

SHENANDOAH COMPUTING LLC AIR CONSTRUCTION PERMIT APPLICATION

Prepared for:

Shenandoah Computing LLC

August 2025

Olsson Project No. 025-01320

Public Version





August 15, 2025

Missouri Department of Natural Resources Air Pollution Control Program
ATTN: Aysenur Argut Reed, Permit Section
PO Box 176
Jefferson City, MO 65102-0176

RE: Air Construction Permit Application – Public Version
Shenandoah Computing LLC

Ms. Argut Reed:

On behalf of Shenandoah Computing LLC ("Facility"), Olsson is submitting a public version of an air quality construction permit application for a proposed light industrial facility near Platte City, Missouri. A confidential version of this application is being provided to your attention under separate cover. The Facility deems the make and model of the selected stationary engines to be confidential information, including the make and model of the engine that provides the "worst-case" NO_x emission factor as confidential information.

To protect requested confidentiality, the engine specification sheets enclosed with the confidential application are not included in the public version. Public versions of the air emission calculations spreadsheets are provided with this public version of the application. On behalf of the Facility, you may contact me regarding this application at 515-867-2767, or by email at jtimmons@olsson.com.

Sincerely,

A handwritten signature in black ink that reads "Jim Timmons". The signature is written in a cursive, flowing style.

Jim Timmons
Project Scientist
Enclosures:

Air Quality Construction Permit Application – Public Version
Emissions Calculations Workbooks

ACRONYMS AND ABBREVIATIONS

CFR.....	Code of Federal Regulations
ekW.....	Electrical Kilowatt
g/bHP-hr.....	Grams per Brake Horsepower-Hour
HVO.....	Hydrotreated Vegetable Oil
lbs/HP-hr.....	Pounds per Horsepower-Hour
lbs/hr.....	Pounds per Hour
MDNR.....	Missouri Department of Natural Resources
NAAQS.....	National Ambient Air Quality Standards
NESHAP.....	National Emission Standards for Hazardous Air Pollutants
NSPS.....	New Source Performance Standards
NO _x	Nitrogen Oxides
PTE.....	Potential to Emit
RICE.....	Reciprocating Internal Combustion Engines
tpy.....	Tons per Year
ULSD.....	Ultra-Low Sulfur Diesel

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1. PROCESS DESCRIPTION

Shenandoah Computing LLC seeks to construct and permit a light industrial facility near Platte City, Missouri that will be named Shenandoah Computing LLC and referred to as the “Facility” in this application. The proposed Facility will generally be located at the southwest corner of the intersection of highway 92 and North Wian Avenue (Section 34, Township 53N, Range 33W). A Location Map and Site Map are enclosed in Appendix A that identify the proposed location of the Facility’s perimeter fence and proposed buildings.

The Facility will operate under Standard Industrial Classification code 7374 (Computer Processing and Data Preparation and Processing Services) and North American Industry Classification System code 518210 (Data Processing, Hosting, and Related Services). The Facility will operate diesel and Hydrotreated Vegetable Oil (HVO) fuel-fired reciprocating internal combustion engines (RICE) to provide power during emergencies to support the proposed Facility. The Facility’s potential to emit (PTE) for nitrogen oxides (NO_x) are greater than 40 tons per year (tpy); therefore, the Facility will require a permit to construct per Section 643.075 of the Missouri Air Conservation Law. Potential air emission calculations accounting for requested operational limitations are provided in Appendix B. The completed air quality construction permit application for this project is included in Appendix C.

2. FACILITY DESCRIPTION

The emission units proposed for this permit application are as follows:

- One hundred eighty emergency stationary diesel RICE, referred to as “Type 1” in this document.
- Ten emergency stationary diesel RICE, referred to as “Type 2”.
- Sixty cooling towers, each with 6,000 gallon-per-minute water circulation rate.

The Facility will also have eleven smaller ancillary emergency engines to support various site functions. Emission factors used to calculate emissions from these eleven engines, and the RICE identified above, are from worst-case representative vendor specification sheets, EPA Tier 1-3 nonroad diesel emission standards, and Sections 3.3 and 3.4 of AP-42 (October 1996), Tables 3.3-1, 3.3-2, 3.4-1, 3.4-2, 3.4-3, and 3.4-4. Emissions of NO_x are expected during monthly generator tests and operation during emergency power outages at the Facility.

3. NESHAP AND NSPS

Each proposed RICE will be a Tier 2 diesel engine. The Facility will operate each RICE in accordance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, NESHAP Subpart ZZZZ. Each proposed RICE will be defined as a new RICE under NESHAP Subpart ZZZZ and, therefore, will be required to comply with the New Source Performance Standards (NSPS) for Stationary Compression Ignition Combustion Engines, NSPS Subpart IIII, per Title 40, Part 63.6590 (c)(1) of the Code of Federal Regulations (CFR).

The Facility will operate each proposed engine as an emergency engine as defined by Title 40 Part 60.4219 of the CFR and in accordance with the maintenance and testing limitation found in 40 CFR 60.4211 (f) - each emergency RICE cannot operate more than 100 hours per calendar year for maintenance and testing purposes. Each emergency RICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. Emergency use is not limited under NSPS Subpart IIII, nor under NESHAP Subpart ZZZZ.

The Facility is also requesting the ability to operate all emergency generators with either ultra-low sulfur diesel (ULSD) or renewable diesel fuel such as Hydrotreated Vegetable Oils (HVO). All fuel used at the site will meet all the requirements of 40 CFR 1090.305 via 40 CFR 60.4207(b). PTE calculations for the proposed fuel change are not provided as this change will not increase the emissions rates of the Facility and therefore will not change the emissions limits requested in the construction permit application. The Supporting Documentation for Alternative Diesel Fuels is provided in the CONFIDENTIAL application.

4. REQUESTED LIMITATIONS

The Facility is proposing a source-wide emission limit to maintain potential NO_x emissions to be less than 250 tpy, thereby maintaining minor source status under the Prevention of Significant Deterioration (PSD) regulations. The limited potential air emission calculations include the maximum number of respective generators and a “worst-case” NO_x emission factor of 8.59 g/bHP-hr. Please refer to Appendix B for the limited potential emission calculations and an engine specifications sheet that identifies the “worst-case” NO_x emission factor used as an example compliance demonstration for the requested facility wide emission limit. Two engine specification sheets for Type 1 and Type 2 engines were compared for the “worst-case” NO_x emission factor. Engine specification sheets for Type 1 and Type 2 engines compared for the “worst-case” emissions calculations are also enclosed in Appendix B. Specific engines have not been selected at the time of this application submittal.

Proposed Source-Wide Operational Limitation:

The Facility is requesting a combined, site-wide emission limit of 249 tpy of NO_x emissions for all generators over any consecutive 12-month period for the entire facility, not to exceed the limits specified in either 40 CFR 60 IIII or 40 CFR 63 ZZZZ. The Facility is proposing to demonstrate compliance with the NO_x emission limit according to the following equation:

$$\sum_{i=1}^n \frac{EF_i * P_i * t_i}{2,000}$$

Where,

$$EF_i = \text{Emission factor for generator } i \left(\frac{\text{lb}}{\text{HP} - \text{hr}} \right)$$

$$P_i = \text{Rate Capacity for generator } i \text{ (HP)}$$

$$t_i = \text{Operating time, in hours, of generator } i \text{ for the previous 12 month period}$$

Generator records will be updated monthly with the operational hours from the previous calendar month to calculate site-wide emissions on a 12-month rolling total basis. As previously stated, the PTE calculations are based on a “worst-case” NO_x air emission factor of 8.59 g/bHP-hour, but actual emissions will be dependent on the make and model of the generators that are installed. Please refer to the enclosed workbook named “PUBLIC 25-08-14_ENV_Shenandoah Computing LLC_PTE”. A worksheet labeled “0; Source-Wide Requested Limit” provides a demonstration of the equation to comply with the requested 249 tpy NO_x limit.

5. AIR QUALITY DISPERSION MODELING

Part of the construction permit application review process for the Missouri Department of Natural Resources (MDNR) is evaluating the ambient air quality effects of the proposed project. Air quality dispersion modeling is used to assess a construction project's impact to applicable National Ambient Air Quality Standards (NAAQS). The Facility's PTE for NO_x exceeds the MDNR air quality dispersion modeling threshold for NO_x – 40 tons or more per year. The Facility will therefore contact the MDNR to establish an air quality dispersion modeling protocol to complete required NO_x air quality dispersion modeling. All other pollutants for this project have PTEs less than the *de minimis* emission levels listed in Division 10, Chapter 6, Section 20 in the Missouri Code of State Regulations (See Appendix B). Thus, air quality dispersion modeling is not anticipated to be required for other air pollutants. Air quality dispersion modeling analyses will be provided as soon as possible to support this air quality construction permit application.

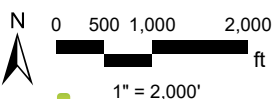
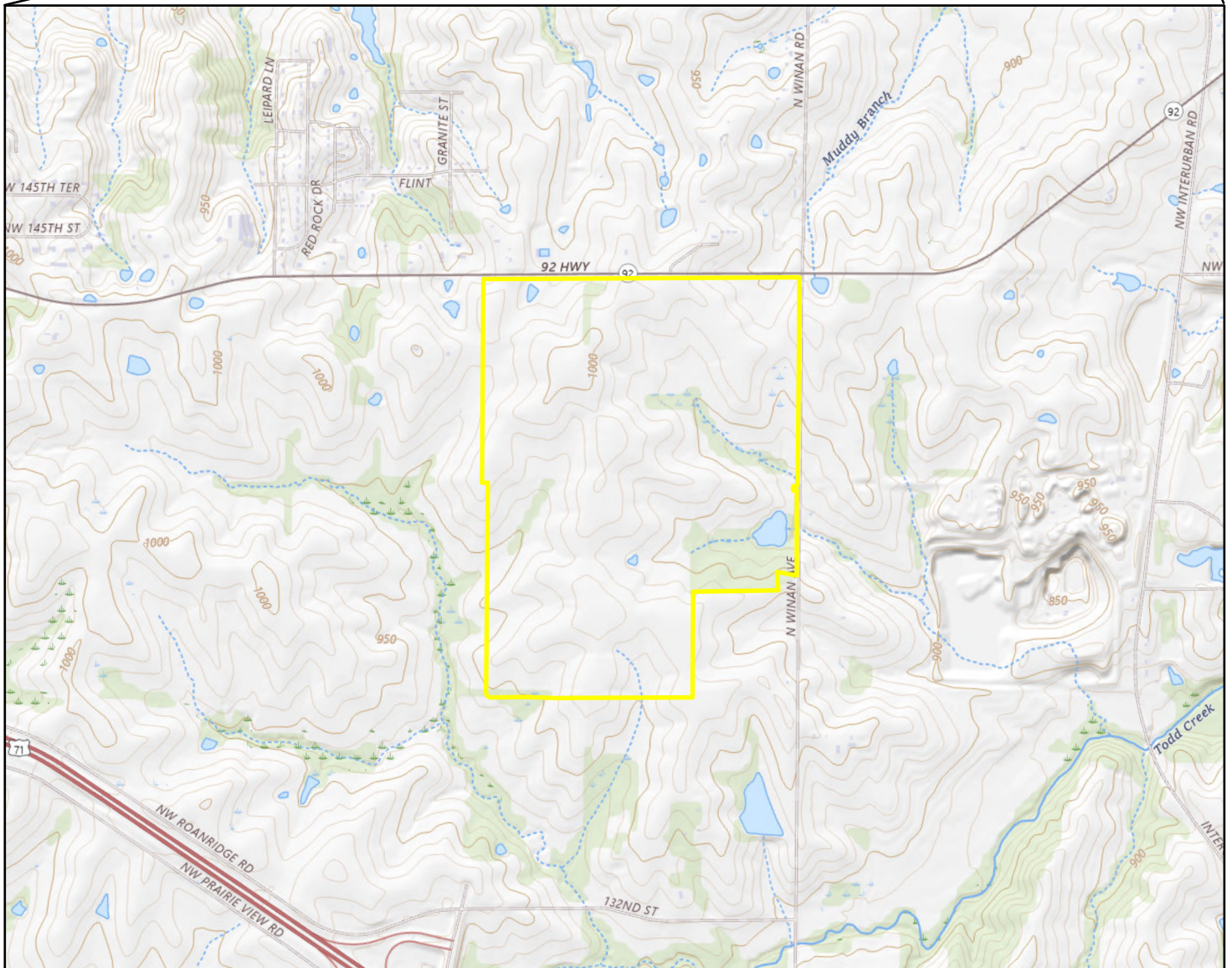
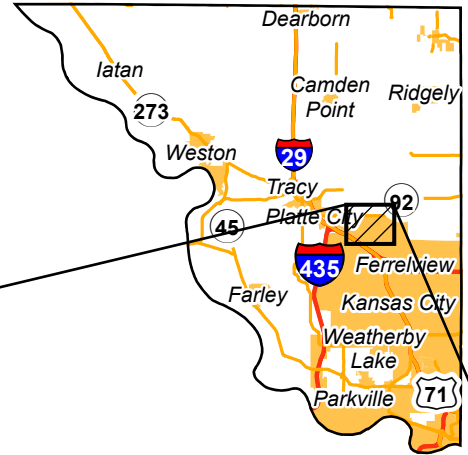
APPENDIX A

Location Map, Site Map, and Process Layout Diagram

MISSOURI

PLATTE COUNTY

Project Area



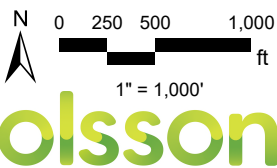
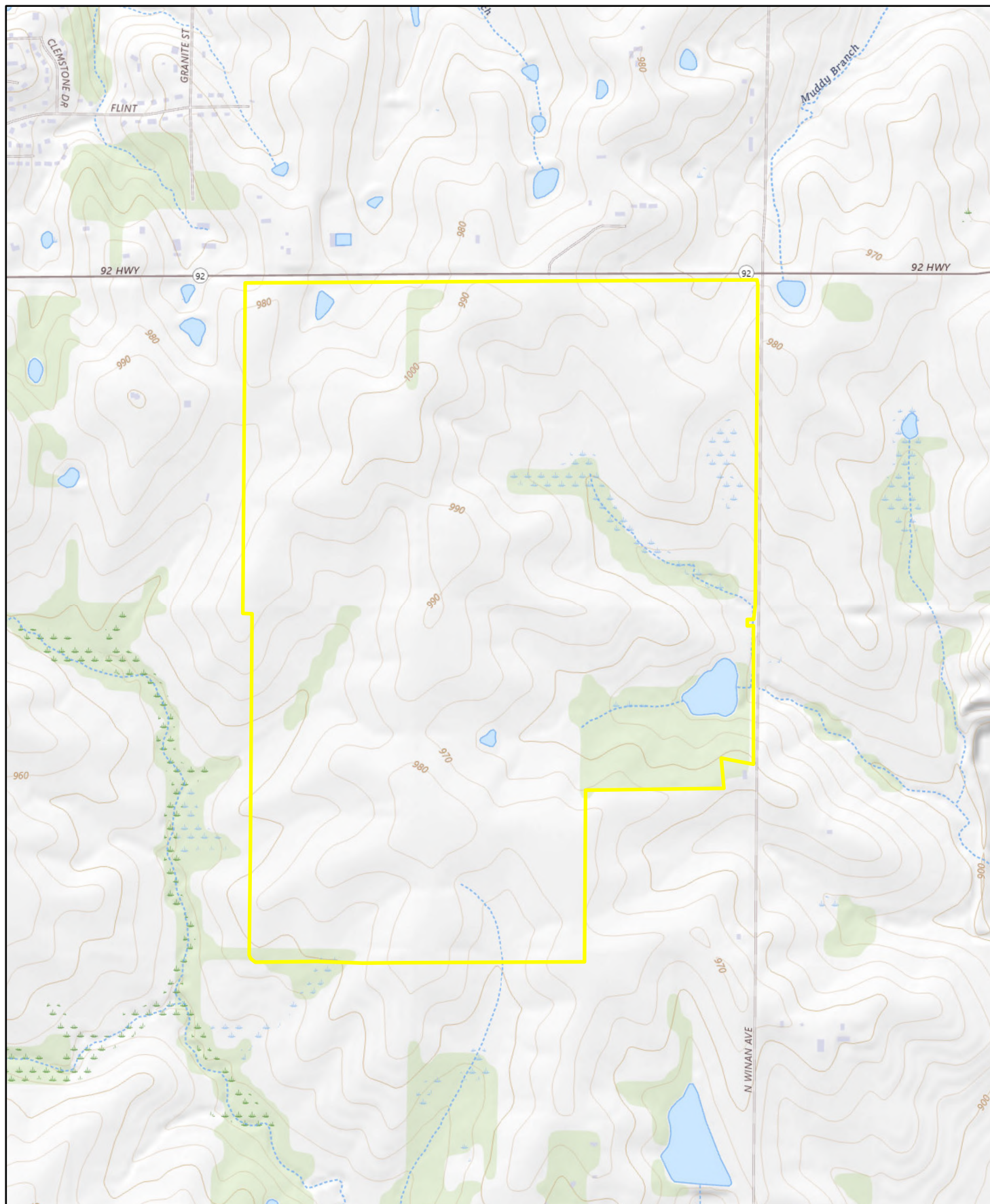
Fenceline

Shenandoah Computing LLC
Air Construction Permit Application

Platte City, Platte County, Missouri
 Olsson Project # 025-01320

Location Map

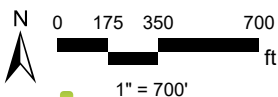
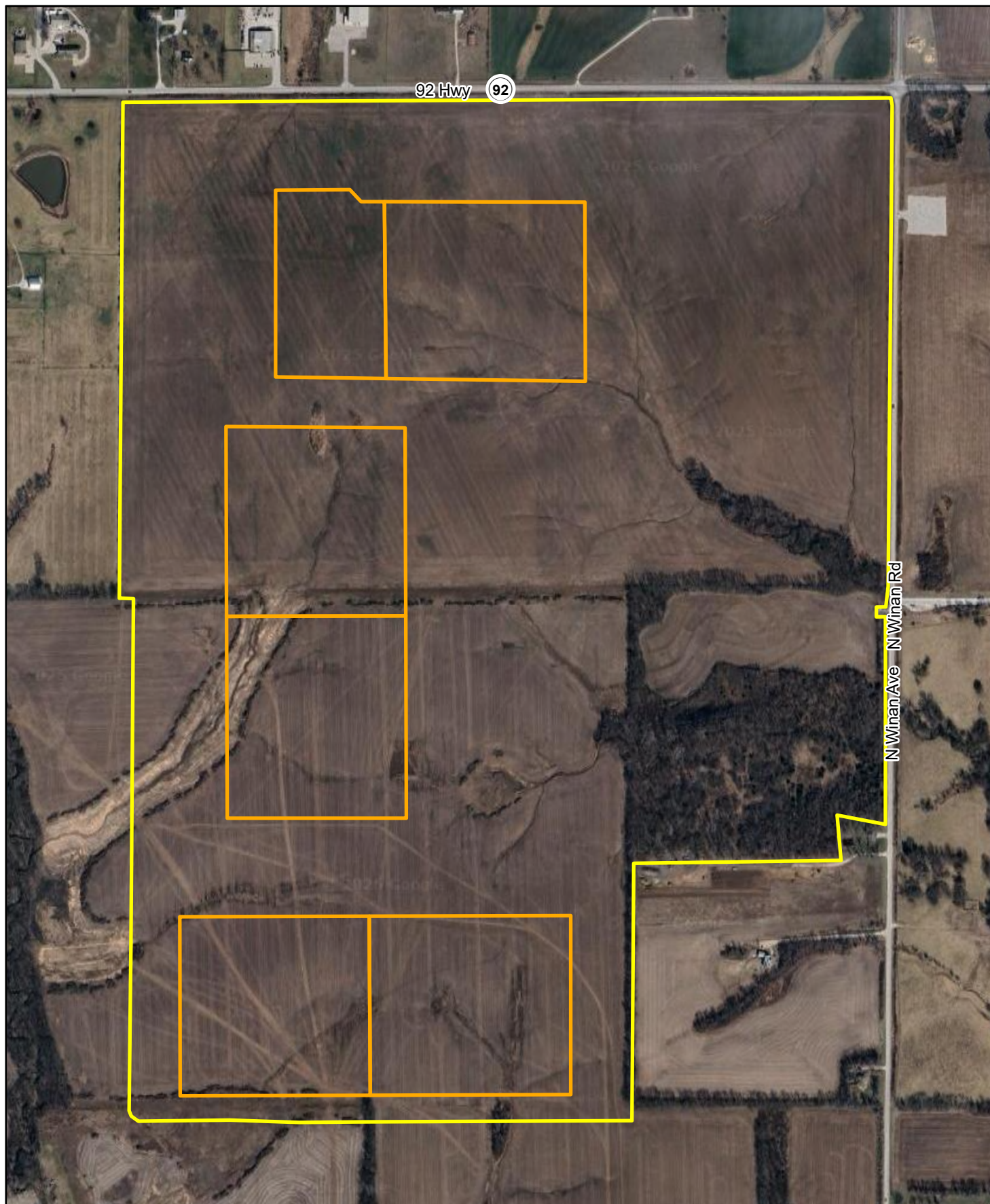
Figure 1



 Fenceline

Shenandoah Computing LLC
Air Construction Permit Application
Platte City, Platte County, Missouri
Olsson Project # 025-01320
Topographic Map
Figure 2

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-  Building
-  Fenceline

Shenandoah Computing LLC
Air Construction Permit Application
Platte City, Platte County, Missouri
Olsson Project # 025-01320
Site Map
Figure 3

APPENDIX B

Limited PTE Calculations and Supporting Documentation for
Alternative Diesel Fuels

Facility-Wide Emission Totals

Pollutant	PTE (tons/year)
NO _x	249.00
CO	59.66
VOC	7.03
PM	16.50
PM ₁₀	12.72
PM _{2.5}	9.36
SO _x	0.62
GHGs as CO ₂ e	15,533.97
HAP	
1,3-Butadiene	0.000
Acetaldehyde	0.004
Acrolein	0.001
Benzene	0.072
Formaldehyde	0.009
Naphthalene	0.012
Polycyclic Organic Hydrocarbons	0.008
Toluene	0.026
Xylenes	0.018
Total HAP	0.149

Source-Wide Requested Limits

The 100 kW, ≤400 bHP, 350 kW, 500 kW, 800 kW, and 1,000 kW engines have the following total max potential NOx emissions:

Engine	Emission Rate (lb/hr)	Number of Engines	Maximum Annual Runtime (Hrs)	Maximum NOx Emissions (TPY)
	(A)	(B)	(C)	(D) = (A)x(B)x(C)/2000
100 kW Engines	14.28	3	100.0	2.14
≤400 bHP Engines	14.28	2	100.0	1.43
350 kW Engine	14.28	1	100.0	0.71
500 kW Engine	14.28	1	100.0	0.71
800 kW Engine ^[1]	44.83	2	100.0	4.48
1,000 kW Engine	22.42	2	100.0	2.24
			Total Emissions:	11.72

[1] Emission calculations for this engine assume a rated capacity of 2,000 kW for conservatism

For worst-case emissions from Auxiliary generators in the table above, the NOx emissions from Type 1 and Type 2 Engines must not exceed 237.28 tons per year (TPY) to remain below 249 TPY facility-wide. Using the highest potential emission rate between these engine types (75.69 lb/hr) yields the most conservative estimate of NOx emissions:

Engines	Emission Rate per Engine (lb/hr)	Number of Engines	Average Annual Runtime per Engine to Remain Below 237 TPY NOx (Hours)	Average NOx Emissions (TPY)
	(A)	(B)	(C)	(D) = (A)*(B)*(C)/2000
Type 1 (180) + Type 2 (10) engines	75.69	190	33.0	237.28

The Facility is requesting a 249 tpy NOx Emission Limit. The Facility is proposing to demonstrate compliance with the NOx emission limit with the following equation applied to each individual engine:

Example Emission Point Source Name	Example Engine-Specific Emission Factor (lb/bHP-hr)	Example Engine-Specific Rated Capacity (bHP)	Example Operating Time for Previous 12 Months (hrs)	Example NOx Emissions for Previous 12 Months (lbs)	Example Engine-Specific Rolling 12-month NOx Emissions Contribution (TPY)
	(A)	(B)	(C)	(D) = (A)*(B)*(C)	(D) / 2000
Type 1 Engine	0.019	3,997	33.0	2497.65	1.25
Type 2 Engine	0.016	2,536	33.0	1300.60	0.65

Engine Emissions for the 2,750 kW Engines

2,750.0 kW

Emission Equivalent = 237.28 tons NO_x/year
 NO_x Emission Rate per Engine = 75.69 lbs NO_x/hour
 Number of Engines = 190 (Assumes all engines are Type 1)
Average Hours per Engine [8] = 33.0 Hours/Year per 2,750 kW engine
Average Fuel Usage per Engine = 6,137.4 Gallons/Year per 2,750 kW engine

Parameter	Units	100% Load Value
Fuel Consumption ^[7]	gal/hour	186.0
Engine Power	ekW	2,750.0
Engine Power ^[1]	bHP	3,997.0
Engine Power ^[2]	bkW	2,981.8
Engine Power ^[6]	MMBtu/hr	28.0

Pollutant	Emission Factor Value	Emission Factor Units	Emission Rate/Engine (lb/hr)	Emission Rate/Engine (tons/yr)	# of Engines	Facility Total Emission Rate (tons/yr)	lb/hr Calculation
			A	C = A x B / 2,000 lb/ton		E = C x D	
NO _x ^[3]	8.59	g/bHP-hr	75.69	1.25	190	237.28	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
CO ^[3]	2.00	g/bHP-hr	17.62	0.29	190	55.24	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
VOC ^[3]	0.19	g/bHP-hr	1.67	0.03	190	5.25	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
PM/PM ₁₀ /PM _{2.5} ^{[9][5]}	0.20	g/bkW-hr	1.31	0.02	190	4.12	lb/hr = ((g/bkW-hour) x (bkW)) / (g/lb)
SO _x ^{[4][8]}	1.21E-05	lb/bHP-hr	4.85E-02	8.00E-04	190	1.52E-01	lb/hr = (lb/bHP-hour) x (bHP)
Acetaldehyde ^[4]	2.52E-05	lb/MMBtu	7.05E-04	1.16E-05	190	2.21E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acrolein ^[4]	7.88E-06	lb/MMBtu	2.20E-04	3.64E-06	190	6.91E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Benzene ^[4]	7.76E-04	lb/MMBtu	2.17E-02	3.58E-04	190	6.81E-02	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Formaldehyde ^[4]	7.89E-05	lb/MMBtu	2.21E-03	3.64E-05	190	6.92E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Naphthalene ^[4]	1.30E-04	lb/MMBtu	3.64E-03	6.00E-05	190	1.14E-02	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Polycyclic Organic Hydrocarbons(POH) ^[4]	8.20E-05	lb/MMBtu	2.29E-03	3.79E-05	190	7.19E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Toluene ^[4]	2.81E-04	lb/MMBtu	7.86E-03	1.30E-04	190	2.46E-02	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Xylenes ^[4]	1.93E-04	lb/MMBtu	5.40E-03	8.91E-05	190	1.69E-02	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Total HAP ^[4]	1.57E-03	lb/MMBtu	4.40E-02	7.27E-04	190	1.38E-01	lb/hr = (lb/MMBtu) x (MMBtu/hr)

Footnotes

- 1 Nameplate bHP as obtained from a representative specification sheet (Spec 1).
- 2 bkW = (bHP) x (0.746 bkW/bHP)
- 3 NO_x, CO, and VOC emission factors were obtained from a representative specification sheet (Spec 1).
- 4 SO_x and HAP emission factors were obtained from EPA AP-42 Section 3.4 (October 1996), Tables 3.4-1, 3.4-3, and 3.4-4POH value is without naphthalene.
- 5 All PM is assumed to be PM₁₀ and PM_{2.5}, including filterable plus condensable emissions.
- 6 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996)
- 7 Fuel rate as obtained from a representative specification sheet (Spec 1).
- 8 15 ppm sulfur content assumed for diesel fuel per NSPS IIII requirement
- 9 PM/PM₁₀/PM_{2.5} emission factors were obtained from NSPS Subpart IIII (40 CFR Part 1039) Appendix I, Table 2.

