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**west virginia department of environmental protection**

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Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone 304/926-0475

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

**GENERAL PERMIT REGISTRATION APPLICATION  
ENGINEERING EVALUATION / FACT SHEET**

BACKGROUND INFORMATION

Registration No.: G65-C562  
Plant ID No.: 081-00271  
Applicant: Appalachian Power Company  
Facility Name: Beckley Service Center  
Location: Beckley, Raleigh County  
SIC Code: 4911  
Application Type: Construction  
Received Date: October 7, 2016  
Engineer Assigned: William T. Rothwell II, P.E.  
Fee Amount: \$250.00  
Date Received: October 12, 2016  
Complete Date: November 6, 2016  
Applicant Ad Date: *Not Applicable*  
Newspaper: *Not Applicable*  
UTM's: Easting: 483.24 E km Northing: 4186.00 N km Zone: 17  
Description: Installation of a 560 kW emergency generator to be used in the event of a power failure.

TYPE OF PROCESS

The installation is a Cummins 560 kW Diesel Generator Set, Model 450DEFJ using a 755 bhp Cummins QSX15-G9 Tier 2 Certified engine that was manufactured in 2015. The generator is used to provide emergency power backup. During normal operation, the generator is exercised once a week for approximately one hour for an annual run time of 52 hours. The generator will not exceed the allowable 500 hours/year allowed by the State of West Virginia. The existing Cummins VTA-28G2 Diesel Generator set will be removed from the site.

SITE INSPECTION

A site inspection was deemed unnecessary by the writer at this time. However, once the emergency generator is installed and operated, it will be placed on the regular inspection list of sources.

*From Charleston, take I-64E/I-77S approximately 55 miles to exit 48. Proceed from exit 48 to the intersection of US-19 S/WV-16 S/ Robert C Byrd Dr. Turn Right onto US-19 S/WV-16 S/ Robert C Byrd Dr and travel approximately 2 miles. Facility is located on the left (traveling south) side of US-19 S/WV-16 S/ Robert C Byrd Dr.*

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	8.57	2.14
Carbon Monoxide	0.83	0.21
VOC	0.53	0.13
SO2	0.01	0.01
Particulate Matter	0.10	0.03

Because of the low emission levels, the VOC, Sulfur Oxides, and Particulate Matter emissions will not be written into the permit.

GENERAL PERMIT ELIGIBILITY

The proposed construction and operation of this facility meets the eligibility requirements required in Section 1.3 and the storage tank limitation required in Section 2.1.4.b as specified in the General Permit G65-C.

The permittee is subject to 40CFR60 Subpart IIII because they are an owner and operator of a stationary compression ignition (CI) internal combustion engine (ICE) that commenced construction after July 11, 2005 and the stationary CI ICE was manufactured after April 1, 2006 (2015) and is not a fire pump engine [§60.4200 (a)(2)(I)].

Certified values for this specific engine were used in the emissions calculations. Since the engine meets EPA Tier 2 requirements, it emits no more than what is specified in 40 CFR §89.112, Table 1. For annual emissions calculations, 500 hrs/year were used.

Section 60.4205b details the emission standards for emergency engines with a displacement less than 30 liters per cylinder that are not fire pump engines. They must meet the emission standards for new non-road CI engines in Section 60.4202. Section 60.4202.a.2 states that engines with a maximum engine power greater than or equal to 37 kW (50 hp) must meet the standards in 40CFR89.112 and 40CFR89.113 for all pollutants beginning in model year 2007. [§60.4202.a.2.].

The permittee is subject to 40CFR80 because Section 60.4207 states that owners and

operators of stationary CI ICE subject to Subpart IIII that use diesel fuel must use diesel fuel that meets the requirements of 40CFR 80.510(a) beginning October 1, 2007 [§60.4207.a.].

RECOMMENDATION TO ACTING DIRECTOR

The request of Appalachian Power Company to operate an emergency generator near Beckley, Raleigh County, WV site meets the requirements of General Permit G65-C and all applicable rules. It is the recommendation of the writer to grant a General Permit Registration to construct and operate said facility.



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William T. Rothwell II, P.E.  
Engineer

12/02/2016

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Date