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**west virginia department of environmental protection**

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Division of Air Quality  
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Charleston, WV 25304  
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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.: G60-C074  
Plant ID No.: 039-00076  
Applicant: Charleston Area Medical Center (CAMC)  
Facility Name: CAMC Cancer Center  
Location: Charleston, Kanawha County  
SIC Code: 8062  
Application Type: Construction  
Received Date: March 20, 2015  
Engineer Assigned: William T. Rothwell II, P.E.  
Fee Amount: \$1,500.00  
Date Received: March 31, 2015  
Complete Date: April 17, 2015  
Applicant Ad Date: March 26, 2015  
Newspaper: *The Charleston Gazette*  
UTM's: Easting: 447.304 km Northing: 4242.351 km Zone: 17  
Description: Application for the construction and operation one (1) diesel-fired emergency generator to be used to provide electricity throughout the facility in the event of a power failure.

**TYPE OF PROCESS**

The following process description was taken from Permit Application G60-C074:

The CAMC Cancer Center will utilize one (1) Caterpillar CAT C15 - 500 kW generator set powered by one (1) 762 horsepower diesel fired Caterpillar Model C15 ATAAC engine that was manufactured on 10/21/2013 and is EPA Tier 2 certified. The generator will be housed in an enclosure and have a 660 gallon sub-base fuel tank module. The emergency generator will be used to provide electricity throughout the facility in the event of a power failure.

## SITE INSPECTION

A site inspection was performed by the writer on April 15, 2015. This permit is an for one emergency generator installed for the purpose of allowing key systems to continue to operate without interruption during times of utility power outages.

*The CAMC Cancer Center is located on State Road 61 (MacCorkle Avenue) just south of the 35<sup>th</sup> Street Bridge.*

## ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Maximum controlled emissions from the CAMC Cancer Center's emergency generator is summarized below. G60-C limits the facility to 500 hours per year of operation.

Emission	Pollutant	Maximum Hourly	Maximum Annual
EG-1 Caterpillar C15 ATAAC	Nitrogen Oxides	10.26	2.57
	Carbon Monoxide	1.25	0.31
	Volatile Organic Compounds	0.47	0.12
	Sulfur Dioxide	0.01	0.01
	Particulate Matter-10	0.06	0.02
	Formaldehyde	<0.01	<0.01

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

## GENERAL PERMIT ELIGIBILITY

The proposed construction and operation of this facility meets the applicability stated under Section 2.3 (area source, source not subject to additional requirements, and located in an attainment area, etc.), and is required to meet the Limitations and Standards stated under Section 3.2 as specified in General Permit G60-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 (2013) 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 engines 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 DIRECTOR

CAMC Cancer Center's request to construct and operate an emergency generator at the Charleston, Kanawha County, WV site meets the requirements of General Permit G60-C and all applicable rules and therefore should be granted a General Permit Registration to construct and operate the said facility.



William T. Rothwell II, P.E.

Engineer



Date