Engine Emissions for the 1,750 kW Engines

1,750.0 kW

Emission Equivalent = 237.28 tons NO_x/year
 NO_x Emission Rate per Engine = 39.42 lbs NO_x/hour
 Number of Engines = 190 (Assumes all engines are Type 2)
Average Hours per Engine [8] = 63.4 Hours/Year per engine
Average Fuel Usage per Engine = 7,718.0 Gallons/Year per engine

Parameter	Units	100% Load Value
Fuel Consumption ^[10]	gal/hour	121.8
Engine Power	ekW	1,750.0
Engine Power ^[1]	bHP	2,536.0
Engine Power ^[2]	bkW	1,891.9
Engine Power ^[9]	MMBtu/hr	17.8

Pollutant	Emission Factor Value	Emission Factor Units	Emission Rate/Engine (lb/hr)	Emission Rate/Engine (tons/yr)	# of Engines	Facility Total Emission Rate (tons/yr)	lb/hr Calculation
			A	C = A x B / 2,000 lb/ton		E = C x D	
NO _x ^[3]	7.05	g/bHP-hr	39.42	1.25	190	237.28	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
CO ^[4]	0.98	g/bHP-hr	5.48	0.17	190	32.98	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
VOC ^[5]	0.16	g/bHP-hr	0.89	0.03	190	5.39	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
PM/PM ₁₀ /PM _{2.5} ^{[3][8]}	0.053	g/bHP-hr	0.30	0.01	190	1.78	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
SO _x ^{[6][7]}	1.21E-05	lb/bHP-hr	3.08E-02	9.75E-04	190	0.19	lb/hr = (lb/bHP-hour) x (bHP)
Acetaldehyde ^[6]	2.52E-05	lb/MMBtu	4.47E-04	1.42E-05	190	2.69E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acrolein ^[6]	7.88E-06	lb/MMBtu	1.40E-04	4.43E-06	190	8.42E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Benzene ^[6]	7.76E-04	lb/MMBtu	1.38E-02	4.36E-04	190	8.29E-02	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Formaldehyde ^[6]	7.89E-05	lb/MMBtu	1.40E-03	4.44E-05	190	8.43E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Naphthalene ^[6]	1.30E-04	lb/MMBtu	2.31E-03	7.31E-05	190	1.39E-02	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Polycyclic Organic Hydrocarbons (POH) ^[6]	8.20E-05	lb/MMBtu	1.46E-03	4.61E-05	190	8.76E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Toluene ^[6]	2.81E-04	lb/MMBtu	4.99E-03	1.58E-04	190	3.00E-02	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Xylenes ^[6]	1.93E-04	lb/MMBtu	3.43E-03	1.09E-04	190	2.06E-02	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Total HAP ^[6]	1.57E-03	lb/MMBtu	2.79E-02	8.85E-04	190	1.68E-01	lb/hr = (lb/MMBtu) x (MMBtu/hr)

Footnotes

- 1 Nameplate bHP as obtained from a representative specification sheet (Spec 2).
- 2 bkW = (bHP) x (0.746 bkW/bHP)
- 3 NO_x emission factors were obtained from a representative specification sheet (Spec 2).
- 4 CO and PM/PM₁₀/PM_{2.5} emission factors were obtained from a representative specification sheet (Spec 4).
- 5 VOC emission factors were obtained from a representative specification sheet (Spec 5).
- 6 SO_x and HAP emission factors were obtained from EPA AP-42 Section 3.4 (October 1996), Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4. POH value is without naphthalene.
- 7 15 ppm sulfur content assumed per NSPS IIII requirement.
- 8 All PM is assumed to be PM₁₀ and PM_{2.5}, including filterable plus condensable emissions.
- 9 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996)
- 10 Fuel rate as obtained from a representative specification sheet (Spec 5).

Engine Emissions for the 1000 ekW WWTP Engine

	1,000.0	ekW
Emission Equivalent =	2.24	tons NO _x /year
NO _x Emission Rate per Engine =	22.42	lbs NO _x /hour
Number of Engines =	2	
Maximum Hours per Engine [B] =	100.0	Hours/Year per engine
Maximum Fuel Usage per Engine =	7,529.6	Gallons/Year per engine

Parameter	Units	100% Load Value
Fuel Consumption ^[9]	gal/hour	75.3
Engine Power	ekW	1,000.0
Engine Power ^[2]	bHP	1,473.7
Engine Power ^[1]	bkW	1,098.9
Heating value for fuel oil ^[6]	MMBtu/gal	0.137
Engine Power ^[10]	MMBtu/hr	10.3

Pollutant	Emission Factor Value	Emission Factor Units	Emission Rate/Engine (lb/hr)	Emission Rate/Engine (tons/yr)	# of Engines	Facility Total Emission Rate (tons/yr)	lb/hr Calculation
			A	C = A x B / 2,000 lb/ton			
NO _x ^[3]	6.90	g/bHP-hr	22.42	1.12	2	2.24	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
CO ^[3]	2.60	g/bHP-hr	8.45	0.42	2	0.84	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
VOC ^[3]	1.00	g/bHP-hr	3.25	0.16	2	0.32	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
PM/PM ₁₀ /PM _{2.5} ^{[3][4]}	0.15	g/bHP-hr	0.49	0.02	2	0.05	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
SO _x ^{[5][6]}	1.21E-05	lb/bHP-hr	1.79E-02	8.94E-04	2	0.00	lb/hr = (lb/bHP-hour) x (bHP)
Acetaldehyde ^[5]	2.52E-05	lb/MMBtu	2.60E-04	1.30E-05	2	2.60E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acrolein ^[5]	7.88E-06	lb/MMBtu	8.13E-05	4.06E-06	2	8.13E-06	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Benzene ^[5]	7.76E-04	lb/MMBtu	8.00E-03	4.00E-04	2	8.00E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Formaldehyde ^[5]	7.89E-05	lb/MMBtu	8.14E-04	4.07E-05	2	8.14E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Naphthalene ^[5]	1.30E-04	lb/MMBtu	1.34E-03	6.71E-05	2	1.34E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Polycyclic Organic Hydrocarbons (POH) ^[5]	8.20E-05	lb/MMBtu	8.46E-04	4.23E-05	2	8.46E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Toluene ^[5]	2.81E-04	lb/MMBtu	2.90E-03	1.45E-04	2	2.90E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Xylenes ^[5]	1.93E-04	lb/MMBtu	1.99E-03	9.95E-05	2	1.99E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Total HAP ^[5]	1.57E-03	lb/MMBtu	1.62E-02	8.12E-04	2	1.62E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)

Footnotes

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- bkW = ekW / 0.91, assumption made based on ekW-bkW ratio from a representative specification sheet (Spec 3).
- bHP = bkW / (0.7457 bkW/bHP)
- NO_x, CO, VOC, and PM/PM₁₀/PM_{2.5} emission factors were obtained from EPA Tier 1-3 nonroad diesel emission standards.
- All PM is assumed to be PM₁₀ and PM_{2.5}, including filterable plus condensable emissions.
- SO_x and HAP emission factors were obtained from EPA AP-42 Section 3.4 (October 1996), Tables 3.4-1, 3.4-3, and 3.4-4. POH value is without naphthalene.
- 15 ppm sulfur content assumed for diesel fuel per NSPS IIII requirement
- Heating value for fuel oil from AP-42, Appendix A (September 1985)
- Fuel rate is Engine Power (MMBtu/hr) divided by Heating value for fuel oil (MMBtu/gal)
- 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996)

Engine Emissions for the 800 kW WWTP Engine

	800.0	ekW ^[1]
Emission Equivalent =	4.48	tons NO _x /year
NO _x Emission Rate per Engine =	44.83	lbs NO _x /hour
Number of Engines =	2	
Maximum Hours per Engine [B] =	100.0	Hours/Year per engine
Maximum Fuel Usage per Engine =	15,059.2	Gallons/Year per engine

Parameter	Units	100% Load Value
Fuel Consumption ^[9]	gal/hour	150.6
Engine Power ^[1]	ekW	2,000.0
Engine Power ^[3]	bHP	2,947.3
Engine Power ^[2]	bkW	2,197.8
Heating value for fuel oil ^[6]	MMBtu/gal	0.137
Engine Power ^[10]	MMBtu/hr	20.6

Pollutant	Emission Factor Value	Emission Factor Units	Emission Rate/Engine (lb/hr)	Emission Rate/Engine (tons/yr)	# of Engines	Facility Total Emission Rate (tons/yr)	lb/hr Calculation
			A	C = A x B / 2,000 lb/ton		E = B x D	
NO _x ^[4]	6.90	g/bHP-hr	44.83	2.24	2	4.48	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
CO ^[4]	2.60	g/bHP-hr	16.89	0.84	2	1.69	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
VOC ^[4]	1.00	g/bHP-hr	6.50	0.32	2	0.65	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
PM/PM ₁₀ /PM _{2.5} ^{[4][5]}	0.15	g/bHP-hr	0.97	0.05	2	0.10	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb)
SO _x ^{[6][7]}	1.21E-05	lb/bHP-hr	3.58E-02	1.79E-03	2	0.00	lb/hr = (lb/bHP-hour) x (bHP)
Acetaldehyde ^[6]	2.52E-05	lb/MMBtu	5.20E-04	2.60E-05	2	5.20E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acrolein ^[6]	7.88E-06	lb/MMBtu	1.63E-04	8.13E-06	2	1.63E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Benzene ^[6]	7.76E-04	lb/MMBtu	1.60E-02	8.00E-04	2	1.60E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Formaldehyde ^[6]	7.89E-05	lb/MMBtu	1.63E-03	8.14E-05	2	1.63E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Naphthalene ^[6]	1.30E-04	lb/MMBtu	2.68E-03	1.34E-04	2	2.68E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Polycyclic Organic Hydrocarbons (POH) ^[6]	8.20E-05	lb/MMBtu	1.69E-03	8.46E-05	2	1.69E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Toluene ^[6]	2.81E-04	lb/MMBtu	5.80E-03	2.90E-04	2	5.80E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Xylenes ^[6]	1.93E-04	lb/MMBtu	3.98E-03	1.99E-04	2	3.98E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Total HAP ^[6]	1.57E-03	lb/MMBtu	3.25E-02	1.62E-03	2	3.25E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)

Footnotes

- 1
- Set to 2,000 kW to estimate worse case
- 2
- bkW = kW / 0.91, assumption made based on kW-bkW ratio from a representative specification sheet (Spec 3).
- 3
- bHP = kW / (0.7457 kW/bHP)
- 4
- NO_x, CO, VOC, and PM/PM₁₀/PM_{2.5} emission factors were obtained from EPA Tier 1-3 nonroad diesel emission standards.
- 5
- All PM is assumed to be PM₁₀ and PM_{2.5}, including filterable plus condensable emissions.
- 6
- SO_x and HAP emission factors were obtained from EPA AP-42 Section 3.4 (October 1996), Tables 3.4-1, 3.4-3, and 3.4-4. POH value is without naphthalene.
- 7
- 15 ppm sulfur content assumed for diesel fuel per NSPS IIII requirement
- 8
- Heating value for fuel oil from AP-42, Appendix A (September 1985)
- 9
- Fuel rate is Engine Power (MMBtu/hr) divided by Heating value for fuel oil (MMBtu/gal)
- 10
- 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996)

Engine Emissions for the 500 kW Booster Pump Generator

500.0 kW

Emission Equivalent = 0.71 tons NO_x/year
 NO_x Emission Rate per Engine = 14.28 lbs NO_x/hour
 Number of Engines = 1
 Maximum Hours per Engine [B] = 100.0 Hours/Year for the 500 kW engine
 Maximum Fuel Usage per Engine = 3,837.1 Gallons/Year for the 500 kW engine

Parameter	Units	100% Load Value
Fuel Consumption ^[8]	gal/hour	38.4
Engine Power ^[2]	bHP	751.0
Engine Power ^[1]	bkW	560.0
Heating value for fuel oil ^[7]	MMBtu/gal	0.137
Engine Power ^[3]	MMBtu/hr	5.3

Pollutant	Emission Factor Value	Emission Factor Units	Emission Rate/Engine (lb/hr)	Emission Rate/Engine (tons/yr)	# of Engines	Facility Total Emission Rate (tons/yr)	lb/hr Calculation
			A	C = A x B / 2,000 lb/ton		E = B x D	
NO _x ^[3]	6.90	g/bHP-hr	14.28	0.71	1	0.71	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
CO ^[3]	2.60	g/bHP-hr	5.38	0.27	1	0.27	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
VOC ^[3]	1.00	g/bHP-hr	2.07	0.10	1	0.10	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
PM/PM ₁₀ /PM _{2.5} ^{[3][4]}	0.15	g/bHP-hr	0.31	0.02	1	0.02	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
SO _x ^{[5][6]}	1.21E-05	lb/bHP-hr	9.11E-03	4.56E-04	1	0.00	lb/hr = (lb/bHP-hour) x (bHP)
Acetaldehyde ^[5]	2.52E-05	lb/MMBtu	1.32E-04	6.62E-06	1	6.62E-06	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acrolein ^[5]	7.88E-06	lb/MMBtu	4.14E-05	2.07E-06	1	2.07E-06	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Benzene ^[5]	7.76E-04	lb/MMBtu	4.08E-03	2.04E-04	1	2.04E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Formaldehyde ^[5]	7.89E-05	lb/MMBtu	4.15E-04	2.07E-05	1	2.07E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Naphthalene ^[5]	1.30E-04	lb/MMBtu	6.83E-04	3.42E-05	1	3.42E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Polycyclic Organic Hydrocarbons (POH) ^[5]	8.20E-05	lb/MMBtu	4.31E-04	2.16E-05	1	2.16E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Toluene ^[5]	2.81E-04	lb/MMBtu	1.48E-03	7.39E-05	1	7.39E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Xylenes ^[5]	1.93E-04	lb/MMBtu	1.01E-03	5.07E-05	1	5.07E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Total HAP ^[5]	1.57E-03	lb/MMBtu	8.27E-03	4.14E-04	1	4.14E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)

Footnotes

- 1 bkW is the upper bound of EPA Tier 3 nonroad diesel engine emission factor table.
- 2 bHP = bkW / (0.7457 bkW/bHP)
- 3 NO_x, CO, VOC, and PM/PM₁₀/PM_{2.5} emission factors were obtained from EPA Tier 1-3 nonroad diesel emission standards.
- 4 All PM is assumed to be PM₁₀ and PM_{2.5}, including filterable plus condensable emissions.
- 5 SO_x and HAP emission factors were obtained from EPA AP-42 Section 3.4 (October 1996), Tables 3.4-1, 3.4-3, and 3.4-4. POH value is without naphthalene.
- 6 15 ppm sulfur content assumed for diesel fuel per NSPS IIII requirement
- 7 Heating value for fuel oil from AP-42, Appendix A (September 1985)
- 8 Fuel rate is Engine Power (MMBtu/hr) divided by Heating value for fuel oil (MMBtu/gal)
- 9 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996)

Engine Emissions for the 350 kW Lift Station Generator

350.0 kW

Emission Equivalent = 0.71 tons NO_x/year
 NO_x Emission Rate per Engine = 14.28 lbs NO_x/hour
 Number of Engines = 1
 Maximum Hours per Engine [B] = 100.0 Hours/Year for the 350 kW engine
 Maximum Fuel Usage per Engine = 3,837.1 Gallons/Year for the 350 kW engine

Parameter	Units	100% Load Value
Fuel Consumption ⁽⁸⁾	gal/hour	38.4
Engine Power ⁽²⁾	bHP	751.0
Engine Power ⁽¹⁾	bkW	560.0
Heating value for fuel oil ⁽⁷⁾	MMBtu/gal	0.137
Engine Power ⁽³⁾	MMBtu/hr	5.3

Pollutant	Emission Factor Value	Emission Factor Units	Emission Rate/Engine (lb/hr)	Emission Rate/Engine (tons/yr)	# of Engines	Facility Total Emission Rate (tons/yr)	lb/hr Calculation
			A	C = A x B / 2,000 lb/ton		E = B x D	
NO _x ⁽³⁾	6.90	g/bHP-hr	14.28	0.71	1	0.71	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
CO ⁽⁵⁾	2.60	g/bHP-hr	5.38	0.27	1	0.27	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
VOC ⁽³⁾	1.00	g/bHP-hr	2.07	0.10	1	0.10	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
PM/PM ₁₀ /PM _{2.5} ⁽³⁾⁽⁴⁾	0.15	g/bHP-hr	0.31	0.02	1	0.02	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
SO _x ⁽⁵⁾⁽⁶⁾	2.90E-01	lb/MMBtu	1.52E+00	7.62E-02	1	0.08	lb/hr = (lb/MMBtu) x (MMBtu/hr)
1,3-Butadiene ⁽⁵⁾	3.91E-05	lb/MMBtu	2.06E-04	1.03E-05	1	1.03E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acetaldehyde ⁽⁵⁾	7.67E-04	lb/MMBtu	4.03E-03	2.02E-04	1	2.02E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acrolein ⁽⁵⁾	9.25E-05	lb/MMBtu	4.86E-04	2.43E-05	1	2.43E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Benzene ⁽⁵⁾	9.33E-04	lb/MMBtu	4.90E-03	2.45E-04	1	2.45E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Formaldehyde ⁽⁵⁾	1.18E-03	lb/MMBtu	6.20E-03	3.10E-04	1	3.10E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Naphthalene ⁽⁵⁾	8.48E-05	lb/MMBtu	4.46E-04	2.23E-05	1	2.23E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Polycyclic Organic Hydrocarbons (POH) ⁽⁵⁾	8.32E-05	lb/MMBtu	4.37E-04	2.19E-05	1	2.19E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Toluene ⁽⁵⁾	4.09E-04	lb/MMBtu	2.15E-03	1.08E-04	1	1.08E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Xylenes ⁽⁵⁾	2.85E-04	lb/MMBtu	1.50E-03	7.49E-05	1	7.49E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Total HAP ⁽⁵⁾	3.87E-03	lb/MMBtu	2.04E-02	1.02E-03	1	1.02E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)

Footnotes

- 1 bkW is the upper bound of EPA Tier 3 nonroad diesel engine emission factor table.
- 2 bHP = bkW / (0.7457 bkW/bHP)
- 3 NO_x, CO, VOC, and PM/PM₁₀/PM_{2.5} emission factors were obtained from EPA Tier 1-3 nonroad diesel emission standards.
- 4 All PM is assumed to be PM₁₀ and PM_{2.5}, including filterable plus condensable emissions.
- 5 SO_x and HAP emission factors were obtained from EPA AP-42 Section 3.3 (October 1996), Tables 3.3-1 and Table 3.3-2. POH value is without naphthalene.
- 6 15 ppm sulfur content assumed for diesel fuel per NSPS IIII requirement
- 7 Heating value for fuel oil from AP-42, Appendix A (September 1985)
- 8 Fuel rate is Engine Power (MMBtu/hr) divided by Heating value for fuel oil (MMBtu/gal)
- 9 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996)

Engine Emissions for the ≤400 bHP Fire Pump Engine

≤400 bHP

Emission Equivalent = 1.43 tons NO_x/year
 NO_x Emission Rate per Engine = 14.28 lbs NO_x/hour
 Number of Engines = 2
 Maximum Hours per Engine [B] = 100.0 Hours/Year for each ≤400 bHP engine
 Maximum Fuel Usage per Engine = 3,837.1 Gallons/Year for each ≤400 bHP engine

Parameter	Units	100% Load Value
Fuel Consumption ⁽⁸⁾	gal/hour	38.4
Engine Power ⁽²⁾	bHP	751.0
Engine Power ⁽¹⁾	bkW	560.0
Heating value for fuel oil ⁽⁷⁾	MMBtu/gal	0.137
Engine Power ⁽⁸⁾	MMBtu/hr	5.3

Pollutant	Emission Factor Value	Emission Factor Units	Emission Rate/Engine (lb/hr)	Emission Rate/Engine (tons/yr)	# of Engines	Facility Total Emission Rate (tons/yr)	lb/hr Calculation
			A	C = A x B / 2,000 lb/ton		E = B x D	
NO _x ⁽³⁾	6.90	g/bHP-hr	14.28	0.71	2	1.43	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
CO ⁽³⁾	2.60	g/bHP-hr	5.38	0.27	2	0.54	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
VOC ⁽³⁾	1.00	g/bHP-hr	2.07	0.10	2	0.21	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
PM/PM ₁₀ /PM _{2.5} ⁽³⁾⁽⁴⁾	0.15	g/bHP-hr	0.31	0.02	2	0.03	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
SO _x ⁽⁵⁾⁽⁶⁾	2.90E-01	lb/MMBtu	1.52E+00	7.62E-02	2	0.15	lb/hr = (lb/MMBtu) x (MMBtu/hr)
1,3-Butadiene ⁽⁵⁾	3.91E-05	lb/MMBtu	2.06E-04	1.03E-05	2	2.06E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acetaldehyde ⁽⁵⁾	7.67E-04	lb/MMBtu	4.03E-03	2.02E-04	2	4.03E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acrolein ⁽⁵⁾	9.25E-05	lb/MMBtu	4.86E-04	2.43E-05	2	4.86E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Benzene ⁽⁵⁾	9.33E-04	lb/MMBtu	4.90E-03	2.45E-04	2	4.90E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Formaldehyde ⁽⁵⁾	1.18E-03	lb/MMBtu	6.20E-03	3.10E-04	2	6.20E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Naphthalene ⁽⁵⁾	8.48E-05	lb/MMBtu	4.46E-04	2.23E-05	2	4.46E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Polycyclic Organic Hydrocarbons (POH) ⁽⁵⁾	8.32E-05	lb/MMBtu	4.37E-04	2.19E-05	2	4.37E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Toluene ⁽⁵⁾	4.09E-04	lb/MMBtu	2.15E-03	1.08E-04	2	2.15E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Xylenes ⁽⁵⁾	2.85E-04	lb/MMBtu	1.50E-03	7.49E-05	2	1.50E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Total HAP ⁽⁵⁾	3.87E-03	lb/MMBtu	2.04E-02	1.02E-03	2	2.04E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)

Footnotes

- 1 bkW is the upper bound of EPA Tier 3 nonroad diesel engine emission factor table.
- 2 bHP = bkW / (0.7457 bkW/bHP)
- 3 NO_x, CO, VOC, and PM/PM₁₀/PM_{2.5} emission factors were obtained from EPA Tier 1-3 nonroad diesel emission standards.
- 4 All PM is assumed to be PM₁₀ and PM_{2.5}, including filterable plus condensable emissions.
- 5 SO_x and HAP emission factors were obtained from EPA AP-42 Section 3.3 (October 1996), Tables 3.3-1 and Table 3.3-2. POH value is without naphthalene.
- 6 15 ppm sulfur content assumed for diesel fuel per NSPS IIII requirement
- 7 Heating value for fuel oil from AP-42, Appendix A (September 1985)
- 8 Fuel rate is Engine Power (MMBtu/hr) divided by Heating value for fuel oil (MMBtu/gal)
- 9 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996)

Engine Emissions for the 100 kW Guardhouse and Warehouse Engines

100.0 ekW

Emission Equivalent = 2.14 tons NO_x/year
 NO_x Emission Rate per Engine = 14.28 lbs NO_x/hour
 Number of Engines = 3
 Maximum Hours per Engine [B] = 100.0 Hours/Year for each 100 kW engine
 Maximum Fuel Usage per Engine = 3,837.1 Gallons/Year for each 100 kW engine

Parameter	Units	100% Load Value
Fuel Consumption ⁽⁸⁾	gal/hour	38.4
Engine Power ⁽²⁾	bHP	751.0
Engine Power ⁽¹⁾	bkW	560.0
Heating value for fuel oil ⁽⁷⁾	MMBtu/gal	0.137
Engine Power ⁽³⁾	MMBtu/hr	5.3

