Table of Contents

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475 • www.dep.wv.gov/daq

APPLICATION FOR GENERAL PERMIT REGISTRATION

CONSTRUCT, MODIFY, RELOCATE OR ADMINISTRATIVELY UPDATE
A STATIONARY SOURCE OF AIR POLLUTANTS

☒ CONSTRUCTION ☐ MODIFICATION ☐ RELOCATION ☐ CLASS I ADMINISTRATIVE UPDATE
☐ CLASS II ADMINISTRATIVE UPDATE

CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:

☐ **G10-D** – Coal Preparation and Handling
☐ **G20-B** – Hot Mix Asphalt
☐ **G30-D** – Natural Gas Compressor Stations
☐ **G33-A** – Spark Ignition Internal Combustion Engines
☐ **G35-A** – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit)
☐ **G40-C** – Nonmetallic Minerals Processing
☐ **G50-B** – Concrete Batch
☐ **G60-C** - Class II Emergency Generator
☒ **G65-C** – Class I Emergency Generator
☐ **G70-A** – Class II Oil and Natural Gas Production Facility

SECTION I. GENERAL INFORMATION

1. Name of applicant (as registered with the WV Secretary of State's Office):
City of Huntington Sanitary Board

2. Federal Employer ID No. **(FEIN):**
55-6006811

3. Applicant's mailing address:
555 7th Avenue
Huntington WV 25701

4. Applicant's physical address:
555 7th Avenue
Huntington WV 25701

5. If applicant is a subsidiary corporation, please provide the name of parent corporation: NA

6. **WV BUSINESS REGISTRATION.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **NO**
- IF **YES,** provide a copy of the Certificate of **Incorporation/ Organization / Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- IF **NO,** provide a copy of the **Certificate of Authority / Authority of LLC / Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

SECTION II. FACILITY INFORMATION

7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.): Wastewater pump station

8a. Standard Industrial Classification (SIC) code:

AND

8b. North American Industry System (NAICS) code: 221320

9. DAQ Plant ID No. (for existing facilities only):
___ ___ ___ - ___ ___ ___ ___ ___

10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only):

A: PRIMARY OPERATING SITE INFORMATION

11A. Facility name of primary operating site:	12A. Address of primary operating site:
Huntington Wastewater Treatment Plant	Mailing: 555 7th Avenue Huntington, WV 25701 Physical: 5010 Sunset Drive Huntington WV

13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? ☒ YES ☐ NO

- IF **YES**, please explain:
- IF **NO**, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.

14A. – For **Modifications or Administrative Updates** at an existing facility, please provide directions to the present location of the facility from the nearest state road;

– For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a **MAP** as **Attachment F**.

___ Take I-64 west to the Hal Greer Blvd. exit. Turn right onto Hal Greer Blvd. Turn left into Kinnect Park. Take gravel road on left to pump station generator.

15A. Nearest city or town:	16A. County:	17A. UTM Coordinates:
Huntington	Cabell	Northing (KM): 4,250.50 Easting (KM): 376.60 Zone: 17

18A. Briefly describe the proposed new operation or change (s) to the facility:	19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits):
Standby Emergency Generator for Hal Greer Blvd. Pump Station	Latitude: 38.39425 Longitude: -82.41305

B: 1ST ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits)

11B. Name of 1st alternate operating site:	12B. Address of 1st alternate operating site:
NA	Mailing: Physical:

13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? ☐ YES ☐ NO

- IF **YES**, please explain:
- IF **NO**, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.

14B. – For **Modifications or Administrative Updates** at an existing facility, please provide directions to the present location of the facility from the nearest state road;

– For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a **MAP as Attachment F**.

15B. Nearest city or town:	16B. County:	17B. UTM Coordinates: Northing (KM): Easting (KM): Zone:
18B. Briefly describe the proposed new operation or change (s) to the facility:		19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: Longitude:

C: 2ND ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits):

11C. Name of 2nd alternate operating site: NA	12C. Address of 2nd alternate operating site: Mailing: Physical:

13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? ☐ YES ☐ NO

– IF **YES**, please explain:

– IF **NO**, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.

14C. – For **Modifications or Administrative Updates** at an existing facility, please provide directions to the present location of the facility from the nearest state road;

– For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a **MAP as Attachment F**.

15C. Nearest city or town:	16C. County:	17C. UTM Coordinates: Northing (KM): Easting (KM): Zone:
18C. Briefly describe the proposed new operation or change (s) to the facility:		19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: Longitude:

20. Provide the date of anticipated installation or change: ____/____/____ ☐ If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: : ____/____/____	21. Date of anticipated Start-up if registration is granted: ____/____/____

22. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application if other than 8760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation).

Hours per day_____ Days per week _____ Weeks per year _____ Percentage of operation _____: 500 hours per year

SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

23. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

24. Include a **Table of Contents** as the first page of your application package.

All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone.

25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below.

- ☐ ATTACHMENT A : CURRENT BUSINESS CERTIFICATE
- ☒ ATTACHMENT B: PROCESS DESCRIPTION
- ☐ ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS
- ☒ ATTACHMENT D: PROCESS FLOW DIAGRAM
- ☒ ATTACHMENT E: PLOT PLAN
- ☒ ATTACHMENT F: AREA MAP
- ☒ ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM
- ☐ ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS
- ☒ ATTACHMENT I: EMISSIONS CALCULATIONS
- ☐ ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT
- ☐ ATTACHMENT K: ELECTRONIC SUBMITTAL
- ☒ ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE
- ☐ ATTACHMENT M: SITING CRITERIA WAIVER
- ☐ ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS)
- ☒ ATTACHMENT O: EMISSIONS SUMMARY SHEETS
- ☐ OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.)

Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please DO NOT fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.

SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

☐ I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation

FOR A PARTNERSHIP

☐ I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

☐ I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

☒ I certify that I am the President or a member of the Board of Directors

FOR A JOINT VENTURE

☐ I certify that I am the President, General Partner or General Manager

FOR A SOLE PROPRIETORSHIP

☐ I certify that I am the Owner and Proprietor

☒ *I hereby certify that* (please print or type) _____

is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or,

I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible

Signature _____
(please use blue ink) Responsible Official Date

Name & Title Wesley S. Leek Director Huntington Sanitary Board _____
(please print or type)

Signature Wesley S Leek 4-14-17
(please use blue ink) Authorized Representative (if applicable) Date

Applicant's Name _____

Phone & Fax (304) 781-1912 (304) 526-4029
Phone Fax

Email wleek@huntingtonsb.com

ATTACHMENT A – Current Business Certificate

Huntington Sanitary Board is owned and operated by the City of Huntington WV and therefore does not have a business certification.

