HUTTONSVILLE PUBLIC SERVICE DISTRICT

P.O. BOX 277 ● Mill Creek West Virginia ● 26280

ADMINISTRATIVE OFFICE
PHONE: 335-2035
FAX: 335-4601

January 5, 2016

West Virginia Division of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston WV 25304

To Whom This May Concern:

With the assistance from Gene M. Coccari Environmental Resource Analyst the Huttonsville Public Service District has completed their application for an emergency permit registration for their generator located at the Elkwater Fork Water Treatment Plant in Huttonsville WV.

Please notify this office if we need to submit anything further and please invoice us for the $200.00 permit fee.

Regards,

Louise A McAtee
General Manager, HPSD

Cc: file
Enclosure

G65# G65-C559
New ID# 083-00136
John Legg

$250
Class II general permit application

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

RECEIVED JAN 08 2016 WV DEP / DIV OF AIR QUALITY

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): Huttonsville Public Service District

2. Federal Employer ID No. **(FEIN):** 55-0587301

3. Applicant's mailing address: PO Box 277 Mill Creek WV 26280

4. Applicant's physical address: 9877 Seneca Trail Mill Creek WV 26280

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

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.): Water Treatment Plant

8a. Standard Industrial Classification (SIC) code:

AND

8b. North American Industry System (NAICS) code: 221310

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:
1469 Elkwater Fork Road Huttonsville WV 26273	Mailing: PO Box 277 Mill Creek WV 26280 Physical: 1469 Elkwater Fork Rd Huttonsville WV 26273

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: have a 720gpm Water Treatment Plant on site

➪ 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**.

Go 8.3 miles south from US 250 an US 219 intersection in Huttonsville WV Turn Right onto CR 58 go 1.5 miles Plant on left.

15A. Nearest city or town:	16A. County:	17A. UTM Coordinates:
Huttonsville	Randolph	Northing (KM): 4272974.85 Easting (KM): 581882.66 Zone: 17S

18A. Briefly describe the proposed new operation or change (s) to the facility:	19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits):
	Latitude: _____ Longitude: _____

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:
	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:
Huttonsville	Randolph	Northing (KM): 4272974.85 Easting (KM): 581882.66 Zone: 17S
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:	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: owned

➪ 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: : 4 / 7 / 2015	21. Date of anticipated Start-up if registration is granted: 4 / 7 / 2015

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 _____

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

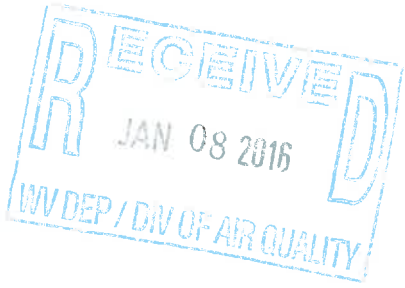
☐ I certify that I am the President or a member of the Board of Directors

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) Louise A. McAtee

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 Louise A McAtee 1/5/16
(please use blue ink) Responsible Official Date

Name & Title General Manager Huttonsville PSD
(please print or type)

Signature _____
(please use blue ink) Authorized Representative (if applicable) Date

Applicant's Name _____

Phone & Fax 304-335-2035 304 335 4601
Phone Fax

Email huttonsville psd @ gmail.com

EMERGENCY GENERATOR ENGINE DATA SHEET

Source Identification Number[1]		EG-1	
Engine Manufacturer and Model		CAT C27ATAAC	
Manufacturer's Rated bhp/rpm		1214hp eng 1005hp-gen	
Source Status[2]		ES	
Date Installed/Modified/Removed[3]		2014	
Engine Manufactured/Reconstruction Date[4]		2014	
Is this a Certified Stationary Spark Ignition 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]	—	
	Fuel Type[9]	2FO	
	H_2S (gr/100 scf)	0	
	Operating bhp/rpm	1214	
	BSFC (Btu/bhp-hr)	—	
	Fuel throughput (ft^3/hr)	—	
	Fuel throughput ($MMft^3$/yr)	—	
	Operation (hrs/yr)	500 potential	
Reference[10]	Potential Emissions[11]	lbs/hr	tons/yr
MD	NO_X	10.29	2.573
MD	CO	2-4	0.6
MD	VOC	0.2	0.05
AP	SO_2	2.5	0.622
MD	PM_{10}	0.18	0.045
AP*	Formaldehyde	0.56	0.14

*used aldehyde surrogate

1. Enter the appropriate Source Identification Number for each emergency generator. Generator engines should be designated EG-1.