Pollutant	Emission Factor Value	Emission Factor Units	Emission Rate/Engine (lb/hr)	Emission Rate/Engine (tons/yr)	# of Engines	Facility Total Emission Rate (tons/yr)	lb/hr Calculation
			A	C = A x B / 2,000 lb/ton		E = B x D	
NO _x ⁽³⁾	6.90	g/bHP-hr	14.28	0.71	3	2.14	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
CO ⁽³⁾	2.60	g/bHP-hr	5.38	0.27	3	0.81	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
VOC ⁽³⁾	1.00	g/bHP-hr	2.07	0.10	3	0.31	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
PM/PM ₁₀ /PM _{2.5} ⁽³⁾⁽⁴⁾	0.15	g/bHP-hr	0.31	0.02	3	0.05	lb/hr = ((g/bHP-hour) x (bHP)) / (g/lb) x 1.25 safety factor
SO _x ⁽⁵⁾⁽⁶⁾	2.90E-01	lb/MMBtu	1.52E+00	7.62E-02	3	0.23	lb/hr = (lb/MMBtu) x (MMBtu/hr)
1,3-Butadiene ⁽⁵⁾	3.91E-05	lb/MMBtu	2.06E-04	1.03E-05	3	3.08E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acetaldehyde ⁽⁵⁾	7.67E-04	lb/MMBtu	4.03E-03	2.02E-04	3	6.05E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Acrolein ⁽⁵⁾	9.25E-05	lb/MMBtu	4.86E-04	2.43E-05	3	7.29E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Benzene ⁽⁵⁾	9.33E-04	lb/MMBtu	4.90E-03	2.45E-04	3	7.36E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Formaldehyde ⁽⁵⁾	1.18E-03	lb/MMBtu	6.20E-03	3.10E-04	3	9.30E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Naphthalene ⁽⁵⁾	8.48E-05	lb/MMBtu	4.46E-04	2.23E-05	3	6.69E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Polycyclic Organic Hydrocarbons (POH) ⁽⁵⁾	8.32E-05	lb/MMBtu	4.37E-04	2.19E-05	3	6.56E-05	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Toluene ⁽⁵⁾	4.09E-04	lb/MMBtu	2.15E-03	1.08E-04	3	3.23E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Xylenes ⁽⁵⁾	2.85E-04	lb/MMBtu	1.50E-03	7.49E-05	3	2.25E-04	lb/hr = (lb/MMBtu) x (MMBtu/hr)
Total HAP ⁽⁵⁾	3.87E-03	lb/MMBtu	2.04E-02	1.02E-03	3	3.05E-03	lb/hr = (lb/MMBtu) x (MMBtu/hr)

Footnotes

- 1 bkW is the upper bound of EPA Tier 3 nonroad diesel engine emission factor table.
- 2 bHP = bkW / (0.7457 bkW/bHP)
- 3 NO_x, CO, VOC, and PM/PM₁₀/PM_{2.5} emission factors were obtained from EPA Tier 1-3 nonroad diesel emission standards.
- 4 All PM is assumed to be PM₁₀ and PM_{2.5}, including filterable plus condensable emissions.
- 5 SO_x and HAP emission factors were obtained from EPA AP-42 Section 3.3 (October 1996), Tables 3.3-1 and Table 3.3-2. POH value is without naphthalene.
- 6 15 ppm sulfur content assumed for diesel fuel per NSPS IIII requirement
- 7 Heating value for fuel oil from AP-42, Appendix A (September 1985)
- 8 Fuel rate is Engine Power (MMBtu/hr) divided by Heating value for fuel oil (MMBtu/gal)
- 9 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996)

Limited GHG Emissions for the 2,750 ekW engines

Pollutant	Emission Factor (lb/MMBtu) ^[1] [A]	Engine Power (MMBtu/hr) ^[2] [B]	Emission Rate (lb/hr) [C] = [A]*[B]	Average Annual Hours of Operation ^[3] [D]	Annual Emissions per Engine (TPY) [E] = [C]*[D]/2000	Number of Type 1 Engines [F]	Total Annual Emissions (TPY) [G] = [E]*[F]	100-Year GWP ^[4] [H]	Total Annual Emissions (TPY as CO ₂ e) [I] = [G]*[H]
CO ₂	165	27.98	4616.54	33.00	76.16	190	14471.31	1.00	14471.31
TOC (as CH ₄)	0.09	27.98	2.52	33.00	0.04	190	7.89	29.80	235.22
Total CO ₂ e:									14706.54
Total CO ₂ e Per Engine:									77.40

Footnotes

- [1] AP-42 Table 3.4-1. Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines
- [2] Engine bHP taken from nameplate as provided from a representative engine specification sheet (Spec 1). Conversion to MMBtu/hr is: 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996).
- [3] Hourly usage as reported in calculations for HAP and Criterial Pollutant emissions for Type 1 Diesel Engines
- [4] IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (AR6)

Limited GHG Emissions for the 1,750 ekW engines

Pollutant	Emission Factor (lb/MMBtu) ^[1] [A]	Engine Power (MMBtu/hr) ^[2] [B]	Emission Rate (lb/hr) [C] = [A]*[B]	Average Annual Hours of Operation ^[3] [D]	Annual Emissions per Engine (TPY) [E] = [C]*[D]/2000	Number of Type 2 Engines [F]	Total Annual Emissions (TPY) [G] = [E]*[F]	100-Year GWP ^[4] [H]	Total Annual Emissions (TPY as CO ₂ e) [I] = [G]*[H]
CO ₂	165	17.75	2929.08	63.37	92.80	190	17632.42	1.00	17632.42
TOC (as CH ₄)	0.09	17.75	1.60	63.37	0.05	190	9.62	29.80	286.61
							Total CO ₂ e:		17919.03
							Total CO ₂ e Per Engine:		94.31

Footnotes

- [1] AP-42 Table 3.4-1. Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines
- [2] Engine bHP taken from nameplate as provided from a representative engine specification sheet (Spec 2). Conversion to MMBtu/hr is: 1 bHP-hour = 7,000 Btu; MMBtu/hr = (bHP) x (7,000 Btu/bHP-hour) / (1,000,000 Btu / 1 MMBtu); EPA AP-42, footnote 1 to Table 3.3-1 (October 1996).
- [3] Hourly usage as reported in calculations for HAP and Criterial Pollutant emissions for Type 2 Diesel Engines
- [4] IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (AR6)

Limited GHG Emissions for the 1000 ekW engines

Pollutant	Emission Factor (lb/MMBtu) ^[1] [A]	Engine Power (MMBtu/hr) ^[2] [B]	Emission Rate (lb/hr) [C] = [A]*[B]	Maximum Annual Hours of Operation ^[3] [D]	Annual Emissions per Engine (TPY) [E] = [C]*[D]/2000	Number of 1000 ekW Engines [F]	Total Annual Emissions (TPY) [G] = [E]*[F]	100-Year GWP ^[4] [H]	Total Annual Emissions (TPY as CO ₂ e) [I] = [G]*[H]
CO ₂	165	10.32	1702.07	100.00	85.10	2	170.21	1.00	170.21
TOC (as CH ₄)	0.09	10.32	0.93	100.00	0.05	2	0.09	29.80	2.77
Total CO ₂ e:							172.97		
Total CO ₂ e Per Engine:							86.49		

Footnotes

- [1] AP-42 Table 3.4-1. Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines
- [2] CO₂ and TOC (as CH₄) emission factors were obtained from AP-42 Section 3.4 (October 1996), Tables 3.4-1.
- [3] Hourly usage as reported in calculations for HAP and Criterial Pollutant emissions for 1000 ekW Diesel Engines
- [4] IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (AR6)

Limited GHG Emissions for the 800 ekW engines

Pollutant	Emission Factor (lb/MMBtu) ^[1] [A]	Engine Power (MMBtu/hr) ^[2] [B]	Emission Rate (lb/hr) [C] = [A]*[B]	Maximum Annual Hours of Operation ^[3] [D]	Annual Emissions per Engine (TPY) [E] = [C]*[D]/2000	Number of 800 ekW Engines [F]	Total Annual Emissions (TPY) [G] = [E]*[F]	100-Year GWP ^[4] [H]	Total Annual Emissions (TPY as CO ₂ e) [I] = [G]*[H]
CO ₂	165	20.63	3404.13	100.00	170.21	2	340.41	1.00	340.41
TOC (as CH ₄)	0.09	20.63	1.86	100.00	0.09	2	0.19	29.80	5.53
Total CO ₂ e:							345.95		
Total CO ₂ e Per Engine:							172.97		

Footnotes

- [1] AP-42 Table 3.4-1. Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines
- [2] CO₂ and TOC (as CH₄) emission factors were obtained from AP-42 Section 3.4 (October 1996), Tables 3.4-1.
- [3] Hourly usage as reported in calculations for HAP and Criterial Pollutant emissions for 800 ekW Diesel Engines
- [4] IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (AR6)

Limited GHG Emissions for the 500 ekW engine

Pollutant	Emission Factor (lb/MMBtu) ^[1] [A]	Engine Power (MMBtu/hr) ^[2] [B]	Emission Rate (lb/hr) [C] = [A]*[B]	Maximum Annual Hours of Operation ^[3] [D]	Annual Emissions per Engine (TPY) [E] = [C]*[D]/2000	Number of 500 ekW Engines [F]	Total Annual Emissions (TPY) [G] = [E]*[F]	100-Year GWP ^[4] [H]	Total Annual Emissions (TPY as CO ₂ e) [I] = [G]*[H]
CO ₂	165	5.26	867.37	100.00	43.37	1	43.37	1.00	43.37
TOC (as CH ₄)	0.09	5.26	0.47	100.00	0.02	1	0.02	29.80	0.70
Total CO ₂ e:									44.07
Total CO ₂ e Per Engine:									44.07

Footnotes

- [1] AP-42 Table 3.4-1. Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines
- [2] CO₂ and TOC (as CH₄) emission factors were obtained from AP-42 Section 3.4 (October 1996), Tables 3.4-1.
- [3] Hourly usage as reported in calculations for HAP and Criteria Pollutant emissions for 500 ekW Diesel Engines
- [4] IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (AR6)

Limited GHG Emissions for the 350 ekW engine

Pollutant	Emission Factor (lb/MMBtu) ^[1] [A]	Engine Power (MMBtu/hr) ^[2] [B]	Emission Rate (lb/hr) [C] = [A]*[B]	Maximum Annual Hours of Operation ^[3] [D]	Annual Emissions per Engine (TPY) [E] = [C]*[D]/2000	Number of 350 ekW Engines [F]	Total Annual Emissions (TPY) [G] = [E]*[F]	100-Year GWP ^[4] [H]	Total Annual Emissions (TPY as CO ₂ e) [I] = [G]*[H]
CO ₂	165	5.26	867.37	100.00	43.37	1	43.37	1.00	43.37
TOC (as CH ₄)	0.09	5.26	0.47	100.00	0.02	1	0.02	29.80	0.70
Total CO ₂ e:									44.07
Total CO ₂ e Per Engine:									44.07

Footnotes

- [1] AP-42 Table 3.4-1. Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines
- [2] CO₂ and TOC (as CH₄) emission factors were obtained from AP-42 Section 3.4 (October 1996), Tables 3.4-1.
- [3] Hourly usage as reported in calculations for HAP and Criteria Pollutant emissions for 350 ekW Diesel Engines
- [4] IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (AR6)

Limited GHG Emissions for the≤400 bHP engines

Pollutant	Emission Factor (lb/MMBtu) ^[1] [A]	Engine Power (MMBtu/hr) ^[2] [B]	Emission Rate (lb/hr) [C] = [A]*[B]	Maximum Annual Hours of Operation ^[3] [D]	Annual Emissions per Engine (TPY) [E] = [C]*[D]/2000	Number of ≤400 bHP Engines [F]	Total Annual Emissions (TPY) [G] = [E]*[F]	100-Year GWP ^[4] [H]	Total Annual Emissions (TPY as CO ₂ e) [I] = [G]*[H]
CO ₂	165	5.26	867.37	100.00	43.37	2	86.74	1.00	86.74
TOC (as CH ₄)	0.09	5.26	0.47	100.00	0.02	2	0.05	29.80	1.41
Total CO ₂ e:									88.15
Total CO ₂ e Per Engine:									44.07

Footnotes

- [1] AP-42 Table 3.4-1. Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines
- [2] CO₂ and TOC (as CH₄) emission factors were obtained from AP-42 Section 3.4 (October 1996), Tables 3.4-1.
- [3] Hourly usage as reported in calculations for HAP and Criteria Pollutant emissions for ≤400 bHP Diesel Engines
- [4] IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (AR6)

Limited GHG Emissions for the 100 ekW engines

Pollutant	Emission Factor (lb/MMBtu) ^[1] [A]	Engine Power (MMBtu/hr) ^[2] [B]	Emission Rate (lb/hr) [C] = [A]*[B]	Maximum Annual Hours of Operation ^[3] [D]	Annual Emissions per Engine (TPY) [E] = [C]*[D]/2000	Number of 100 ekW Engines [F]	Total Annual Emissions (TPY) [G] = [E]*[F]	100-Year GWP ^[4] [H]	Total Annual Emissions (TPY as CO ₂ e) [I] = [G]*[H]
CO ₂	165	5.26	867.37	100.00	43.37	3	130.11	1.00	130.11
TOC (as CH ₄)	0.09	5.26	0.47	100.00	0.02	3	0.07	29.80	2.11
							Total CO ₂ e:		132.22
							Total CO ₂ e Per Engine:		44.07

Footnotes

- [1] AP-42 Table 3.4-1. Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines
- [2] CO₂ and TOC (as CH₄) emission factors were obtained from AP-42 Section 3.4 (October 1996), Tables 3.4-1.
- [3] Hourly usage as reported in calculations for HAP and Criterial Pollutant emissions for 100 ekW Diesel Engines
- [4] IPCC, 2023: Summary for Policymakers. In: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (AR6)

Diesel Tank Emissions

Assumptions

- Potential and actual air emissions are based on results from the Minnesota Storage Tank Air Emission Calculator workbook (fixed roof, horizontal, above and underground) for a 6,000-gallon above ground storage tank containing diesel fuel.
- The Minnesota Storage Tank Air Emission Calculator workbook (fixed roof, horizontal, above and underground) calculated the following VOC air emissions based on a 6,000-gallon horizontal storage tank with 6,137 gallons of annual throughput, in gallons/year:

Working Loss	0.14 Lbs/year
Standing storage Loss	0.68 Lbs/year
- For each of the Type 1 engine, the Facility is proposing to use a belly tank with a maximum capacity of 6,000 gallons (180 tanks).
- For the Type 2, 100 kW, ≤400 bHP, 350 kW, 500 kW, 800 kW, and 1000 kW engines, the Facility conservatively assumed 6,000-gallon belly tanks (21 total)
- The Standing Storage Loss Emission calculations assume each belly tank will have a capacity of 6,000 gallons.

Actual Emissions for Standing Losses and Working Losses for Type 1 and Other (1750 kW engines, conservatively)

	Number of Tanks	Actual Emissions per Tank	Total losses (Lbs/year)	VOC tons/year
Type 1	180	0.79	143.07	7.15E-02
Other	21	0.82	17.31	8.65E-03
Total	201		160.38	8.02E-02

- See Belly Tank Emissions Calculations for additional details.

Potential Emissions for Standing Losses and Working Losses for Type 1 and Other (1750 kW engines, conservatively)

	Number of Tanks	Potential Emissions per Tank	Total Losses (Lbs/year)	VOC tons/year
Type 1	180	0.83	148.86	7.44E-02
Other	21	0.86	18.16	9.08E-03
Total	201		167.03	8.35E-02

- See Belly Tank Emissions Calculations for additional details.

60 Cooling Towers: B1CT-1 thru B1CT-12, B2CT-1 thru B2CT-12, B3CT-1 thru B3CT-12, B4CT-1 thru B4CT-12, B5CT-1 thru B5CT-12

Circulation rate:	21,600,000	gal/hr (6,000 gal/min per cooling tower)
	189,216,000	Mgal/yr (based on 8,760 hrs/yr)
Drift loss percent:	0.001	%
Water density:	8.34	lbs/gal
TDS concentration:	1,500	ppm single sample event
	1,500	ppm average annual rate
Biocide Additive	12,000	gal/yr
Biocide Density	10	lb/gal
Biocide % VOC	0	%

Emission Factor Calculation for PM and PM₁₀

Emission factor equation from AP-42, Section 13.4-2 (01/1995)

PM/PM₁₀ emission factor =

0.0001251	lbs/Mgal single sample event (highest hourly rate)
0.0001251	lbs/Mgal average annual rate

Hourly Emissions = (lbs/Mgal single sample event)(hourly throughput gal/hr)(1 Mgal/1,000 gal)

Annual Emissions = (lbs/Mgal average annual rate)(annual throughput Mgal/yr)/(2,000 lbs/ton)

Cooling Tower Emission Summary		
Pollutant	Hourly PTE (lbs/hr)	Annual PTE (tons/year)
PM	2.70	11.84
PM ₁₀ ^[1]	1.89	8.28
PM _{2.5} ^[2]	1.13	4.97
VOC	0.00	0.00

[1] PM₁₀ is assumed 70% of PM per CEIDARS, "Final - Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds", October 2006

[2] PM_{2.5} is assumed 42% of CEIDARS, "Final - Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds", October 2006

VOC emission summary for horizontal tanks

	VOC actual emissions (tons/year)	VOC potential emissions (tons/year)
Type 1 (180)	7.05E-02	7.31E-02
Type 2 + 7 Auxiliary (17 total tanks)	6.87E-03	7.18E-03
Total Potential Tank Emissions	7.74E-02	8.03E-02

If there are more than 3 horizontal tanks at the facility, you can copy/duplicate a blue tank tab:

- i. Right-click on the tab name (example 'Horizontal tank 3')
- ii. Select 'Move or Copy'
- iii. Check to box next to 'Create a Copy'

VOC emissions from horizontal tank #1

Enter tank specific information in all blue cells.

Tank information

Tank identification	Type 1 Belly Tanks
Description	Worst-Case Tank Emissions Eval.
Location (city)	Kansas City Area, MO

Property	Value	Units	Description	About the value
Fuel type	Diesel	select one	Type of fuel stored in the tank.	Choose "Gasoline" or "Diesel" from the drop-down box.
Storage tank position	Above	select one	Fixed roof structure.	Choose "Above" or "Under" from the drop-down box.
Actual throughput	5,504	gal/yr	Gallons stored in this tank over the period of 12 consecutive months.	
Actual hours operated	8760.0	hours/year	Number of hours the tank is being used.	
Potential throughput	7,155	gal/yr	Calculated based on actual tank throughput divided by the hours operated and multiplied by 8760 hours/year.	An additional 30% is added to the total to allow for variability and account for maximum capacity of the tank throughput.
VOC actual emissions	3.92E-04	ton/yr	Amount of VOC actually released over the 12-month period.	Emissions are calculated based on the data entered into the blue cells on this tab.
VOC potential emissions	4.06E-04	ton/yr	Amount of VOCs potentially released over a 12-month period.	Emissions are calculated based on the data entered into the blue cells on this tab.

Physical properties of the tank

Property	Value	Units	Description	About the value
Shell length H _S	8.92	feet	This is actual length of the tank.	Use the outside height of the tank.
Shell diameter D	10.70	feet	This is the actual width of the cylindrical shell.	Use the outside diameter of the tank.
Shell effective height H _E	8.40	feet	Calculated effective height of the tank.	
Shell effective diameter D _E	11.02	feet	Calculated effective diameter of the cylindrical shell.	
Shell radius R _S	5.350778952	feet	Calculated radius	The shell diameter divided by 2.
Working Max volume	6000.0	gallons	Calculated volume - (Max volume may change, 6,000 gal is worse case scenario)	Area = $\pi \pi (D_E/2)^2$ * shell effective height (S _E). Conversion factor: 7.48 gallon/ft ³ .
Turnovers per year (actual)	0.9	dimensionless	Calculated number the tank is emptied and refilled, annually.	Actual throughput and working volume . Value = "0" if liquid is stored for an entire year.
Turnovers per year (potential)	1.2	dimensionless	Calculated number the tank could be emptied and refilled, annually.	Potential throughput and working volume . Value = "0" if liquid is stored for an entire year.
Shell color/shade	White/NA	select one	Tank shell color and shade are used to identify paint solar absorptance .	Default value is "White/NA". Go to Table 7.1-6.
Shell condition	Average	select one	Tank condition is used to identify paint solar absorptance . Only aboveground.	Default value is "Average" Go to Table 7.1-6.
Paint solar absorptance α	0.25	dimensionless	Insert value from table 7.1-6 . Paint effectiveness in absorbing radiant energy.	Default value for "White/NA", "Average" condition tank is: 0.25. Go to Table 7.1-6.
Vacuum setting P _{BV}	-0.03	psig	Vacuum setting is a value set for the tank at the facility.	Must be between 0 and -1 psig. Default value is -0.03 psig.
Pressure setting P _{BP}	0.03	psig	Breather vent pressure is a reading from the tank monitoring system.	Must be between 0 and 1 psig. Default value is 0.03 psig.

Weather data

Property	Value	Units	Description	About the value
Nearest major city	Kansas City, MO	Select one	Nearest major city to the tank location.	Go to Table 7.1-7.
Average annual maximum temperature T _{AX}	64.0	°F	Average over a calendar year.	Go to Table 7.1-7.
Average annual minimum temperature T _{AN}	45.3	°F	Average over a calendar year.	Go to Table 7.1-7.
Atmospheric pressure P _A	14.2	psia	Average for the location.	Barometric pressure of 29.9 inches of mercury is approximately 14.7 psia.
Solar insolation I	1325.0	Btu/(ft ² ·day)	Total for a horizontal surface.	Go to Table 7.1-7.

Calculation of VOC Emission = Total Losses (L_T)

Variable	Calculated value	Notes (equations are from AP-42, Chapter 7)
Total losses (VOC actual emissions) L _T	0.78	Equation 1-1
Total losses (VOC potential emissions) L _T	0.81	Equation 1-1
Standing storage losses L _S	0.68	Equation 1-2
Working losses (actual) L _W	0.10	Equation 1-35
Working losses (potential) L _W	0.13	Equation 1-35
Annual net throughput (actual) Q	131.04	Based on actual throughput entered by user (gal/year) / 42 bbl/gal
Annual net throughput (potential) Q	170.36	Based on calculated potential throughput (gal/year) / 42 bbl/gal
Working loss turnover factor (actual) K _N	1.00	Saturation; turnovers >36 = (180 + N) / 6N; turnovers at 36 or lower = 1
Working loss turnover factor (potential) K _N	1.00	Saturation; turnovers >36 = (180 + N) / 6N; turnovers at 36 or lower = 1
Stock vapor density W _V	0.00	Equation 1-22
Vapor Molecular Weight at 60 °F M _V	130	Table 7.1-2
Vapor pressure P _{VA}	0.005854784	Equation 1-25, P _{VA} based on T _{LA}
Vapor space volume V _V	401.07	Equation 1-3
Vapor space tank outage H _{VO}	4.20	Equation 1-16, note for H _{VO} horizontal
Vapor space expansion factor K _E	0.034	Equation 1-5
Vented vapor saturation factor K _S	1.00	Equation 1-21
Working loss product factor K _P	1	Assume value of 1 for gasoline or diesel.
Ideal gas constant R	10.731	Constant, Equation 1-22
Average vapor temperature T _V	517.63	Equation 1-33

Daily average liquid surface temperature	T _{LA}	516.60	°R
Daily vapor temperature range	ΔT _V	19.72	°R
Daily ambient temperature range	ΔT _A	18.70	°R
Daily maximum ambient temperature	T _{AX}	523.70	°R
Daily minimum ambient temperature	T _{AN}	505.00	°R
Daily average ambient temperature	T _{AA}	514.35	°R
Liquid bulk temperature	T _B	515.34	°R
Daily vapor pressure range	ΔP _V	0.00	psia
Breather vent pressure setting range	ΔP _B	0.06	psi
Vapor pressure equation constant	A	12.101	dimensionless
Vapor pressure equation constant	B	8907	°R
Vapor pressure at T _{LX}	P _{VX}	0.0069	psia
Vapor pressure at T _{LN}	P _{VN}	0.0050	psia
Maximum T _{LA}	T _{LX}	521.53	°R
Minimum T _{LA}	T _{LN}	511.67	°R

Equation 1-28
Equation 1-7
Equation 1-11
Table 7-1-7. Conversion factor: Rankine = Fahrenheit + 459.7
Table 7-1-7. Conversion factor: Rankine = Fahrenheit + 459.7
Equation 1-30
Equation 1-31
Equation 1-9
Equation 1-10
Table 7.1-2
Table 7.1-2
Equation 1-9, note 5
Equation 1-9, note 5
Equation 1-9, note to Figure 7.1-17
Equation 1-9, note to Figure 7.1-17

VOC emissions from horizontal tank #1

Enter tank specific information in all blue cells.

Tank information

Tank identification	Type 2 Belly Tanks (+ Ancillary Tanks)
Description	Worst-Case Tank Emissions Eval.
Location (city)	Kansas City Area, MO

Property	Value	Units	Description	About the value
Fuel type	Diesel	select one	Type of fuel stored in the tank.	Choose "Gasoline" or "Diesel" from the drop-down box.
Storage tank position	Above	select one	Fixed roof structure.	Choose "Above" or "Under" from the drop-down box.
Actual throughput	6,876	gal/yr	Gallons stored in his tank over the period of 12 consecutive months.	
Actual hours operated	8760	hours/year	Number of hours the tank is being used.	
Potential throughput	8,939	gal/yr	Calculated based on actual tank throughput divided by the hours operated and multiplied by 8760 hours/year.	An additional 30% is added to the total to allow for variability and account for maximum capacity of the tank throughput.
VOC actual emissions	4.04E-04	ton/yr	Amount of VOC actually released over the 12-month period.	Emissions are calculated based on the data entered into the blue cells on this tab.
VOC potential emissions	4.22E-04	ton/yr	Amount of VOCs potentially released over a 12-month period.	Emissions are calculated based on the data entered into the blue cells on this tab.