ATTACHMENT B – Process Description

ATTACHMENT B –Process Description

The City of Huntington Sanitary Board operates a public wastewater treatment system for the City of Huntington and several communities in Cabell and Wayne counties.

After the 2011 derecho, the city received a grant to permanently install an emergency generator for the Hal Greer Boulevard pump station. The pump station is located on Hal Greer Boulevard at the entrance to Kinnect Park. Currently there are no businesses, schools or homes within 300 feet of this location.

The Hal Greer Blvd. pump station serves approximately 29 commercial and residential customers.

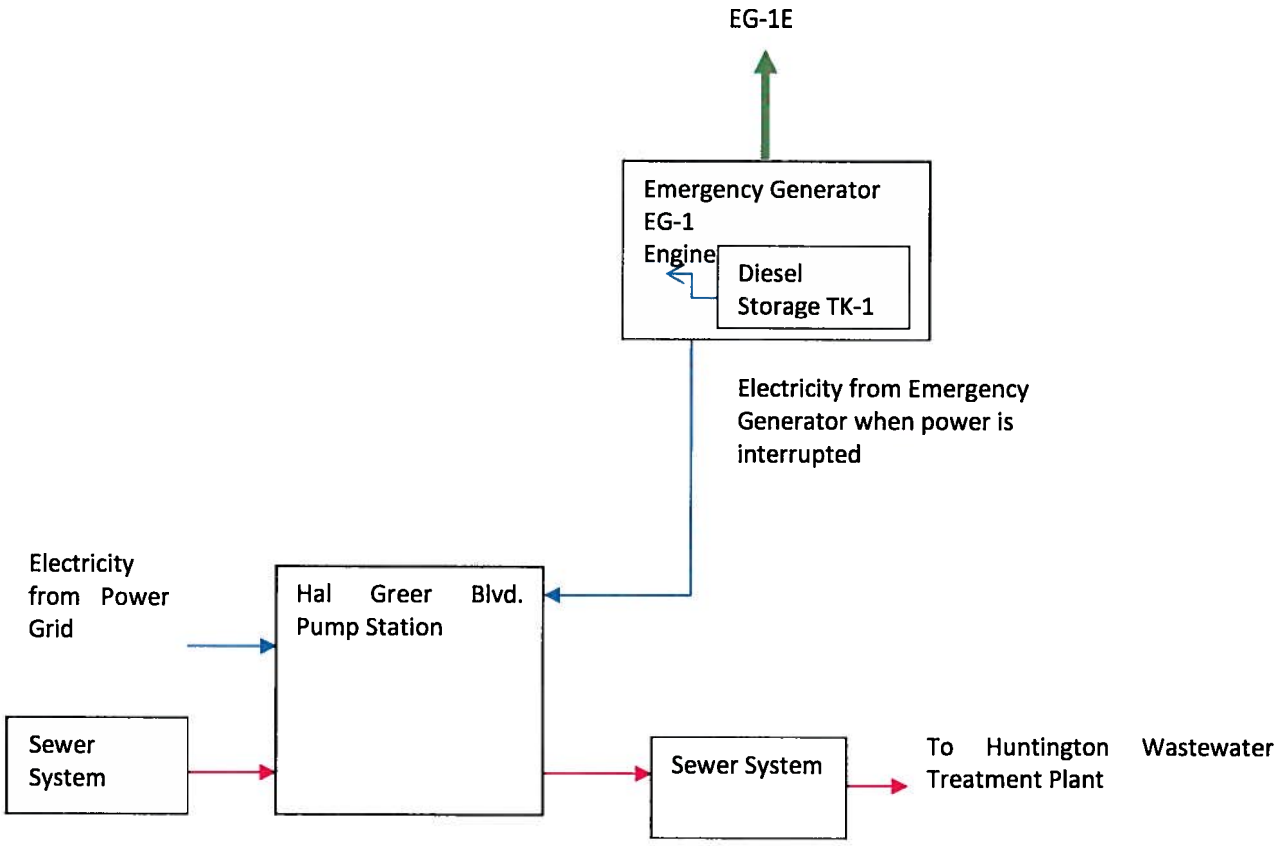
During normal operating conditions, 3-phase electrical power is supplied to the pump station via Appalachian Power's public grid. During the event of an electrical power outage from the power company's grid, the automatic transfer switch automatically detects the loss of voltage and transfers the pump station over to run off of emergency generator power supply. The transfer switch automatically disconnects the pump station from the public power grid and starts the emergency generator, providing emergency electric power to the pump station. Once the power outage is resolved and electric power is restored to the pump station via the power company, the automatic transfer switch transfers power supply back to the public grid and shuts down the emergency generator and the pump station is restored to normal operating conditions. The emergency generator is not configured to supply power to the Appalachian Power's electrical grid.

The emergency generator is also configured to test operations once per week.

The compression-ignition diesel engine operates under the US EPA NSPS Subpart IIII. The NSPS allows for 100 hours per year for testing/maintenance/emergency demand response. Subpart III permits unlimited use in true emergencies but total hours of operation will be limited to 500 hours to comply with the WV DAQ General Permit G65-C.

