhaust. Generator exhausts are either vertical or horizontal. For the vertically oriented generator exhausts, it was assumed these exhausts will merge and mix as they exit. The mixed exhaust temperature was approximated based on the volume weighted average under standard temperature and constant pressure. Specifically, the mixed temperature T_m is given by:

$$T_m = \frac{T_p V_{p\_std} + T_g V_{g\_std}}{V_{p\_std} + V_{g\_std}};$$

where T_p and T_g is the exhaust temperatures of the plenum and generator respectively, and V_{p_std} and V_{g_std} are the exhaust volume flow rates of the plenum and generator at standard temperature. The volume flow at standard temperature is given by:

$$V_{x\_std} = V_x \frac{T_s}{T_x}$$

where T_x and V_x are the operating temperature and volume flow from either the plenum or generator and T_s is the standard temperature of 273.15 K. The mixed volume (V_m) is the

combined standard volumes from the plenum and generator scaled up to the mixing temperature using:

$$V_m = (V_{p\_std} + V_{g\_std})\frac{T_m}{273.15}.$$

The mixed plenum and generator values are shown in Table 5.

Some of the generators are configured with the plenum exhaust exiting vertically out of the top of the enclosure (at 16.5 feet) with the generator exhaust being released horizontally above plenum. Although the generator exhausts is getting entrained into the plenum exhaust, it is not contributing to the vertical momentum of the plume. After consultation with Nevada Department of Environmental Protection (NDEP), these stack parameters were adjusted to account for the thermal plume mixing by using the mixed temperature (T_m) and lack of additional vertical momentum from the generator exhaust by using the plenum only flow rate (V_p) for establishing the exit velocity.

Table 5: Calculated Mixed Temperature (T_m) and Volumes (V_m)

Parameter	units	G1, G1a, G1b,G1c	G2, G2a, G2b
Plenum Flow (Vp)	acfm	108,843	144,700
Gen Flow (Vg)	acfm	20.980	23,582
Temp Flow (Tp)	K	360.9	342.6
Gen Temp (Tg)	K	691	720.93
Vp_std	cfm	82,372	115,369
Vg_std	cfm	7,710	8,935
Mixed Flow (Vm)	K	398.6	369.8
Mixed Temp (Tm)	acfm	129,820	168,282

Other Sources

The other source include:

- Two fire pumps, ~235 kW engines. These units were collocated but not merged (modeled as separate units).
- The R&D backup emergency generator is configured with the generator exhaust being released horizontally above vertical plenum exhaust and is modeled as described above.
- The CLC emergency generator (System 14) exhaust is released into the radiator exhaust area, which leave out of the top of the enclosure. Thus, this source was modeled using the plenum exhaust approach as well.

- Four RTUs for the DC#1 building
  - 2 "F" units: 294 MBH Package Rooftop Unit
  - 2 "DC" units: 900 MBH Package Rooftop Unit
  - All RTUs operating 8760 hours using parameters based on manufacture specifications.
  - The RTUs exhaust vertically.
- Because the layout and configuration of the kitchen equipment is currently not known and because this is an insignificant source, it was conservatively modeled as a volume source, with parameters based on the size of the HUB. The source was located at the center of the HUB, with a height equal to ½ the building height. The vertical dispersion (sigma-z) was set to the building height divided by 2.15 and the lateral dimension (sigma-y) to the shorter building length (138.4 ft) divided by 4.3 as per guidance.
- Each ES unit has six power modules and two support modules in a line, with dimensions of 29'5" long, 4'4" wide and 8'2" high. The ES units are grouped as pairs, placed back-to-back, in three parallel rows. The ES units exhaust vertically upward out of a vent on the top of the units. Although the exhaust is hot (500-600 F), the ES units are typically modeled as volume sources. For this analysis, each row is modeled as three volume sources, each representing a group of 4 power modules. The volume source is placed in the middle of the group, given a height equal to the unit height, with a sigma y equal to twice the module width divided by 2.15 and a sigma z equal to the module height divided by 2.15.

Table 6 shows the modeled source parameters for each group of sources.

Table 6. Modeled Stack Parameters

Stack Group	Emis Grp	Gen/plenu, Orient.	Hgt (ft)	Temp (K)	Flow (ACFM)	Vel (m/s)	Eq. Dia (m)	Opening
S0101-S0114	System 1	Vert	40	393.6	129,820	4.42	4.20	14'x10.65'
S0115-S0126	System 2	Horz/Vert	16.5	393.6	108,843	3.71	4.20	14'x10.65'
S0301-S0326	System 3	Horz/Vert	16.5	393.6	108,843	3.71	4.20	14'x10.65'
S0201-S0236	System 4	Vert	16.5	393.6	129,820	3.90	4.47	13'x13'
S0401-S0436	System 5	Vert	16.5	393.6	129,820	3.90	4.47	13'x13'
C0101-C0104	System 6	Vert	44.3	369.6	168,026	4.35	4.81	14'x14'
C0105-C0107	System 7	Vert	16.5	369.6	168,026	4.35	4.81	14'x14'
C0301-C0308	System 8	Vert	16.5	369.6	168,026	5.05	4.47	13'x13'
M0201-M0210	System 9	Vert	50	393.6	129,820	3.90	4.47	13'x13'
M0401-M0410	System 10	Vert	50	393.6	129,820	3.90	4.47	13'x13'
BG01p	System 11	POINT	9.5	351.2	145,100	14.90	2.42	
FP	System 12	POINTHOR	20	965.0	1773	45.9	0.2	
CLC	System 14	POINT	6.42	343.4	8578	10.02	0.72	1.61'x2.71'
RTUDC		Vert	52.3	511.0	332	8.6	0.2	
RTUF		Vert	52.1	511.0	16.6	0.4	0.2	
				Sigma Y (m)	**Sigma Z (m)**			
Hkitch		VOLUME	18.4	9.8	5.2			
ES	System 13	VOLUME	8.17	1.25	1.16			

Table 7 shows the emissions used in the analysis for each emission unit. For the long term NOx and PM, NDEP required all generators (including the R&D gen) plus the two fire pumps were run together to find the maximum 1-hour impact. Then, this maximum impact was multiplied by hours of operation divided by the hours in a year (for example, 100/8760) to calculate an annual concentration. The continuous sources (RTUs and ES units) were modeled in a separate run, assuming 8760 hours operation to calculate their annual impact. Then the two concentrations were added on a receptor-by-receptor basis.

For NO_2, the Tier 2 Ambient Ratio Method - 2 (ARM2) was used, assuming an in-stack ratio of 0.2 (ARM2_min) and ambient ratio of 0.9 (ARM2_max).

As mentioned, Silver Slate has the need to run larger groups of generators for up to 24 hours for electrical system testing and Integrated Systems Testing (IST). To evaluate this condition,

blocks of generators associated with a data center were run together for 24-hours. The size of the block was determined such that the standard and increment were not exceeded.

For the short-term evaluations, impacts were evaluated on a data center basis, with all generators of that data center being run simultaneously (33 gens for DC#1, 34 gens for DC#3, and 46 gens for DC#2 and DC#4), along with fire pumps, R&D backup generator, CLC generator, Bloom cells and DC#1 RTUs. .

Table 8 shows the facility wide emission limits. Emissions of lead are insignificant and were not evaluated. The facility is not anticipated to be a source of hydrogen sulfide or sulfuric acid mist. It was assumed that all PM was in the form of $PM_{2.5}$.

Table 7. Short and Long Term Emissions (lbs/hr) by Source

	Short Term Emissions (lbs/hr)				Annualized emissions for
Source Group	PM	NOx	SOx	CO	Short-term NOx (lbs/hr)
Sys1: S0101-S0114	2.57	71.00	0.04	23.23	0.81
Sys2: S0115-S0126	2.76	61.78	0.05	26.93	0.71
Sys3: S0301-S0326	1.96	61.94	0.04	22.96	0.71
Sys4: S0201-S0236	1.96	61.94	0.04	22.96	0.71
Sys5: M0201-M0210	1.96	61.94	0.04	22.96	0.71
Sys6: S0401-S0436	1.13	71.00	0.05	26.93	0.81
Sys7: M0401-M0410	1.13	71.00	0.05	26.93	0.81
Sys8: CG0101-CG0104	2.42	58.94	0.05	25.64	0.67
Sys9: CG0105-CG0107	2.93	65.22	0.04	25.18	0.74
Sys10: CG0301-CG0308	2.17	65.89	0.04	25.48	0.75
Sys11: BG01p	2.29	61.78	0.04	26.93	0.71
Sys12: FP1 & 2	0.15	1.87	0.00	0.31	0.02
Sys13: ES01-09	0.04	0.01	0.00	0.03	0.01
Sys14: CLC	0.09	1.85	0.00	1.01	0.02
RD	0.01	0.09	0.00	0.07	0.09
RF	0.00	0.03	0.00	0.02	0.03
HK	0.01	0.17	0.00	0.14	0.17

Table 8. Facility-wide Emission Estimates

Pollutant	Facility-Wide Potential to Emit (lb/hr)	Facility-Wide Potential to Emit (tpy)
Total Particulate Matter (PM)	320.0	8.44
Total Particulate Matter with Aerodynamic Diameter 10 microns or less (PM_{10})	320.0	8.44
Total Particulate Matter with Aerodynamic Diameter 2.5 microns or less ($PM_{2.5}$)	320.0	8.44
Total Sulfur Dioxide (SO_2)	7.27	0.17
Total Carbon Monoxide (CO)	4181.0	95.68
Total Oxides of Nitrogen (NO_X)	11107.4	249
Total Volatile Organic Compounds (VOC)	436.8	15.76
Total Lead (Pb)	2.02E-06	5.13E-06
Total Hydrogen Sulfide (H_2S)	0	0
Total Sulfuric Acid Mist (H_2SO_4)	0	0

Ozone Analysis

Unlike the other criteria pollutants, O_3 is not directly emitted from the sources. Rather, O_3 is formed through a series of complex photochemical reactions involving volatile organic compounds (VOC), NO_X, and other gases in the atmosphere. Therefore, the method for estimating the O_3 impact is different from that of the other criteria pollutants. For this analysis, O_3 impacts were evaluated using the Scheffe method.[1] The Scheffe method is a simple screening lookup table approach that uses the maximum daily VOC emission rate and the ratio of VOC to NO_X emissions to conservatively determine the maximum incremental O_3 impact from a single source using urban or rural environments. The maximum daily VOC emissions was based on the scenario that all of the generators of one of the data centers are operating for 24-hours as shown in Table 9. DC1 has the higher VOC emissions as was used in the analysis. The Scheffe O_3 impact calculations are included below.

Table 9. Maximum Hourly VOC (lb/hr) for Ozone

Generator Group	Single Gen Max VOC	DC01	DC03	DC02	DC04
DC Gen Count		8	11	23	12
Sys1: S0101-S0114	2.3	--			
Sys2: S0115-S0126	4.9	38.8			
Sys3: S0301-S0326	1.2		3.5		
Sys4: S0201-S0236	1.2			26.8	
Sys5: M0201-M0210	1.2			--	
Sys6: S0401-S0436	4.9				58.3
Sys7: M0401-M0410	4.9				--
Sys8: CG0101-CG0104	1.6	--			
Sys9: CG0105-CG0107	1.5	--			
Sys10: CG0301-CG0308	1.6		12.9		
Sys 11 to 14 + Insign.		2.79	2.79	2.79	2.79
Total (lb/hr)		41.6	19.1	29.6	61.0
Total (lb/day)		999.1	459.3	710.3	1465.2

[1] Scheffe, Richard D. 1988. VOC/NOX Point Source Screening Tables. Unites States Environmental Protection Agency, Office of Air Quality Planning and Standards, Technical Support Division, Source Receptor Analysis Branch. September 1988.