Physical properties of the tank

Property	Value	Units	Description	About the value
Shell length H _S	8.92	feet	This is actual length of the tank.	Use the outside height of the tank.
Shell diameter D	10.70	feet	This is the actual width of the cylindrical shell.	Use the outside diameter of the tank.
Shell effective height H _E	8.40	feet	Calculated effective height of the tank.	
Shell effective diameter D _E	11.02	feet	Calculated effective diameter of the cylindrical shell.	
Shell radius R _S	5.350778953	feet	Calculated radius	The shell diameter divided by 2.
Working Max volume	6000.0	gallons	Calculated volume - (Max volume may change, 6,000 gal is worse case scenario)	Area = $\pi(D_E/2)^2 * \text{shell effective height} (S_E)$. Conversion factor: 7.48 gallon/ft ³ .
Turnovers per year (actual) N	1.1	dimensionless	Calculated number the tank is emptied and refilled, annually.	Actual throughput and working volume . Value = "0" if liquid is stored for an entire year.
Turnovers per year (potential) N	1.5	dimensionless	Calculated number the tank could be emptied and refilled, annually.	Potential throughput and working volume . Value = "0" if liquid is stored for an entire year.
Shell color/shade	White/NA	select one	Tank shell color and shade are used to identify paint solar absorptance .	Default value is "White/NA". Go to Table 7.1-6.
Shell condition	Average	select one	Tank condition is used to identify paint solar absorptance . Only aboveground.	Default value is "Average" Go to Table 7.1-6.
Paint solar absorptance α	0.25	dimensionless	Insert value from table 7.1-6 . Paint effectiveness in absorbing radiant energy.	Default value for "White/NA", "Average" condition tank is: 0.25. Go to Table 7.1-6.
Vacuum setting P _{BV}	-0.03	psig	Vacuum setting is a value set for the tank at the facility.	Must be between 0 and -1 psig. Default value is -0.03 psig.
Pressure setting P _{BP}	0.03	psig	Breather vent pressure is a reading from the tank monitoring system.	Must be between 0 and 1 psig. Default value is 0.03 psig.

Weather data

Property	Value	Units	Description	About the value
Nearest major city	Kansas City, MO	Select one	Nearest major city to the tank location.	Go to Table 7.1-7.
Average annual maximum temperature T _{AX}	64.0	°F	Average over a calendar year.	Go to Table 7.1-7.
Average annual minimum temperature T _{AN}	45.3	°F	Average over a calendar year.	Go to Table 7.1-7.
Atmospheric pressure P _A	14.2	psia	Average for the location.	Barometric pressure of 29.9 inches of mercury is approximately 14.7 psia.
Solar insolation I	1325.0	Btu/(ft ² ·day)	Total for a horizontal surface.	Go to Table 7.1-7.

Calculation of VOC Emission = Total Losses (L_T)

Variable	Calculated value	Notes (equations are from AP-42, Chapter 7)
Total losses (VOC actual emissions) L _T	0.81	Equation 1-1
Total losses (VOC potential emissions) L _T	0.84	Equation 1-1
Standing storage losses L _S	0.68	Equation 1-2
Working losses (actual) L _W	0.13	Equation 1-35
Working losses (potential) L _W	0.16	Equation 1-35
Annual net throughput (actual) Q	163.71	Based on actual throughput entered by user (gal/year) / 42 bbl/gal
Annual net throughput (potential) Q	212.83	Based on calculated potential throughput (gal/year) / 42 bbl/gal
Working loss turnover factor (actual) K _N	1.00	Saturation; turnovers >36 = (180 + N) / 6N; turnovers at 36 or lower = 1
Working loss turnover factor (potential) K _N	1.00	Saturation; turnovers >36 = (180 + N) / 6N; turnovers at 36 or lower = 1
Stock vapor density W _V	0.00	Equation 1-22
Vapor Molecular Weight at 60 °F M _V	130	Table 7.1-2
Vapor pressure P _{VA}	0.005854784	Equation 1-25, P _{VA} based on T _{LA}
Vapor space volume V _V	401.07	Equation 1-3
Vapor space tank outage H _{VO}	4.20	Equation 1-16, note for H _{VO} horizontal
Vapor space expansion factor K _E	0.034	Equation 1-5
Vented vapor saturation factor K _S	1.00	Equation 1-21
Working loss product factor K _P	1	Assume value of 1 for gasoline or diesel.
Ideal gas constant R	10.731	Constant, Equation 1-22
Average vapor temperature T _V	517.63	Equation 1-33

Daily average liquid surface temperature	T _{LA}	516.60	°R
Daily vapor temperature range	ΔT _V	19.72	°R
Daily ambient temperature range	ΔT _A	18.70	°R
Daily maximum ambient temperature	T _{AX}	523.70	°R
Daily minimum ambient temperature	T _{AN}	505.00	°R
Daily average ambient temperature	T _{AA}	514.35	°R
Liquid bulk temperature	T _B	515.34	°R
Daily vapor pressure range	ΔP _V	0.00	psia
Breather vent pressure setting range	ΔP _B	0.06	psi
Vapor pressure equation constant	A	12.101	dimensionless
Vapor pressure equation constant	B	8907	°R
Vapor pressure at T _{LX}	P _{VX}	0.0069	psia
Vapor pressure at T _{LN}	P _{VN}	0.0050	psia
Maximum T _{LA}	T _{LX}	521.53	°R
Minimum T _{LA}	T _{LN}	511.67	°R

Equation 1-28
Equation 1-7
Equation 1-11
Table 7-1-7. Conversion factor: Rankine = Fahrenheit + 459.7
Table 7-1-7. Conversion factor: Rankine = Fahrenheit + 459.7
Equation 1-30
Equation 1-31
Equation 1-9
Equation 1-10
Table 7.1-2
Table 7.1-2
Equation 1-9, note 5
Equation 1-9, note 5
Equation 1-9, note to Figure 7.1-17
Equation 1-9, note to Figure 7.1-17

Reference tables from AP-42, chapter 7AP-42, Chapter 7 (updated June 2020) <https://www3.epa.gov/ttn/chief/ap42/ch07/final/ch07s01.pdf>**Table 7.1-2 Properties of selected petroleum liquids at 60 F**

Petroleum liquid	Vapor molecular weight	Liquid density	True vapor pressure	Vapor pressure equation constant	Vapor pressure equation constant
	M_V (lb/lb-mole)	W_L (lb/gal)	P_{VA} (psi)	A (dimensionless)	B (°R)
Distillate fuel oil No. 2	130	7.1	0.006	12.101	8907
Gasoline RVP 7	68	5.6	3.5	11.833	5500.6

Table 7.1-6 Paint solar absorption for fixed roof tanks

Paint Color	Paint shade or type	Reflective condition (α) ¹		
		New	Average	Aged
Aluminum	Specular	0.39	0.44	0.49
Aluminum	Diffuse	0.60	0.64	0.68
Aluminum ²	Mill-finish, unpainted	0.10	0.12	0.15
Beige/Cream	No shade	0.35	0.42	0.49
Black	No shade	0.97	0.97	0.97
Brown	No shade	0.58	0.62	0.67
Gray	Light	0.54	0.58	0.63
Gray	Medium	0.68	0.71	0.74
Green	Dark	0.89	0.90	0.91
Red	Primer	0.89	0.90	0.91
Rust	Red iron oxide	0.38	0.44	0.50
Tan	No shade	0.43	0.49	0.55
White	N/A not applicable	0.17	0.25	0.34

¹Reflective condition definitions

New: For paint, paint still retains the fresh shine of having been recently applied; for mill-finished aluminum, surface is shiny.

Average: For paint, paint is in good condition, but the initial shine has faded; for mill-finished aluminum, surface is oxidized but still bright.

Aged: For paint, paint is noticeably faded and dull; for mill-finish aluminum, surface is dull.

²Refers to aluminum as the base metal, rather than aluminum colored paint.**Table 7.1-7 Daily average maximum, daily average minimum liquid temperature, and insolation factor in Minnesota**

Location	Average daily maximum temperature ¹	Average daily minimum temperature ¹	Average solar insolation factor	Atmospheric pressure
	T_{AX} °F	T_{AN} °F	I Btu/(ft ² ·day)	P_A psia (ln/in ²)
Lincoln, NE	62.5	40.5	1290	14.08
Duluth, MN	48.2	31.4	1133	13.95
International Falls, MN	48.2	27.6	1077	14.08
Kansas City, MO	64	45.3	1325	14.18
Rochester, MN	53.2	36	1169	14.01
Chicago, IL	58.4	41.8	1183	14.34
St. Cloud, MN	52.9	32.9	1165	14.16

¹Ambient temperature

Instructions

- 1) Read through the instructions and information in the 'Instructions' tab.
- 2) Review the 'Insignificant activities' tab for Minnesota Rules that may apply to the tanks at your facility.
- 3) Start with 'Horizontal tank 1' tab, enter the applicable data in the blue boxes.
- 4) Continue to 'Horizontal tank 2' and 'Horizontal tank 3' tabs for additional tanks and enter applicable data into the blue boxes.
- 5) Go to 'VOC emission total' tab for a summary of all the tanks entered into this calculator.

Color key

Blue	Enter information for your facility in the blue boxes.
White	Do not change the values/formulas in white boxes. White boxes contain intermediate calculations for determining emissions.
Green	Your emission totals are in green boxes. These are automatically calculated based on information entered in blue boxes.
Yellow	Permit and insignificant activity thresholds.
Orange	Orange boxes are filled with standard values. You may change them if you have test results that provide data specific to your site.
Blue Text	Key information

Assistance

This calculator was created by the Minnesota Pollution Control Agency's (MPCA) Small Business Environmental Assistance Program (SBEAP). We provide free, confidential, environmental assistance to small businesses. For more information:

Call: 651/282-6143 Email: smallbizhelp.pca@state.mn.us
800/657-3938

Online at the MPCA website at: <https://www.pca.state.mn.us/smallbizhelp>

Insignificant activity - tanks

List tanks in the table below that qualify as an insignificant activity. [Minn. R. 7007.1300, subp. 2\(E\), 3\(C\), and 3\(F\)](#)

Subpart 2(E)

If your tank meets any of the following descriptions, it is not required to be listed on an air permit application.

- 1. Pressurized storage tanks for anhydrous ammonia, liquid petroleum gas (LPG), liquid natural gas (LNG), or natural gas (NG)
- 2. Storage tanks holding lubricating oils
- 3. Above and below ground fuel oil storage tanks with a combined total tankage capacity less than 100,000 gallons
- 4. Gasoline storage tanks with a combined total tankage capacity of less than 2,000 gallons
- 5. Storage tanks holding inorganic liquids, including water, except for acids that volatilize hazardous air pollutants (HAPs) or volatile organic compounds (VOC)

Subpart 3(C)

If your tank meets any of the following descriptions, it is required to be listed on an air permit application.

- 1. Gasoline storage tanks with a combined total tankage capacity of not more than 10,000 gallons
- 2. Nonhazardous air pollutant VOC storage tanks with a combined total tankage capacity of not more than 10,000 gallons of nonhazardous air pollutants and with a vapor pressure of not more than 1.0 psia at 60 degrees Fahrenheit

Subpart 3(F)

Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than:

- 1. 4,000 pounds per year of carbon monoxide
- 2. 2,000 pounds per year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, VOCs (including hazardous air pollutant-containing VOCs), and ozone
- 3. 1,000 tons per year of CO₂e

Subject to subpart 2(E), 3(C), or 3(F)	Tank ID	Tank contents	Capacity	Location	Color	Vertical or horizontal	Notes

Supporting Documentation for
Alternative Diesel Fuels



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November 16th, 2022

To Whom it May concern;

The attached emissions data is provided as representative emissions for the 20V4000G94S engine model. The comparative emissions measurement was carried out on an EPA Tier2-certified 60 Hz engine at Rolls Royce Solutions America test lab in Aiken, SC to validate and to confirm no significant negative impact on engine out emissions while using EN15940 between 50Hz and 60Hz engines. Results of these test can be seen in Chart 1. The results show slight reduction of all regulated emissions. It must be noted that the testing was done on one engine test bench and the engine run time and condition of the engine is not necessarily similar to engines used at our certification test facility in Germany and therefore the emissions measurements in Aiken could differ from actual engine certification tests and because of this the actual reduction of emissions shown from the Aiken, SC test could vary from expected emissions reductions when performing certification tests in Germany.

Mark Holt

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Emissions Expert
Rolls-Royce Solutions America Inc.
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Mark Halbert

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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.

Emissions measurement data provided 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.

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.

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 SO₂ emission rates comprehend exclusively the SO₂ content as found in the fuel source, oil consumption effects are not included. Variation of sulfur content in the fuel changes only the stated SO₂ 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.



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REGULATED EMISSION REDUCTION USING EN15940 DIESEL FUEL

■ Standard Certification ■ Worst Case Speed Adjustment ■ Worst Case Droop

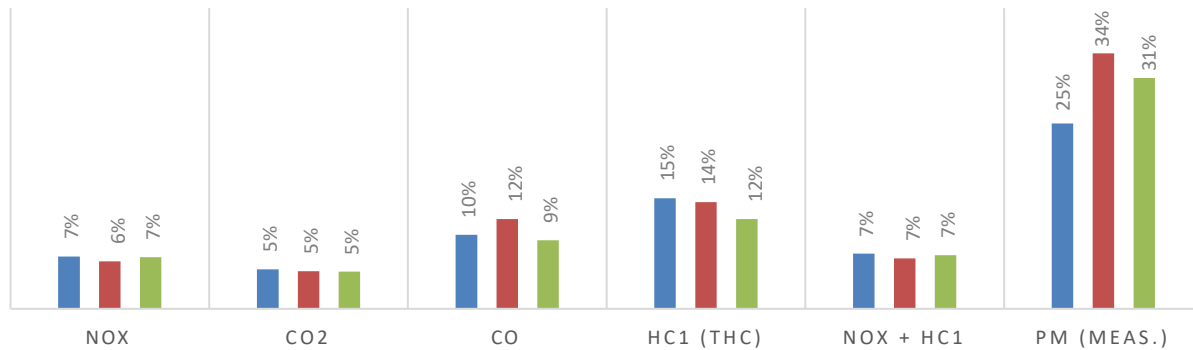


Chart 1: Reduction in Regulated Emissions using EN15940 Diesel on D2 Test Cycle



Power Generation

HVO FUEL PROVEN TO BE EFFECTIVE FOR DIESEL GENERATOR SETS

By Brian Ponstein
Senior Product Manager

And Jens Engelhardt
Senior Manager, Development Engineering

The energy landscape is changing rapidly with a clear focus on cleaner solutions in the pursuit of net zero emissions. The goal is to achieve this reduced environmental impact without sacrificing the hallmark benefits of reliability, efficiency, and load acceptance of diesel gensets.

Testing fuel performance

Rolls-Royce approves the use of synthetic paraffinic diesel fuel, also referred to as Hydrotreated Vegetable Oil (HVO), for its **mtu** Series 4000 gensets in power generation applications. This paper provides a detailed review of the testing of an **mtu** diesel generator set operating on standard diesel fuel as well as on HVO fuel.



A Rolls-Royce
solution

System tests were conducted in the field with mobile measurement technology. Engine-only tests were performed on a test bed, generating more accurate data results. The results of the testing confirm the effectiveness of HVO as a drop-in fuel for **mtu** diesel generator sets. In comparing the performance criteria between diesel and HVO fuel, no significant effects on general performance were observed. In fact, several positive factors were observed when using HVO.

HVO testing showed:

- A decrease in NO_x, CO₂, and PM
- Improved response to load acceptance
- Full power performance
- Decreased fuel consumption

This test was conducted using both an **mtu** 20V 4000 G94S engine as well as a 20V 4000 DS3000 generator set.

The assessment of this test addressed the following areas:

- Load step behavior: Diesel & HVO
- Emissions testing: Diesel & HVO
- Fuel consumption comparison
- Endurance run on HVO

Fuels tested

The testing comparison of engine generator set performance was conducted using distillate diesel fuel and HVO. The diesel fuel used followed DIN 51603 (B0) and the HVO fuel followed EN15940 Class A. In the U.S., engine-only tests were performed using ULSD and HVO meeting ASTM 975. The chart below also shows ASTM D975 and EN 590 for reference.

Parameter	Unit	ASTM D 975 ULSD	EN 590	DIN 51603 Heating Oil EL low sulfur	EN 15940 Class A	Shell HVO (Batch DK6272)
Cetane number	-	min 40	min 51	na	min 70	75,5
Cetane index	-	min 40	min 46	na	na	na
Density at 15°C	kg/m ³	na	820-845	max 860	765-800	779,6
Sulfur content	ppm	max 15	max 10	max 50	max 5	< 5
Total aromatics	% (m/m)	max 35	na	na	max 1,1	na
Flashpoint	°C	min 52	min 55	min 55	min 55	76
Viscosity at 40 °C	mm ² /s	1,9-4,1	2,0-4,5	max 3,8	2-4,5	2,873
FAME content	Vol %	max 5	max 7	max 0,5	max 7	0,0
Oxidation stability	h	na	min 20	na	min 20	> 48
Oxidation stability	g/m ³	na	max 25	na	max 25	< 2
Lubricity at 60 °C (HFRR value)	µm	max 520	max 460	max 460	max 400	339
Total contamination	mg/kg	na	max 24	max 24	max 24	< 12
Water content	mg/kg	na	max 200	max 200	max 200	36
Water + sediment	Vol %	max 0,05	na	na	na	na

Therefore, as reference, Shell HVO is the fuel sample from the testing as a comparison to the standards.

Note: Fuel specifications state ranges, maximums, or minimums for various fuel characteristics.

Test results

The test was completed using a complete generator set. On both fuels, the full nameplate rating of the genset was achieved. The emission test equipment was installed after the engine in the exhaust system.

Fuel consumption

Figure 1 shows data from the engine via ECM recording, comparing engine power and fuel consumed at each load point. The unit was loaded to the same electrical load for each load step on the two different fuels.

Fuel consumption comparison Diesel vs HVO 3000kWe Genset

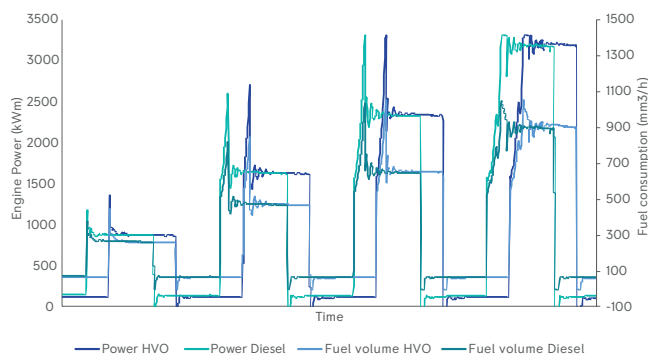


Figure 1

Figure 2 shows the fuel consumption for the EPA D2 cycle load points based on an engine brake dynamometer. The results show HVO has a higher energy per mass, but a lower energy per volume. Therefore, fuel consumption values for HVO could differ slightly from published values for distillate diesel fuel and this should be taken into consideration if permitting is based on fuel consumption.

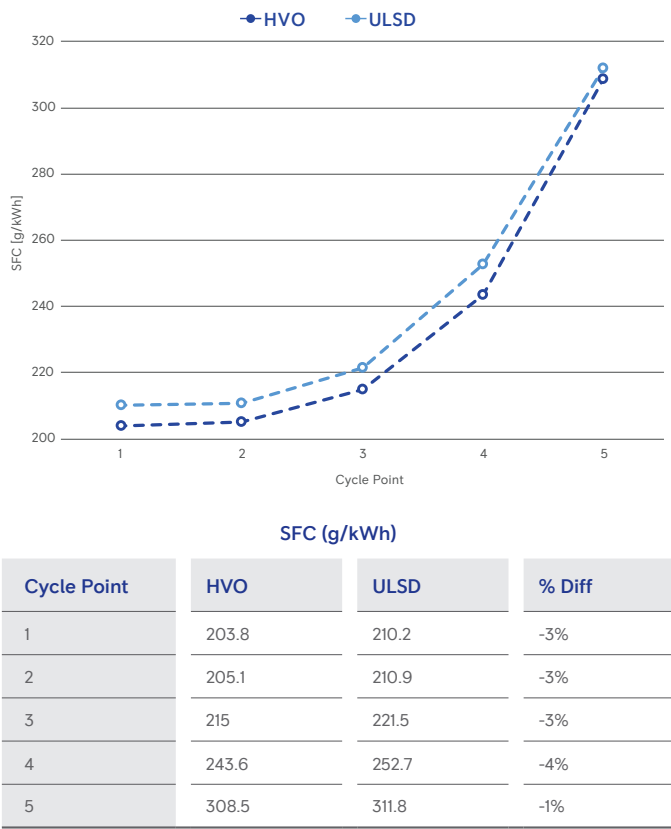


Figure 2: Fuel consumption from dynamometer testing

NOx comparison

For the NOx values, a 5% error bar is added to the charts to show potential sensor error (Figure 3). The data shows a NOx reduction of approximately 8% when operating with HVO, with a higher reduction at lower loads. When looking at the EPA weighted average (D2 cycle), the delta becomes more evident on the potential reduction (Figure 4).

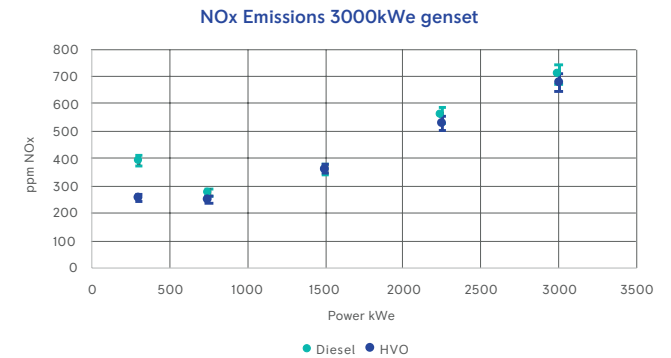


Figure 3

The chart on the left shows the specific fuel consumption improves using HVO, which can be explained by higher combustion efficiency due to HVO's higher Cetane number. However, the chart on the right shows a slightly higher volumetric fuel consumption, which can be attributed to the HVO's lower density.

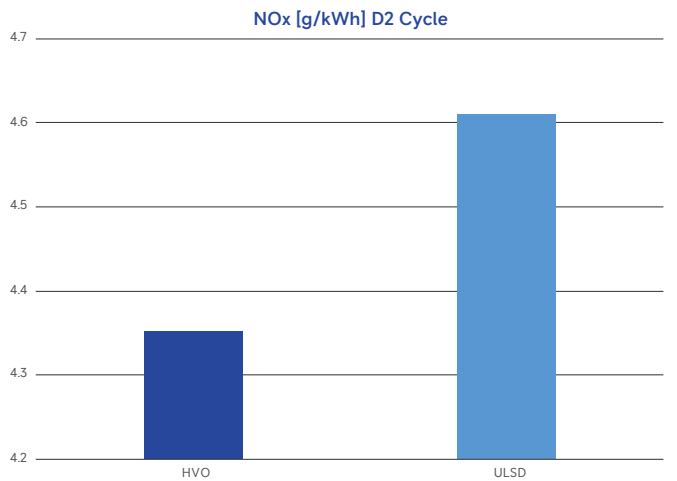
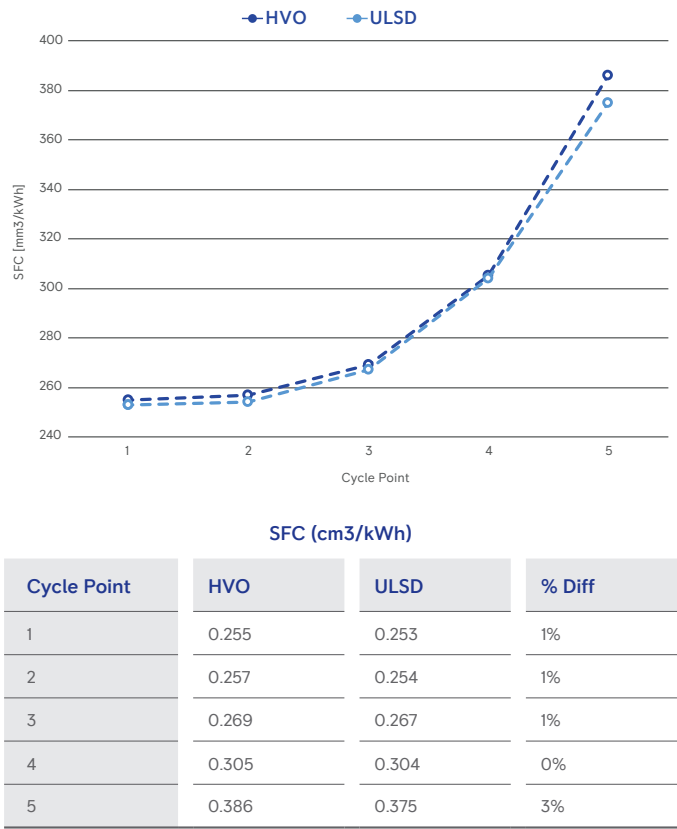


Figure 4

CO₂ comparison

The test analyzed tail pipe emissions, and CO₂ footprint reduction well-to-wheel depending on fuel feedstock. For the CO₂ values, a reduction is consistent. A reduction of 3% was seen in the D2 Cycle emissions testing.

The real CO₂ advantage of HVO, and why it is considered a renewable fuel, is not reflected in the data but can be found in the feedstock. Whereas coal does not absorb CO₂ before it is converted into diesel fuel, the feedstocks used for HVO (such as sunflower) absorb CO₂. This results in a very minimal increase of total CO₂ emissions if using HVO. CO₂ neutrality differs by feedstock and production process.

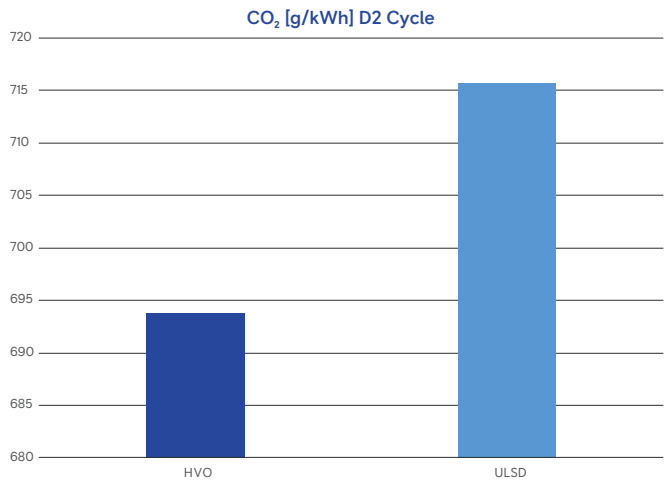
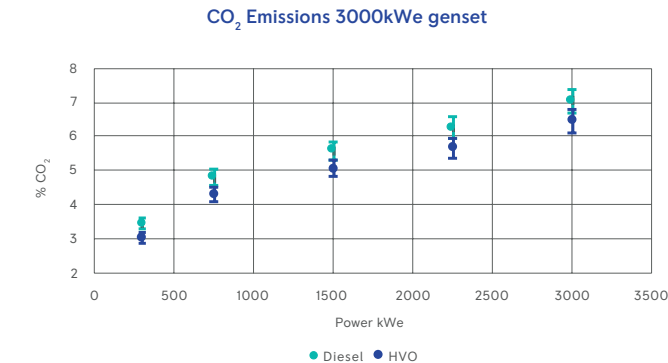


Figure 5

Particulate Matter (PM) comparison

Significant reduction in PM emissions was observed when operating on HVO fuel. The reduction of PM emissions ranges from 50-80% depending on load point, with a 42% reduction in D2 cycle emissions.