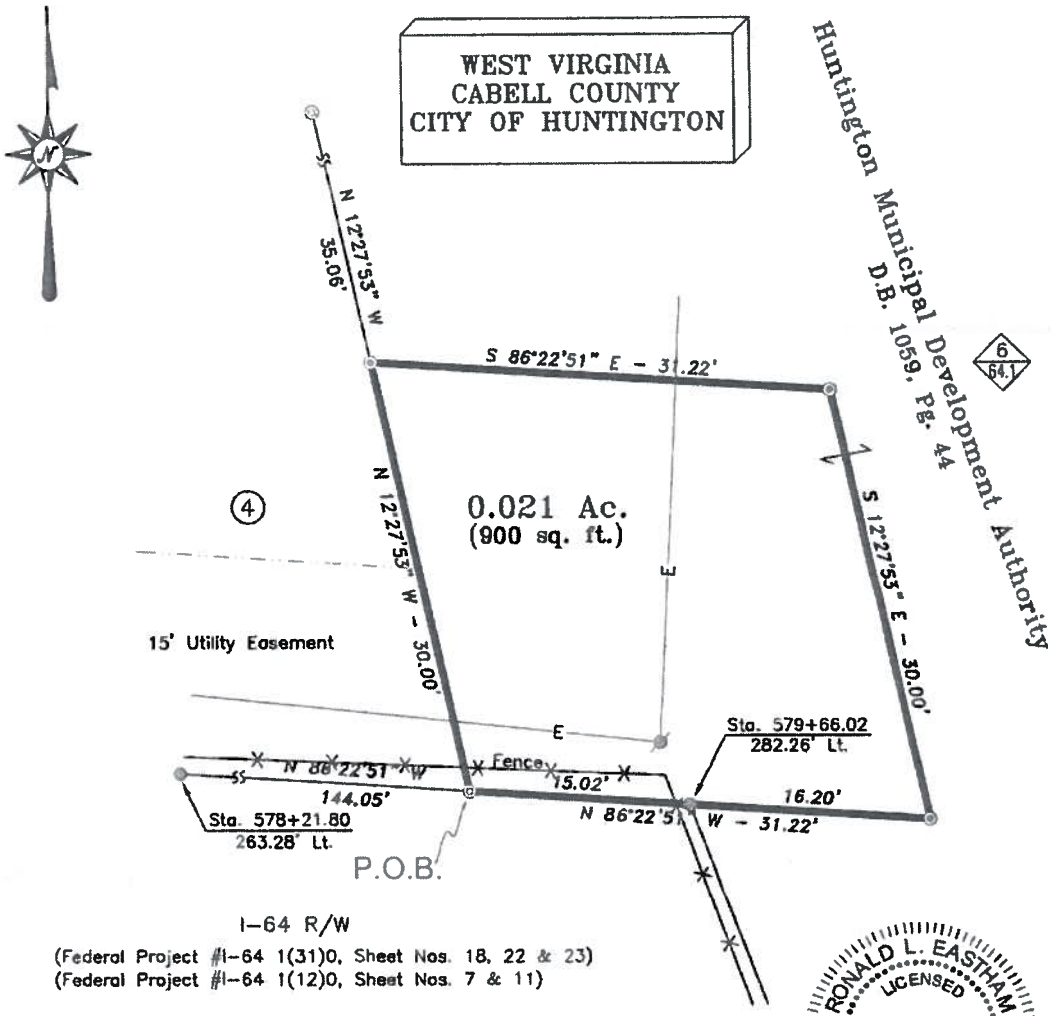
ATTACHMENT D – Process Flow Diagram

ATTACHMENT D – PROCESS FLOW DIAGRAM



ATTACHMENT E –Plot Plan

Survey datum is based on the West Virginia State Plane Coordinate System, South Zone, NAD '83, feet, and on digital drawings provided by the Huntington Municipal Development Authority.



(Federal Project #I-64 1(31)0, Sheet Nos. 18, 22 & 23)
(Federal Project #I-64 1(12)0, Sheet Nos. 7 & 11)

RONALD L. EASTHAM LICENSED No. 150 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

NOTES

- 5/8" x 33" Reinforcing Rod w/Yellow Plastic Cap Stamped "RL Eastham 150" (set)
- 5/8" x 33" Reinforcing Rod w/Red Plastic Cap Stamped "Eastham & Associates" (recovered)
- 5/8" Reinforcing Rod w/Yellow Plastic Cap Stamped "WVDOT" (found)
- Boundary Line
- Utility Easement Line
- Utility Pole
- E — Overhead Electric Line
- (4) Lot Number
- 6 / 64.1 Tax Map Number / Tax Parcel Number

NOTES

1. Being subject to all restrictions, reservations, right-of-way, easements, utilities, covenants, exceptions, conveyances, leases and exclusions previously imposed and appearing of record, and those not of record.

0' 10' 20' 30'

Surveyed By:

Ronald L. Eastham

Licensed Professional Surveyor 150

This instrument was this day presented in my office, and thereupon, together with the certificate thereto annexed, is admitted to record.
TESTE: , CABELL COUNTY CLERK
OCT 01 2013

Plat of Survey for

HUNTINGTON MUNICIPAL DEVELOPMENT AUTHORITY

Eastham & Associates
ENGINEERS - SURVEYORS - PLANNERS
• 3982 STATE ROUTE 7, • CHESAPEAKE, OH 45619 •
• (740) 867-8369 • (800) 424-5258 • Fax (740) 867-8146 •
• E-mail Address • eastham@eastham-assoc.com •
• http://www.eastham-assoc.com •