Model Selection

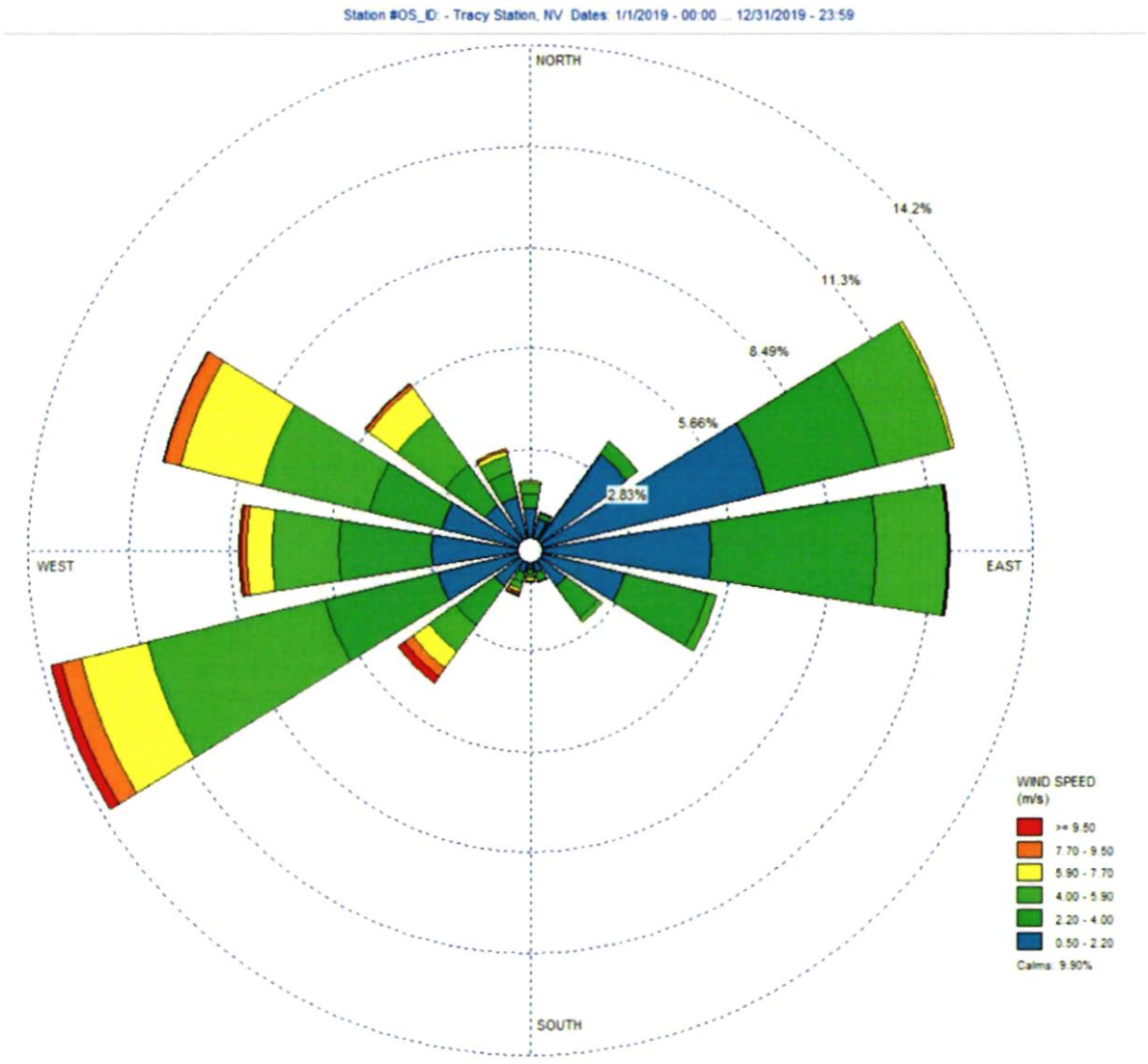
For this analysis, the most recent version (24142) of the AERMOD (American Meteorological Society/Environmental Protection Agency Regulatory Model) was used to estimate the air quality impacts resulting from the proposed project. AERMOD is an advanced modeling system, which incorporates the boundary layer theory, turbulence, and effects of terrain features into air dispersion simulations. It is an EPA-recommended guideline model to be used to estimate potential impacts from this type of project.

Building downwash was incorporated into the model runs. The most recent version of the Building Profile Input Program (BPIP) with PRIME (BPIPPRM, version 04274) was used to calculate building downwash parameters for input to AERMOD. All downwash files are included in the modeling files.

Meteorological Data

For this analysis, NDEP provided one year (2019) of AERMOD ready meteorological data from a tower located at the Tracy Power Plant. The latitude and longitude of the tower are 39.561N, 119.514W. For this analysis, the Bulk Richardson approach without "adjust-ustar" was used. A wind rose for the site is shown in Figure 6. The tower is roughly 10 kilometers (6.1 miles) northwest of the project site.

Figure 6. Wind Rose for the 2019 Tracy, NV station



Receptor Grids

Receptor elevations for AERMOD were determined using the AERMAP pre-processor (Version 18081). AERMAP uses United States Geological Survey (USGS) 1-degree, 7.5-minute Digital Elevation Model (DEM) files and a newer National Elevation Dataset (NED). AERMAP was run to generate the receptor elevations and hill heights using the NED data. The following receptor grids were used in the modeling analyses:

- 25m spacing along boundary.
- Defined generators area which is a 200m buffer around gens, receptors placed 50 m spacing out to 1000 m from generator area.
- 200 m spacing out to 5000 m

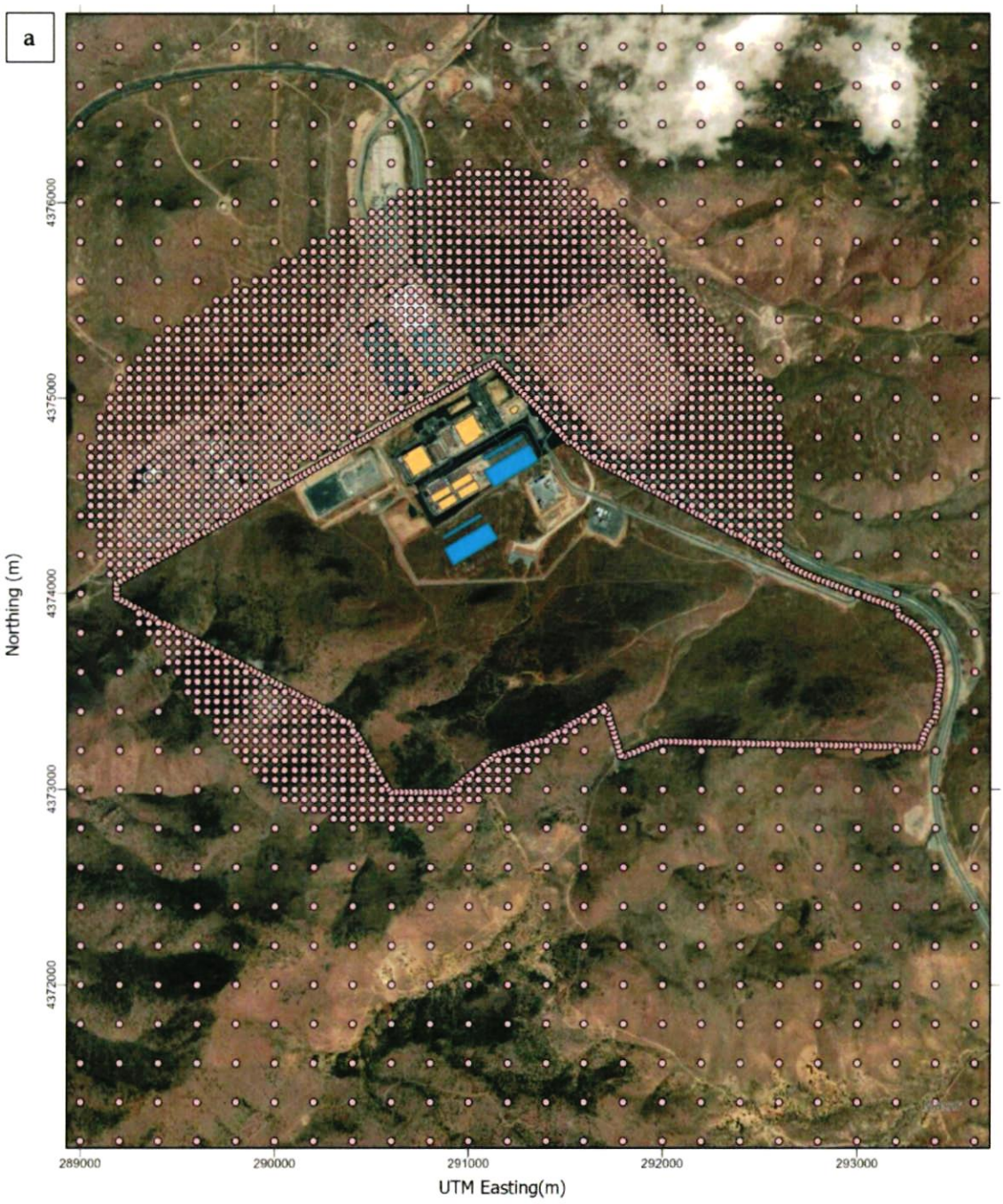
Figure 7a and b show the near and far field receptor grids used.