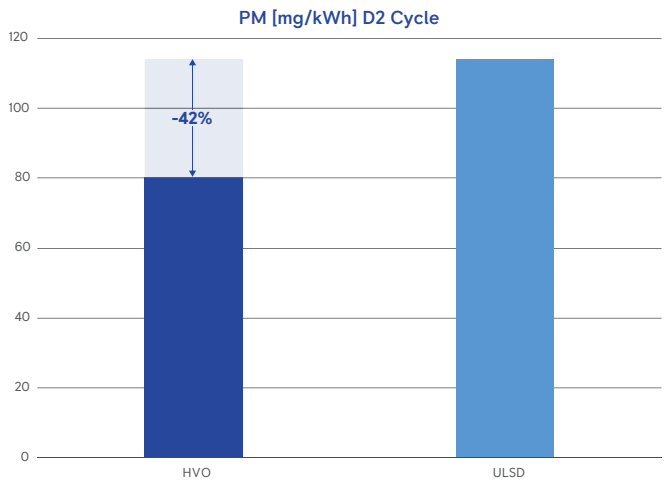
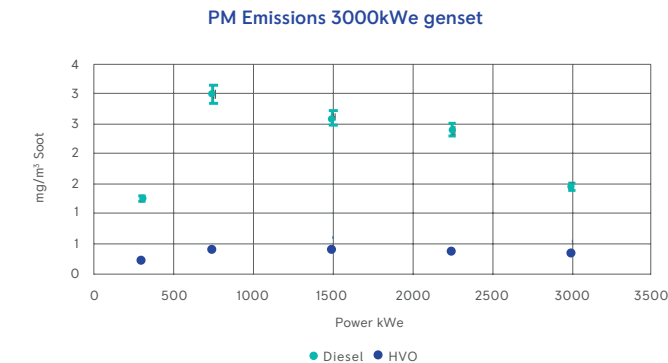


Figure 6

Transient response

The transient behavior when operating on HVO fuel is comparable to the performance of operation with distillate diesel fuel. Figure 7 provides a summary of the load steps with the corresponding frequency dip and recovery time.

Figures 8 and 9 show the behavior of each fuel as well as the acceptance tolerance according to ISO 8528 for voltage and frequency.

The end of line (EOL) parameters for this engine were adjusted using diesel fuel. Figure 9 shows the same maximum power was achieved using HVO even if the end-of-line-testing is done with diesel fuel.

Transient response 3000kWe Genset

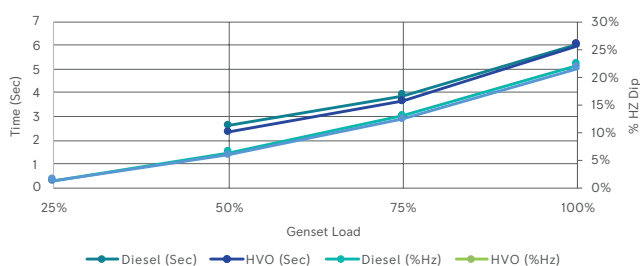


Figure 7

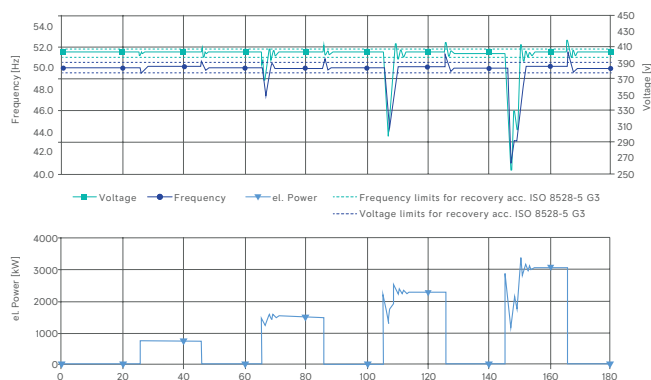


Figure 8: Transient behavior with distillate diesel

Conclusion

The use of HVO as a drop-in fuel has shown acceptable performance in controlled applications. Therefore, HVO fuel is approved for use in **mtu** generator sets.

The testing showed full nameplate power could be achieved equally using both fuels. In addition, the test shows the following benefits when operating on HVO fuel as an alternative to distillate diesel:

- Lower NO_x, PM and CO₂ emissions at nearly all load points
- Marginal transient performance improvement

As with all fuels, the end user must work closely with its fuel supplier to ensure it is getting the optimal fuel for its application and installation. In addition, proper fuel storage must also be assessed, as it is important for the fuel to be of acceptable quality to ensure reliability and sustainability of the product. Lastly, the feedstock for the HVO fuel should be considered to truly assess the well-to-wheel CO₂ reduction and environmental impact.

Please consult with your local **mtu** representative when using HVO fuel.

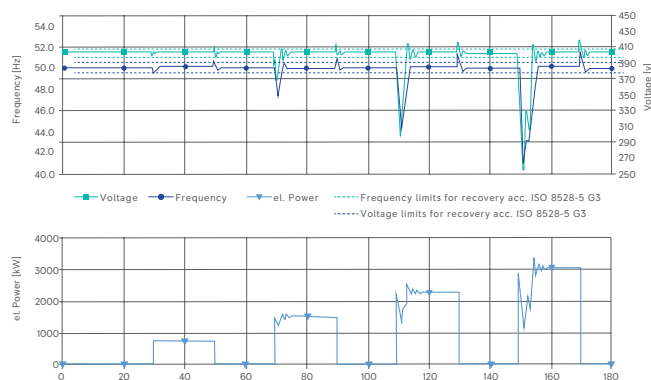


Figure 9: Transient behavior with HVO fuel

Rolls-Royce provides world-class power solutions and complete lifecycle support under our product and solution brand **mtu**. Through digitalization and electrification, we strive to develop drive and power generation solutions that are even cleaner and smarter and thus provide answers to the challenges posed by the rapidly growing societal demands for energy and mobility. We deliver and service comprehensive, powerful and reliable systems, based on both gas and diesel engines, as well as electrified hybrid systems. These clean and technologically advanced solutions serve our customers in the marine and infrastructure sectors worldwide.

Renewable and Alternative Fuels For Use in Diesel Engines

ABSTRACT

A number of renewable and alternative fuels can be used as drop-in replacements for diesel fuel. These fuels must meet the specifications and characteristics described below in order to be used in Cat® engines and reduce the risk of downtime.

INTRODUCTION

Renewable fuels are derived from renewable resources such as planted crops (soy, palm, rapeseed, etc.), used cooking oil, animal fat, biomass, algae, and others. Renewable fuels reduce the carbon footprint of diesel engines on a Life Cycle Analysis basis. Renewable fuels that are derived from fats and oils may be processed through hydrotreating. The result is a high paraffinic renewable diesel (RD), also called hydrotreated vegetable oil (HVO), that can be used in diesel engines.

Biomass and syn gas, which can be produced from methane gas and gas-to-liquid (GTL), can be converted into renewable fuel through various processes and is typically called biomass-to-liquid (BTL). BTL, GTL and HVO have the same chemistry and performance specifications, and all can be used in diesel engines.

Guidelines

Note that alternative and renewable fuels covered in this paper are different than biodiesel fuel, which is covered in other publications.

In order to be applicable for Cat® diesel engines, Caterpillar recommends that renewable and alternative fuels meet the latest version of any of the following specifications:

- EN15940, which defines quality requirements for BTL, GTL and HVO. This is the preferred specification for renewable and alternative fuels covered in this paper.
- ASTM D975, which is the specification for diesel fuel in the United States.
- EN 590, except for its density provisions. This is the specification for diesel fuel in Europe.
- The Cat Diesel Fuel Specification, except for its density provisions.

Renewable and alternative fuels that meet the requirements listed above can be used at:

- 100 percent (may be called RD100, HVO100, or GTL 100);
- Any blend level with diesel fuel;
- Any blend level with biodiesel fuel; and
- Any blend level with a combination of biodiesel and diesel fuels.

Renewable and alternative fuels are typically paraffinic hydrocarbons, which are included in a subset of diesel fuel composition. Hence these fuels, whether at 100% or blended, can be used as drop-in replacements for diesel fuel. These fuels have many benefits:

- HVO / RD fuels are renewable, which can reduce the carbon footprint or Greenhouse Gas (GHG) impact of the engine.
- They have a high cetane number.
- They can be formulated to provide low temperature capability. Consult with your supplier to ensure the fuel meets the ambient temperature requirements of the application.
- They can reduce the emissions of certain products of incomplete combustion, such as unburned hydrocarbons (UHC), soot, and carbon monoxide (CO). They may also reduce NOx emissions under certain engine loads and cycles.

Here are Caterpillar's guidance and potential impacts for the use of renewable and alternative fuels according to the specifications detailed above:

- No specific engine conversion process is needed when these fuels are used for the first time or thereafter.
- These fuels may reduce the power output of engines due to their low density. Up to a 5% reduction may be noted at 100%.
- They are compatible with aftertreatment technologies such as DPF, DOC and SCR, and they can be used on engines that meet Tier4, Stage V, and similar advanced emission standards.
- They are compatible with filters and engine oils used with typical diesel fuels. No impact on maintenance intervals is expected. In general, it is recommended that oil drain intervals are based on oil analysis.
- They are compatible with elastomeric materials and hoses used on most modern engines. Certain elastomers used in older engines, such as those manufactured prior to the early 1990s, may not be compatible with the new alternative fuels. Refer to your Cat dealer for guidance.
- They can be stored in the same tanks used for diesel fuel, and they have a similar aging life as diesel fuel.
- As with all fuels, renewable and alternative fuels have to be managed to reduce contamination and water ingress.

Summary

The use of fuels with low carbon footprints supports Caterpillar's sustainability initiatives. Caterpillar is continuously following the development of renewable and alternative fuels, and is involved in the development of appropriate specifications to ensure the successful application of these fuels in Cat engines.

LET'S DO THE WORK.™

LEXE20433-00 June 2021

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3,000 ekW, 60 Hz Generator Set: Diesel & HVO Test

ABSTRACT

This paper provides details and summary conclusions of the evaluation in factory test cell of a Cat® 3516E, 3,000 ekW, 60 Hz generator set using diesel and hydrotreated vegetable oil (HVO) fuel.

Executive Summary

This paper describes back-to-back tests performed at Caterpillar's Large Engine Center on a Cat® 3516E, 3,000 kW, 60 Hz diesel generator set running on diesel and hydrotreated vegetable oil (HVO). The findings of the tests, which are detailed in this paper, can be summarized as follows:

Positive Impact Using HVO

- Compared with diesel, lower NOx, smoke, and soot emissions were recorded.
- Start-up time was faster than diesel, but the time to reach steadystate speed was almost equal.

Additional Observations (the following results were expected; they do not preclude the use of HVO as a fuel)

- HVO density limited the injector delivery; at the full rack setting the engine lost 3.6% of power.
- On average, transient response tests showed a 1.3% greater frequency drop.

Introduction

Caterpillar is a world leader in the development and production of heavy-duty diesel engines.

Caterpillar has been following the development of renewable and alternative fuels for decades, and the company is involved in the development of appropriate specifications to ensure the successful application of these fuels in Cat® engines. The most common liquid renewable fuels are derived from renewable resources such as planted crops (soy, palm, rapeseed, etc.), used cooking oil, animal fat, biomass, algae, and others. Renewable fuels reduce the carbon footprint of the fuels on a Life Cycle Analysis basis. One form of renewable fuel, hydrotreated vegetable oil (HVO) — also called renewable diesel (RD) — is derived from fats and oils through a hydrotreating process.

To better understand the performance and environmental impact of using HVO as fuel in a diesel engine, Caterpillar performed a back-to-back study of diesel and HVO fuel in a Cat 3516E, 3,000 ekW, 60Hz generator set.

Fuels Tested

For the test, a comparison of engine performance was conducted using diesel fuel and HVO, referred to as neat or R100, no blending.

Details on the composition of the diesel fuel and HVO used in the test are shown in Figure 1.

		Ultra-Low Sulfur Diesel (ULSD)	Hydrotreated Vegetable Oil (HVO)
T90	°C	320	302
Density@15°C	g/mL	0.8492	0.7814*
Cetane Index, Calculated		44.7	69.8*
Sulfur	ppm	13.8	5.0
Viscosity @ 40°C	cSt	2.46	3.095*
Lubricity (maximum)	mm	0.45*	0.46*
Cloud Point	°C	-12*	-10*
Aromatics (by weight)	%	35*	1.1*
Flashpoint	°C	54*	55*

*values based on characteristics listed in the fuel certificate of analysis or in fuel specification; other values in the table represent results of fuels analysis conducted in Caterpillar Tech Center labs.

Note: Fuel specifications (e.g., ASTM D975 and EN 15940) indicate ranges or maximum/minimum for the various fuel characteristics

Figure 1

Test Set Up

The generator set was evaluated in test cell #525 at the Caterpillar Large Engine Center in Lafayette, Indiana. The test cell is normally used for production testing of generator sets and is equipped with a reactive load bank.

Pictures of the generator set installed in the test cell are shown in Figure 2.



Figure 2

The diesel fuel used for the test came from a common tank that supplies the facility test cells, while a temporary tank for the HVO was installed in an adjacent test cell.

A picture of the temporary tank for the HVO is shown in Figure 3.



Figure 3

To measure the NO_x emissions and smoke, automotive-style NO_x sensors and smoke sensors were installed in the exhaust stack. The installation of these sensors and the required analysis equipment are shown in Figure 4.

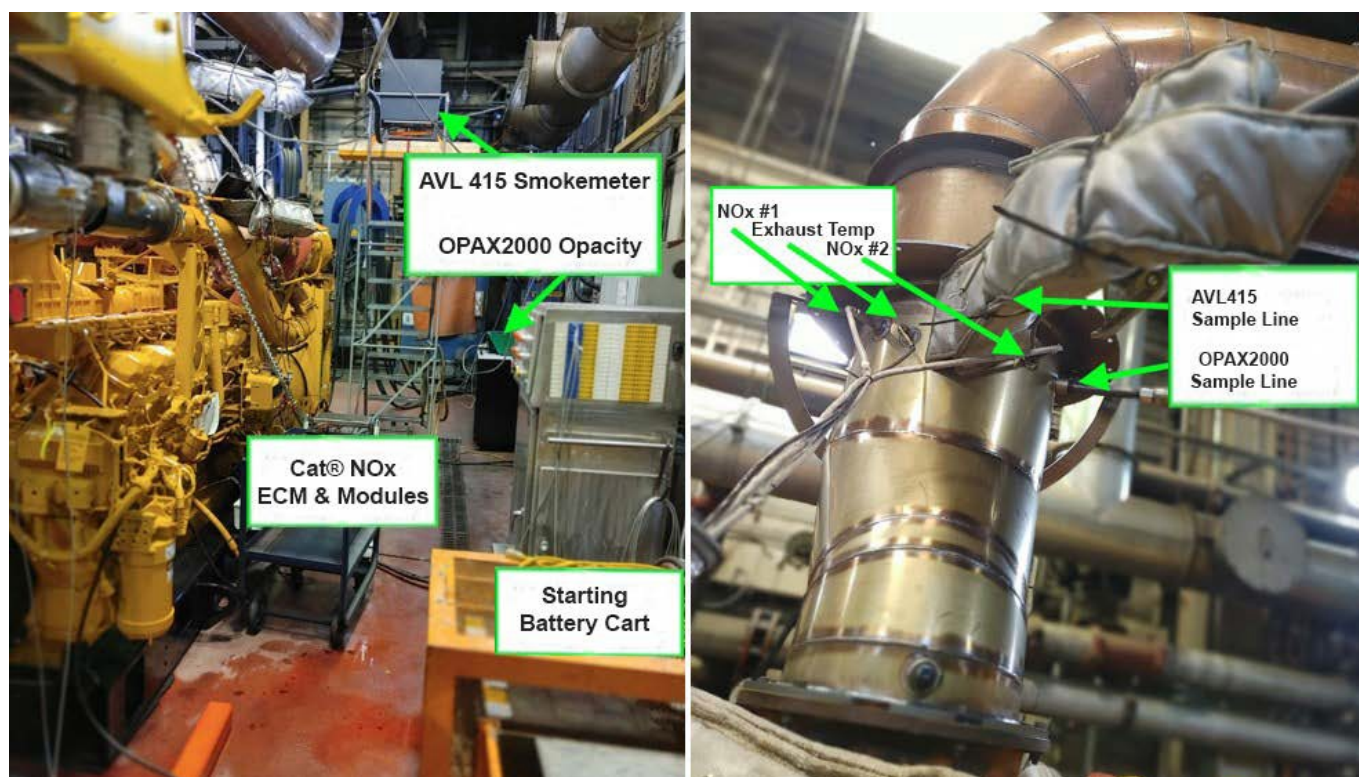


Figure 4

Test Procedure

The testing was completed in four days with a total of 18 hours of run time on the generator set. The test plan was as follows:

1. Install the generator set and perform any test cell debug with diesel fuel.
2. Perform and record 12 steady-state performance points with diesel fuel.
3. Perform and record three NFPA start-up tests with diesel fuel.
4. Perform and record four ISO 8528-5 tests with diesel fuel.
5. Perform and record four SpecSizer tests with diesel fuel.
6. Change fuel filters for the engine and test cell.
7. Purge the system of diesel fuel by running engine with 100 gallons of HVO.
8. Perform and record 12 steady-state performance points with HVO.
9. Perform and record three NFPA start-up tests with HVO.
10. Perform and record four ISO 8528-5 tests with HVO.
11. Perform and record four SpecSizer tests with HVO.
12. Change fuel filters for the engine and test cell.
13. Purge the system of HVO by running engine with 100 gallons of diesel fuel.
14. Check the generator set power with diesel fuel, inspect the generator set, and remove to prepare for shipping.

For the start-up tests, the jacket water was forced to 60°C. These tests were repeated three times to ensure consistent results. Each transient test (ISO 8528-5 and SpecSizer tests) was run at two voltage regulator settings (2 V/Hz and 3 V/Hz) as well as two power factor settings (0.8 and 1).

Test Results

The generator set was expected to lose 2% to 5% of power based on the literature as well as Caterpillar's own simulations. At all the tested part-load points, the engine was run to the same power. The engine governor modified the fuel injector duration (rack) for these points. To document the power loss at the full load point, the rack was held constant at the rated power for both the diesel and HVO tests. The test showed the engine lost 3.6% of its power with HVO, as shown in Figure 5.

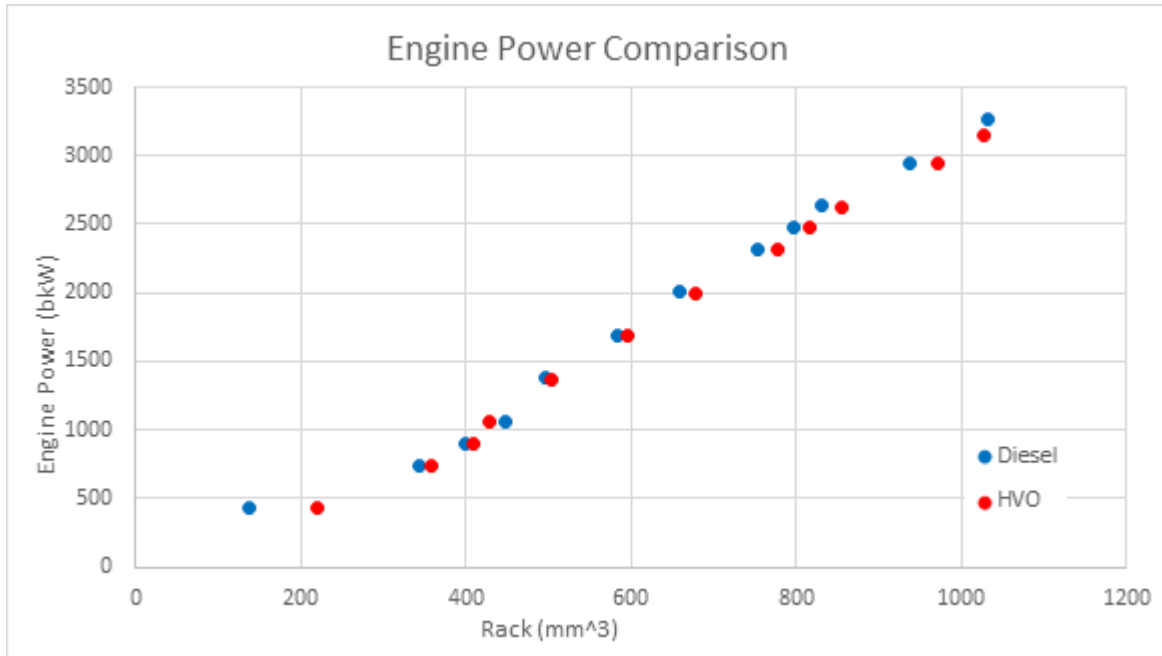


Figure 5

The fuel consumed in gallons/hr was also recorded for these 12 steady-state points, as shown in Figure 6.

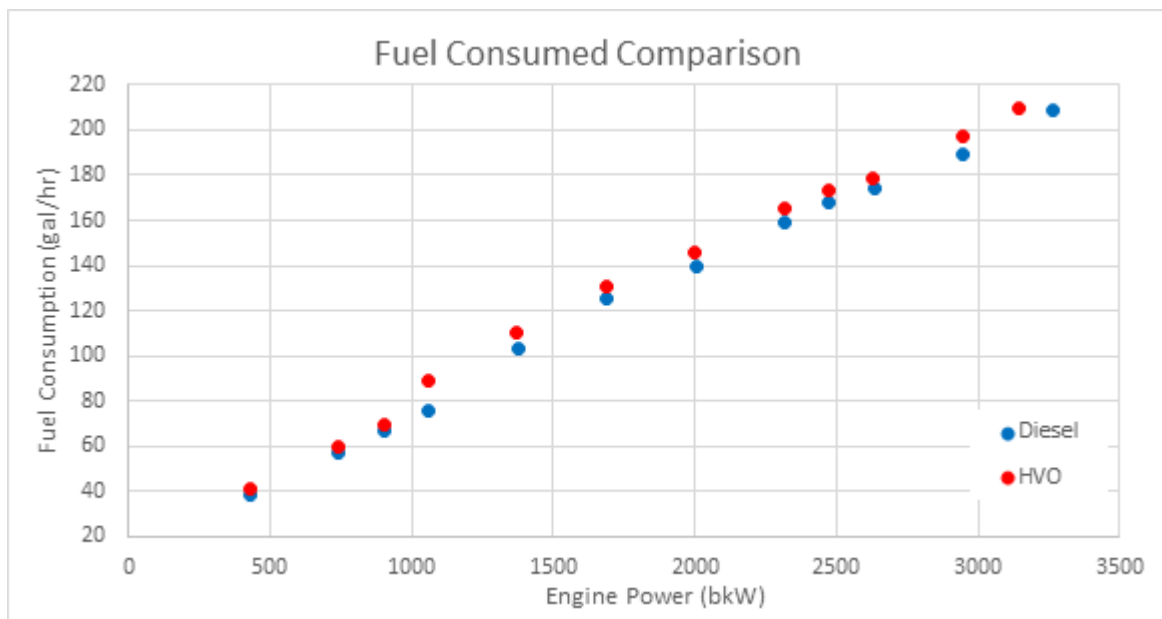


Figure 6

Since this test was not performed in a development/certification test cell, automotive NOx sensors and smoke sensors were installed and recorded to document changes with the different fuels.

For the NOx sensors, a 5% error bar has been added to all measured test points and shows there is no significant difference at high loads. At a 50% load and lower, the HVO shows a NOx reduction of up to approximately 40%. The NOx test results for 12 steady-state points are shown in Figure 7.

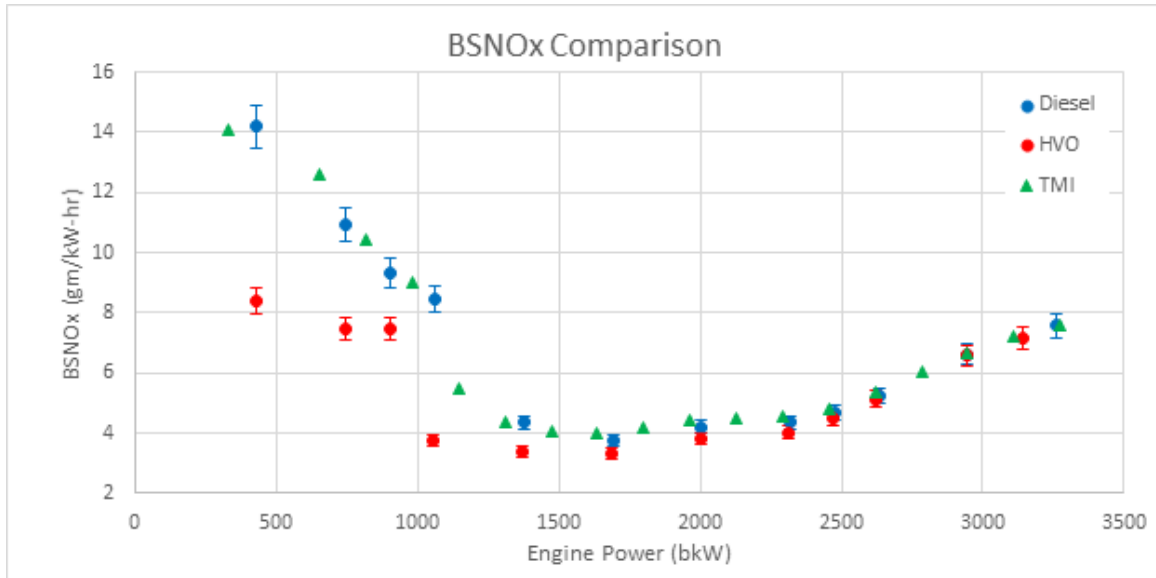


Figure 7

An AVL 415 smoke meter was used to measure the filter smoke number (FSN) for the 12 steady-state points. The FSN values for HVO were up to approximately 60% lower than the diesel values down to approximately 28% load. The FSN values for diesel were lower than the HVO values by up to approximately 80% at approximately 23% load and below. These results are shown in Figure 8.