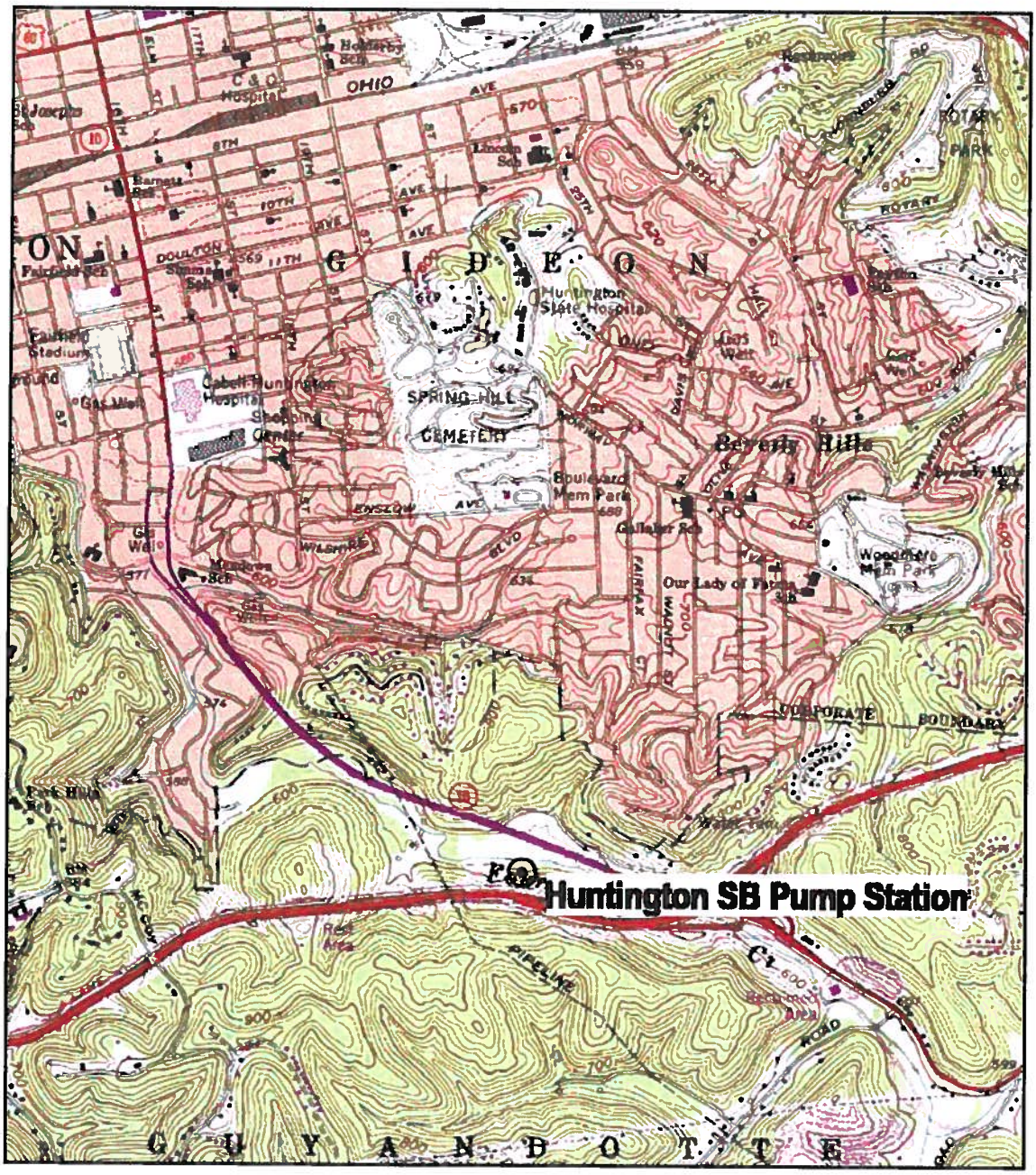
Job No. 5322 WC	Date: September 11, 2013	Scale: 1" = 10'
Drawn By: D. Lee		
Checked By: J. Eastham		

Page 13 of 40

Google Earth

feet 500
meters 100

ATTACHMENT F – Area Map



USGS QUADRANGLE
Huntington, WV 1985 Edition

0 1000 2000 4000

GRAPHIC SCALE (IN FEET)
1" = 2000'

North

STEPTOE & JOHNSON PLLC
ATTORNEYS AT LAW

Huntington Sanitary Board

Figure 1
Site Location Map
Huntington SB Pump Station
Huntington, West Virginia

PROJECT NO.:	REVIEWED BY:	DRAWN BY:	DATE:
435360.00002	JG	DS	1/31/2017

Drawing File: Huntington Sanitary Board.dwg

ATTACHMENT G – Equipment Data Sheets and Registration Section Applicability Form

General Permit G65-C Registration
Section Applicability Form

General Permit G65-C was developed to allow qualified registrants to seek registration for emergency generator(s).

General Permit G65-C allows the registrant to choose which sections of the permit that they wish to seek registration under. Therefore, please mark which sections that you are applying for registration under. Please keep in mind, that if this registration is approved, the issued registration will state which sections will apply to your affected facility.

Section 5	Reciprocating Internal Combustion Engines (R.I.C.E.)*	☒
Section 6	Tanks	☐
Section 7	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII)	☒
Section 8	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ)	☐

* **Affected facilities that are subject to Section 5 may also be subject to Sections 7 or 8. Therefore, if the applicant is seeking registration under both sections, please select both.**

EMERGENCY GENERATOR ENGINE DATA SHEET

Source Identification Number[1]		EG-1	
Engine Manufacturer and Model		John Deere 4024HG295C	
Manufacturer's Rated bhp/rpm		96/1800	
Source Status[2]		ES	
Date Installed/Modified/Removed[3]		2013	
Engine Manufactured/Reconstruction Date[4]		2008	
Is this a Certified Stationary Compression Engine according to 40CFR60 Subpart IIII? (Yes or No)[5]		Yes	
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No)[6]		No	
Engine, Fuel and Combustion Data	Engine Type[7]	LB4S	
	APCD Type[8]	A/F	
	Fuel Type[9]	2FO	
	H_2S (gr/100 scf)		
	Operating bhp/rpm	96/1800	
	BSFC (Btu/bhp-hr)		
	Fuel throughput (ft^3/hr)	2.9	
	Fuel throughput ($MMft^3$/yr)	0.001451	
	Operation (hrs/yr)	500	
Reference[10]	Potential Emissions[11]	lbs/hr	tons/yr
MD	NO_X	0.67	0.17
MD	CO	0.11	0.03
AP	VOC	0.25	0.06
AP	SO_2	0.04	0.01
MD	PM_{10}	0.03	0.01
AP	Formaldehyde	<0.01	<0.01

STORAGE TANK DATA SHEET

Source ID #[1]	Status[2]	Content[3]	Volume[4]	Dia[5]	Throughput[6]	Orientation[7]	Liquid Height[8]
TK-1	2	Diesel Fuel	225	3.0	10,850	Vertical	3.5

1. Enter the appropriate Source Identification Numbers (Source ID #) for each storage tank located at the compressor station. Tanks should be designated T01, T02, T03, etc.
2. Enter storage tank Status using the following:

   EXIST Existing Equipment NEW Installation of New Equipment
   REM Equipment Removed
3. Enter storage tank content such as condensate, pipeline liquids, glycol (DEG or TEG), lube oil, etc.
4. Enter storage tank volume in gallons.
5. Enter storage tank diameter in feet.
6. Enter storage tank throughput in gallons per year.
7. Enter storage tank orientation using the following:

   VERT Vertical Tank HORZ Horizontal Tank
8. Enter storage tank average liquid height in feet.