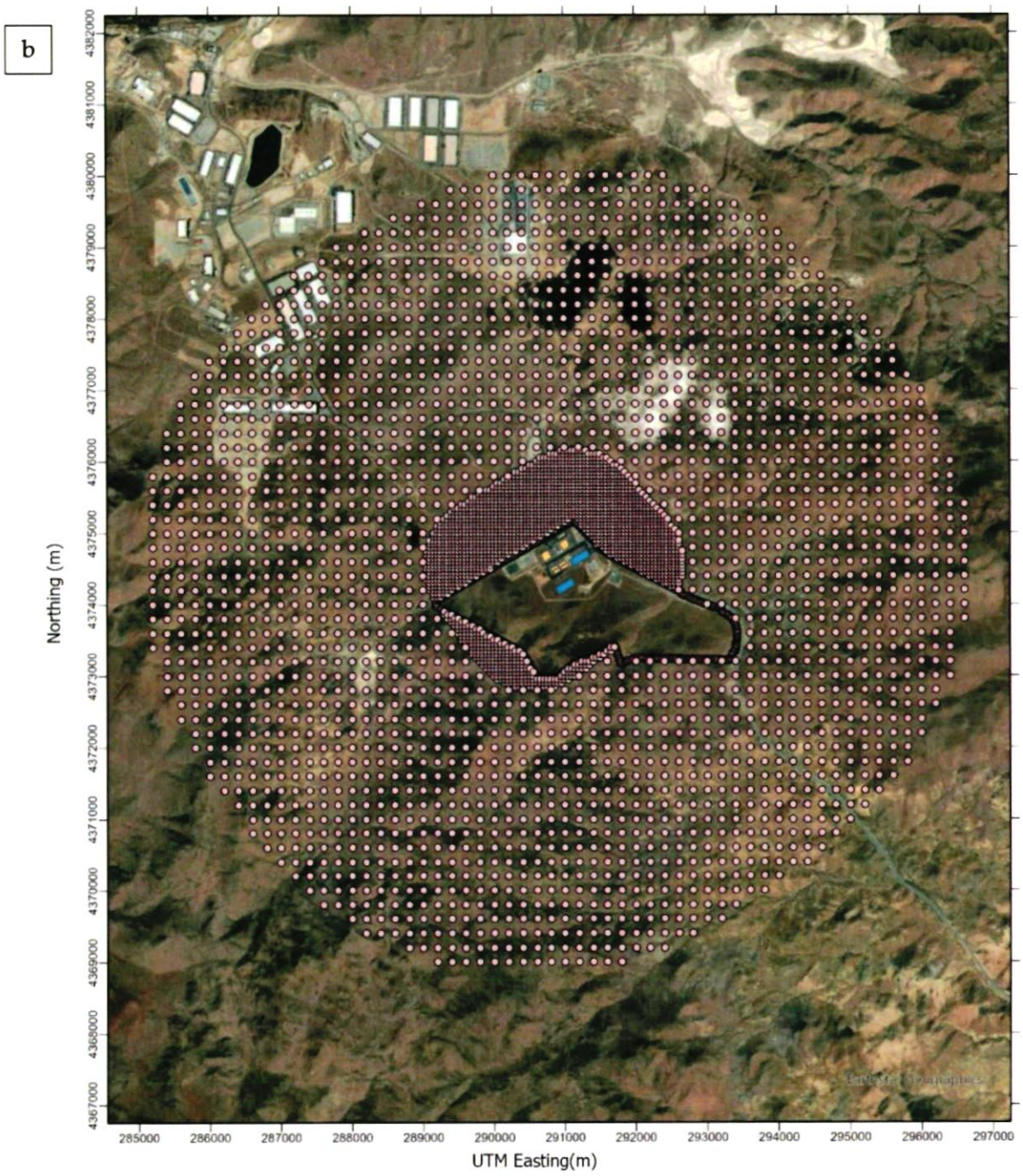
Background Concentrations

For this analysis, NDEP provided the following rural Nevada background concentrations:

- 2.3 $\mu g/m^3$ for $PM_{2.5}$ annual;
- 8 $\mu g/m^3$ for $PM_{2.5}$ 24-hr;
- 10.2 $\mu g/m^3$ for PM_{10} 24-hr; and
- 0 $\mu g/m^3$ for CO, NO_2, and SO_2.
- 93.8 $\mu g/m^3$ for Ozone (based on Fernley NV station from 2016-2018)

Figure 7. (a) Near Field Receptor Grid and (b) Far Field Receptor Grid




b
Northing (m)
4382000
4381000
4380000
4379000
4378000
4377000
4376000
4375000
4374000
4373000
4372000
4371000
4370000
4369000
4368000
4367000
285000
286000
287000
288000
289000
290000
291000
292000
293000
294000
295000
296000
297000
UTM Easting(m)

Standards

Table 10 shows the applicable Nevada and Federal Air Quality Standards.

Table 10. Nevada and Federal Air Quality Standards.

Pollutant	Ave Time	Rank	Nevada Standard µg/m³	Federal Standard µg/m³
PM_{10}	24-hr	H1H	150	150
$PM_{2.5}$	Annual	Max	9	9
$PM_{2.5}$	24-hr	H8H	35	35
NO_2	Annual	Max	100	100
NO_2	1-hr	H8H	188	188
CO	1-hr	H1H	40500	40000
CO	8-hr	H1H	7000	10000
SO_2	Annual	Max	80	-
SO_2	24-hr	H1H	365	-
SO_2	3-hr	H1H	1300	-
SO_2	1-hr	H1H	-	196
Ozone	8-hour	H1H	139.7 (0.07 ppm)	139.7 (0.07 ppm)

Evaluation

Table 11 shows the modeled impacts. Impacts are shown by data center and show the annual concentration calculation.

Table 12shows the potential estimated emissions impacts for the Silver Slate facility, with comparison to the Nevada and National Ambient Air Quality Standards (AAQS). All impacts were less than the applicable AAQS.

Table 11. Modeled Impacts (ug/m³)

24-hr STPM	**DC1**	**DC3**	**DC2**	**DC4**	**All**	**Max**
H1H	8.34	5.66	4.84	24.02	28.37	24.02
H2H	8.07	4.35	4.11	20.53	25.00	20.53
H8H	6.31	3.81	3.33	16.42	20.47	16.41
LT PM as max 1-hr PM for all gens					257.8	
LT Annual PM = 1-hr *100/8760 + continuous sources						2.95
ST 1-hr NO_2	**DC1**	**DC3**	**DC2**	**DC4**		**Max**
H8H	56.16	112.67	97.55	97.88		112.67
LT: H1H 1-hr for all gens					4822.4	
LT Annual NO_2 = 1-hr *100/8760+ continuous sources						55.06
SO2	**DC1**	**DC3**	**DC2**	**DC4**		**Max**
24-hr	0.70	1.04	1.08	1.77		1.77
3-hr	2.53	3.87	5.25	4.96		5.25
1-hr	6.30	10.51	10.99	14.60		14.60
LT SO2: H1H 1-hr for all gens					23.0	
LT Annual SO_2 = 1-hr *100/8760						0.262
CO	**DC1**	**DC3**	**DC2**	**DC4**		**Max**
1-hr	747.5	544.4	572.1	1720.1		1720.1
8-hr	224.1	105.7	165.6	375.5		375.5

Table 12. Model Results and Compliance Demonstration

Pollutant	Ave Time	Rank	Max µg/m³	Bkgd µg/m³	Total Impact µg/m³	Nevada AAQS µg/m³	Federal AAQS µg/m³	Compliant? (Yes/No)
PM10	24-hr	H1H	24.0	10.2	34.2	150	150	Yes
PM2.5	Annual	Max	3.01	2.50	5.5	-	9	Yes
PM2.5	24-hr	H8H	16.4	8	24.4		35	Yes
NO2	Annual	Max	55.1	0	55.1	100	100	Yes
NO2	1-hr	H8H	112.7	0	112.7	188	188	Yes
CO	1-hr	H1H	1720.1	0	1720.1	40500	40000	Yes
CO	8-hr	H1H	375.5	0	375.5	7000	10000	Yes
SO2	Annual	Max	0.006	0	0.006	80	-	Yes
SO2	24-hr	H1H	1.8	0	1.8	365	-	Yes
SO2	3-hr	H1H	5.2	0	5.2	1300	1300	Yes
SO2	1-hr	H1H	14.6	0	14.6	-	196	Yes
Ozone	8-hour	H1H	35.1	93.8	128.9	139.7	139.7	Yes

Ozone Evaluation

BRIDGEWATER GROUP	ENGINEERING CALCULATIONS	PROJECT TITLE: Silver Slate LLC	BY: K. Norville		
		PROJECT NO: GGL-015	PAGE: 1	OF: 1	SHEET: 1
		SUBJECT: Ozone Analysis	DATE: April 17, 2026		

Estimation of O_3 Increment from VOC and NO_x Emissions
Using VOC/NOx Point Source Screening Tables (Richard D. Scheffe)

VOC Emission	Annual	15.8 ton/yr	From Modeling Report Table 8.
NOx Emission	Annual	250.0 ton/yr	Synthetic Minor Limit
VOC/NOx Ratio		0.063	
VOC Emission	Max Daily	1465.2 lb/day	From Modeling Report Table 9 (Scenario: DC01)
		267.4 ton/yr	

Using Table 1 of VOC/NOx Point Source Screening Tables for Rural Conditions
The applicable column in Table 1 is column 3:

Column 3 value for VOC emission rate of:	100 tpy is:	1.4 pphm
Column 3 value for VOC emission rate of:	300 tpy is:	1.7 pphm
By linear interpolation:		
Column 3 value for VOC emission rate of:	267.4 tpy is:	1.65 pphm

Thus, the O_3 increment from VOC emission is: 0.0165 ppm = $\frac{1.65 \text{ pphm}}{\frac{1 \text{ ppm}}{100 \text{ pphm}}}$

Ideal gas constant: 0.022415 m^3/mol (0 °C)
0.024057 m^3/mol (20 °C)

$$\frac{0.0165 \text{ parts}}{1{,}000{,}000 \text{ parts}} \left| \frac{\text{mol}}{0.024057 \text{ m}^3} \right| \frac{48 \text{ g}}{\text{mol}} \left| \frac{1{,}000{,}000 \text{ ug}}{\text{g}} \right| = 32.9 \text{ ug/m}^3$$

Background O_3 Conc.:	0.047 ppm	Three year average (2016-2018) of the athrimetic mean 8-hour values
	93.8 ug/m^3	From the Fernley NV monitor
Max 1-hr O_3 Concentration:	126.7 ug/m^3	

Table 1. Rural-based O_3 Increment (pphm) as a Function of NMOC Emissions and NMOC/NOx Ratios

	TONS NMOC/TONS NOx (PPMC/PPM)		
NMOC EMISSIONS (TONS/YR)	> 20.7 (> 20) (COL 1)	5.2 - 20.7 (5 - 20) (COL 2)	< 5.2 (<5) (COL 3)
50	0.4	0.4	1.1
75	0.4	0.4	1.2
100	0.4	0.5	1.4
300	0.8	1.0	1.7
500	1.1	1.4	1.9
750	1.6	1.9	2.3
1000	2.0	2.4	2.7
1500	2.7	3.0	3.3
2000	3.4	3.8	3.7
3000	4.8	5.2	4.3
5000	7.0	7.5	4.8
7500	9.8	10.1	5.1
10000	12.2	12.9	5.4

Attachment F – Manufacturer's Information and Specifications

Date: 12/20/18

To whom it may concern

Below are the site specific not to exceed (NTE) emissions for Vandelay Project STY in Reno, Nevada.

Engine is 20V4000G74S 3D Tier 2 certified (2800kWe genset)

Boundary conditions	
Intake air temperature	*40C*
Charge air coolant temp	*60C*
Altitude above sea	*5600 feet*
Intake air depression	*25 mbar*
Exhaust back pressure	*50 mbar*
Fuel	*#2 Diesel (ASTM975, EN590)*

Power (P/PN)	*[-]*	*1.00*	*0.75*	*0.50*	*0.25*	*0.10*
Power	*[kW]*	*3010*	*2257.5*	*1505*	*752.5*	*301*
Speed	*[rpm]*	*1800*	*1800*	*1800*	*1800*	*1800*
NOx	*[g/kWh]*	*10.17*	*7.56*	*6.16*	*5.33*	*20.69*
CO	*[g/kWh]*	*2.36*	*2.52*	*2.19*	*7.26*	*23.10*
HC	*[g/kWh]*	*0.15*	*0.32*	*0.44*	*0.97*	*3.54*
Particulate (PM)	*[g/kWh]*	*0.26*	*0.26*	*0.20*	*0.58*	*2.36*

Important note: This NTE value set is only valid for Vandelay Project STY in Reno, Nevada and above boundary conditions as part of the complete plant setup with 20V4000G74S 3D T2 and not valid to other projects, single requests or benchmarks. Values for new engines and new intake air filters.