2. Enter the Source Status using the following codes:

NS	Construction of New Source (installation)	ES	Existing Source
MS	Modification of Existing Source	RS	Removal of Source

ATTACHMENT E
August, 2015 for Air Pollution Application

Huttonsville Public Service District - Water Plant adjacent to Elkwater Fork Dam

Approximate Plant Power Requirements = 301,553 w = 302 KW

Unit	Total Units	Power / Unit	Total Power Required
Travelling Screen Drive Motor	1 each	3 hp	2238 w
Floculator Drive Motors	4 each	2.5 hp	7460 w
Horizontal Sludge Scraper	2 each	5 hp (1 operating)	3730w
Transverse Sludge Scraper	2 each	3 hp (1 operating)	2238 w
Backwash water Pumps	2 each	30 hp	44,760 w
High Service Pumps (1400 gpm)	2 each	150 hp (1 operational)	111,900 w
Lighting 2 bulbs @ 60w Fluorescent	160 each	60w / each	9600 w
Lighting 120 w	8 each	120 w / each	960 w
Chemical Feeder Pumps (1/2 hp)	10 each	½ hp	3730 w
Mixer Motors	5 each	½ hp	1865 w
Hot water Tank	1 each	3200w	3200 w
Electric Stove	1 each	5000 w	5000 w
Refrigerator	1 each	500 w	500 w
Trolley Motor	1 each	5 hp	3730 w
HW Tank	1 each	2500 w	2500 w
Exhaust fans	8 each	2 hp	11,936 w
Electric Wall Heaters	5-10 kw, 1-5 kw, 4-2500 w, 2-1500 w	varies	68,000 w
HVAC System	1 each	8 hp	5968 w
Electric garage door openers	2 each	1.5 hp	2238 w
Misc.			10,000 w

Assumptions for Section 13A Calculations

1. The generator at the water plant is rated at 750 ekw, or at 1,005 HP, and was oversized to allow for future expansion and lower fuel consumption.
2. The water plant runs for 9 hours per day, with a maximum draw of 302 kw or 405 HP.
3. Emissions are calculated on 9 hours per day, with one week of operation on the generator per year.
4. Data on the generator is shown on the map labeled Attachment D.
5. As the plant operates a maximum of 9 hours per day, the yearly amount is calculated as 3,285 hours of operation rather than 8,760 hours of operation.
6. Calculations are shown for only the data provided by the manufacturer on Attachment D.

The only emissions from this operation is when the backup generator is operating.

From Manufacturer Data on Attachment D

Emissions (Nominal) [1]	
NOx g/hp-hr	6.74 g/hp-hr
CO g/hp-hr	.24 g/hp-hr
HC g/hp-hr	.02 g/hp-hr
PM g/hp-hr	.019 g/hp-hr

1. Pollutant - PM = 0.019 grams/HP-hr x 405 HP / 453.6 grams/lb = 0.017 lb/hour

   0.017 lb/hour x 3,285 hours of operation = 55.7 lbs

Typically, the maximum use of the generator should be one week per year of 1/52 of the 55.7 lbs or 1.07 lbs.