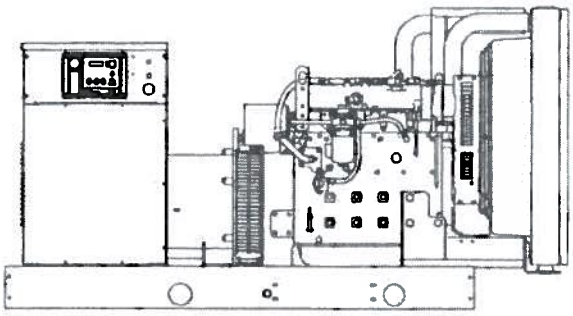
Model: 60REOZJC

KOHLER POWER SYSTEMS 208-600 V Diesel

ISO 9001 KOHLER POWER SYSTEMS NATIONALLY REGISTERED

Ratings Range

		60 Hz
Standby:	kW	49-60
	kVA	49-75
Prime:	kW	45-54
	kVA	45-68



Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- The 60 Hz generator set engine is certified by the Environmental Protection Agency (EPA) to conform to Tier 3 nonroad emissions regulations.
- A one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Alternator features:
  - The unique Fast-Response™ II excitation system delivers excellent voltage response and short-circuit capability using a permanent magnet (PM)-excited alternator.
  - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
  - Controllers are available for all applications. See controller features inside.
  - The low coolant level shutdown prevents overheating (standard on radiator models only).
  - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.

Generator Set Ratings

				130°C Rise Standby Rating		105°C Rise Prime Rating	
Alternator	Voltage	Ph	Hz	kW/kVA	Amps	kW/kVA	Amps
4P8	120/208	3	60	60/75	208	54/68	187
	127/220	3	60	60/75	197	54/68	177
	120/240	3	60	60/75	180	54/68	162
	120/240	1	60	49/49	204	45/45	188
	139/240	3	60	60/75	180	54/68	162
	220/380	3	60	55/69	104	50/63	95
	277/480	3	60	60/75	90	54/68	81
	347/600	3	60	60/84	72	53/66	64
4P10	120/208	3	60	60/75	208	54/68	187
	127/220	3	60	60/75	197	54/68	177
	120/240	3	60	60/75	180	54/68	162
	120/240	1	60	54/54	225	50/50	208
	139/240	3	60	60/75	180	54/68	162
	220/380	3	60	60/75	114	54/68	103
	277/480	3	60	60/75	90	54/68	81
	347/600	3	60	60/75	72	53/66	64
4V7	120/240	1	60	57/57	238	51/51	213

RATINGS: All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. *Standby Ratings:* Standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. *Prime Power Ratings:* At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain the technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet
Leads: quantity, type	12, Reconnectable 4, 110-120/220-240
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H
Temperature rise	130°C, Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Voltage regulation, no-load to full-load	Controller Dependent
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby Current
Peak motor starting kVA:	(35% dip for voltages below)
480 V 4P8 (12 lead)	212
480 V 4P10 (12 lead)	250
240 V 4V7 (4 lead)	215

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Vacuum-impregnated windings with fungus-resistant epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Fast-Response™ II brushless alternator with brushless exciter for excellent load response.

Application Data

Engine

Engine Specifications	
Manufacturer	John Deere
Engine model	5030HF285G
Engine type	4-Cycle, Turbocharged
Cylinder arrangement	5 Inline
Displacement, L (cu. in.)	3.0 (186)
Bore and stroke, mm (in.)	86 x 105 (3.39 x 4.13)
Compression ratio	18.2:1
Piston speed, m/min. (ft./min.)	375 (1230)
Main bearings: quantity, type	6, Replaceable Insert
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	72 (96)
Cylinder head material	Cast Iron
Crankshaft material	Ductile Iron
Valve material:	
Intake	Chromium-Silicon Steel
Exhaust	Stainless Steel
Governor: type, make/model	JDEC Electronic, Level 18, EUP
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	±0.25%
Frequency	Field-Convertible
Air cleaner type, all models	Dry

Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust flow at rated kW, m^3/min. (cfm)	13.8 (488)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	524 (976)
Maximum allowable back pressure, kPa (in. Hg)	7.5 (2.2)
Exhaust outlet size at engine hookup, mm (in.)	64.0 (2.5)

Engine Electrical

Engine Electrical System	
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	12
Ampere rating	70
Starter motor rated voltage (DC)	12
Battery, recommended cold cranking amps (CCA):	
Quantity, CCA rating	One, 640
Battery voltage (DC)	12

Fuel

Fuel System	
Fuel supply line, min. ID, mm (in.)	11.0 (0.44)
Fuel return line, min. ID, mm (in.)	6.0 (0.25)
Max. lift, engine-driven fuel pump, m (ft.)	3.0 (10.0)
Max. fuel flow, Lph (gph)	82 (21.7)
Fuel prime pump	Manual
Fuel filter	
Secondary	5 Microns @ 98% Efficiency
Water Separator	Yes
Recommended fuel	#2 Diesel

Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.)	10.4 (11.0)
Oil pan capacity with filter, L (qt.)	11.3 (11.9)
Oil filter: quantity, type	1, Cartridge
Oil cooler	Water-Cooled

Application Data

Cooling

Radiator System	
Ambient temperature, °C (°F)*	50 (122)
Engine jacket water capacity, L (gal.)	3.4 (0.9)
Radiator system capacity, including engine, L (gal.)	11.0 (2.9)
Engine jacket water flow, Lpm (gpm)	98 (26)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	45.9 (2612)
Heat rejected to air charge cooler at rated kW, dry exhaust, kW (Btu/min.)	13.0 (740)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	597 (23.5)
Fan, kWm (HP)	4.1 (5.5)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)

* Enclosure reduces ambient temperature capability by 5°C (9°F).