* Please note that these data are physical values only referring to and representing a normative defined operating condition. Any change in operating time and conditions will have impact on physical values and engine behavior, which have to be reflected and assessed within the complete propulsion system especially in regard to emission compliance and product safety. These data are representing the contractual agreed scope of the MTU engine at the time of delivery. MTU doesn't take any responsibility or liability neither out or in connection with the contract nor on any other basis

• beyond these specified operating conditions of the engine

• and for any installation/modification of the entire propulsion system by the customer itself or any third party and the customer will indemnify MTU on first demand for any third party claim out or in connection with this.

Calculated values are not proven by tests and therefore the accuracy cannot be guaranteed. Emissions data measurement procedures are consistent with those described in the applicable rules and standards. The NO_x, CO, HC and PM emission data tabulated here were takes from a single new engine under the test conditions shown above and are valid for the following conditions:

• Fuel according to EN 590 or US EPA 40CFR89

• Coolant and Lubricants according MTU Fuels and Lubricants Specification

Emissions data is based on single operating points and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle. Field emission test data are not guaranteed to these levels. Actual field test results

MTU America Inc. dba MTU Onsite Energy
100 Power Drive, Mankato, MN 56001 / USA / T +1 507 625 7873 / www.mtuonsiteenergy.com

A Rolls-Royce Power Systems Company

may vary due to test site conditions, installation, fuel specification, test procedures, and instrumentation. Over time deterioration may occur which may have an impact on emission levels. MTU Friedrichshafen GmbH has made efforts to ensure that the information in this data sheet is accurate, but reserves the right to amend specifications and information without notice and without obligation or liability. No liability for any errors, facts or opinions is accepted. Customers must satisfy themselves as to the suitability of this product for their application. No responsibility for any loss as a result of any person placing reliance on any material contained in this data sheet will be accepted. MTU Friedrichshafen GmbH reserves all rights in the information contained in this data sheet. It shall not be reproduced, made available to a third party or otherwise used in any way whatsoever.

Sincerely,

Mark Halbert
Director of Engineering
MTU Onsite Energy Corporation

Chris Schroeder
Application Engineering
MTU Onsite Energy Corporation

DIESEL GENERATOR SET
MTU 20V4000 DS2800

2800 kWe / 60 Hz / Standby
380 - 13.8kV

mtu onsite energy

SYSTEM RATINGS

Standby

Voltage (L-L)	380V	480V	600V	4160V	12470V	13200V	13800V
Phase	3	3	3	3	3	3	3
PF	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60	60
kW	2800	2800	2800	2800	2800	2800	2800
kVA	3500	3500	3500	3500	3500	3500	3500
Amps [illegible]	5318	4210	3368	486	162	153	146
Voltage Dip	4000	5400	5875	5250	5125	4875	6000
Generator Model	1030FDL1110	1020FDL1106	1020FDS1124	1020FDM1182	1030FDH1254	1030FDH1252	1030FDH1254
Temp Rise	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C
Connection	6 LEAD WYE	6 LEAD WYE	6 LEAD WYE	6 LEAD WYE	6 LEAD WYE	6 LEAD WYE	6 LEAD WYE

* UL 2200 Offered

CERTIFICATIONS AND STANDARDS

- **Emissions** – EPA Tier 2 Certified
- **Generator set is designed and manufactured in facilities certified to standards ISO 9001:2008 and ISO 14001:2004**
- **Seismic Certification – Optional**
  - IBC Certification
  - OSHPD Pre-Approval
- **UL 2200 Listed – Optional**
- **Performance Assurance Certification (PAC)**
  - Generator Set Tested to ISO 8528-5 for Transient Response
  - Verified product design, quality and performance integrity
  - All engine systems are prototype and factory tested
- **Power Rating**
  - Accepts Rated Load in One Step Per NFPA 110
  - Permissible average power output during 24 hours of operation is approved up to 85%.

APPLICATION DATA

Engine

Manufacturer	MTU
Model	20V4000G74S
Type	4-Cycle
Arrangement	20-V
Displacement: L (in^3)	95.4 (5,822)
Bore: cm (in)	17 (6.69)
Stroke: cm (in)	21 (8.27)
Compression Ratio	16.4:1
Rated RPM	1,800
Engine Governor	Electronic Isochronous (ADEC)
Max. Power: kWm (bhp)	3,010 (4,036)
Speed Regulation	±0.25%
Air Cleaner	Dry

Liquid Capacity (Lubrication)

Total Oil System: L (gal)	390 (103)
Engine Jacket Water Capacity: L (gal)	205 (54.2)
After Cooler Water Capacity: L (gal)	50 (13.2)
System Coolant Capacity: L (gal)	860 (227)

Electrical

Electric Volts DC	24
Cold Cranking Amps Under -17.8 °C (0 °F)	4,200

Fuel System

Fuel Supply Connection Size	-16 JIC 37° Female 1" NPT Adapter Provided
Fuel Return Connection Size	-16 JIC 37° Female 1" NPT Adapter Provided
Max. Fuel Lift: m (ft)	1 (3)
Recommended Fuel	Diesel #2
Total Fuel Flow: L/hr (gal/hr)	1,620 (428)

Fuel Consumption

At 100% of Power Rating: L/hr (gal/hr)	704 (186)
At 75% of Power Rating: L/hr (gal/hr)	553 (146)
At 50% of Power Rating: L/hr (gal/hr)	394 (104)

Cooling - Radiator System

Ambient Capacity of Radiator: °C (°F)	48 (118)
Max. Restriction of Cooling Air: Intake and Discharge Side of Rad.: kPa (in. H_2O)	0.12 (0.5)
Water Pump Capacity: L/min (gpm)	1,567 (414)
After Cooler Pump Capacity: L/min (gpm)	567 (150)
Heat Rejection to Coolant: kW (BTUM)	1,040 (59,143)
Heat Rejection to After Cooler: kW (BTUM)	740 (42,083)
Heat Radiated to Ambient: kW (BTUM)	237 (13,476)
Fan Power: kW (hp)	60.6 (81.3)

Air Requirements

Aspirating: *m^3/min (SCFM)	240 (8,476)
Air Flow Required for Rad. Cooled Unit: *m^3/min (SCFM)	3,082 (108,843)
Remote Cooled Applications; Air Flow Required for Dissipation of Radiated Generator Set Heat for a Max. of 25 °F Rise: *m^3/min (SCFM)	843 (29,603)

* Air density = 1.184 kg/m^3 (0.0739 lbm/ft^3)

Exhaust System

Gas Temp. (Stack): °C (°F)	470 (878)
Gas Volume at Stack Temp: m^3/min (CFM)	594 (20,977)
Max. Allowable Back Pressure: kPa (in. H_2O)	8.5 (34.1)

System 01 Emergency Generators: MTU 20V4000G74S

Emission Unit IDs: S0101-S0114

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2019 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: MTU America, Inc. (U.S. Manufacturer or Importer) **Certificate Number:** KMDDL95.4GTR-007	**Effective Date:** 11/06/2018 **Expiration Date:** 12/31/2019	Byron J. Bunker, Division Director Compliance Division	**Issue Date:** 11/06/2018 **Revision Date:** N/A

Model Year: 2019
Manufacturer Type: Original Engine Manufacturer
Engine Family: KMDDL95.4GTR

Mobile/Stationary Indicator: Stationary
Emissions Power Category: 560< kW<=2237
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: Electronic Control, Smoke Puff Limiter

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

The actual engine power may be outside the limits of the Emissions Power Category shown above. See the certificate application for details.

ROLLS ROYCE

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Contents

	Genset	Marine	O & G	Rail	C & I
Application	X				
Engine model	20V4000G94S				
Rated power [kW]	3490				
Rated speed [rpm]	1800				
Application Group	3D				
Legislative body	EPA Stationary EMERG T2 (40CFR60)				
Test cycle	D2				
Data Set No.	XZ54954100429				
Data Set Basis	US EPA Nonroad Tier 2 (40CFR1039)				
Fuel sulphur content [ppm]	7.8				

Description of Revision | Frequency

Data generated by EDS Creator version 1.0 and uniplot.
Ref.-dataset: RP057_121219_1800_D2_Cycle_1_D... no for 1115 in EDS platform.

Configurator	[illegible] (TATC)	Project no 0	Size A4
Approver1	[illegible]	Order no 0	
Approver2	[illegible] (TATC)	EDS-ID 1014-16.12.2021	
Approver3	[illegible]		
Approver4			
User	[illegible]	Title: Emission data sheet	
Engine model: 20V4000G94S			

Emissionstage: EPA Stationary EMERG T2 (40CFR60) | Sheet 1 of 5

Configuration-ID: 1115 | Documentation: [illegible] | Emissionstage basis: US EPA Nonroad Tier 2 (40CFR1039)

ROLLS ROYCE

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General Disclaimers (valid for Measured and NTE values)

Please note that these data are physical and/or technical values only referring to and representing a normative defined operating condition. Any change in operating time and conditions will have impact on physical values and engine behavior, which must be considered and assessed within the complete propulsion system especially in regard to emission compliance and product safety.

Measurements listed in this EDS are representative of the listed engine rating at the time of testing. These measurements and results can change according to instrumentation, boundary condition, and engine to engine variability. In addition - changes to the engine family hard or software may occur which could result in changes to some of the listed values.

Emissions data measurement procedures are conducted according to applicable rules and standards as per "Emission Stage/Optimization". Potential deviations from these procedures are documented internally.

The listed emission values relate to the corresponding certification data. Seller doesn't take any responsibility or liability neither out or in connection with the contract nor on any other basis
- beyond these specified operating conditions of the engine
- and for any installation/modification of the entire propulsion system by the customer itself or any third party
and the customer will indemnify MTU on first demand for any third party claim out or in connection with this.

Seller reserves the right to amend specifications and information without notice and without obligation or liability. No liability for any errors, facts or opinions is accepted. Customers must satisfy themselves as to the suitability of this product for their application. No responsibility for any loss as a result of any person placing reliance on any material contained in this data sheet will be accepted.

Seller reserves all rights in the information contained in this data sheet. It shall not be reproduced, made available to a third party or otherwise used in any way whatsoever.

When applicable, emission values are measured after combined exhaust streams.

Measured Emissions data is based on single operating points and thus cannot be used to compare to regulations which use values based on a weighted cycle.

Field emission test data are not guaranteed to these levels. Actual field test results may vary due to test site conditions, installation, fuel specification, test procedures, and instrumentation. Over time deterioration may occur which may have an impact on emission levels.

The SO_2 emission rates comprehend exclusively the SO_2 content as found in the fuel source, oil consumption effects are not included. Variation of sulfur content in the fuel changes only the stated SO_2 emissions, cross sensitivity to other emissions (e.g. particulates) is not possible.

All values based on metric units, inaccuracies for non metric values can occur, values are not binding.

Specific to gas engines: The listed emission values are based on gas composition at the time of certification measurement. Gas composition is as displayed in the EDS-document. Carbon dioxide and methane concentrations have direct influence on the corresponding displayed carbon dioxide and methane emissions.