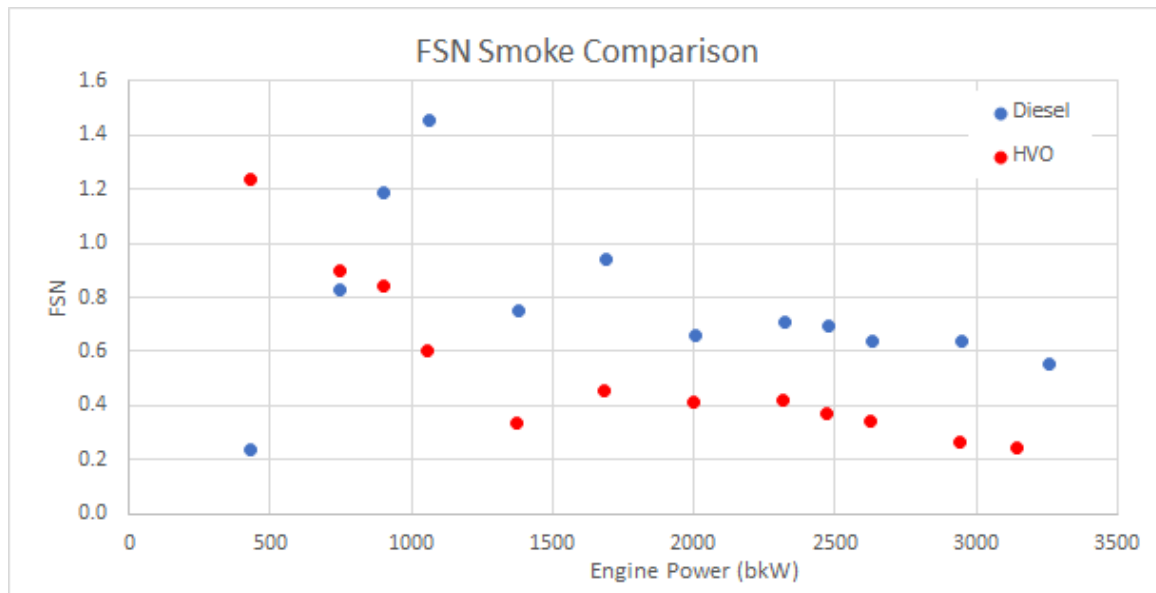


Figure 8

The peak smoke opacity was captured for the SpecSizer test also. These results correspond with the steady-state results, showing the smoke produced with HVO is approximately 50% of the diesel value. This is shown in Figure 9.

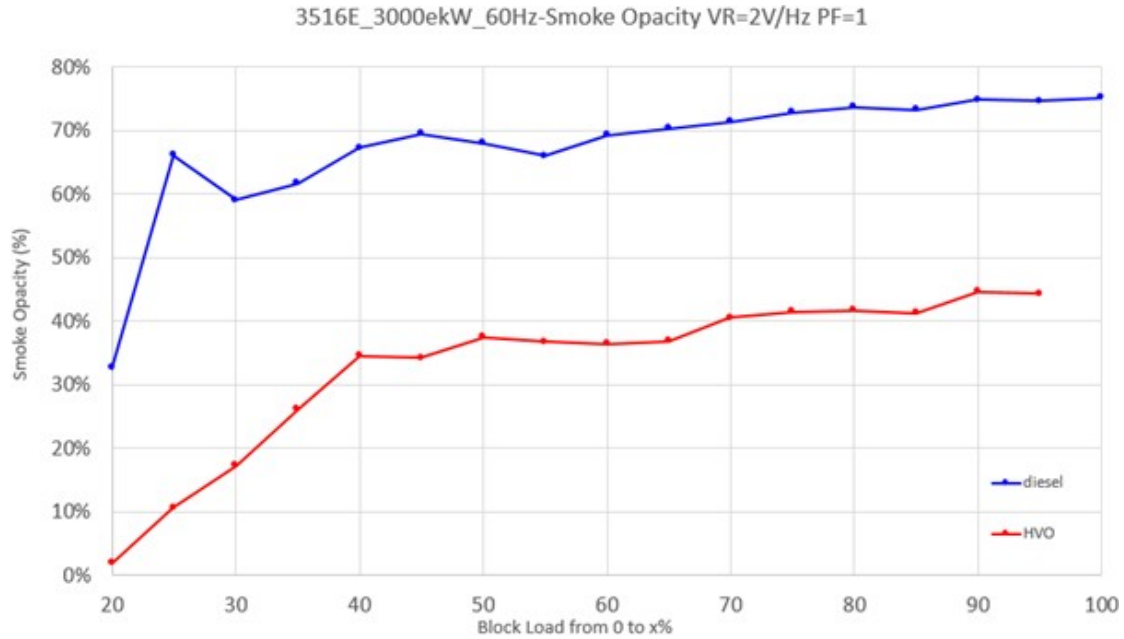


Figure 9

Transient response tests with a 2:1 slope voltage regulator and at a 1.0 PF resulted in the frequency drop crossing the G3 limit at approximately 41% with HVO and 43% with diesel. The G2 limit was crossed at approximately 48% with HVO and 51% with diesel. These test results are shown in Figure 10.

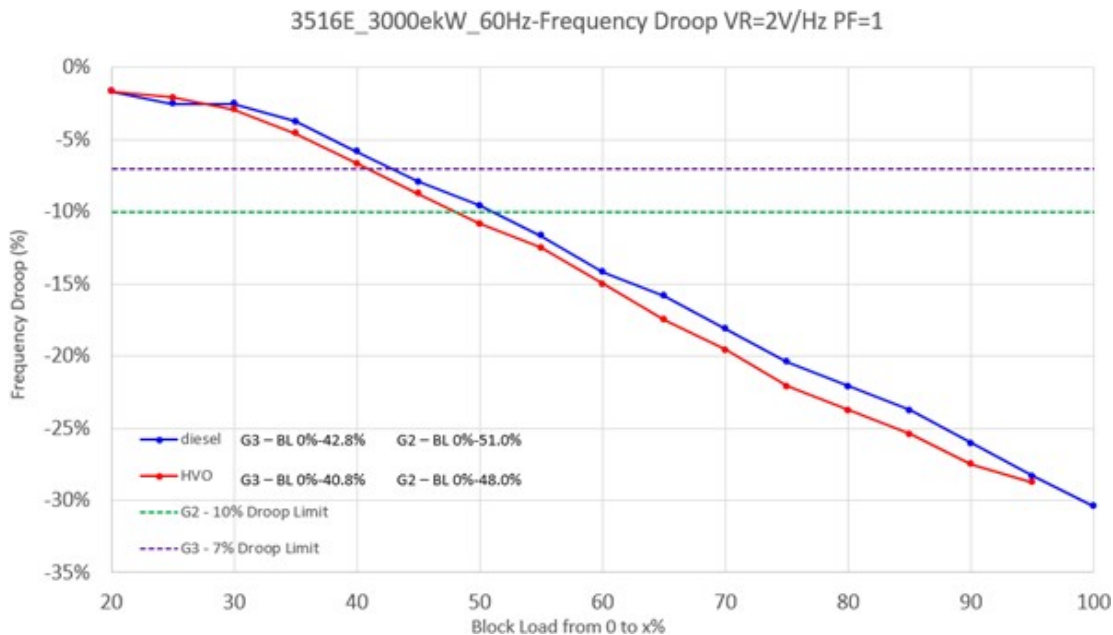


Figure 10

Figure 11 shows how the frequency behaves with diesel and HVO fuel for block loads of 0-40% to 0-60%, in 5% increments. In all cases, the frequency dip and recovery time with diesel are less than with HVO. The frequency rise is slightly higher with diesel than HVO for the load rejection of block loads in 5% increments from 40% to 60%, except in the case of the 45% load rejection.

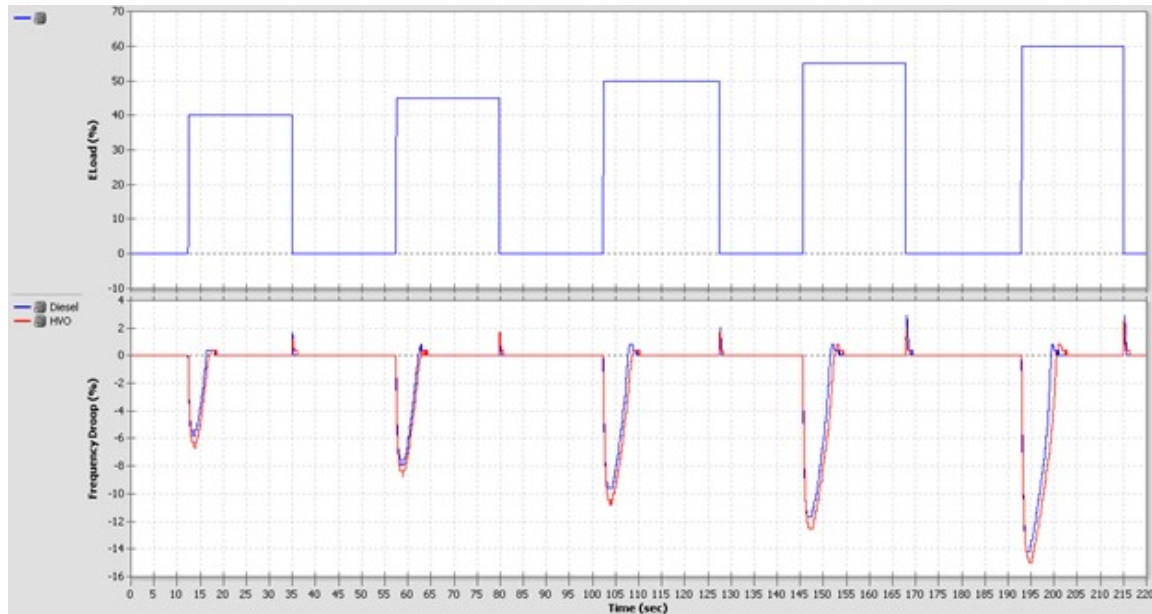


Figure 11

To test the capability of the Cat 3516E to meet NFPA 110, Type 10 requirements that stipulate power must be provided to the load terminals of the transfer switch within 10 seconds, the jacket water temperature of the engine was maintained at 60°C and a start-up test was performed with each fuel three times. Results for each of the three runs were similar, so the third run with each fuel is shown in Figure 12. As expected, based on the higher cetane number, the start-up time with HVO was slightly faster than with diesel. There was a slight overshoot in engine speed with HVO, resulting in almost identical times to reach steady state speed. In both cases, the steady state engine speed reached 1800 rpm (60 Hz) in under 7 seconds.

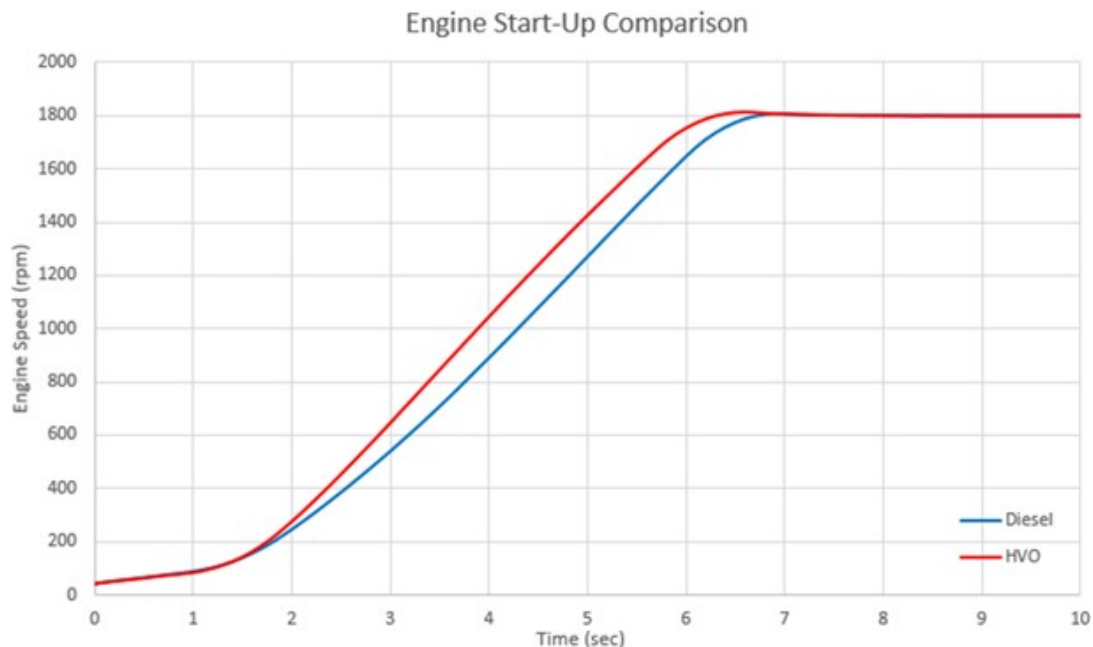


Figure 12

Summary

With some trade-offs, the tests demonstrated the viability of HVO as an alternative to diesel fuel:

- HVO density limited the injector delivery, and the engine had a 3.6% power loss at full load (a power loss of 2% to 5% was expected).
- Fuel consumption was slightly higher using HVO at all points measured.
- Overall, lower NOx, smoke and soot emissions were recorded when using HVO. For the smoke opacity test, the results using HVO were approximately 50% of diesel at all points measured.
- On average, transient response tests showed a 1.3% greater frequency drop with HVO.
- Start-up time using HVO was faster than diesel, but the time to reach steady state speed was almost equal.

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LEXE20432-00 June 2021

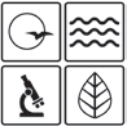
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APPENDIX C

Construction Permit Application

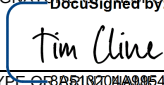


MISSOURI DEPARTMENT OF NATURAL RESOURCES
AIR POLLUTION CONTROL PROGRAM
APPLICATION FOR AUTHORITY TO CONSTRUCT

APCP USE ONLY

CHECK NO.:	CHECK RECIEVED:
CHECK AMOUNT: \$	CHECK DATE:
PROJECT NUMBER:	

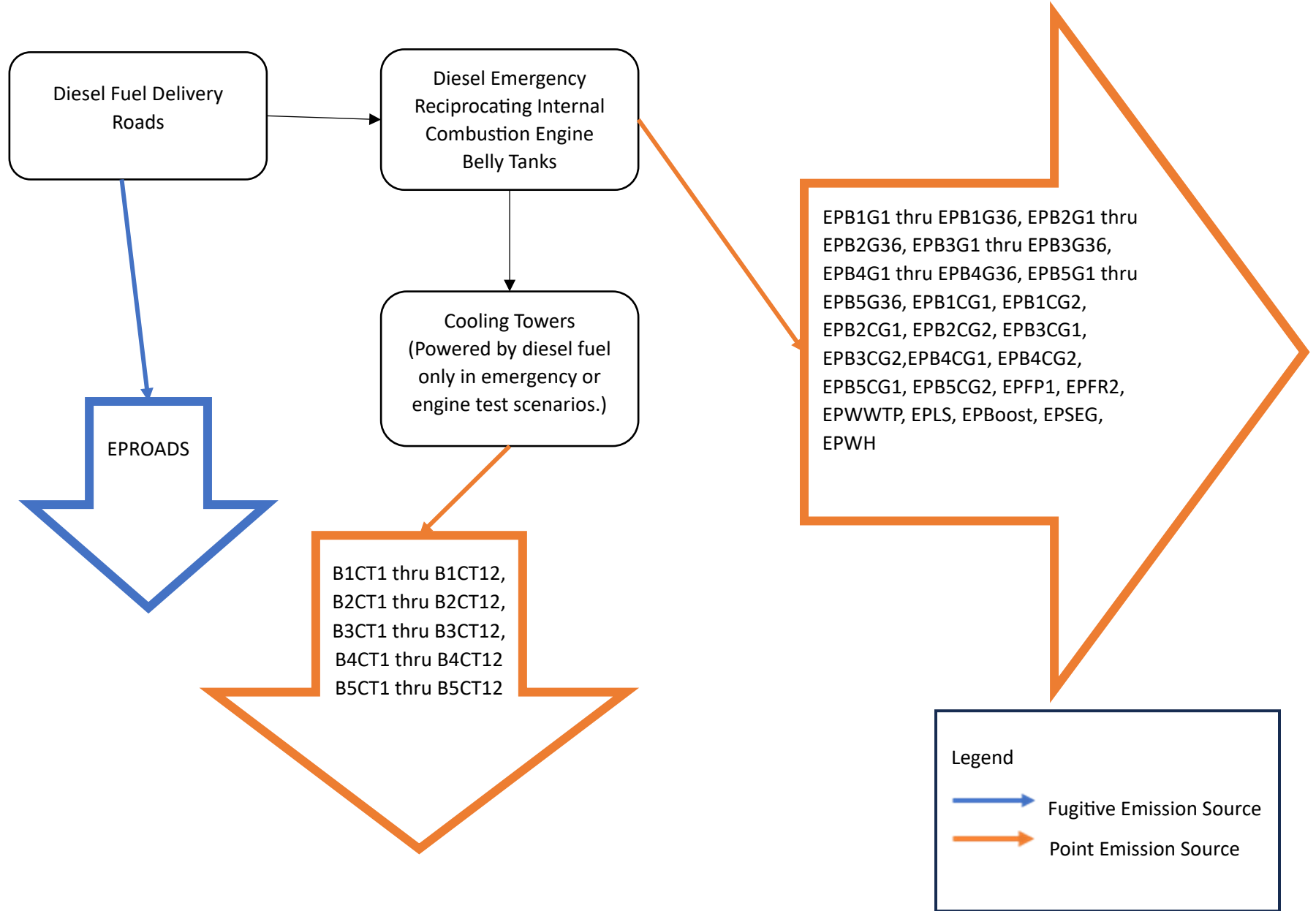
Submit applications with the filing fee that is appropriate for the project: no filing fee for an amendment; **\$250** for Sections (3), (5), and (6); **\$5,000** for Sections (7), (8) and (9); and **\$2,500** for PAL renewal. The department will assess a **\$75**-per-hour processing fee at the end of the review, unless no permit is required.

1.OWNER'S NAME (PLEASE PRINT OR TYPE) Shenandoah Computing LLC		
2.OWNER'S STREET ADDRESS One Metropolitan Square, 211 N Broadway # 3600		
3.OWNER'S MAILING ADDRESS One Metropolitan Square, 211 N Broadway # 3600		
4.OWNER'S CITY St. Louis	STATE MO	ZIP CODE 63102
5.COUNTY St. Louis	6.SECTION, TOWNSHIP, RANGE N/A	
7.FINAL PRODUCT / PRINCIPAL ACTIVITY Computer Processing and Data Preparation and Processing Services		8.SIC CODE 7374
9.INSTALLATION NAME (IF DIFFERENT)		
10.INSTALLATION MAILING ADDRESS One Metropolitan Square, 211 N Broadway # 3600		
11.INSTALLATION COMPANY CITY St. Louis	STATE MO	ZIP CODE 63102
12.CONTACT PERSON'S NAME (PLEASE PRINT OR TYPE) Tim Cline	CONTACT PERSON'S TITLE Authorized Signatory	
13.CONTACT PERSON'S MAILING ADDRESS One Metropolitan Square, 211 N Broadway # 3600		
14.CONTACT PERSON'S CITY St. Louis	STATE MO	ZIP CODE 63102
15.CONTACT PERSON'S TELEPHONE NUMBER WITH AREA CODE TBD	16.CONTACT PERSON'S FAX NUMBER WITH AREA CODE TBD	
17.CONTACT PERSON'S EMAIL ADDRESS TBD		
18.UNIFIED REVIEW Yes ☐ No ☐		
19.THIS APPLICATION IS FOR Modification or Addition to an Existing Installation ☐ New Installation ☒ Amendment to Existing Permit: Permit No. _____ Temporary / Pilot Plant ☐		
20.FIPS COUNTY ID NUMBER 29165	21.PLANT ID NUMBER	
22.PROJECTED DATE TO COMMENCE CONSTRUCTION March 2026	23.PROJECTED DATE OF OPERATION STARTUP Summer 2027	
APPLICANT'S CERTIFICATION STATEMENT		
I certify I have personally examined and am familiar with the information in this application and believe the information submitted is accurate and complete. I am aware that making a false statement or misrepresentation in this application is grounds for denying or revoking the construction permit. I may also be guilty of a misdemeanor and upon conviction, may be punished by fine or imprisonment.		
SIGNATURE OF RESPONSIBLE OFFICIAL 		
TYPE OR PRINT NAME OF RESPONSIBLE OFFICIAL Tim Cline		DATE August 20, 2025
OFFICIAL TITLE OF RESPONSIBLE OFFICIAL Authorized Signatory		RESPONSIBLE OFFICIAL'S TELEPHONE NUMBER WITH AREA CODE

24.PROJECT DECSRIPTION AND NARRATIVE

Emission Information for Air Construction Permit Application		
Form 1.1 Process Flow Diagram for Facility According to Proposed Application		
INSTALLATION NAME (A.)	FIPS COUNTY NO. (B.)	PLANT NO. (C.)
For a new installation, show the entire installation. For an addition to an existing installation, show only the new processes, equipment, or emission points and begin the ID numbering where the existing EIQ emission point numbers leave off. If the application is for a modification or an addition to an existing emission point or unit, show the upstream and downstream point(s) or the equipment this modification will affect.		

Shenandoah Computing LLC
Construction Permit Application Attachment
Process Flow Diagram for Facility According to Proposed Application



Form 1.2 Summary of Emission Points Affected by this Application (duplicate this form as needed)MO 780-1323 (03-22)

Shenandoah Computing LLC

29165

Point No.	Point Description	Reference Worksheet(s) form numbers used with form 2.0 (F.)
EPB1G1	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G2	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G3	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G4	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G5	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G6	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G7	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G8	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G9	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G10	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G11	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G12	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G13	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G14	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G15	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G16	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G17	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G18	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G19	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G20	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G21	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G22	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G23	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G24	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G25	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
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EPB1G30	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
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EPB1G32	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G33	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G34	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G35	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G36	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1CG1	Type 2 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1CG2	Type 2 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB2G1	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB2G2	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB2G3	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB2G4	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB2G5	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB2G6	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1

Shenandoah Computing LLC

29165

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EPB2G7	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB2G8	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB2G9	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
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EPB2CG2	Type 2 - Tier 2 Diesel Emergency Generator	Form 2.1
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EPB3G2	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
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EPB3G7	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G8	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G9	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G10	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G11	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G12	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1

Shenandoah Computing LLC

29165

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EPB3G14	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G15	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G16	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G17	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
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EPB3G19	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
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EPB3G30	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G31	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G32	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G33	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G34	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G35	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3G36	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3CG1	Type 2 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB3CG2	Type 2 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G1	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G2	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G3	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G4	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G5	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G6	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G7	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G8	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G9	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G10	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G11	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G12	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G13	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G14	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G15	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G16	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G17	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G18	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1

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Point No.	Point Description	Reference Worksheet(s) form numbers used with form 2.0 (F.)
EPB4G19	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G20	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G21	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G22	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G23	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G24	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G25	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G26	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G27	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G28	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G29	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G30	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G31	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G32	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G33	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G34	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G35	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4G36	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4CG1	Type 2 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB4CG2	Type 2 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G1	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G2	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G3	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G4	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G5	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G6	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G7	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G8	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G9	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G10	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G11	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G12	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G13	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G14	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G15	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G16	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G17	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G18	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G19	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G20	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G21	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G22	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G23	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G24	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1

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Point No.	Point Description	Reference Worksheet(s) form numbers used with form 2.0 (F.)
EPB5G25	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G26	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G27	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G28	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G29	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G30	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G31	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G32	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G33	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G34	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G35	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5G36	Type 1 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5CG1	Type 2 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB5CG2	Type 2 - Tier 2 Diesel Emergency Generator	Form 2.1
EPB1G1Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G2Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G3Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G4Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G5Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G6Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G7Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G8Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G9Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G10Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G11Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G12Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G13Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G14Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G15Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G16Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G17Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G18Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G19Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G20Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G21Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G22Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G23Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G24Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G25Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G26Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G27Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G28Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G29Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G30Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5

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Point No.	Point Description	Reference Worksheet(s) form numbers used with form 2.0 (F.)
EPB1G31Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G32Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G33Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G34Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G35Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1G36Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1CG1Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB1CG2Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G1Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G2Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G3Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G4Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G5Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G6Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G7Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G8Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G9Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G10Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G11Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G12Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G13Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G14Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G15Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G16Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G17Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G18Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G19Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G20Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G21Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G22Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G23Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G24Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G25Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G26Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G27Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G28Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G29Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G30Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G31Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G32Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G33Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G34Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G35Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2G36Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5

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Point No.	Point Description	Reference Worksheet(s) form numbers used with form 2.0 (F.)
EPB2CG1Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB2CG2Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G1Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G2Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G3Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G4Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G5Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G6Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G7Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G8Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G9Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G10Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G11Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G12Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G13Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G14Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G15Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G16Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G17Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G18Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G19Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G20Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G21Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G22Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G23Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G24Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G25Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G26Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G27Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G28Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G29Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G30Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G31Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G32Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G33Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G34Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G35Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3G36Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3CG1Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB3CG2Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G1Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G2Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G3Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G4Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5

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Point No.	Point Description	Reference Worksheet(s) form numbers used with form 2.0 (F.)
EPB4G5Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G6Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G7Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G8Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G9Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G10Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G11Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G12Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G13Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G14Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G15Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G16Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G17Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G18Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G19Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G20Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G21Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G22Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G23Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G24Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G25Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G26Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G27Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G28Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G29Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G30Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G31Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G32Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G33Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G34Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G35Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4G36Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4CG1Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB4CG2Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G1Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G2Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G3Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G4Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G5Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G6Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G7Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G8Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G9Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G10Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5