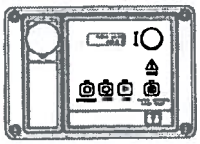
Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m^3/min. (scfm)‡	96 (3400)
Combustion air, m^3/min. (cfm)	5.3 (187)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	15.5 (880)
Alternator, kW (Btu/min.)	8.9 (505)

‡ Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

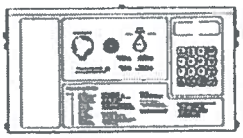
Fuel Consumption		
Diesel, Lph (gph) at % load	**Standby Rating**	
100%	19.1	(5.0)
75%	14.4	(3.8)
50%	10.1	(2.7)
25%	6.0	(1.6)
Diesel, Lph (gph) at % load	**Prime Rating**	
100%	17.5	(4.6)
75%	13.1	(3.5)
50%	9.2	(2.4)
25%	5.8	(1.5)

Controllers



Decision-Maker® 3000 Controller
Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.
- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Scrolling display shows critical data at a glance
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-100 for additional controller features and accessories.



Decision-Maker® 550 Controller
Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities.
- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or modem configuration
- Controller supports Modbus® protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-46 for additional controller features and accessories.

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KohlerPower.com

Kohler Power Systems
Asia Pacific Headquarters
7 Jurong Pier Road
Singapore 619159
Phone (65) 6264-6422, Fax (65) 6264-6455

Additional Standard Features

- Alternator Protection
- Battery Rack and Cables
- Oil Drain and Coolant Drain w/Hose Barb
- Oil Drain Extension (with narrow skid and enclosure models only)
- Operation and Installation Literature
- Radiator Drain Extension (with enclosure only)

Available Options

Approvals and Listings

- ☐ California OSHPD
- ☐ CSA Approval
- ☐ IBC Seismic Certification
- ☐ UL2200 Listing

Enclosed Unit

- ☐ Sound Enclosure (with enclosed critical silencer)
- ☐ Weather Enclosure (with enclosed critical silencer)
- ☐ Weather Housing (with roof-mounted critical silencer)

Open Unit

- ☐ Exhaust Silencer, Critical (kit: PA-324470)
- ☐ Exhaust Silencer, Hospital (kit: GM32386-KP1)
- ☐ Flexible Exhaust Connector, Stainless Steel

Fuel System

- ☐ Auxiliary Fuel Pump
- ☐ Flexible Fuel Lines
- ☐ Fuel Pressure Gauge
- ☐ Subbase Fuel Tanks

Controller

- ☐ Common Failure Relay
- ☐ Communication Products and PC Software (Decision-Maker® 550 controller only)
- ☐ Customer Connection (Decision-Maker® 550 controller only)
- ☐ Dry Contact (isolated alarm) (Decision-Maker® 550 controller only)
- ☐ Input/Output Module (Decision-Maker® 3000 controller only)
- ☐ Prime Power Switch
- ☐ Remote Annunciator Panel
- ☐ Remote Audiovisual Alarm Panel (Decision-Maker® 550 controller only)
- ☐ Remote Emergency Stop
- ☐ Remote Mounting Cable (Decision-Maker® 550 controller only)
- ☐ Run Relay

Cooling System

- ☐ Block Heater, 1000 W, 110–120 V
- ☐ Block Heater, 1000 W, 190–240 V [recommended for ambient temperatures below 0°C (32°F)]
- ☐ Radiator Duct Flange

Electrical System

- ☐ Alternator Strip Heater
- ☐ Battery
- ☐ Battery Charger, Equalize/Float Type
- ☐ Battery Heater
- ☐ Line Circuit Breaker (NEMA type 1 enclosure)
- ☐ Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)

Paralleling System

- ☐ Reactive Droop Compensator
- ☐ Remote Speed Adjust Control/Electronic Governor
- ☐ Voltage Adjust Control
- ☐ Voltage Regulator Relocation (Decision-Maker® 550 controller only)

Miscellaneous

- ☐ Air Cleaner, Heavy Duty
- ☐ Air Cleaner Restriction Indicator
- ☐ Closed Crankcase Vent
- ☐ Engine Fluids (oil and coolant) Added
- ☐ Rated Power Factor Testing
- ☐ Rodent Guards
- ☐ Skid End Caps

Literature

- ☐ General Maintenance
- ☐ NFPA 110
- ☐ Overhaul
- ☐ Production

Warranty

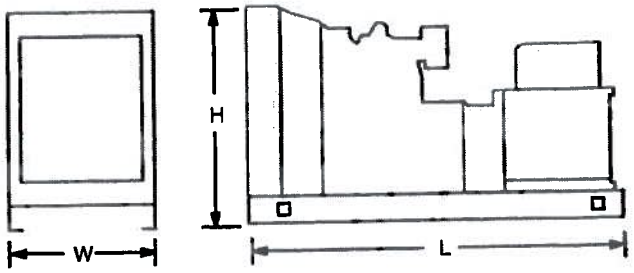
- ☐ 2-Year Basic
- ☐ 2-Year Prime
- ☐ 5-Year Basic
- ☐ 5-Year Comprehensive
- ☐ 10-Year Major Components

Other Options

- ☐ _____
- ☐ _____

Dimensions and Weights

Overall Size, L x W x H, mm (in.):
Wide Skid: 2300 x 1040 x 1133 (90.55 x 40.94 x 44.61)
Narrow Skid: 1998 x 780 x 1067 (78.66 x 30.71 x 42.01)
Weight (radiator model), wet, kg (lb.): 892 (1966)

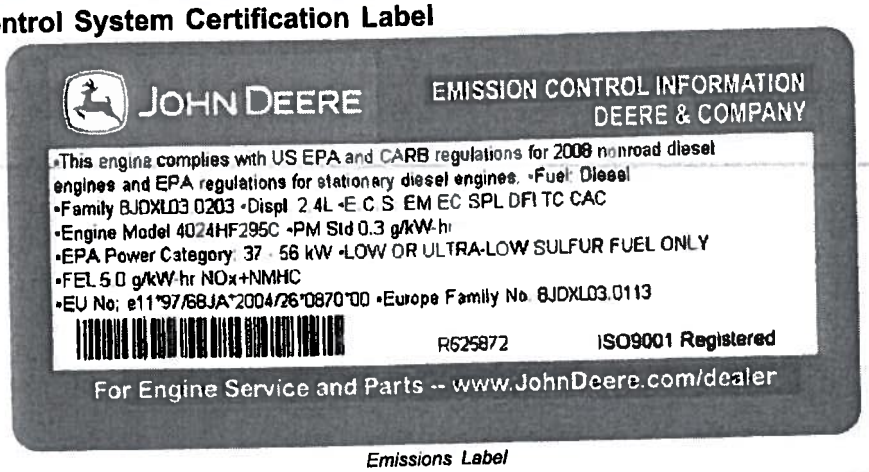


NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

DISTRIBUTED BY:

Emission System Warranty

Emissions Control System Certification Label



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Emissions Label

⚠ CAUTION: Statutes providing severe penalties for tampering with emissions controls may apply to the user or dealer.