EAT Specific Disclaimers (valid for EDS values)

NH_3 emissions levels measured with AVL SESAM i60/4 FT Multi Component Exhaust Measurement System (FTIR) including EPA 40 CFR 1065 legislation compliant automated checks for linearity.
Generators or engines with exhaust after-treatment systems require a stabilization period of approximately 1 hour to ensure stable temperatures across SCR prior to performing an emissions test. Performing emissions measurements before a stable temperature has been achieved can result in inconsistent emission values. NOx Values only applicable if temperatures across SCR reached for DEF Dosing.

NTE Disclaimers (valid for NTE calculated values)

Calculated not to exceed values (NTE) are not proven by tests and therefore the accuracy is not guaranteed.

All emission data shown in chapters Emission Data Sheet, Not to Exceed Values, and Type Approval were gathered from a corresponding certification engine under test conditions shown above and complying to corresponding TEN data.

Description of Revision | Frequency

Data generated by EDS Creator version 1.0 and uniplot.
Ref.-dataset: RP057_121219_1800_D2_Cycle_1_D... no for 1115 in EDS platform.

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Configurator	[illegible] (TATC)	Project no 0	Size A4
Approver1	[illegible]	Order no 0	
Approver2	[illegible] (TATC)	EDS-ID 1014-16.12.2021	
Approver3	[illegible]		
Approver4			
User	[illegible]	Title: Emission data sheet	
Engine model: 20V4000G94S			

Emissionstage: EPA Stationary EMERG T2 (40CFR60) | Sheet 2 of 5

Configuration-ID: 1115 | Documentation: [illegible] | Emissionstage basis: US EPA Nonroad Tier 2 (40CFR1039)

A Rolls-Royce solution

Engine data

	Genset	Marine	O & G	Rail	C & I
Application	X				
Engine model	20V4000G94S				
Application Group	3D				
Legislative body	EPA Stationary EMERG T2 (40CFR60)				
Test cycle	D2				
Fuel sulphur content [ppm]	7.8				
mg/mN³ values base on residual oxygen value of [%]	Measured				

Not to exceed emission values*

Cycle point	[-]	n1	n2	n3	n4	n5
Power	kW	3490	2617	1745	872	349
Power relative	[-]	1	0.75	0.5	0.25	0.1
Engine speed	1/min	1800	1800	1800	1800	1800
	rpm	1800	1800	1800	1800	1800
Engine speed relative	[-]	1	1	1	1	1
NOX-Emissions specific	g/(bhp*h)	5.99	5.34	4.66	4.12	14.61
	g/kWh	8.03	7.16	6.24	5.52	19.59
CO-Emissions specific	g/(bhp*h)	0.91	1.01	0.84	2.1	9.57
	g/kWh	1.22	1.35	1.13	2.81	12.83
HC1-Emissions specific	g/(bhp*h)	0.18	0.27	0.45	1.04	4.7
	g/kWh	0.24	0.36	0.6	1.39	6.31
NMHC-Emissions specific	g/kWh	0.24	0.36	0.6	1.39	
NOX+HC1-Emissions specific	g/(bhp*h)	6.17	5.61	5.11	5.16	19.31
	g/kWh	8.27	7.52	6.85	6.92	25.89
NOX+NMHC-Emissions specific	g/kWh	8.27	7.52	6.85	6.92	
PM-Emissions specific (Meas.)	g/(bhp*h)	0.07	0.104	0.09	0.262	1.793
	g/kWh	0.094	0.14	0.121	0.352	2.405

Configurator	[illegible]	Project no. 0	Size A4
Approver1	[illegible]	Order no. 0	
Approver2	[illegible]	EDS-ID 1014-16.12.2021	
Approver3	[illegible]	Title: Emission data sheet	
User	[illegible]		

Description of Revision | Frequency

Data generated by EDS Creator version 1.0 and unpaid. Ref.-dataset: [illegible] platform.

Engine model: 20V4000G94S

Emissionstage: EPA Stationary EMERG T2 (40CFR60)

Emissionstage basis: US EPA Nonroad Tier 2 (40CFR1039)

Sheet 5 of 5

Configuration-ID: 1115

Documentation: [illegible]

System 2 Emergency Generators: MTU 20V4000G94S

Emission Unit IDs: S0115-S0126

Rolls-Royce Solutions America Inc.

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Novi, MI 48377, USA
T +1 248 560 8000

600 Bettis Academy Rd.
Graniteville, SC 29829, USA
T +1 803 663 8831

100 Power Dr.
Mankato, MN 56001, USA
T +1 507 625 7973

December 6th, 2022

To Whom it May concern:

Please reference Table 1 providing the fuel flowrate data for the Rolls-Royce America Solutions Inc. (previous company name MTU America Inc) model 20V4000G94S stationary emergency standby EPA Tier 2 certified engine in gallons per hour based on the 20V4000G94S Technical Sales document product specification document.

Table 1. 20V4000G94S Fuel Consumption*

load	g/kWh	kW	cc/kwh	gal/kWh	gal/h
100%	208	3490	245	0.065	226
75%	211	2618	248	0.066	172
50%	219	1745	258	0.068	119
25%	249	872	293	0.077	67.5

*Calculations from g/kWh to US gal/h based on SG = 0.85 and 1 gal = 3,785 cc

Mark Holt

Mark Holt
Emissions Expert
Rolls-Royce Solutions America Inc.
100 Power Drive
Mankato, MN 56001
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Mobile: +1 612 518-6775
Email: mark.holt@ps.rolls-royce.com

SSE 2024_079

May 7th, 2024

To Whom It May Concern:

With regards to Cummins Power Systems (CPS) manufactured diesel generator set model **C3000D6EB** rated for 60 Hz operation and equipped with Cummins **QSK78-G37** engine:

When tested under the following conditions:

Table 1	
Fuel Specification:	ASTM D975 No. 2-D S15 diesel fuel with 0.0015% sulfur content (by weight), and 42-48 cetane number.
Air Inlet Temperature:	77 °F
Fuel Inlet Temperature:	104 °F (at fuel pump inlet)
Barometric Pressure:	29.53 in. Hg
Humidity:	NOx measurement corrected to 75 grains H2O/lb. dry air

Based on engine emissions validation testing, the table below represents the nominal performance and exhaust emissions data for the generator set listed above:

	Standby				
PERFORMANCE DATA	**10%**	**25%**	**50%**	**75%**	**100%**
Electrical Power (kWe)	275	688	1375	2063	2750
Engine Power (BHP at 1800 RPM/60Hz)	534	1110	2071	3031	3991
Fuel Consumption (US Gal/hr)	35	61	104	147	184
Exhaust Gas Flow (CFM)	5521	8413	13396	17899	20643
Exhaust Gas Temperature (°F)	603	762	814	805	827
NOx (Oxides of Nitrogen)	4.65	3.81	3.70	3.89	5.55
NMHC (Nonmethane Hydrocarbons)	0.58	0.22	0.11	0.08	0.07
CO (Carbon Monoxide)	1.7	0.5	0.2	0.1	0.1
PM (Particulate Matter)	0.09	0.07	0.03	0.02	0.02

All emissions values above are cited as g/bhp-hr

Steady-State emissions recorded per ISO8178-1 during operation at rated engine speed (+/-2%) and stated constant load (+/-2%) with engine temperatures, pressures and emission rates stabilized.

The NOx, HC, CO, and PM emission data tabulated here are representative of test data taken from a single engine under the test conditions shown above. Data for the other components are estimated. This data is subject to instrumentation and engine-to-engine variability. Field emissions test data is not guaranteed to these levels. Actual field test results may vary due to test ambient, site conditions, installation, fuel specification, test procedures, instrumentation and ambient correction factors. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

SSE 2024_079

Values provided in the table below are representative of "Potential Site Variation" for the Program site STY3 in Spark, Nevada. These values account for variances as indicated above without consideration of improper generator set maintenance.

	Standby				
PERFORMANCE DATA	**10%**	**25%**	**50%**	**75%**	**100%**
Electrical Power (kWe)	275	688	1375	2063	2750
Engine Power (BHP at 1800 RPM/60Hz)	534	1110	2071	3031	3991
NOx (Oxides of Nitrogen)	5.90	4.83	4.70	4.94	7.04
NMHC (Nonmethane Hydrocarbons)	0.99	0.37	0.19	0.14	0.12
CO (Carbon Monoxide)	3.4	1.0	0.4	0.2	0.2
PM (Particulate Matter)	0.18	0.14	0.06	0.04	0.02

All emissions values above are cited as g/bhp-hr

Potential Site variation values provided above are accounted for Engine, Ambient variation and measurement with no correction factors.

The values in this letter are applicable for engines operating on ASTM D975 DF2 and paraffinic fuels conforming to EN15940, including Hydrotreated Vegetable Oil (HVO). Please consult Fluids for Cummins Engines bulletin # 3379001 for more information on the applicability of HVO.

The data and information provided in this letter is for informational purposes to assist customers in making purchasing decisions appropriate for their site-specific compliance needs. Owners/operators of compression ignition internal combustion engines are responsible for ensuring compliance with applicable local, state, and federal standards when CI engines are installed at the owner/operator site. The data and information contained herein regarding site variation values in particular should be considered as part of a site-specific compliance evaluation.

This letter does not supersede any of the commercial terms of sale, including, but not limited to, warranty coverage and compliance with law obligations. THE INFORMATION IN THIS LETTER IS PROVIDED "AS IS" AND WITH ALL FAULTS AND DEFECTS. CUMMINS DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED AND THIS LETTER SHOULD NOT BE SHARED WITH THIRD PARTIES WITHOUT CUMMINS PRIOR WRITTEN CONSENT. For further questions on this product or application, please contact the local Cummins Sales and Service representative.

Best Regards,

Miguel Araujo
Application Engineer – Strategic Accounts (Data Center)
Cummins Power Generation

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SSE 2024_079

May 7th, 2024

To Whom It May Concern:

With regards to Cummins Power Systems (CPS) manufactured diesel generator set model **C3000D6EB** rated for 60 Hz operation and equipped with Cummins **QSK78-G37** engine:

When tested under the following conditions:

Table 1	
Fuel Specification:	ASTM D975 No. 2-D S15 diesel fuel with 0.0015% sulfur content (by weight), and 42-48 cetane number.
Air Inlet Temperature:	77 °F
Fuel Inlet Temperature:	104 °F (at fuel pump inlet)
Barometric Pressure:	29.53 in. Hg
Humidity:	NOx measurement corrected to 75 grains H2O/lb. dry air

Based on engine emissions validation testing, the table below represents the nominal performance and exhaust emissions data for the generator set listed above:

	Standby				
PERFORMANCE DATA	**10%**	**25%**	**50%**	**75%**	**100%**
Electrical Power (kWe)	275	688	1375	2063	2750
Engine Power (BHP at 1800 RPM/60Hz)	534	1110	2071	3031	3991
Fuel Consumption (US Gal/hr)	35	61	104	147	184
Exhaust Gas Flow (CFM)	5525	8423	13396	17899	20643
Exhaust Gas Temperature (°F)	603	762	814	805	827
NOx (Oxides of Nitrogen)	4.65	3.81	3.70	3.89	5.55
NMHC (Nonmethane Hydrocarbons)	0.58	0.22	0.11	0.08	0.07
CO (Carbon Monoxide)	1.7	0.5	0.2	0.1	0.1
PM (Particulate Matter)	0.09	0.07	0.03	0.02	0.02

All emissions values above are cited as g/bhp-hr

Steady-State emissions recorded per ISO8178-1 during operation at rated engine speed (+/-2%) and stated constant load (+/-2%) with engine temperatures, pressures and emission rates stabilized.