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Point No.	Point Description	Reference Worksheet(s) form numbers used with form 2.0 (F.)
EPB5G11Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G12Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G13Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G14Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G15Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G16Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G17Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G18Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G19Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G20Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G21Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G22Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G23Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G24Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G25Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G26Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G27Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G28Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G29Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G30Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G31Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G32Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G33Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G34Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G35Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5G36Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5CG1Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPB5CG2Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	Form 2.5
EPFP1	Tier 2 Diesel Fire Pump Generator	Form 2.1
EPFP2	Tier 2 Diesel Fire Pump Generator	Form 2.1
EPHUB1	Tier 2 Diesel Administrative Generator	Form 2.1
EPHUB2	Tier 2 Diesel Administrative Generator	Form 2.1
EPWWTP1	Tier 2 Diesel WWTP Backup Generator	Form 2.1
EPWWTP2	Tier 2 Diesel WWTP Backup Generator	Form 2.1
EPLS	Tier 2 Diesel Lift Station Emergency Generator	Form 2.1
EPBoost	Tier 2 Diesel Booster Pump Generator	Form 2.1
EPGH1	Tier 2 Diesel Guardhouse Generator	Form 2.1
EPGH2	Tier 2 Diesel Guardhouse Generator	Form 2.1
EPWH	Tier 2 Diesel Warehouse Generator	Form 2.1
EPFP1Tank	Tier 2 Diesel Fire Pump Generator Belly Tank	Form 2.5
EPFP2Tank	Tier 2 Diesel Fire Pump Generator Belly Tank	Form 2.5
EPHUB1	Tier 2 Diesel Administrative Generator Belly Tank	Form 2.5
EPHUB2	Tier 2 Diesel Administrative Generator Belly Tank	Form 2.5
EPWWTP1Tank	Tier 2 Diesel WWTP Backup Generator Belly Tank	Form 2.5

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Point No.	Point Description	Reference Worksheet(s) form numbers used with form 2.0 (F.)
EPWWTP2Tank	Tier 2 Diesel WWTP Backup Generator Belly Tank	Form 2.5
EPLSTank	Tier 2 Diesel Lift Station Generator Belly Tank	Form 2.5
EPBoostTank	Tier 2 Diesel Booster Pump Generator Belly Tank	Form 2.5
EPGH1Tank	Tier 2 Diesel Guardhouse Generator Belly Tank	Form 2.5
EPGH2Tank	Tier 2 Diesel Guardhouse Generator Belly Tank	Form 2.5
EPWHTank	Tier 2 Diesel Warehouse Generator Belly Tank	Form 2.5
B1CT1	6,000 gallon-per-minute Cooling Tower	
B1CT2	6,000 gallon-per-minute Cooling Tower	
B1CT3	6,000 gallon-per-minute Cooling Tower	
B1CT4	6,000 gallon-per-minute Cooling Tower	
B1CT5	6,000 gallon-per-minute Cooling Tower	
B1CT6	6,000 gallon-per-minute Cooling Tower	
B1CT7	6,000 gallon-per-minute Cooling Tower	
B1CT8	6,000 gallon-per-minute Cooling Tower	
B1CT9	6,000 gallon-per-minute Cooling Tower	
B1CT10	6,000 gallon-per-minute Cooling Tower	
B1CT11	6,000 gallon-per-minute Cooling Tower	
B1CT12	6,000 gallon-per-minute Cooling Tower	
B2CT1	6,000 gallon-per-minute Cooling Tower	
B2CT2	6,000 gallon-per-minute Cooling Tower	
B2CT3	6,000 gallon-per-minute Cooling Tower	
B2CT4	6,000 gallon-per-minute Cooling Tower	
B2CT5	6,000 gallon-per-minute Cooling Tower	
B2CT6	6,000 gallon-per-minute Cooling Tower	
B2CT7	6,000 gallon-per-minute Cooling Tower	
B2CT8	6,000 gallon-per-minute Cooling Tower	
B2CT9	6,000 gallon-per-minute Cooling Tower	
B2CT10	6,000 gallon-per-minute Cooling Tower	
B2CT11	6,000 gallon-per-minute Cooling Tower	
B2CT12	6,000 gallon-per-minute Cooling Tower	
B3CT1	6,000 gallon-per-minute Cooling Tower	
B3CT2	6,000 gallon-per-minute Cooling Tower	
B3CT3	6,000 gallon-per-minute Cooling Tower	
B3CT4	6,000 gallon-per-minute Cooling Tower	
B3CT5	6,000 gallon-per-minute Cooling Tower	
B3CT6	6,000 gallon-per-minute Cooling Tower	
B3CT7	6,000 gallon-per-minute Cooling Tower	
B3CT8	6,000 gallon-per-minute Cooling Tower	
B3CT9	6,000 gallon-per-minute Cooling Tower	
B3CT10	6,000 gallon-per-minute Cooling Tower	
B3CT11	6,000 gallon-per-minute Cooling Tower	
B3CT12	6,000 gallon-per-minute Cooling Tower	
B4CT1	6,000 gallon-per-minute Cooling Tower	
B4CT2	6,000 gallon-per-minute Cooling Tower	

Shenandoah Computing LLC

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Point No.	Point Description	Reference Worksheet(s) form numbers used with form 2.0 (F.)
B4CT3	6,000 gallon-per-minute Cooling Tower	
B4CT4	6,000 gallon-per-minute Cooling Tower	
B4CT5	6,000 gallon-per-minute Cooling Tower	
B4CT6	6,000 gallon-per-minute Cooling Tower	
B4CT7	6,000 gallon-per-minute Cooling Tower	
B4CT8	6,000 gallon-per-minute Cooling Tower	
B4CT9	6,000 gallon-per-minute Cooling Tower	
B4CT10	6,000 gallon-per-minute Cooling Tower	
B4CT11	6,000 gallon-per-minute Cooling Tower	
B4CT12	6,000 gallon-per-minute Cooling Tower	
B5CT1	6,000 gallon-per-minute Cooling Tower	
B5CT2	6,000 gallon-per-minute Cooling Tower	
B5CT3	6,000 gallon-per-minute Cooling Tower	
B5CT4	6,000 gallon-per-minute Cooling Tower	
B5CT5	6,000 gallon-per-minute Cooling Tower	
B5CT6	6,000 gallon-per-minute Cooling Tower	
B5CT7	6,000 gallon-per-minute Cooling Tower	
B5CT8	6,000 gallon-per-minute Cooling Tower	
B5CT9	6,000 gallon-per-minute Cooling Tower	
B5CT10	6,000 gallon-per-minute Cooling Tower	
B5CT11	6,000 gallon-per-minute Cooling Tower	
B5CT12	6,000 gallon-per-minute Cooling Tower	
EPROADS	Diesel fuel delivery haul roads	Form 2.7

Emission Information for Air Construction Permit Application
Form 1.3 Plant Layout Diagram

INSTALLATION NAME (A.)	FIPS COUNTY NO. (B.)	PLANT NO. (C.)
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Use this page or a separate sheet to provide a Plant Layout Diagram. Refer to the Permits Instruction Packet for details.

Emission Information for Air Construction Permit Application Form 2.0 Emission Point Information (duplicate this form as needed)										
INSTALLATION NAME (A.)					FIPS COUNTY NO. (B.)			PLANT NO. (C.)		
POINT IDENTIFICATION										
POINT NO. (D.)		POINT DESCRIPTION (E.)								
SOURCE CLASSIFICATION CODE (SCC) (F.)					MAKE (G.)		MODEL (H.)		YEAR (I.)	
STACK/VENT PARAMETERS										
STACK NO. (J.)		HEIGHT (FT) (K.)			DIAMETER (FT) (L.)					
TEMPERATURE (F) (M.)		VELOCITY (FT/MIN) (N.)			FLOW RATE (STANDARD CUBIC FT/MIN) (O.)					
OPERATING RATE/SCHEDULE										
EXPECTED ANNUAL THROUGHPUT (P.)			UNITS (Q.)		MAXIMUM HOURLY DESIGN RATE (R.)			UNITS/HR (S.)		
HOURS/DAY (T.)			DAYS/WEEK				WEEKS/YEAR			
AIR POLLUTION CONTROLS										
DEVICE NO. (U.)	CONTROL DEVICE DESCRIPTION (V.)				Control Device Destruction/Removal Efficiency % (w.)					
					PM ₁₀	SO _x	NO _x	VOC	CO	HAPs
DEVICE NO. (U.)	DESCRIPTION OF COLLECTION/SUPPRESSION SYSTEM (X.)									
CALCULATION SECTION (Y.)										
POLLUTANT	EMISSION FACTOR	EMISSION FACTOR UNITS	OVERALL CONTROL EFFICIENCY	EMISSION RATE (LB/HR)		POTENTIAL EMISSIONS (TONS/YR)				

Point No. (D.)	Point Description (E.)	SCC (F.)	Make (G.)	Model (H.)	Year (I.)	Stack No. (J.)	Height (Ft.) (K.)	Diameter (Ft.) (L.)	Temperature (F) (M.)	Velocity (Ft./Min.) (N.)	Flow Rate (scfm) (O.)	Expected Annual Throughput (P.)	Units (Q.)	Max Hourly Design Rate (R.)	Units/Hr. (S.)	Hours/Day (T.)	Days/Week	Weeks/Year
EPB1G1	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	1	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G2	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	2	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G3	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	3	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G4	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	4	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G5	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	5	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G6	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	6	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G7	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	7	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G8	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	8	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G9	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	9	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G10	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	10	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G11	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	11	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G12	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	12	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G13	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	13	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G14	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	14	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G15	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	15	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G16	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	16	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G17	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	17	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G18	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	18	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G19	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	19	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G20	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	20	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G21	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	21	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G22	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	22	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G23	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	23	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G24	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	24	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G25	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	25	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G26	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	26	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G27	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	27	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G28	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	28	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G29	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	29	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G30	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	30	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G31	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	31	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G32	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	32	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G33	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	33	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G34	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	34	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G35	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	35	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G36	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	36	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1CG1	Type 2 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	37	20	2	484	4114.2	12925	7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200
EPB1CG2	Type 2 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	38	20	2	484	4114.2	12925	7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200
EPB2G1	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	39	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G2	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	40	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G3	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	41	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G4	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	42	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G5	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	43	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G6	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	44	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G7	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	45	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G8	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	46	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G9	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	47	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G10	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	48	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G11	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	49	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G12	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	50	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G13	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	51	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G14	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	52	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G15	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	53	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G16	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	54	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G17	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	55	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G18	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	56	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G19	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	57	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G20	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	58	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G21	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	59	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G22	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	60	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G23	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	61	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G24	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	62	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G25	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	63	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G26	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	64	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.0		

Point No. (D.)	Point Description (E.)	SCC (F.)	Make (G.)	Model (H.)	Year (I.)	Stack No. (J.)	Height (Ft.) (K.)	Diameter (Ft.) (L.)	Temperature (F) (M.)	Velocity (Ft./Min.) (N.)	Flow Rate (scfm) (O.)	Expected Annual Throughput (P.)	Units (Q.)	Max Hourly Design Rate (R.)	Units/Hr. (S.)	Hours/Day (T.)	Days/Week	Weeks/Year
EPB2G33	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	71	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G34	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	72	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G35	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	75	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2G36	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	76	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB2CG1	Type 2 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	77	20	2	484	4114.2	12925	7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200
EPB2CG2	Type 2 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	78	20	2	484	4114.2	12925	7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200
EPB3G1	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	79	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G2	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	80	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G3	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	81	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G4	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	82	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G5	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	83	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G6	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	84	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G7	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	85	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G8	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	86	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G9	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	87	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G10	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	88	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G11	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	89	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G12	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	90	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G13	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	91	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G14	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	92	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G15	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	93	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G16	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	94	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G17	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	95	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G18	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	96	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G19	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	97	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G20	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	98	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G21	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	99	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G22	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	100	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G23	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	101	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G24	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	102	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G25	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	103	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G26	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	104	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G27	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	105	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G28	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	106	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G29	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	107	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G30	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	108	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G31	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	109	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G32	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	110	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G33	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	111	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G34	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	112	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G35	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	113	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3G36	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	114	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB3CG1	Type 2 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	115	20	2	484	4114.2	12925	7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200
EPB3CG2	Type 2 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	116	20	2	484	4114.2	12925	7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200
EPB4G1	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	117	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G2	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	118	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G3	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	119	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G4	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	120	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G5	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	121	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G6	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	122	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G7	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	123	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G8	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	124	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G9	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	125	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G10	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	126	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G11	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	127	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G12	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	128	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G13	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	129	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G14	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	130	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G15	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	131	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G16	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	132	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G17	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	133	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G18	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	134	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G19	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	135	20	2	484	6677.4	20978	6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB4G20	Type 1 - Tier 2 Diesel Emergency Generator	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023	136	20	2	484	6677.4	2							

Point No. (D.)	Point Description (E.)	SCC (F.)	Make (G.)	Model (H.)	Year (I.)	Stack No. (J.)	Height (Ft.) (K.)	Diameter (Ft.) (L.)	Temperature (F) (M.)	Velocity (Ft./Min.) (N.)	Flow Rate (scfm) (O.)	Expected Annual Throughput (P.)	Units (Q.)	Max Hourly Design Rate (R.)	Units/Hr. (S.)	Hours/Day (T.)	Days/Week	Weeks/Year
B1CT9	6,000 gallon-per-minute Cooling Tower	3-85-001-01				208	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B1CT10	6,000 gallon-per-minute Cooling Tower	3-85-001-01				209	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B1CT11	6,000 gallon-per-minute Cooling Tower	3-85-001-01				210	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B1CT12	6,000 gallon-per-minute Cooling Tower	3-85-001-01				211	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT1	6,000 gallon-per-minute Cooling Tower	3-85-001-01				216	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT2	6,000 gallon-per-minute Cooling Tower	3-85-001-01				217	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT3	6,000 gallon-per-minute Cooling Tower	3-85-001-01				218	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT4	6,000 gallon-per-minute Cooling Tower	3-85-001-01				219	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT5	6,000 gallon-per-minute Cooling Tower	3-85-001-01				220	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT6	6,000 gallon-per-minute Cooling Tower	3-85-001-01				221	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT7	6,000 gallon-per-minute Cooling Tower	3-85-001-01				222	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT8	6,000 gallon-per-minute Cooling Tower	3-85-001-01				223	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT9	6,000 gallon-per-minute Cooling Tower	3-85-001-01				224	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT10	6,000 gallon-per-minute Cooling Tower	3-85-001-01				225	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT11	6,000 gallon-per-minute Cooling Tower	3-85-001-01				226	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B2CT12	6,000 gallon-per-minute Cooling Tower	3-85-001-01				227	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT1	6,000 gallon-per-minute Cooling Tower	3-85-001-01				232	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT2	6,000 gallon-per-minute Cooling Tower	3-85-001-01				233	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT3	6,000 gallon-per-minute Cooling Tower	3-85-001-01				234	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT4	6,000 gallon-per-minute Cooling Tower	3-85-001-01				235	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT5	6,000 gallon-per-minute Cooling Tower	3-85-001-01				236	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT6	6,000 gallon-per-minute Cooling Tower	3-85-001-01				237	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT7	6,000 gallon-per-minute Cooling Tower	3-85-001-01				238	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT8	6,000 gallon-per-minute Cooling Tower	3-85-001-01				239	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT9	6,000 gallon-per-minute Cooling Tower	3-85-001-01				240	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT10	6,000 gallon-per-minute Cooling Tower	3-85-001-01				241	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT11	6,000 gallon-per-minute Cooling Tower	3-85-001-01				242	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B3CT12	6,000 gallon-per-minute Cooling Tower	3-85-001-01				243	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT1	6,000 gallon-per-minute Cooling Tower	3-85-001-01				248	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT2	6,000 gallon-per-minute Cooling Tower	3-85-001-01				249	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT3	6,000 gallon-per-minute Cooling Tower	3-85-001-01				250	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT4	6,000 gallon-per-minute Cooling Tower	3-85-001-01				251	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT5	6,000 gallon-per-minute Cooling Tower	3-85-001-01				252	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT6	6,000 gallon-per-minute Cooling Tower	3-85-001-01				253	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT7	6,000 gallon-per-minute Cooling Tower	3-85-001-01				254	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT8	6,000 gallon-per-minute Cooling Tower	3-85-001-01				255	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT9	6,000 gallon-per-minute Cooling Tower	3-85-001-01				256	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT10	6,000 gallon-per-minute Cooling Tower	3-85-001-01				257	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT11	6,000 gallon-per-minute Cooling Tower	3-85-001-01				258	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B4CT12	6,000 gallon-per-minute Cooling Tower	3-85-001-01				259	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT1	6,000 gallon-per-minute Cooling Tower	3-85-001-01				264	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT2	6,000 gallon-per-minute Cooling Tower	3-85-001-01				265	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT3	6,000 gallon-per-minute Cooling Tower	3-85-001-01				266	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT4	6,000 gallon-per-minute Cooling Tower	3-85-001-01				267	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT5	6,000 gallon-per-minute Cooling Tower	3-85-001-01				268	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT6	6,000 gallon-per-minute Cooling Tower	3-85-001-01				269	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT7	6,000 gallon-per-minute Cooling Tower	3-85-001-01				270	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT8	6,000 gallon-per-minute Cooling Tower	3-85-001-01				271	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT9	6,000 gallon-per-minute Cooling Tower	3-85-001-01				272	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT10	6,000 gallon-per-minute Cooling Tower	3-85-001-01				273	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT11	6,000 gallon-per-minute Cooling Tower	3-85-001-01				274	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
B5CT12	6,000 gallon-per-minute Cooling Tower	3-85-001-01				275	30	30	69	1446	1022117	5.37E+11	scf water	6.13E+07	scf	24	7.000	52.000
EPB1G1Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-02-001-06	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G2Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G3Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G4Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G5Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G6Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G7Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G8Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G9Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G10Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G11Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G12Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G13Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G14Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G15Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G16Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G17Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB1G18Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200

Point No. (D.)	Point Description (E.)	SCC (F.)	Make (G.)	Model (H.)	Year (I.)	Stack No. (J.)	Height (Ft.) (K.)	Diameter (Ft.) (L.)	Temperature (F) (M.)	Velocity (Ft./Min.) (N.)	Flow Rate (scfm) (O.)	Expected Annual Throughput (P.)	Units (Q.)	Max Hourly Design Rate (R.)	Units/Hr. (S.)	Hours/Day (T.)	Days/Week	Weeks/Year	
EPB1G19Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G20Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G21Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G22Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G23Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G24Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G25Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G26Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G27Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G28Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G29Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G30Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G31Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G32Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G33Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G34Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G35Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1G36Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB1CG1Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200	
EPB1CG2Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200	
EPB2G1Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G2Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G3Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G4Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G5Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G6Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G7Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G8Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G9Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G10Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G11Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G12Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G13Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G14Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G15Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G16Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G17Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G18Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G19Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G20Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G21Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G22Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G23Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G24Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G25Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G26Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G27Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G28Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G29Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G30Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G31Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G32Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G33Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G34Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G35Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2G36Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB2CG1Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200	
EPB2CG2Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200	
EPB3G1Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G2Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G3Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G4Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G5Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G6Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G7Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G8Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G9Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G10Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G11Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	
EPB3G12Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200	

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Point No. (D.)	Point Description (E.)	SCC (F.)	Make (G.)	Model (H.)	Year (I.)	Stack No. (J.)	Height (Ft.) (K.)	Diameter (Ft.) (L.)	Temperature (F) (M.)	Velocity (Ft./Min.) (N.)	Flow Rate (scfm) (O.)	Expected Annual Throughput (P.)	Units (Q.)	Max Hourly Design Rate (R.)	Units/Hr. (S.)	Hours/Day (T.)	Days/Week	Weeks/Year
EPB5G7Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G8Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G9Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G10Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G11Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G12Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G13Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G14Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G15Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G16Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G17Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G18Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G19Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G20Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G21Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G22Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G23Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G24Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G25Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G26Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G27Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G28Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G29Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G30Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G31Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G32Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G33Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G34Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G35Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5G36Tank	Type 1 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							6,137	Gals. Fuel	186	Gals.	0.092	0.027	0.200
EPB5CG1Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200
EPB5CG2Tank	Type 2 - Tier 2 Diesel Emergency Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							7,718	Gals. Fuel	121	Gals.	0.092	0.027	0.200
EPFP1Tank	Tier 2 Diesel Fire Pump Generator Belly Tank	2-01-001-02	CAT ^[1]		2023							3,837	Gals. Fuel	38.4	Gals.	0.274	0.080	0.594
EPFP2Tank	Tier 2 Diesel Fire Pump Generator Belly Tank	2-01-001-02	CAT ^[1]		2023							2,044	Gals. Fuel	38.4	Gals.	0.274	0.080	0.594
EPHUB1Tank	Tier 2 Diesel Administrative Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							7,530	Gals. Fuel	75.3	Gals.	0.274	0.080	0.594
EPHUB2Tank	Tier 2 Diesel Administrative Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							7,530	Gals. Fuel	75.3	Gals.	0.274	0.080	0.594
EPWWTP1Tank	Tier 2 Diesel WWTP Backup Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							15,059	Gals. Fuel	150.6	Gals.	0.274	0.080	0.594
EPWWTP2Tank	Tier 2 Diesel WWTP Backup Generator Belly Tank	2-01-001-02	MTU/CAT/Cummins		2024/2022/2023							15,059	Gals. Fuel	150.6	Gals.	0.274	0.080	0.594
EPLSTank	Tier 2 Diesel Lift Station Generator Belly Tank	2-01-001-02	CAT ^[1]		2023							3,837	Gals. Fuel	38.4	Gals.	0.274	0.080	0.594
EPBoostTank	Tier 2 Diesel Booster Pump Generator Belly Tank	2-01-001-02	CAT ^[1]		2023							3,837	Gals. Fuel	38.4	Gals.	0.274	0.080	0.594
EPGH1Tank	Tier 2 Diesel Guardhouse Generator Belly Tank	2-01-001-02	CAT ^[1]		2023							3,837	Gals. Fuel	38.4	Gals.	0.274	0.080	0.594
EPGH2Tank	Tier 2 Diesel Guardhouse Generator Belly Tank	2-01-001-02	CAT ^[1]		2023							3,837	Gals. Fuel	38.4	Gals.	0.274	0.080	0.594
EPWHTank	Tier 2 Diesel Warehouse Generator Belly Tank	2-01-001-02	CAT ^[1]		2023							3,837	Gals. Fuel	38.4	Gals.	0.274	0.080	0.594
EPROADS	Diesel fuel delivery haul roads	2-53-503-0000										1,252,147	Gals. Fuel	0.522	Tons	24	7.000	52.000

^[1] The manufacturer specification sheet used for this unit is representative, as the make and model for this unit have not yet been confirmed." Reference the footnote for the 350 and 500 kW engines.

[2] Make/model for the 800 kW and 100 kW generators is to be determined. For conservatism, the make/model of the 2750 kW generator was used for the 800 kW generator and the make/model of the 350 kW was used as the information for the 100 kW generator.