The emissions warranty described below applies only to those engines marketed by John Deere that have been certified by the United States Environmental Protection Agency (EPA) and/or California Air Resources Board (CARB), and used in the United States and Canada. The presence of an emissions label like the one shown signifies that the engine has been certified with the EPA and/or CARB. The EPA and CARB warranties only apply to new engines having the certification label affixed to the engine and sold as stated above in the geographic areas governed by the regulating agencies.

NOTE: The hp/kW rating on the engine emissions certification label specifies the gross engine hp/kW, which is flywheel power without fan. In most applications this will not be the same rating as the advertised vehicle hp/kW rating.

BK34394,00001BD -19-31JUL08-1/1

John Deere Emissions Control Warranty Statement

DXLOGOV1 —UN—28APR09

JOHN DEERE

CALIFORNIA AND U.S. EPA EMISSIONS CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Engine Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines, or This engine conforms to US EPA nonroad compression-ignition regulations, refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines, or This engine conforms to US EPA and California nonroad compression-ignition emission regulations, also refer to the "California Emission Control Warranty Statement.

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emissions-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

U.S. AND CANADA EMISSIONS CONTROL WARRANTY STATEMENT:

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine including all parts of its emissions-control system was designed, built and equipped so as to conform at the time of sale with 40 CFR §1039.120 and applicable regulations under Section 213 of the Clean Air Act and is free from defects in materials and workmanship which would cause the engine to fail to conform with applicable regulations for a period of five years from the date of delivery to the original ultimate purchaser or 3,000 hours of operation, whichever first occurs.

John Deere will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engines emissions of any pollutant within the stated warranty period. Warranty coverage is subject to the limitations and exclusions set forth herein.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by non-performance of maintenance requirements listed in the Operators Manual.

John Deere is not liable for damage to other engine components caused by a failure of an emissions related part, unless otherwise covered by standard warranty.

John Deere may deny the owner warranty coverage if the off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications or alterations.

John Deere may deny warranty claims for failures caused by the unauthorized or unreasonable use of an engine following sale.

Where permitted by law, neither John Deere, or any authorized John Deere engine distributor, dealer, or repair facility, or any company affiliated with John Deere will be liable for incidental or consequential damages.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on your off-road diesel engine. In California, new heavy-duty off-road engines must be designed, built and equipped to meet the States stringent ant-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

Continued on next page

DX,EMISSIONS -19-08SEP08-1/2

JOHN DEERE'S WARRANTY RESPONSIBILITY

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System

- Intake manifold
- Turbocharger
- Charge air cooler

Fuel Metering system

- Fuel injection system

Exhaust Gas Recirculation

- EGR valve

Catalyst or Thermal Reactor Systems

- Catalytic converter
- Exhaust manifold

Particulate Controls

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

Advanced Oxides of Nitrogen (NOx) Controls

- NOx absorbers and catalysts

SCR systems and urea containers / dispensing systems

Miscellaneous Items used in Above Systems

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Emission control labels

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operators Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owners failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission_CI_Rev (08 Sep 08)

DX,EMISSIONS -19-08SEP08-2/2

ATTACHMENT I – Emissions Calculations

Huntington Sanitary Board - Hal Greer Pump Station
Class I General Permit G65-C Emergency Generator Application

Rev.13 APRIL 2017

Emergency Generator (Source ID# EG-1) Calculations Summary & Rationale

John Deere EPA Family BJDXL03.0203 Model Number 5030HG285G

Pollutant	Emission Factor	Emission Factor Units	Emission Factor Basis / Source	Equation Used to Calc. Hourly Emis.	Fuel Consumption (US gal/hour)	Engine Power (bhp)	Engine Power (kW)	Annual Operating Hours	Max. Hourly Emis. (lb/hr)	Max. Annual Emis. (tpy)
NOx	4.200	g/kW-hr	US EPA engine data - 2008	[1]	21.7	96	72	500	0.67	0.17
CO	0.7000	g/kW-hr	US EPA engine data - 2008	[1]	21.7	96	72	500	0.11	0.03
VOC	0.0900	lb/MMBtu	AP-42 Table 3.4-1	[2]	21.7	96	72	500	0.25	0.06
PM10	0.16000	g/kW-hr	US EPA engine data - 2008	[1]	21.7	96	72	500	0.03	0.01
SO2	8.09E-03	lb/hp-hr	AP-42 Table 3.4-1	[3]	21.7	96	72	500	0.04	0.01
Formaldehyde	7.89E-05	lb/MMBtu	AP-42, Table 3.4-3	[2]	21.7	96	72	500	0.0002	0.0001

23.97

NOTES:

NA = Not Applicable
NF = No Emission Factor
>>>AP-42, Chapter 3.4 references are from the October 1996 revision.
>>>Max. Annual Emissions based upon Max. Hourly Emissions @ 500 hr/yr.
>>>Only the WVDEP-DAQ required Emergency Generator General Permit HAP species are calculated above.
>>>Other Organic HAP species includes all organic HAPs in AP-42 Table 3.4-3 except for formaldehyde have been individually calculated above.