The NOx, HC, CO, and PM emission data tabulated here are representative of test data taken from a single engine under the test conditions shown above. Data for the other components are estimated. This data is subject to instrumentation and engine-to-engine variability. Field emissions test data is not guaranteed to these levels. Actual field test results may vary due to test ambient, site conditions, installation, fuel specification, test procedures, instrumentation and ambient correction factors. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

SSE 2024_079

Values provided in the table below are representative of "Potential Site Variation" for the Program site STY3 in Spark, Nevada. These values account for variances as indicated above without consideration of improper generator set maintenance.

	Standby				
PERFORMANCE DATA	**10%**	**25%**	**50%**	**75%**	**100%**
Electrical Power (kWe)	275	688	1375	2063	2750
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NOx (Oxides of Nitrogen)	5.90	4.83	4.70	4.94	7.04
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CO (Carbon Monoxide)	3.4	1.0	0.4	0.2	0.2
PM (Particulate Matter)	0.18	0.14	0.06	0.04	0.02

All emissions values above are cited as g/bhp-hr

Potential Site variation values provided above are accounted for Engine, Ambient variation and measurement with no correction factors.

The values in this letter are applicable for engines operating on ASTM D975 DF2 and paraffinic fuels conforming to EN15940, including Hydrotreated Vegetable Oil (HVO). Please consult Fluids for Cummins Engines bulletin # 3379001 for more information on the applicability of HVO.

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Best Regards,

Miguel Araujo
Application Engineer – Strategic Accounts (Data Center)
Cummins Power Generation

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SSE 2024_079

May 7th, 2024

To Whom It May Concern:

With regards to Cummins Power Systems (CPS) manufactured diesel generator set model **C3000D6EB** rated for 60 Hz operation and equipped with Cummins **QSK78-G37** engine:

When tested under the following conditions:

Table 1	
Fuel Specification:	ASTM D975 No. 2-D S15 diesel fuel with 0.0015% sulfur content (by weight), and 42-48 cetane number.
Air Inlet Temperature:	77 °F
Fuel Inlet Temperature:	104 °F (at fuel pump inlet)
Barometric Pressure:	29.53 in. Hg
Humidity:	NOx measurement corrected to 75 grains H2O/lb. dry air

Based on engine emissions validation testing, the table below represents the nominal performance and exhaust emissions data for the generator set listed above:

	Standby				
PERFORMANCE DATA	**10%**	**25%**	**50%**	**75%**	**100%**
Electrical Power (kWe)	275	688	1375	2063	2750
Engine Power (BHP at 1800 RPM/60Hz)	534	1110	2071	3031	3991
Fuel Consumption (US Gal/hr)	35	61	104	147	184
Exhaust Gas Flow (CFM)	5543	8423	13396	17899	20643
Exhaust Gas Temperature (°F)	603	762	814	805	827
NOx (Oxides of Nitrogen)	4.65	3.81	3.76	3.89	5.55
NMHC (Nonmethane Hydrocarbons)	0.58	0.22	0.11	0.08	0.07
CO (Carbon Monoxide)	1.7	0.5	0.2	0.1	0.1
PM (Particulate Matter)	0.09	0.07	0.03	0.02	0.02

All emissions values above are cited as g/bhp-hr

Steady-State emissions recorded per ISO8178-1 during operation at rated engine speed (+/-2%) and stated constant load (+/-2%) with engine temperatures, pressures and emission rates stabilized.

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SSE 2024_079

Values provided in the table below are representative of "Potential Site Variation" for the Program site STY3 in Spark, Nevada. These values account for variances as indicated above without consideration of improper generator set maintenance.

	Standby				
PERFORMANCE DATA	**10%**	**25%**	**50%**	**75%**	**100%**
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Engine Power (BHP at 1800 RPM/60Hz)	534	1110	2071	3031	3991
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CO (Carbon Monoxide)	3.4	1.0	0.4	0.2	0.2
PM (Particulate Matter)	0.18	0.14	0.06	0.04	0.02

All emissions values above are cited as g/bhp-hr

Potential Site variation values provided above are accounted for Engine, Ambient variation and measurement with no correction factors.

The values in this letter are applicable for engines operating on ASTM D975 DF2 and paraffinic fuels conforming to EN15940, including Hydrotreated Vegetable Oil (HVO). Please consult Fluids for Cummins Engines bulletin # 3379001 for more information on the applicability of HVO.

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Best Regards,

Miguel Araujo
Application Engineer – Strategic Accounts (Data Center)
Cummins Power Generation

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MECHANICAL UNITS 3080kWe		77°F at 5600 feet				
Generator Set Manufacturer		Cummins Power Systems				
Generator Set Model		C3250D6e				
Engine Model		QSK95-G9				
Percent Load (Application)	%	100	75	50	25	10
Generator Set output	kWe	3080	2310	1540	770	308
Engine Load (Gross)	kWm	3320	2490	1662	831	332
Engine Load	bhp	4456	3342	2228	1114	446
Fuel Consumption	US gal/hr	221	169	123	68	38

November 28, 2018

To Whom It May Concern:

Below are the site variation values for the QSK95 units going to the STY Reno Site.

Estimated Emissions Site Values for STY Reno Critical Units (3080 kWe)

Emissions Multipliers to account for Engine, Measurement, and Ambient Variation with no correction factors

*Measurement variation assumes exhaust flow rate is calculated using EPA Title 40, Chapter I, Subchapter C, Part 60, Appendix A-7 Test Method 19 (no pitot tube allowed)

Steady State Emissions Values										
QSK95 G9 FR7372 1800rpm @ 3080 kWe										
Engine Power (bhp)	**4456**	**3342**	**2228**	**1114**	**446**	**4456**	**3342**	**2228**	**1114**	**446**
	Nominal					**Site Specific Emissions**				
	77°F at 5600 feet					**Estimated Site 95%(z=1.64) Values (g/bhp-hr.)**				
	100%	**75%**	**50%**	**25%**	**10%**	**100%**	**75%**	**50%**	**25%**	**10%**
NOx (Oxides of Nitrogen)	4.7	4.1	2.9	3.0	4.8	6.0	5.3	3.7	3.8	6.1
NMHC (Nonmethane hydrocarbons)	0.06	0.13	0.15	0.23	0.61	0.10	0.22	0.26	0.39	1.04
NOx + NMHC	4.8	4.3	3.1	3.2	5.4	6.1	5.5	4.0	4.2	7.2
CO (Carbon Monoxide)	0.5	0.2	0.6	1.1	3.6	1.1	0.5	1.1	2.3	7.2
PM (Particulate Matter)	0.06	0.07	0.13	0.25	0.29	0.15	0.18	0.33	0.63	0.73

***All the values above assume the intake manifold temperature does not exceed 126°F at an ambient temperature of 77°F and altitude of 5600 feet.**

If there are any questions, please reach out to the individual listed below.

Sincerely,
Bhargava Srikantha
Application Engineer – Technical Specialist
Cummins Power Systems
3850 Victoria St N, Shoreview, MN-55126
KN147@Cummins.com, Ph.: 612-875-8298

Glaucio G De Oliveira
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2019 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Cummins Inc. (U.S. Manufacturer or Importer) **Certificate Number:** KCEXL95.0AAA-015	**Effective Date:** 10/01/2018 **Expiration Date:** 12/31/2019	Byron J. Bunker, Division Director Compliance Division	**Issue Date:** 10/01/2018 **Revision Date:** N/A

Model Year: 2019
Manufacturer Type: Original Engine Manufacturer
Engine Family: KCEXL95.0AAA

Mobile/Stationary Indicator: Stationary
Emissions Power Category: kW>560
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: No Non-After Treatment Devices Installed

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

December 15th, 2021

To Whom It May Concern:

With regards to Cummins Power Systems (CPS) manufactured diesel generator set model C3250 D6e rated for 60 Hz operation and equipped with Cummins QSK95-G9 engine:

When tested under the following conditions:

Table 1	
Fuel Specification:	ASTM D975 No. 2-D S15 diesel fuel with 0.0015% sulfur content (by weight), and 42-48 cetane number.
Air Inlet Temperature:	77 °F
Fuel Inlet Temperature:	104 °F (at fuel pump inlet)
Barometric Pressure:	29.53 in. Hg
Humidity:	NOx measurement corrected to 75 grains H2O/lb. dry air

Based on engine emissions validation testing, the table below represents the nominal performance and exhaust emissions data for the generator set listed above:

	Standby			
PERFORMANCE DATA	25%	50%	75%	100%
BHP @ 1800 RPM (60 Hz)	1173	2241	3308	4379
Power Output (kWe)	770	1540	2310	3080
Fuel Consumption US Gal/Hr	69	120	163	211
Exhaust Gas Flow CFM	10145	16254	19840	23582
Exhaust Gas Temperature °F	632	670	717	838
NMHC (Nonmethane Hydrocarbons)	0.3	0.18	0.10	0.07
NOx (Oxides of Nitrogen)	5.82	5.38	4.3	5.52
CO (Carbon Monoxide)	0.5	0.2	0.1	0.2
PM (Particulate Matter)	0.21	0.1	0.06	0.04
All emissions values above are cited as g/bhp-hr				

Steady-State emissions recorded per ISO8178-1 during operation at rated engine speed (+/-2%) and stated constant load (+/-2%) with engine temperatures, pressures and emission rates stabilized.

The NOx, HC, CO, and PM emission data tabulated here are representative of test data taken from a single engine under the test conditions shown above. Data for the other components are estimated. This data is subject to instrumentation and engine-to-engine variability. Field emissions test data is not guaranteed to these levels. Actual field test results may vary due to test ambient, site conditions, installation, fuel specification, test procedures, instrumentation and ambient correction factors. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

Values provided in the table below are representative of "Potential Site Variation" for the Program STY1_ZN2 site in Reno, Nevada. These values account for variances as indicated above without consideration of improper generator set maintenance.

PERFORMANCE DATA	25%	50%	75%	100%
BHP @ 1800 RPM (60 Hz)	1173	2241	3308	4379
POWER OUTPUT (kWe)	770	1540	2310	3080
NMHC (Nonmethane Hydrocarbons)	0.51	0.31	0.17	0.12
NOx (Oxides of Nitrogen)	4.94	4.13	5.46	6.76
CO (Carbon Monoxide)	1.0	0.4	0.2	0.4
PM (Particulate Matter)	0.42	0.20	0.12	0.08
All emissions values above are cited as g/bhp-hr				
Potential Site variation values provided above are accounted for Engine, Ambient variation and measurement with no correction factors.				