Attachment A

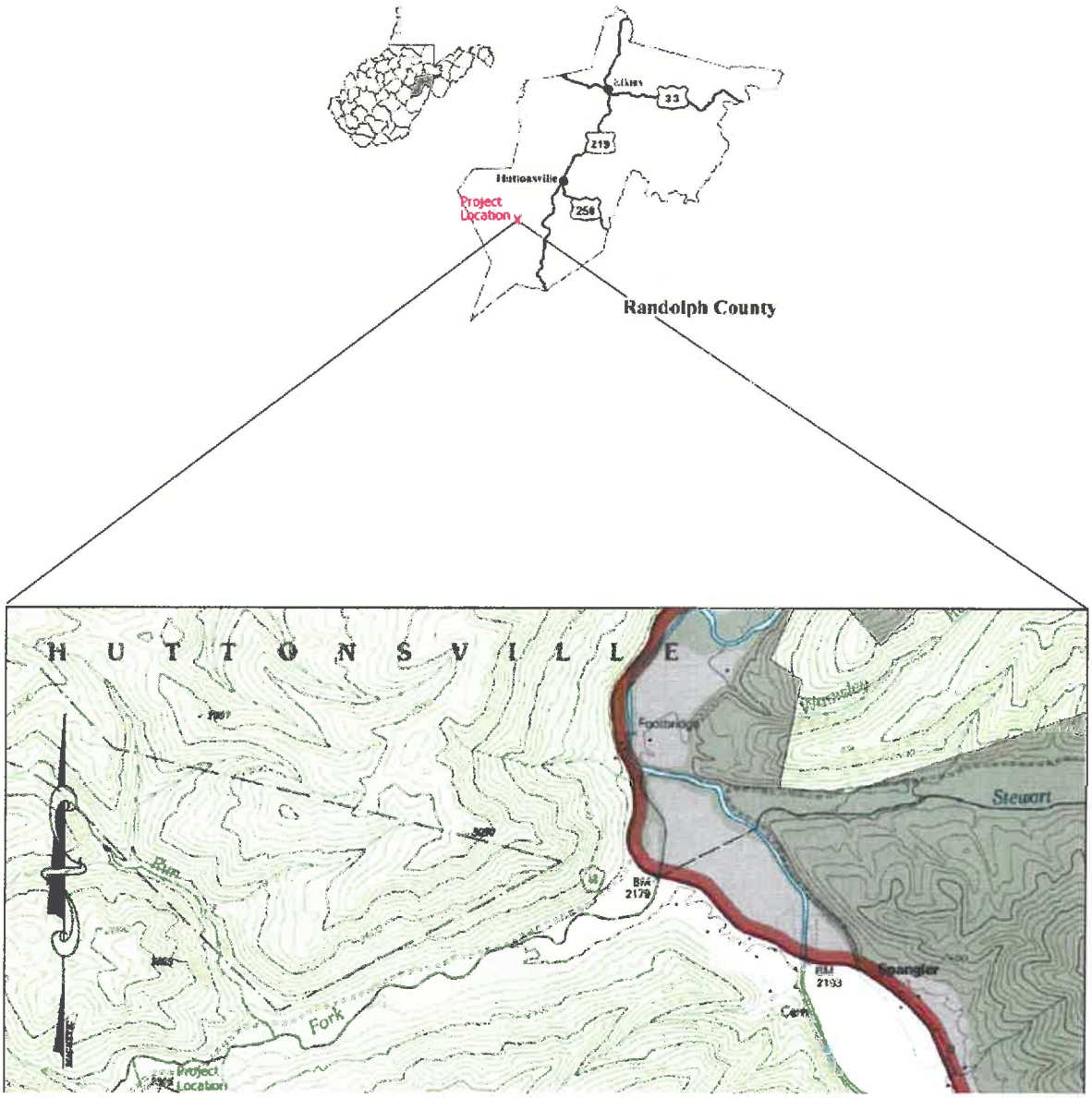


Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES[a]

Pollutant	Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01)		Diesel Fuel (SCC 2-02-001-02, 2-03-001-01)		EMISSION FACTOR RATING
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	
NO_x	0.011	1.63	0.031	4.41	D
CO	6.96 E-03[d]	0.99[d]	6.68 E-03	0.95	D
SO_x	5.91 E-04	0.084	2.05 E-03	0.29	D
PM-10[b]	7.21 E-04	0.10	2.20 E-03	0.31	D
CO_2[c]	1.08	154	1.15	164	B
Aldehydes	4.85 E-04	0.07	4.63 E-04	0.07	D
TOC					
Exhaust	0.015	2.10	2.47 E-03	0.35	D
Evaporative	6.61 E-04	0.09	0.00	0.00	E
Crankcase	4.85 E-03	0.69	4.41 E-05	0.01	E
Refueling	1.08 E-03	0.15	0.00	0.00	E

[a] References 2,5-6,9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

[b] PM-10 = particulate matter less than or equal to 10 μm aerodynamic diameter. All particulate is assumed to be ≤ 1 μm in size.