Emission Information for Air Construction Permit Application

Form 2.1 Fuel Combustion Information (duplicate this form as needed)

INSTALLATION NAME (A.)		FIPS COUNTY NO. (B.)	PLANT NO. (C.)	
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COMBUSTION EQUIPMENT INFORMATION

POINT NO. (D.)	SCC (E.)			
(F.) EQUIPMENT DESCRIPTION (MAKE/MODEL)		(G.) YEAR PUT IN SERVICE	(H.) MAXIMUM DESIGN RATE (MILLION BTU/HR)	
Sum of Total Maximum Hourly Design Rates				

FUEL INFORMATION

(I.) FUEL TYPE

Oil

☐ Distillate (Fuel Oil 1-4)

☐ Residual Fuel Oil (5-6)

☐ Waste Oil

Gas

☐ Natural Gas

☐ LPG/Propane

Coal

☐ Anthracite

☐ Bituminous

☐ Lignite

Other

☐ Refuse

☐ Trade Wastes

☐ Other (specify)

FUEL (J.)	ANNUAL THROUGHPUT (K.)	UNITS (L.)	% SULFUR BY WEIGHT (M.)	% ASH BY WEIGHT (N.)
FUEL TOTALS AND WEIGHTED AVERAGES				

Comments:

MO 780-1323 (03-22)

Point No. (D.)	SCC (E.)	(F.) Equipment Description (Make/Model) ^[1]	(G.) Year Put in Service	(H.) Max Design Rate (MMBtu/Hr.)	(I.) Fuel Type	Fuel (J.)	Annual Throughput (K.) ^[2]	Units (L.)	% Sulfur by Weight (M.) ^[3]	% Ash by Weight (N.) ^[4]
EPB1G1	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G2	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G3	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G4	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G5	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G6	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G7	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G8	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G9	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G10	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G11	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G12	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G13	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G14	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G15	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G16	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G17	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G18	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB1G19	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G0	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G1	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G2	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G3	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G4	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G5	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G6	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G7	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G8	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G9	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G10	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G11	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G12	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G13	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G14	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G15	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G16	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G17	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G18	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G19	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G20	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G21	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G22	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G23	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G24	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G25	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G26	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB2G27	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible

Point No. (D.)	SCC (E.)	(F.) Equipment Description (Make/Model) ^[1]	(G.) Year Put in Service	(H.) Max Design Rate (MMBtu/Hr.)	(I.) Fuel Type	Fuel (J.)	Annual Throughput (K.) ^[2]	Units (L.)	% Sulfur by Weight (M.) ^[3]	% Ash by Weight (N.) ^[4]
EPB2G28	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB2G29	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB2G30	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB2G31	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB2G32	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB2G33	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB2G34	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB2G35	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB2G36	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB2CG1	2-01-001-02	MTU/CAT/Cummins	2026	17.8	Distillate (Fuel Oil 1-4)	Diesel	7,718 Gals.		0.0015	Negligible
EPB2CG2	2-01-001-02	MTU/CAT/Cummins	2026	17.8	Distillate (Fuel Oil 1-4)	Diesel	7,718 Gals.		0.0015	Negligible
EPB3G1	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G2	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G3	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G4	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G5	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G6	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G7	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G8	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G9	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G10	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G11	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G12	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G13	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G14	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G15	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G16	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G17	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G18	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G19	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G20	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G21	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G22	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G23	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G24	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G25	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G26	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G27	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G28	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G29	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G30	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G31	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G32	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G33	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G34	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G35	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3G36	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB3CG1	2-01-001-02	MTU/CAT/Cummins	2026	17.8	Distillate (Fuel Oil 1-4)	Diesel	7,718 Gals.		0.0015	Negligible
EPB3CG2	2-01-001-02	MTU/CAT/Cummins	2026	17.8	Distillate (Fuel Oil 1-4)	Diesel	7,718 Gals.		0.0015	Negligible
EPB4G1	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G2	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G3	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G4	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G5	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G6	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G7	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G8	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G9	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G10	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G11	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G12	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G13	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G14	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G15	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible
EPB4G16	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137 Gals.		0.0015	Negligible

Point No. (D.)	SCC (E.)	(F.) Equipment Description (Make/Model) ^[1]	(G.) Year Put in Service	(H.) Max Design Rate (MMBtu/Hr.)	(I.) Fuel Type	Fuel (J.)	Annual Throughput (K.) ^[2]	Units (L.)	% Sulfur by Weight (M.) ^[3]	% Ash by Weight (N.) ^[4]
EPB4G17	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G18	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G19	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G20	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G21	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G22	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G23	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G24	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G25	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G26	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G27	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G28	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G29	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G30	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G31	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G32	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G33	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G34	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G35	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4G36	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB4CG1	2-01-001-02	MTU/CAT/Cummins	2026	17.8	Distillate (Fuel Oil 1-4)	Diesel	7,718	Gals.	0.0015	Negligible
EPB4CG2	2-01-001-02	MTU/CAT/Cummins	2026	17.8	Distillate (Fuel Oil 1-4)	Diesel	7,718	Gals.	0.0015	Negligible
EPB5G1	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G2	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G3	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G4	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G5	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G6	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G7	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G8	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G9	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G10	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G11	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G12	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G13	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G14	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G15	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G16	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G17	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G18	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G19	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G20	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G21	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G22	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G23	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G24	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G25	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G26	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G27	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G28	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G29	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G30	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G31	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G32	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G33	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G34	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G35	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5G36	2-01-001-02	MTU/CAT/Cummins	2026	28	Distillate (Fuel Oil 1-4)	Diesel	6,137	Gals.	0.0015	Negligible
EPB5CG1	2-01-001-02	MTU/CAT/Cummins	2026	17.8	Distillate (Fuel Oil 1-4)	Diesel	7,718	Gals.	0.0015	Negligible
EPB5CG2	2-01-001-02	MTU/CAT/Cummins	2026	17.8	Distillate (Fuel Oil 1-4)	Diesel	7,718	Gals.	0.0015	Negligible
EPFP1	2-01-001-02	CAT ^[1]	2026	5.3	Distillate (Fuel Oil 1-4)	Diesel	3,837	Gals.	0.0015	Negligible
EPFP2	2-01-001-02	CAT ^[1]	2026	5.3	Distillate (Fuel Oil 1-4)	Diesel	2,044	Gals.	0.0015	Negligible
EPHUB1	2-01-001-02	MTU/CAT/Cummins	2026	10.3	Distillate (Fuel Oil 1-4)	Diesel	7,530	Gals.	0.0015	Negligible
EPHUB2	2-01-001-02	MTU/CAT/Cummins	2026	10.3	Distillate (Fuel Oil 1-4)	Diesel	7,530	Gals.	0.0015	Negligible
EPWWWTP1	2-01-001-02	MTU/CAT/Cummins	2026	20.6	Distillate (Fuel Oil 1-4)	Diesel	15,059	Gals.	0.0015	Negligible

Point No. (D.)	SCC (E.)	(F.) Equipment Description (Make/Model) ^[1]	(G.) Year Put in Service	(H.) Max Design Rate (MMBtu/Hr.)	(I.) Fuel Type	Fuel (J.)	Annual Throughput (K.) ^[2]	Units (L.)	% Sulfur by Weight (M.) ^[3]	% Ash by Weight (N.) ^[4]
EPWWTP2	2-01-001-02	MTU/CAT/Cummins	2026	20.6	Distillate (Fuel Oil 1-4)	Diesel	15,059	Gals.	0.0015	Negligible
EPLS	2-01-001-02	CAT ^[1]	2026	5.3	Distillate (Fuel Oil 1-4)	Diesel	3,837	Gals.	0.0015	Negligible
EPBoost	2-01-001-02	CAT ^[1]	2026	5.3	Distillate (Fuel Oil 1-4)	Diesel	3,837	Gals.	0.0015	Negligible
EPGH1	2-01-001-02	CAT ^[1]	2026	5.3	Distillate (Fuel Oil 1-4)	Diesel	3,837	Gals.	0.0015	Negligible
EPGH2	2-01-001-02	CAT ^[1]	2026	5.3	Distillate (Fuel Oil 1-4)	Diesel	3,837	Gals.	0.0015	Negligible
EPWH	2-01-001-02	CAT ^[1]	2026	5.3	Distillate (Fuel Oil 1-4)	Diesel	3,837	Gals.	0.0015	Negligible

Footnotes:
[1] Shenandoah Computing LLC considers make and model information for the generators as confidential. Representative
[2] Annual fuel throughput based on worst-case emission factor for 1750kW and 2750kW engines. See attached calculations.
[3] Sulfur content based on NSPS IIII requirement 40 CFR 80.510 (b)
[4] Ash content based on AP-42, Appendix A, "Typical Parameters of Various Fuels."
[5] Make/model for the 100 kW, 800 kW, and 1000 kW generators is to be determined.

Emission Information for Air Construction Permit Application
Form 2.3 Uncontrolled VOC Emission Information (duplicate this form as needed)

INSTALLATION NAME (A.)		FIPS COUNTY NO. (B.)	PLANT NO. (C.)
POINT NO. (D.)	SCC CODE (E.)		

APPLICATION RATE	
1	100%
2	100%
3	100%
4	100%
5	100%
6	100%
7	100%
8	100%
9	100%
10	100%
11	100%
12	100%
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89	100%
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91	100%
92	100%
93	100%
94	100%
95	100%
96	100%
97	100%
98	100%
99	100%
100	100%

APPLICATION METHOD (F.)	MATERIAL TYPE (G.)	APPLICATION RATE (GALLONS/HOUR) (H.)	% BY WEIGHT OF VOC IN MATERIAL (I.)	DENSITY (LBS/GAL (J.)	LBS OF VOC PER UNIT (K.)
	TOTAL (SCC UNITS) (L.)				

Attach Material Safety Data Sheets (MSDS) for Verification

Enter Total amount calculated above in Estimated Annual Throughput under Operating rate/Schedule on Form 2.0, Emission Point Information.

Comments:



Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909
US GHS

Synonyms: Ultra Low Sulfur Diesel; Low Sulfur Diesel; No. 2 Diesel; Motor Vehicle Diesel Fuel; Non-Road Diesel Fuel; Locomotive/Marine Diesel Fuel

*** Section 1 - Product and Company Identification ***

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

*** Section 2 - Hazards Identification ***

GHS Classification:

Flammable Liquids - Category 3
Skin Corrosion/Irritation – Category 2
Germ Cell Mutagenicity – Category 2
Carcinogenicity - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis)
Aspiration Hazard – Category 1
Hazardous to the Aquatic Environment, Acute Hazard – Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER

Hazard Statements

Flammable liquid and vapor.
Causes skin irritation.
Suspected of causing genetic defects.
Suspected of causing cancer.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909

Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/mist/vapours/spray.

Response

In case of fire: Use water spray, fog or foam to extinguish.
IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.
IF exposed or concerned: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep cool.
Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 3 - Composition / Information on Ingredients ***

CAS #	Component	Percent
68476-34-6	Fuels, diesel, no. 2	100
91-20-3	Naphthalene	<0.1

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher.

*** Section 4 - First Aid Measures ***

First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, fire fighting foam, and other gaseous agents.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

*** Section 6 - Accidental Release Measures ***

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

*** Section 7 - Handling and Storage ***

Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, excessive temperatures and open flame! No smoking or open flame in storage, use or handling areas. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

Incompatibilities

Keep away from strong oxidizers.

*** Section 8 - Exposure Controls / Personal Protection ***

Component Exposure Limits

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: 100 mg/m3 TWA (inhalable fraction and vapor, as total hydrocarbons, listed under Diesel fuel)
Skin - potential significant contribution to overall exposure by the cutaneous route (listed under Diesel fuel)

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909

Naphthalene (91-20-3)

ACGIH: 10 ppm TWA
15 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 10 ppm TWA; 50 mg/m3 TWA
NIOSH: 10 ppm TWA; 50 mg/m3 TWA
15 ppm STEL; 75 mg/m3 STEL

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Clear, straw-yellow.	Odor:	Mild, petroleum distillate odor
Physical State:	Liquid	pH:	ND
Vapor Pressure:	0.009 psia @ 70 °F (21 °C)	Vapor Density:	>1.0
Boiling Point:	320 to 690 °F (160 to 366 °C)	Melting Point:	ND
Solubility (H2O):	Negligible	Specific Gravity:	0.83-0.876 @ 60°F (16°C)
Evaporation Rate:	Slow; varies with conditions	VOC:	ND
Percent Volatile:	100%	Octanol/H2O Coeff.:	ND
Flash Point:	>125 °F (>52 °C) minimum	Flash Point Method:	PMCC
Upper Flammability Limit (UFL):	7.5	Lower Flammability Limit (LFL):	0.6
Burning Rate:	ND	Auto Ignition:	494°F (257°C)

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

*** Section 11 - Toxicological Information ***

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Naphthalene (91-20-3)

Inhalation LC50 Rat >340 mg/m³ 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Contact with eyes may cause mild irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This material has been positive in a mutagenicity study.

Carcinogenicity

A: General Product Information

Suspected of causing cancer.

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

B: Component Carcinogenicity

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (listed under Diesel fuel)

Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)

IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Fuels, diesel, no. 2 (68476-34-6)

Test & Species

96 Hr LC50 Pimephales promelas

35 mg/L [flow-through]

Conditions

Naphthalene (91-20-3)

Test & Species

96 Hr LC50 Pimephales promelas

5.74-6.44 mg/L [flow-through]

Conditions

96 Hr LC50 Oncorhynchus mykiss

1.6 mg/L [flow-through]

96 Hr LC50 Oncorhynchus mykiss

0.91-2.82 mg/L [static]

96 Hr LC50 Pimephales promelas

1.99 mg/L [static]

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909

96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]
72 Hr EC50 Skeletonema costatum	0.4 mg/L
48 Hr LC50 Daphnia magna	2.16 mg/L
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

*** Section 13 - Disposal Considerations ***

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 14 - Transportation Information ***

DOT Information

Shipping Name: Diesel Fuel

NA #: 1993 Hazard Class: 3 Packing Group: III

Placard:



*** Section 15 - Regulatory Information ***

Regulatory Information

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Naphthalene (91-20-3)

CERCLA: 100 lb final RQ; 45.4 kg final RQ

SARA Section 311/312 – Hazard Classes

Acute Health
X

Chronic Health
X

Fire
X

Sudden Release of Pressure
--

Reactive
--

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the de minimis levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Fuels, diesel, no. 2	68476-34-6	No	No	No	Yes	No	No
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

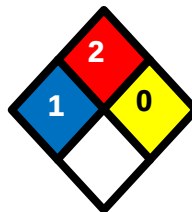
Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Fuels, diesel, no. 2	68476-34-6	Yes	DSL	EINECS
Naphthalene	91-20-3	Yes	DSL	EINECS

*** Section 16 - Other Information ***

NFPA® Hazard Rating

Health	1
Fire	2
Reactivity	0



HMIS® Hazard Rating

Health	1*	Slight
Fire	2	Moderate
Physical	0	Minimal

*Chronic

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

Emission Information for Air Construction Permit Application Form 2.4 Petroleum Liquid Loading Information (duplicate this form as needed)		
INSTALLATION NAME (A.)	FIPS COUNTY NO. (B.)	PLANT NO. (C.)
This form should be filled out to provide information to calculate the emissions from loading organic liquids into tank trucks, rail tank cars and barges. Form 2.5 should be filled out to calculate the Load In - Load Out emissions from storage tanks.		
LOADING INFORMATION		
POINT NO. (D.)	SCC CODE (E.)	ANNUAL THROUGHPUT OF LIQUID (1,000 GALLONS) (F.)
CONTROL DEVICE TYPE (G.)	CONTROL EFFICIENCY (%) (H.)	
(I.) TYPE OF LOADING		
Splash Loading ☐ Submerged Loading ☐ Bottom Loading ☐		
Other (specify):		
CHEMICAL INFORMATION		
BULK LIQUID TYPE (J.)	TRUE VAPOR PRESSURE OF BULK LIQUID (PSIA) (K.)	
MOLECULAR WEIGHT OF MATERIAL LOADED (LB/LB-MOLE) (L.)	SATURATION FACTOR (M.)	
TEMPERATURE OF LIQUID (DEG F) (N.)		
Comments:		

Emission Information for Air Construction Permit Application				
Form 2.5 Organic Liquid Storage				
A. Fixed Roof Tank Information (duplicate this form as needed.)				
INSTALLATION NAME (A.)		FIPS COUNTY NO. (B.)		PLANT NO. (C.)
For use with 500 gallons or greater capacity liquid storage tanks. Include all organic liquids, petroleum products or fuels.				
TANK INFORMATION				
POINT (TANK IDENTIFICATION) NO. (D.)	CAPACITY (IN THOUSANDS OF GALLONS) (E.)	DIAMETER (FT) (F.)	HEIGHT (FT) (G.)	LENGTH (FT) (H.)
COLOR (SHELL) (I.)	COLOR (ROOF) (J.)	TYPE OF ROOF: (K.) ☐ Cone ☐ Dome ☐ Other (specify)		
YEAR PLACED IN SERVICE (L.)	AVERAGE LIQUID HEIGHT (FT) (M.)		ROOF HEIGHT (FT) (N.)	
VENT PRESSURE SETTING (O.)	VENT VACUUM SETTING (P.)		THROUGHPUT (IN THOUSAND OF GALLONS PER YEAR) (Q.)	
CHEMICAL INFORMATION				
CHEMICAL* (R.)	CAS NUMBER (S.)	VAPOR MOLECULAR WEIGHT (T.)		
AVERAGE LIQUID SURFACE TEMPERATURE (F) (U.)		VAPOR PRESSURE AT AVERAGE LIQUID SURFACE TEMPERATURE (PSIA) (V.)		
*MIXTURE - PROVIDE DOCUMENTATION FOR MULTIPLE COMPONENT MIXTURE				
B. Floating Roof Tank Information (duplicate this form as needed.)				
Provide all the following information for liquid storage tanks with capacities greater than 500 gallons. Include all organic liquids and petroleum products or fuels.				
TANK INFORMATION				
POINT (TANK IDENTIFICATION) NO. (D.)	YEAR PLACED IN SERVICE (E.)	CAPACITY (IN THOUSANDS OF GALLONS) (F.)		
DIAMETER (FT) (G.)	LENGTH OF SEAM (FT) (H.)	NUMBER OF COLUMNS (I.)	EFFECTIVE COLUMN DIAMETER (FT) (J.)	
TYPE OF CONSTRUCTION (K.) ☐ Riveted ☐ Welded		TYPE OF ROOF (L.) ☐ Internal ☐ External		
PRIMARY SEAL (M.) ☐ Metallic Shoe ☐ Vapor Mounted ☐ Liquid Mounted		SECONDARY SEAL (N.) ☐ None ☐ Rim Mounted ☐ Shoe Mounted ☐ Weather Shield		
AREA OF DECK (SQ FT) (O.)	DECK (P.) ☐ Bolted ☐ Welded	SHELL CONDITION (Q.) ☐ Light Rust ☐ Dense Rust ☐ Gunitite Lined		
THROUGHPUT (IN THOUSANDS OF GALLONS PER YEAR) (R.)				
CHEMICAL INFORMATION				
CHEMICAL (S.)		CAS NUMBER (T.)		
VAPOR MOLECULAR WEIGHT (U.)		LIQUID DENSITY (LB/GAL) (V.)		

Point (Tank ID No.) (D.)	Capacity (1000s of Gals.) (E.)	Diameter (Ft.) (F.) ^[1]	Height (Ft.) (G.) ^[2]	Length (Ft.) (H.) ^[3]	Color (Shell) (I.)	Color (Roof) (J.)	Type of Roof (K.)	Year Placed in Service (L.)	Average Liquid Height (Ft.) (M.) ^[4]	Roof Height (Ft.) (N.)	Vent Pressure Setting (O.)	Vent Vacuum Setting (P.)	Throughput (1000s of Gals. Per Year) (Q.) ^[5]	Chemical* (R.) ^[6]	CAS Number (S.)	Vapor Molecular Weight (T.)	Avg. Liquid Surface Temperature (°F) (U.)	Vapor Pressure at Avg. Liquid Surface Temp. (PSIA) (V.)	*Mixture Documentation
EPB1G1Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G2Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G3Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G4Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G5Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G6Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G7Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G8Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G9Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G10Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G11Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G12Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G13Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G14Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G15Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G16Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G17Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G18Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G19Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G20Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G21Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G22Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G23Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G24Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G25Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G26Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G27Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G28Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G29Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G30Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G31Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G32Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G33Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G34Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%

Point (Tank ID No.) (D.)	Capacity (1000s of Gals.) (E.)	Diameter (Ft.) (F.) ^[1]	Height (Ft.) (G.) ^[2]	Length (Ft.) (H.) ^[3]	Color (Shell) (I.)	Color (Roof) (J.)	Type of Roof (K.)	Year Placed in Service (L.)	Average Liquid Height (Ft.) (M.) ^[4]	Roof Height (Ft.) (N.)	Vent Pressure Setting (O.)	Vent Vacuum Setting (P.)	Throughput (1000s of Gals. Per Year) (Q.) ^[5]	Chemical* (R.) ^[6]	CAS Number (S.)	Vapor Molecular Weight (T.)	Avg. Liquid Surface Temperature (°F) (U.)	Vapor Pressure at Avg. Liquid Surface Temp. (PSIA) (V.)	*Mixture Documentation
EPB1G35Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1G36Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1CG1Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	7.718	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB1CG2Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	7.718	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G1Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G2Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G3Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G4Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G5Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G6Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G7Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G8Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G9Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G10Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G11Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G12Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G13Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G14Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G15Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G16Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G17Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G18Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G19Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G20Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G21Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G22Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G23Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G24Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G25Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G26Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G27Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G28Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G29Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB2G30Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%

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Point (Tank ID No.) (D.)	Capacity (1000s of Gals.) (E.)	Diameter (Ft.) (F.) ^[1]	Height (Ft.) (G.) ^[2]	Length (Ft.) (H.) ^[3]	Color (Shell) (I.)	Color (Roof) (J.)	Type of Roof (K.)	Year Placed in Service (L.)	Average Liquid Height (Ft.) (M.) ^[4]	Roof Height (Ft.) (N.)	Vent Pressure Setting (O.)	Vent Vacuum Setting (P.)	Throughput (1000s of Gals. Per Year) (Q.) ^[5]	Chemical* (R.) ^[6]	CAS Number (S.)	Vapor Molecular Weight (T.)	Avg. Liquid Surface Temperature (°F) (U.)	Vapor Pressure at Avg. Liquid Surface Temp. (PSIA) (V.)	*Mixture Documentation
EPB3G27Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3G28Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3G29Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3G30Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3G31Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3G32Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3G33Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3G34Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3G35Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3G36Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3CG1Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	7.718	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB3CG2Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	7.718	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G1Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G2Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G3Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G4Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G5Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G6Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G7Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G8Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G9Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G10Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G11Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G12Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G13Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G14Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G15Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G16Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G17Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G18Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G19Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G20Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G21Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB4G22Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%

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Point (Tank ID No.) (D.)	Capacity (1000s of Gals.) (E.)	Diameter (Ft.) (F.) ^[1]	Height (Ft.) (G.) ^[2]	Length (Ft.) (H.) ^[3]	Color (Shell) (I.)	Color (Roof) (J.)	Type of Roof (K.)	Year Placed in Service (L.)	Average Liquid Height (Ft.) (M.) ^[4]	Roof Height (Ft.) (N.)	Vent Pressure Setting (O.)	Vent Vacuum Setting (P.)	Throughput (1000s of Gals. Per Year) (Q.) ^[5]	Chemical* (R.) ^[6]	CAS Number (S.)	Vapor Molecular Weight (T.)	Avg. Liquid Surface Temperature (°F) (U.)	Vapor Pressure at Avg. Liquid Surface Temp. (PSIA) (V.)	*Mixture Documentation
EPB5G19Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G20Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G21Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G22Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G23Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G24Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G25Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G26Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G27Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G28Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G29Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G30Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G31Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G32Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G33Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G34Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G35Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5G36Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	6.137	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5CG1Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	7.718	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPB5CG2Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	7.718	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPFP1Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	3.837	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPFP2Tank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	2.044	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPHUB1Tank ^[6]	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	7.530	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPHUB2Tank ^[6]	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	7.530	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPWWTP1Tank ^[6]	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	15.059	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPWWTP2Tank ^[6]	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	15.059	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPLSTank ^[6]	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	3.837	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPBoostTank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	3.837	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPGH1Tank ^[6]	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	3.837	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPGH2Tank ^[6]	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	3.837	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%
EPWHTank	6.000	10.7	8.4	8.92	White	White	Other: Belly Tank	2026	10.7	10.7	Ambient	Ambient	3.837	Diesel Fuel	Mixture (See Mixture documentation)	130	57	0.006	CAS# 68476-34-6 , Fuels, diesel, no. 2 100% CAS# 91-20-3, Naphthalene, <.01%

Footnotes:
[1] Conservative Estimate
[2] Height=Diameter for Cylindrical Tanks
[3] Length=(Volume/(π*r2)
[4] Assumes full cylindrical tank
[5] See attached calculations for basis.
[6] Chemical information is based on a representatival SDS.

Emission Information for Air Construction Permit Application				
Form 2.7 Haul Road Fugitive Emission Information (duplicate this form as needed)				
INSTALLATION NAME (A.)		FIPS COUNTY NO. (B.)		PLANT NO. (C.)
HAUL ROAD INFORMATION				
POINT NO. (D.)	SCC (E.)	SURFACE MATERIAL OF ROAD (F.)	LENGTH OF ROAD (MILES) (G.)	SILT CONTENT (%) (H.)
TYPE OF DUST CONTROL (CHOOSE ONE)				
☐ Surfactant Spray ☐ Water Spray ☐ Other (specify)				
☐ Water Spray Documented ☐ No Controls				
HAUL TRUCK INFORMATION				
UNLOADED TRUCK WEIGHT (TONS) (J.)		AVERAGE WEIGHT OF MATERIAL PER LOAD (TONS) (K.)		AVERAGE LOADED TRUCK WEIGHT (TONS) (L.)
NUMBER OF WHEELS (M.)		AVERAGE TRUCK SPEED (MPH) (N.)		
MATERIAL HAULED INFORMATION				
TYPE OF MATERIAL(S) HAULED (O.)		ANNUAL AMOUNT HAULED (TONS) (P.)		MAXIMUM HOURLY AMOUNT HAULED (TONS) (Q.)
Comments:				
Form 2.8 Storage Pile Information (duplicate this form as needed.)				
STORAGE PILE INFORMATION				
POINT NO. (D.)	SCC (E.)	TYPE OF MATERIAL STORED (F.)		MOISTURE CONTENT (%) (G.)
AREA OF STORAGE PILE (ACRES) (H.)		STORAGE DURATION (DAYS) (I.)		SILT CONTENT (%) (J.)
ANNUAL AMOUNT STORED (TONS) (K.)			MAXIMUM HOURLY AMOUNT STORED (L.)	
RAW MATERIAL LOADING METHOD (CHOOSE ONE) (M.)				
☐ Barge ☐ Rail ☐ Truck ☐ Conveyor ☐ Other (specify)				
RAW MATERIAL UNLOADING METHOD (CHECK ONE) (N.)				
☐ Barge ☐ Rail ☐ Truck ☐ Conveyor ☐ Other (specify)				
Comments:				

Installation Name (A.): **Shenandoah Computing LLC** 29165

Haul Road Information					
Point No. (D.)	SCC (E.)	Surface Material of Road (F.)	Length of Road Miles (G.)	Silt content (%) (H.) ^[1]	Type of Dust Control
EPROADS	2-53-503-0000	Asphalt	3.90	3.00	Other: Paved Roads
Haul Truck Information					
Unloaded Truck Weight (Tons) (J.)	Avg. wt. of material per load (Tons) (K.)	Average Loaded Truck Wt. (Tons) (L.)	Number of Wheels (M.)	Avg. Truck Speed (MPH) (N.)	
15	25	40	18	15	
Material Hauled Information					
Type of Material(s) Hauled (O.)	Annual Amount Hauled (Tons) (P.) ^[2]	Max Hourly Amount Hauled (Tons) (Q.) ^[3]			
Diesel Fuel	4574	0.522			
Footnotes					
[1] Silt content on Form 2.7 is based on lowest mean value in AP-42, Table 13.2.1-1 for Industrial Facilities. A silt loading value of 3.00 is used to calculate the paved haul road emissions, based on AP-42, Table 13.2.1-2 for a 50th percentile Low Average Daily Traffic Road. [2] Fuel specific gravity from representative SDS. Tons hauled calculated as: $(0.876 \text{ g/cm}^3) * (8.354 \text{ lb/gal per g/cm}^3) / (1,230,460 \text{ gal of annual throughput expected}) / (2000 \text{ lbs/Ton})$ [3] Hourly haul amount based on annual haul amount divided by 8,760 hours per year.					

Emission Information for Construction Permit Application			
Form 2. T Hazardous Air Pollutant Information (duplicate this form as needed)			
INSTALLATION NAME (A.)		FIPS COUNTY NO. (B.)	PLANT NO. (C.)
Use this form to report any hazardous air pollutant (HAP) expected to be handled in amounts greater than 20 pounds per year. The instructions for this form provide a list of the HAPs regulated under the Clean Air Act. The amount emitted should be reported before control equipment reductions are applied. Be sure to include the MSDS for any material containing HAPs.			
POINT NO. (D.)		SCC (E.)	
HAP CHEMICAL (F.)	CAS NUMBER (G.)	AMOUNT USED OR EXPECTED TO BE HANDLED (LBS/YEAR) (H.)	UNITS (I.)

Attach Material Safety Data Sheets (MSDS) for Verification

Comments:

Emission Information for Air Construction Permit Application
Form 3.0 Comment Sheet (duplicate this form as needed.)

INSTALLATION NAME (A.)	FIPS COUNTY NO. (B.)
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EMISSION POINT NO. (C.)

Comments:

SHENANDOAH COMPUTING LLC AIR CONSTRUCTION PERMIT APPLICATION

Public Version

August 2025

Olsson Project No. 025-01320