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Best Regards,

Miguel Araujo
Application Engineer – Strategic Accounts (Data Center)
Cummins Power Generation

SSE 2023_130

August 24th, 2023

To Whom It May Concern:

With regards to Cummins Power Systems (CPS) manufactured diesel generator set model **C3250D6E** rated for 60Hz operation and equipped with Cummins **QSK95-G9** engine:

When tested under the following conditions:

Table 1	
Fuel Specification:	ASTM D975 No. 2-D S15 diesel fuel with 0.0015% sulfur content (by weight), and 42-48 cetane number.
Air Inlet Temperature:	77 °F
Fuel Inlet Temperature:	104 °F (at fuel pump inlet)
Barometric Pressure:	29.53 in. Hg
Humidity:	NO_x measurement corrected to 75 grains H_2O/lb. dry air

Based on engine emissions validation testing, the table below represents the nominal performance and exhaust emissions data for the generator set listed above:

	Standby					
PERFORMANCE DATA	**10%**	**25%**	**50%**	**75%**	**95%**	**100%**
Power Output (kWe)	308	770	1540	2310	2926	3080
BHP @ 1800 RPM (60 Hz)	556	1202	2277	3353	4213	4428
Fuel Consumption (US Gal/Hr)	42	71	120	163	201	211
Exhaust Gas Flow (CFM)	7253	10557	16202	19771	22619	23326
Exhaust Gas Temperature (°F)	547	653	688	732	818	843
NO_x (Oxides of Nitrogen)	4.40	3.17	3.18	4.18	5.10	5.42
NMHC (Nonmethane Hydrocarbons)	0.43	0.28	0.19	0.10	0.07	0.07
CO (Carbon Monoxide)	1.4	0.5	0.3	0.2	0.2	0.2
PM (Particulate Matter)	0.14	0.11	0.07	0.05	0.05	0.03
	All emissions values above are cited as g/bhp-hr					

Steady-State emissions recorded per ISO8178-1 during operation at rated engine speed (+/-2%) and stated constant load (+/-2%) with engine temperatures, pressures and emission rates stabilized.

The NOx, HC, CO, and PM emission data tabulated here are representative of test data taken from a single engine under the test conditions shown above. Data for the other components are estimated. This data is subject to instrumentation and engine-to-engine variability. Field emissions test data is not guaranteed to these levels. Actual field test results may vary due to test ambient, site conditions, installation, fuel specification, test procedures, instrumentation and ambient correction factors. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

SSE 2023_130

Values provided in the table below are representative of "Potential Site Variation" for the Program STY site in Reno, NV. These values account for variances as indicated above without consideration of improper generator set maintenance.

	Standby					
PERFORMANCE DATA	**10%**	**25%**	**50%**	**75%**	**95%**	**100%**
Power Output (kWe)	308	770	1540	2310	2926	3080
BHP @ 1800 RPM (60 Hz)	556	1202	2277	3353	4213	4428
NO_x (Oxides of Nitrogen)	5.58	4.02	4.04	5.30	6.47	6.75
NMHC (Nonmethane Hydrocarbons)	1.04	0.48	0.32	0.17	0.12	0.12
CO (Carbon Monoxide)	2.8	1.0	0.6	0.4	0.4	0.4
PM (Particulate Matter)	0.28	0.22	0.14	0.10	0.06	0.06
	All emissions values above are cited as g/bhp-hr					

The values in this letter are applicable for engines operating on ASTM D975 DF2 and paraffinic fuels conforming to EN15940, including Hydrotreated Vegetable Oil (HVO). Please consult Fluids for Cummins Engines bulletin # 3379001 for more information on the applicability of HVO.

The data and information provided in this letter is for informational purposes to assist customers in making purchasing decisions appropriate for their site-specific compliance needs. Owners/operators of compression ignition internal combustion engines are responsible for ensuring compliance with applicable local, state, and federal standards when CI engines are installed at the owner/operator site. The data and information contained herein regarding site variation values in particular should be considered as part of a site-specific compliance evaluation.

This letter does not supersede any of the commercial terms of sale, including, but not limited to, warranty coverage and compliance with law obligations. THE INFORMATION IN THIS LETTER IS PROVIDED "AS IS" AND WITH ALL FAULTS AND DEFECTS. CUMMINS DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED AND THIS LETTER SHOULD NOT BE SHARED WITH THIRD PARTIES WITHOUT CUMMINS PRIOR WRITTEN CONSENT. For further questions on this product or application, please contact the local Cummins Sales and Service representative.

Best Regards,

Miguel Araujo
Application Engineer – Strategic Accounts (Data Center)
Cummins Power Generation

Engine data

	Genset	Marine	O & G	Rail	C & I
Application	X				
Engine model	20V4000G94S				
Application Group	3D				
Legislative body	EPA Stationary EMERG T2 (40CFR60)				
Test cycle	D2				
Fuel sulphur content [ppm]	7.8				
mg/mN³ values base on residual oxygen value of [%]	Measured				

Not to exceed emission values*

Cycle point	[-]	n1	n2	n3	n4	n5
Power	kW	3490	2617	1745	872	349
Power relative	[-]	1	0.75	0.5	0.25	0.1
Engine speed	rpm	1800	1800	1800	1800	1800
Engine speed relative	[-]	1	1	1	1	1
NOX-Emissions specific	g/(bhp*h)	5.99	5.34	4.66	4.12	
	g/kWh	8.03	7.16	6.24	5.52	
CO-Emissions specific	g/(bhp*h)	0.91	1.01	0.84	2.1	
	g/kWh	1.22	1.35	1.13	2.81	
HC1-Emissions specific	g/(bhp*h)	0.18	0.27	0.45	1.04	
	g/kWh	0.24	0.36	0.6	1.39	
NMHC-Emissions specific	g/(bhp*h)	0.18	0.27	0.45	1.04	
	g/kWh	0.24	0.36	0.6	1.39	
NOX+HC1-Emissions specific	g/kWh	8.27	7.52	6.85	6.92	
NOX+NMHC-Emissions specific	g/(bhp*h)	6.17	5.61	5.11	5.16	
	g/kWh	8.27	7.52	6.85	6.92	
PM-Emissions specific (Meas.)	g/(bhp*h)	0.07	0.104	0.09	0.262	
	g/kWh	0.094	0.14	0.121	0.352	
NOX-Emissions (based on O2 meas)	mg/m3N	2295	1708	1241	797	
NOX+HC1-Emissions (based on O2 meas)	mg/m3N	2356	1784	1346	972	
CO-Emissions (based on O2 meas)	mg/m3N	306.4	282.5	197.3	356.5	

Description of Revision | Frequency

Data generated by EDS Creator version 1.0 and unipbt

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Engine model: 20V4000G94S

Title: Emission data sheet

Size: A4

Emissionstage: EPA Stationary EMERG T2 (40CFR60)

Emissionstage basis: US EPA Nonroad Tier 2 (40CFR1039)

Configuration-ID: 1116

Sheet 5 of 6

HC1-Emissions (based on O2 meas)	mg/m3N	60.3	76	105.2	175.8	
PM-Emissions (based on O2 meas)	mg/m3N	23.7	29.3	21.1	44.6	

Description of Revision | Frequency

Data generated by EDS Creator version 1.0 and unipbt

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Sheet 6 of 6

Rolls-Royce Solutions America Inc.

MTU 20V4000G74S emissions reduction with SPI ecoCUBE® (SCR+cDPF)

MTU 20V4000G74S emissions reduction with SPI ecoCUBE® (SCR+cDPF) [1]				
Load point	NOx reduction	CO reduction[2]	VOC Reduction	PM Reduction
10%[3]	--	--	--	≥ 85%
25%	95%	≥ 85%	≥ 70%	≥ 85%
50%	95%	≥ 85%	≥ 70%	≥ 85%
75%	95%	≥ 85%	≥ 70%	≥ 85%
100%	95%[4]	≥ 85%	≥ 70%	≥ 85%

Not to Exceed (g/kWh)	100	75	50	25
NOx	8.03	7.16	6.24	5.52
CO	1.22	1.35	1.13	2.81
VOC	0.24	0.36	0.6	1.39
PM	0.094	0.14	0.121	0.352

Controlled (g/kWh)	100	75	50	25
NOx	8.030	7.160	6.240	5.520
CO	1.220	1.350	1.130	2.810
VOC	0.240	0.360	0.600	1.390
PM	0.094	0.140	0.121	0.352

	Reduction	With 10% Safety Factor
Nox	95%	86%
CO	85%	77%
VOC	70%	63%
PM	85%	77%

[1] Represents standard product only. Consult the factory/mtu Distributor for additional configurations.

mtu 20V4000 DS3000 (3,000 kWe) 50 °C - Standby / 02

Application data

Engine	
Manufacturer	mtu
Model	20V4000G94S
Type	4-cycle

Fuel consumption	
At 100% of power rating: L/hr (gal/hr)	784 (207)
At 75% of power rating: L/hr (gal/hr)	594 (157)
At 50% of power rating: L/hr (gal/hr)	413 (109)

CLARKE®

JU6H-UFADX8
INSTALLATION & OPERATION DATA (I&O)
USA Produced

Basic Engine Description

Engine Manufacturer	John Deere Co.
Ignition Type	Compression (Diesel)
Number of Cylinders	6
Bore and Stroke - in (mm)	4.19 (106) X 5 (127)
Displacement - in³ (L)	415 (6.8)
Compression Ratio	17.0:1
Valves per cylinder	
Intake	2
Exhaust	2
Combustion System	Direct Injection
Engine Type	In-Line, 4 Stroke Cycle
Fuel Management Control	Electronic, High Pressure Common Rail
Firing Order (CW Rotation)	1-5-3-6-2-4
Aspiration	Turbocharged
Charge Air Cooling Type	Raw Water
Rotation, viewed from front of engine, Clockwise (CW)	Standard
Engine Crankcase Vent System	Open
Installation Drawing	D628
Weight - lb (kg)	1747 (792)

Power Rating	**1760**
Nameplate Power - HP (kW) [1]	305 (227.5)

Cooling System - [C051386]	**1760**
Engine Coolant Heat - Btu/sec (kW)	143 (151)
Engine Radiated Heat - Btu/sec (kW)	20.5 (21.6)
Heat Exchanger Minimum Flow	
60°F (15°C) Raw H_2O - gal/min (L/min)	28 (106)
100°F (37°C) Raw H_2O - gal/min (L/min)	38 (144)
Heat Exchanger Maximum Cooling Raw Water	
Inlet Pressure - psi (bar)	60 (4.1)
Flow - gal/min (L/min)	40 (151)
Typical Engine H_2O Operating Temp - °F (°C)	180 (82.2) - 195 (90.6)
Thermostat	
Start to Open - °F (°C)	180 (82.2)
Fully Opened - °F (°C)	203 (95)
Engine Coolant Capacity - qt (L)	22.2 (21)
Coolant Pressure Cap - lb/in² (kPa)	15 (103)
Maximum Engine Coolant Temperature - °F (°C)	230 (110)
Minimum Engine Coolant Temperature - °F (°C)	160 (71.1)
High Coolant Temp Alarm Switch - °F (°C)	235 (113) - 241 (116)

Electric System - DC	**Standard**		**Optional**	
System Voltage (Nominal)	12		24	
Battery Capacity for Ambients Above 32°F (0°C)				
Voltage (Nominal)	12	{C07633}	12	{C07633}
Qty. Per Battery Bank	1		2	
SAE size per J537	8D		8D	
CCA @ 0°F (-18°C) per J537	1400		1400	
Reserve Capacity - Minutes per J537	430		430	
Battery Cable Circuit, Max Resistance - ohm	0.0012		0.0012	
Battery Cable Minimum Size				
0-120 in. Circuit Length [2]	00		00	
121-160 in. Circuit Length [2]	000		000	
161-200 in. Circuit Length [2]	0000		0000	
Charging Alternator Maximum Output - Amp,	40	{C071363}	55	{C071365}
Starter Cranking Amps, Rolling - @60°F (15°C)	440	{RE69704/RE70404}	250	{C07819/C07820}