[c] Assumes 99% conversion of carbon in fuel to CO_2 with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and gasoline heating value of 20,300 Btu/lb.

[d] Instead of 0.439 lb/hp-hr (power output) and 62.7 lb/mmBtu (fuel input), the correct emissions factors values are 6.96 E-03 lb/hp-hr (power output) and 0.99 lb/mmBtu (fuel input), respectively. This is an editorial correction. March 24, 2009

DIESEL GENERATOR SET

Image shown may not reflect actual package.

STANDBY
750 ekW 938 kVA
60 Hz 1800 rpm 480 Volts

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES

FUEL/EMISSIONS STRATEGY
- EPA Certified for Stationary Emergency Application (EPA Tier 2 emissions levels)

DESIGN CRITERIA
- The generator set accepts 100% rated load in one step per NFPA 110 and meets ISO 8528-5 transient response.

UL 2200 / CSA - Optional
- UL 2200 listed packages
- CSA Certified

Certain restrictions may apply. Consult with your Cat® Dealer.

FULL RANGE OF ATTACHMENTS
- Wide range of bolt-on system expansion *attachments, factory designed and tested*
- Flexible packaging options for easy and cost effective installation

SINGLE-SOURCE SUPPLIER
- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT
- Cat dealers provide extensive post sale support including maintenance and repair agreements
- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- The Cat® S•O•S℠ program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

CAT® C27 ATAAC DIESEL ENGINE
- Utilizes ACERT™ Technology
- Reliable, rugged, durable design
- Four-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

CAT GENERATOR
- Designed to match the performance and output characteristics of Cat diesel engines
- Single point access to accessory connections
- UL 1446 recognized Class H insulation

CAT EMCP 4 CONTROL PANELS
- Simple user friendly interface and navigation
- Scalable system to meet a wide range of customer needs
- Integrated Control System and Communications Gateway

SEISMIC CERTIFICATION
- Seismic Certification available
- Anchoring details are site specific, and are dependent on many factors such as generator set size, weight, and concrete strength. IBC Certification requires that the anchoring system used is reviewed and approved by a Professional Engineer
- Seismic Certification per Applicable Building Codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007
- Pre-approved by OSHPD and carries an *OSP-0084-10 for use in healthcare projects in* California

STANDBY 750 ekW 938 kVA

60 Hz 1800 rpm 480 Volts

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	• Air cleaner	
Cooling	• Package mounted radiator	
Exhaust	• Exhaust flange outlet	[ ] Exhaust mufflers (except Tier 4)
Fuel	• Primary fuel filter with integral water separator • Secondary fuel filters • Fuel priming pump	
Generator	• Matched to the performance and output characteristics of Cat engines • Load adjustment module provides engine relief upon load impact and improves laod acceptance and recovery time • IP23 protection	[ ] Oversize and premium generators [ ] Permanent magnet excitation (PMG) [ ] Internal excited (IE) [ ] Anti-condensation space heaters
Power Termination	• Bus bar	[ ] Circuit breakers, UL listed [ ] Circuit breakers, IEC compliant
Control Panel	• EMCP 4 Genset Controller	[ ] EMCP 4.2 [ ] EMCP 4.3 [ ] EMCP 4.4 [ ] Generator temperature monitoring and protection [ ] Load share module [ ] Digital I/O module [ ] Remote monitoring software
Mounting		[ ] Rubber vibration isolators
Starting/Charging		[ ] Battery chargers [ ] Oversize batteries [ ] Jacket water heater [ ] Heavy duty starting system [ ] Charging alternator [ ] Air starting motor with control and silencer (3500 & C175 models only)
General	• Paint - Caterpillar Yellow except rails and radiators gloss black	The following options are based on regional and product configuration: [ ] Seismic Certification per Applicable Building Codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007 [ ] EU Certificate of Conformance (CE) [ ] UL 2200 package [ ] CSA Certification [ ] EEC Declaration of Conformity [ ] Enclosures- sound attenuated, weather protective [ ] Automatic transfer switches (ATS) [ ] Integral & sub-base fuel tanks [ ] Integral & sub-base UL listed dual wall fuel tanks