EXAMPLE EQUATIONS:

[1] Max. Hourly Emis. Rate (lb/hr) = Emission Factor (g/HP-hr) x Engine Power (HP) x (1 lb/453.59 g)

[2] Max. Hourly Emis. Rate (lb/hr) = Emission Factor (lb/MMBtu) x Fuel Consumption (gal/hour) x Fuel Btu value (Btu/gal)Conversion Factor (MMBtu/1000000 Btu)

[3] Max. Hourly Emis. Rate (lb/hr) = Emission Factor (lb/hp-hr) x (% Sulfur) x Engine Power (bhp) Sulfur content assumed to be 0.05% based on 40 CFR 80.510(a)

Emergency Generator (Source ID# EG-1) Calculations Summary & Rationale

John Deere EPA Family BJDXL03.0203 Model Number 5030HG285G

Pollutant	Emission Factor	Emission Factor Units	Emission Factor Basis / Source	Equation Used to Calc. Hourly Emis.	Fuel Consumption (US gal/hour)	Engine Power (bhp)	Engine Power (kW)	Annual Operating Hours	Max. Hourly Emis. (lb/hr)	Max. Annual Emis. (tpy)
Formaldehyde	7.89E-05	lb/MMBtu	AP-42, Table 3.4-3	[1]	21.7	96	72	500	0.0002	0.0001
Benzene	7.76E-04	lb/MMBtu	AP-42, Table 3.4-3	[1]	21.7	96	72	500	0.0023	0.0001
Toluene	2.81E-04	lb/MMBtu	AP-42, Table 3.4-3	[1]	21.7	96	72	500	0.0008	0.0037
Xylenes	1.93E-04	lb/MMBtu	AP-42, Table 3.4-3	[1]	21.7	96	72	500	0.0006	0.0025
Acrolein	7.88E-06	lb/MMBtu	AP-42, Table 3.4-3	[1]	21.7	96	72	500	0.0000	0.0000
Acetaldehyde	2.52E-05	lb/MMBtu	AP-42, Table 3.4-3	[1]	21.7	96	72	500	0.0001	0.0000
Total Organic HAP wo Formaldehyde	1.28E-03	lb/MMBtu	AP-42, Table 3.4-3	[1]	21.7	96	72	500	0.0039	0.0169

NOTES:

10850

NA = Not Applicable
NF = No Emission Factor
>>>AP-42, Chapter 3.4 references are from the October 1996 revision.
>>>Max. Annual Emissions based upon Max. Hourly Emissions @ 50 hr/yr.
>>>Only the WVDEP-DAQ required Emergency Generator General Permit HAP species are calculated above.
>>>Other Organic HAP species includes all organic HAPs in AP-42 Table 3.4-3 except for formaldehyde have been individually calculated above.

EXAMPLE EQUATIONS:

[4] Max. Hourly Emis. Rate (lb/hr) = Emission Factor (lb/MMBtu) x Fuel Consumption (gal/hour) x Fuel Btu value (Btu/gal)Conversion Factor (MMBtu/1000000 Btu)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	TK-1
City:	Huntington
State:	West Virginia
Company:	City of Huntington
Type of Tank:	Vertical Fixed Roof Tank
Description:	Hal Greer Emergency Generator Diesel Storage

Tank Dimensions

Shell Height (ft):		5.00
Diameter (ft):		3.00
Liquid Height (ft) :		5.00
Avg. Liquid Height (ft):		3.50
Volume (gallons):		264.38
Turnovers:		48.22
Net Throughput(gal/yr):		12,749.20
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		1.00
Radius (ft) (Dome Roof)		3.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Huntington, West Virginia (Avg Atmospheric Pressure = 14.33 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

TK-1 - Vertical Fixed Roof Tank
Huntington, West Virginia

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	All	56.53	51.44	61.62	54.87	0.0058	0.0048	0.0069	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

TK-1 - Vertical Fixed Roof Tank
Huntington, West Virginia

Annual Emission Calcaulations	
Standing Losses (lb):	0.0258
Vapor Space Volume (cu ft):	14.6608
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0354
Vented Vapor Saturation Factor:	0.9994
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	14.6608
Tank Diameter (ft):	3.0000
Vapor Space Outage (ft):	2.0741
Tank Shell Height (ft):	5.0000
Average Liquid Height (ft):	3.5000
Roof Outage (ft):	0.5741
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.5741
Dome Radius (ft):	3.0000
Shell Radius (ft):	1.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Daily Avg. Liquid Surface Temp. (deg. R):	516.2007
Daily Average Ambient Temp. (deg. F):	54.8458
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	514.5358
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,246.2101
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0354
Daily Vapor Temperature Range (deg. R):	20.3740
Daily Vapor Pressure Range (psia):	0.0021
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0048
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0069
Daily Avg. Liquid Surface Temp. (deg R):	516.2007
Daily Min. Liquid Surface Temp. (deg R):	511.1072
Daily Max. Liquid Surface Temp. (deg R):	521.2942
Daily Ambient Temp. Range (deg. R):	20.0583
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9994
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Vapor Space Outage (ft):	2.0741
Working Losses (lb):	0.1807

Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0058
Annual Net Throughput (gal/yr.):	12,749.1963
Annual Turnovers:	48.2222
Turnover Factor:	0.7888
Maximum Liquid Volume (gal):	264.3843
Maximum Liquid Height (ft):	5.0000
Tank Diameter (ft):	3.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.2065

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

TK-1 - Vertical Fixed Roof Tank
Huntington, West Virginia

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.18	0.03	0.21

ATTACHMENT O – Emissions Summary Sheets

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR CRITERIA POLLUTANTS

Emergency Generator Location: Hal Greer Pump Station						Registration Number (Agency Use) G65-C				
	Potential Emissions (lbs/hr)					Potential Emissions (tons/yr)				
Source ID No.	NO_X	CO	VOC	SO_2	PM_{10}	NO_X	CO	VOC	SO_2	PM_{10}
EG-1	0.67	0.11	0.25	0.04	0.01	0.17	0.03	0.06	0.01	0.01
TK-1	-	-	<0.01	-	-	-	-	<0.01	-	-
Total	0.67	0.11	0.25	0.04	0.01	0.17	0.03	0.06	0.01	0.01

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR HAZARDOUS/TOXIC POLLUTANTS

Emergency Generator Location: Hal Greer Blvd. Pump Station							Registration Number (Agency Use) G65-C					
	Potential Emissions (lbs/hr)						Potential Emissions (tons/yr)					
Source ID No.	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formalde-hyde	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formalde-hyde
EG-1	<0.01	NA	<0.01	<0.01	NA	<0.01	<0.01	NA	<0.01	<0.01	NA	<0.01
TK-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total	<0.01	NA	<0.01	<0.01	NA	<0.01	<0.01	NA	<0.01	<0.01	NA	<0.01