* All footnotes are at the bottom of Page 2

CLARKE®

JU6H-UFADX8
INSTALLATION & OPERATION DATA (I&O)
USA Produced

Exhaust System (Single Exhaust Outlet)	1760
Exhaust Flow - ft.³/min (m³/min)	1400 (39.6)
Exhaust Temperature - °F (°C)	961 (516)
Maximum Allowable Back Pressure - in H_2O (kPa)	30 (7.5)
Minimum Exhaust Pipe Dia. - in (mm) ³	6 (152)

Fuel System	1760
Fuel Consumption - gal/hr (L/hr)	14.6 (55.3)
Fuel Return - gal/hr (L/hr)	21.3 (80.6)
Fuel Supply - gal/hr (L/hr)	35.9 (136)
Fuel Pressure - lb/in² (kPa)	3 (20.7) - 6 (41.4)
Minimum Line Size - Supply - in.	.50 Schedule 40 Steel Pipe
Pipe Outer Diameter - in (mm)	0.848 (21.5)
Minimum Line Size - Return - in.	.375 Schedule 40 Steel Pipe
Pipe Outer Diameter - in (mm)	0.675 (17.1)
Maximum Allowable Fuel Pump Suction Lift with clean Filter - in H_2O (mH_2O)	80 (2)
Maximum Allowable Fuel Head above Fuel pump, Supply or Return - ft (m)	6.6 (2)
Fuel Filter Micron Size	2 (Secondary)

Heater System	Standard	Optional
Engine Coolant Heater		
Wattage (Nominal)	1360	1360
Voltage - AC, 1 Phase	115 (+5% -10%)	230 (+5%, -10%)
Part Number	{C123640}	{C123644}

Air System	1760	
Combustion Air Flow - ft.³/min (m³/min)	525 (14.9)	
Air Cleaner	Standard	Optional
Part Number	{C03244}	{C03327}
Type	Indoor Service Only, with Shield	Canister, Single-Stage
Cleaning method	Washable	Disposable
Air Intake Restriction Maximum Limit		
Dirty Air Cleaner - in H_2O (kPa)	14 (3.5)	14 (3.5)
Clean Air Cleaner - in H_2O (kPa)	7 (1.7)	5 (1.2)
Maximum Allowable Temperature (Air To Engine Inlet) - °F (°C)	130 (54.4)	

Lubrication System	
Oil Pressure - normal - lb/in² (kPa)	40 (276) - 60 (414)
Low Oil Pressure Alarm Switch - lb/in² (kPa) to	30 (207) - 35 (241)
In Pan Oil Temperature - °F (°C)	220 (104) - 245 (118)
Total Oil Capacity with Filter - qt (L)	34.3 (32.5)

Lube Oil Heater	Optional	Optional
Wattage (Nominal)	150	150
Voltage	120V (+5%, -10%)	240V (+5%, -10%)
Part Number	{C04430}	{C04431}

Performance	1760
BMEP - lb/in² (kPa)	331 (2280)
Piston Speed - ft/min (m/min)	1467 (447)
Mechanical Noise - dB(A) @ 1m	C133380
Power Curve	C132969

NOTE: This engine is intended for indoor installation or in a weatherproof enclosure. ¹ Derate 3% per every 1000 ft. 304.8m above 300 ft. 91.4m and derate 1% for every 10°F 5.55 °C above 77°F 25°C. ² Positive and Negative Cables Combined Length. ³ Minimum Exhaust Pipe Diameter is based on: 15 feet of pipe, one 90° elbow, and one Industrial silencer. A Back-pressure flow analysis must be performed on the actual field installed exhaust system to assure engine maximum allowable back pressure is not exceeded. See Exhaust Sizing Calculator on www.clarkefire.com. { } indicates component reference part number.

CLARKE®

JU4H, JU4R & JU6H, JU6R ENGINE MODELS
ENGINE MATERIALS AND CONSTRUCTION

Air Cleaner

Type	Indoor Usage Only Oiled Fabric Pleats
Material	Surgical Cotton Aluminum Mesh

Air Cleaner - Optional

Type	Canister
Material	Pleated Paper
Housing	Enclosed

Camshaft

Material	Cast Iron Chill Hardened
Location	In Block
Drive	Gear, Spur
Type of Cam	Ground

Charge Air Cooler (JU6H-60,62,68,74,84, 94, T8, T0, T2, ADK0, AD58, ADNG, ADN0, ADQ0, ADR0, AAQ8, AARG, ADP8, ADP0, ADT0, AD88, ADR8, AD80, ADS0, ADW8, ADX8, AD96 only)

Type	Raw Water Cooled
Materials (in contact with raw water)	
Tubes	90/10 CuNi
Headers	36500 Muntz
Covers	83600 Red Brass
Plumbing	316 Stainless Steel/ Brass 90/10 Silicone

Charge Air Cooler (JU6R-AA87, 59, 61, PF, Q7, RF, S9, 83 only)

Type	Air to Air Cooled
Materials	
Core	Aluminum

Coolant Pump

Type	Centrifugal
Drive	Poly Vee Belt

Coolant Thermostat

Type	Non Blocking
Qty.	1

Cooling Loop (Galvanized)

Tees, Elbows, Pipe	Galvanized Steel
Ball Valves	Brass ASTM B 124,
Solenoid Valve	Brass
Pressure Regulator	Bronze
Strainer	Cast Iron (1/2" - 1" loops) or Bronze (1.25" - 2" loops)

Cooling Loop (Sea Water)

Tees, Elbows, Pipe	316 Stainless Steel
Ball Valves	316 Stainless Steel
Solenoid Valve	316 Stainless Steel
Pressure Regulator/Strainer	Cast Brass ASTM B176 C87600

Cooling Loop (316SS)

Tees, Elbows, Pipe	316 Stainless Steel
Ball Valves	316 Stainless Steel
Solenoid Valve	316 Stainless Steel
Pressure Regulator/Strainer	316 Stainless Steel

Connecting Rod

Type	I-Beam Taper
Material	Forged Steel Alloy

Crank Pin Bearings

Type	Precision Half Shell
Number	1 Pair Per Cylinder
Material	Wear-Guard

Crankshaft

Material	Forged Steel
Type of Balance	Dynamic

Cylinder Block

Type	One Piece with Non-Siamese Cylinders
Material	Annealed Gray Iron

Cylinder Head

Type	Slab 2 Valve
Material	Annealed Gray Iron

Cylinder Liners

Type	Centrifugal Cast, Wet Liner
Material	Alloy Iron Plateau, Honed

Fuel Pump

Type	Diaphragm
Drive	Cam Lobe

Heat Exchanger (USA) - JU4H & JU6H Only

Type	Tube & Shell
Materials	
Tube & Headers	Copper
Shell	Copper
Electrode	Zinc

Heat Exchanger (UK) - JU4H & JU6H Only

Type	Tube & Bundle
Materials	
Tube & Headers	Copper
Shell	Aluminum

Injection Pump

Type	Rotary
Drive	Gear

Lubrication Cooler

Type	Plate

Lubrication Pump

Type	Gear
Drive	Gear

Main Bearings

Type	Precision Half Shells
Material	Steel Backed-Aluminum Lined

Piston

Type and Material	Aluminum Alloy with Reinforced Top Ring Groove
Cooling	Oil Jet Spray

Piston Pin

Type	Full Floating - Offset

Piston Rings

Number/Piston	3
Top	Keystone Barrel Faced - Plasma Coated
Second	Tapered Cast Iron
Third	Double Rail Type w/Expander Spring

Radiator - JU4R & JU6R Only

Type	Plate Fin
Materials	
Core	Copper & Brass
Tank & Structure	Steel
Optional	
Marine Coating	Baked Phenolic

Valves

Type	Poppet
Arrangement	Overhead Valve
Number/Cylinder	1 Intake 1 exhaust
Operating Mechanism	Mechanical Rocker Arm
Type of Lifter	Large Head
Valve Seat Insert	Replaceable

C13615 14NOV18

CLARKE

Rating Specific Emissions Data

Nameplate Rating Information

Clarke Model	**JU6H-UFADX8**
Power Rating (BHP/kW)	**305/227.5**
Certified Speed (RPM)	**1760**

Refer to **Rating Data** section on page 2 for emissions output values

Rating Specific Emissions Data - John Deere Power Systems

JOHN DEERE

Rating Data

Rating	6068HFC48A	
Certified Power(kW)	235	
Rated Speed	1760	
Vehicle Model Number	OEM (Clarke Fire Pump-Emergency)	
Units	g/kW-hr	g/hp-hr
NOx	3.61	2.69
HC	0.08	0.06
NOx + HC	N/A	N/A
Pm	0.07	0.06
CO	0.6	0.4

Certificate Data

Engine Model Year	2019
EPA Family Name	KJDXL13.5103
EPA JD Name	650HAA
EPA Certificate Number	KJDXL13.5103-007
CARB Executive Order	
Parent of Family	6135HF485A
Units	g/kW-hr
NOx	3.31
HC	0.11
NOx + HC	N/A
Pm	0.10
CO	0.6

* The emission data listed is measured from a laboratory test engine according to the test procedures of 40 CFR 89 or 40 CFR 1039, as applicable. The test engine is intended to represent nominal production hardware, and we do not guarantee that every production engine will have identical test results. The family parent data represents multiple ratings and this data may have been collected at a different engine speed and load. Emission results may vary due to engine manufacturing tolerances, engine operating conditions, fuels used, or other conditions beyond our control.

Emissions Results by Rating run on Feb-18-2019

Exhaust Emission Data Sheet
C100D6C
60 Hz Diesel Generator Set

Engine Information:			
Model:	Cummins QSB5-G13	Bore:	4.21 in. (106.9 mm)
Type:	4 cycle, in-line, 4 cylinder diesel	Stroke:	4.88 in. (123.9 mm)
Aspiration:	Turbocharged	Displacement:	272 cu. in. (4.45 liters)
Compression Ratio:	17.3:1	Exhaust Stack Diameter:	3.5 in (88.9 mm)
Emission Control Device:	Turbocharged and charge air-cooled		

Performance Data	1/4 Standby	1/2 Standby	3/4 Standby	Full Standby	Full Prime
BHP @ 1800 RPM (60 Hz)	44	88	132	176	152
Fuel Consumption (gal/Hr)	2.8	4.8	6.9	8.9	7.7
Exhaust Gas Flow (CFM)	388	606	763	878	790
Exhaust Gas Temperature (°F)	496	597	764	913	808
Exhaust Emission Data					
HC (Total Unburned Hydrocarbons)	0.10	0.06	0.03	0.03	0.02
NOx (Oxides of Nitrogen as NO_2)	2.31	2.22	2.73	3.84	3.70
CO (Carbon Monoxide)	0.76	0.52	0.36	0.52	0.30
PM (Particulate Matter)	0.16	0.23	0.04	0.05	0.03
Smoke (Bosch)	0.76	0.84	0.44	0.65	0.29

All values (except smoke) are cited: g/BHP-hr

Attachment G – Digital Copy of the Application