STANDBY 750 ekW 938 kVA

60 Hz 1800 rpm 480 Volts

SPECIFICATIONS

CAT GENERATOR

Frame size..... 596
Excitation..... Permanent Magnet
Pitch..... 0.8667
Number of poles..... 4
Number of bearings..... Single bearing
Number of Leads..... 012
Insulation..... UL 1446 Recognized Class H with tropicalization and antiabrasion
- Consult your Caterpillar dealer for available voltages
IP Rating..... Drip Proof IP22
Alignment..... Pilot Shaft
Overspeed capability..... 150
Wave form Deviation (Line to Line)..... Less than 5% deviation
Voltage regulator..... 3 Phase sensing with selectible volts/Hz
Voltage regulation..... Less than +/- 1/2% (steady state)
Less than +/- 1% (no load to full load)

CAT DIESEL ENGINE

C27 TA, V-12, 4-Stroke Water-cooled Diesel
Bore..... 137.20 mm (5.4 in)
Stroke..... 152.40 mm (6.0 in)
Displacement..... 27.03 L (1649.47 in^3)
Compression Ratio..... 16.5:1
Aspiration..... TA
Fuel System..... MEUI
Governor Type..... ADEM™ A4

CAT EMCP 4 SERIES CONTROLS

EMCP 4 controls including:
- Run / Auto / Stop Control
- Speed and Voltage Adjust
- Engine Cycle Crank
- 24-volt DC operation
- Environmental sealed front face
- Text alarm/event descriptions

Digital indication for:
- RPM
- DC volts
- Operating hours
- Oil pressure (psi, kPa or bar)
- Coolant temperature
- Volts (L-L & L-N), frequency (Hz)
- Amps (per phase & average)
- ekW, kVA, kVAR, kW-hr, %kW, PF

Warning/shutdown with common LED indication of:
- Low oil pressure
- High coolant temperature
- Overspeed
- Emergency stop
- Failure to start (overcrank)
- Low coolant temperature
- Low coolant level

Programmable protective relaying functions:
- Generator phase sequence
- Over/Under voltage (27/59)
- Over/Under Frequency (81 o/u)
- Reverse Power (kW) (32)
- Reverse reactive power (kVAr) (32RV)
- Overcurrent (50/51)

Communications:
- Six digital inputs (4.2 only)
- Four relay outputs (Form A)
- Two relay outputs (Form C)
- Two digital outputs
- Customer data link (Modbus RTU)
- Accessory module data link
- Serial annunciator module data link
- Emergency stop pushbutton

Compatible with the following:
- Digital I/O module
- Local Annunciator
- Remote CAN annunciator
- Remote serial annunciator

STANDBY 750 ekW 938 kVA

60 Hz 1800 rpm 480 Volts

TECHNICAL DATA

Open Generator Set - - 1800 rpm/60 Hz/480 Volts	DM9071	
EPA Certified for Stationary Emergency Application (EPA Tier 2 emissions levels)		
Generator Set Package Performance		
Genset Power rating @ 0.8 pf	937.5 kVA	
Genset Power rating with fan	750 ekW	
Fuel Consumption		
100% load with fan	202.9 L/hr	53.6 Gal/hr
75% load with fan	162.4 L/hr	42.9 Gal/hr
50% load with fan	116.2 L/hr	30.7 Gal/hr
Cooling System[1]		
Air flow restriction (system)	0.12 kPa	0.48 in. water
Engine coolant capacity	55.0 L	14.5 gal
Inlet Air		
Combustion air inlet flow rate	58.7 m³/min	2073.0 cfm
Exhaust System		
Exhaust stack gas temperature	509.3 ° C	948.7 ° F
Exhaust gas flow rate	158.9 m³/min	5611.5 cfm
Exhaust flange size (internal diameter)	203 mm	8 in
Exhaust system backpressure (maximum allowable)	10.0 kPa	40.2 in. water
Heat Rejection		
Heat rejection to coolant (total)	324 kW	18426 Btu/min
Heat rejection to exhaust (total)	742 kW	42197 Btu/min
Heat rejection to aftercooler	138 kW	7848 Btu/min
Heat rejection to atmosphere from engine	100 kW	5687 Btu/min
Heat rejection to atmosphere from generator	46.2 kW	2627.4 Btu/min
Alternator[2]		
Motor starting capability @ 30% voltage dip	2035 skVA	
Frame	596	
Temperature Rise	130 ° C	234 ° F
Lube System		
Sump refill with filter	68.0 L	18.0 gal
Emissions (Nominal)[3]		
NOx g/hp-hr	5.25 g/hp-hr	
CO g/hp-hr	.25 g/hp-hr	
HC g/hp-hr	.03 g/hp-hr	
PM g/hp-hr	.021 g/hp-hr	

[1] For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

[2] Generator temperature rise is based on a 40°C ambient per NEMA MG1-32. UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics.

[3] Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77°F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

RATING DEFINITIONS AND CONDITIONS

Applicable Codes and Standards: AS1359, CSA C22.2 No 100-04, UL142, UL489, UL601, UL869, UL2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, 72/23/EEC, 98/37/EC, 2004/108/EC

Standby - Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel Rates are based on fuel oil of 35° API (16° C or 60° F) gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

Additional Ratings may be available for specific customer requirements. Consult your Cat representative for details.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2014 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Caterpillar Inc.
(U.S. Manufacturer or Importer)

Certificate Number: ECPXL27.0NZS-005

Effective Date: 06/20/2013

Expiration Date: 12/31/2014

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 06/20/2013

Revision Date: N/A

Model Year: 2014
Manufacturer Type: Original Engine Manufacturer
Engine Family: ECPXL27.0NZS

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

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

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

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

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

ATTACHMENT E
August, 2015 for Air Pollution Application

Huttonsville Public Service District - Water Plant adjacent to Elkwater Fork Dam

Approximate Plant Power Requirements = 301,553 w = 302 KW

Unit	Total Units	Power / Unit	Total Power Required
Travelling Screen Drive Motor	1 each	3 hp	2238 w
Floculator Drive Motors	4 each	2.5 hp	7460 w
Horizontal Sludge Scraper	2 each	5 hp (1 operating)	3730w
Transverse Sludge Scraper	2 each	3 hp (1 operating)	2238 w
Backwash water Pumps	2 each	30 hp	44,760 w
High Service Pumps (1400 gpm)	2 each	150 hp (1 operational)	111,900 w
Lighting 2 bulbs @ 60w Fluorescent	160 each	60w / each	9600 w
Lighting 120 w	8 each	120 w / each	960 w
Chemical Feeder Pumps (1/2 hp)	10 each	½ hp	3730 w
Mixer Motors	5 each	½ hp	1865 w
Hot water Tank	1 each	3200w	3200 w
Electric Stove	1 each	5000 w	5000 w
Refrigerator	1 each	500 w	500 w
Trolley Motor	1 each	5 hp	3730 w
HW Tank	1 each	2500 w	2500 w
Exhaust fans	8 each	2 hp	11,936 w
Electric Wall Heaters	5-10 kw, 1-5 kw, 4-2500 w, 2-1500 w	varies	68,000 w
HVAC System	1 each	8 hp	5968 w
Electric garage door openers	2 each	1.5 hp	2238 w
Misc.			10,000 w

Assumptions for Section 13A Calculations

1. The generator at the water plant is rated at 750 ekw, or at 1,005 HP, and was oversized to allow for future expansion and lower fuel consumption.
2. The water plant runs for 9 hours per day, with a maximum draw of 302 kw or 405 HP.
3. Emissions are calculated on 9 hours per day, with one week of operation on the generator per year.
4. Data on the generator is shown on the map labeled Attachment D.
5. As the plant operates a maximum of 9 hours per day, the yearly amount is calculated as 3,285 hours of operation rather than 8,760 hours of operation.
6. Calculations are shown for only the data provided by the manufacturer on Attachment D.

The only emissions from this operation is when the backup generator is operating.

From Manufacturer Data on Attachment D

Emissions (Nominal) [1]	
NOx g/hp-hr	6.74 g/hp-hr
CO g/hp-hr	.24 g/hp-hr
HC g/hp-hr	.02 g/hp-hr
PM g/hp-hr	.019 g/hp-hr

1. Pollutant - PM = 0.019 grams/HP-hr x 405 HP / 453.6 grams/lb = 0.017 lb/hour

   0.017 lb/hour x 3,285 hours of operation = 55.7 lbs

Typically, the maximum use of the generator should be one week per year of 1/52 of the 55.7 lbs or 1.07 lbs.