

To: File  
From: John Legg  
Date: June 7, 2016

*John Legg*  
*6/7/16*

Subj: R13-2452C - Class I Administrative Update to R13-2452B  
Charleston Area Medical Center (CAMC)  
Women & Children's Hospital  
Company ID No: 039-00066  
Permit No.: R13-2452C

### Timing

05/31/2016 - Application received.  
06/02/2016 - Application assigned.

### Description

On May 31, 2016 the Division of Air Quality (DAQ) received a one-page letter dated May 11, 2016. The letter requested a Class I Administrative Update to permit R13-2452B. The following three (3) revisions were requested:

- Revision 1 - Change facility name from CAMC - Women & Children's Division to CAMC Women & Children's Hospital throughout the permit.
- Revision 2 - In Section 1.0 Emission Units, Boiler #1 is listed as a natural gas/#2 fuel oil fired boiler and Boiler #2 as a natural gas fired boiler. Boiler #1 needs changed to a natural gas only fired boiler and Boiler #2 is a dual fuel, natural gas/#2 fuel oil fired boiler.
- Revision 3 - Remove ethylene oxide sterilizers #1, #2 and #3 from the permit as they are no longer present at the facility.

### Changes Made to R13-2452B

A compare file highlighting the changes made to R13-2452B to arrive at R13-2452C is attached to this engineering evaluation as Attachment 1.

**Attachment 1**

**Compare File**

**Changes Made to R13-2452B to Arrived at Permit R13-2452C**

*West Virginia Department of Environmental Protection*  
*Joe Manchin, III*      *Stephanie R. Timmermeyer*  
*Earl Ray Tomblin*      *Division of Air Quality*      *Randy C. Huffman*  
*Governor*           *Cabinet Secretary*

# Permit to Modify Update

**R13-2452B2452C**



*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary source of air pollutants identified herein in accordance with all terms and conditions of this permit.*

*Issued to:*  
**Charleston Area Medical Center**  
**CAMC – Women and Children's Division Hospital**  
**039-00066**

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***John A. Benedict***  
***William F. Durham***  
*Director*

*Issued: DRAFT • Effective: DRAFT June 7, 2016*

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This permit will supercede and replace Permit R13-2452A2452B.

Facility Location: Charleston, Kanawha County, West Virginia  
Mailing Address: 3200 MacCorkle Avenue, SE, Charleston, WV\_25304  
Facility Description: Hospital Facility  
SIC Codes: 8062: Health Services – General Medical & Surgical Hospitals  
UTM Coordinates: 468.69 km Easting • 4,245.43 km Northing • Zone 17  
Permit Type: ~~Modification~~ Class I Administrative Update

~~Description of Change: Installation of new emergency generator.~~

Description of Change: Revision 1 – Change facility name to CAMC Women & Children's Hospital throughout permit. Revision 2 – In Section 1.0. Emission Units, change Boiler #1 to a natural gas fired boiler only (no #2 fuel oil) and Boiler #2 to a dual fueled boiler (both natural gas and #2 fuel oil). Revision 3 – Remove ethylene oxide sterilizers #1, #2 and #3 from the permit as they are no longer present at the facility.

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.*

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*As a result of the granting of this permit, the source is not subject to 45CSR30.*

**1.0. Emission Units**

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
Boiler #1	Stack 1	Natural Gas/ <del>#2 Fuel Oil</del> Fired Boiler	Prior to 6/9/89	10.4 MMBTU/hr	NA
Boiler #2	Stack 2	Natural Gas and <del>#2 Fuel Oil</del> Fired Boiler ( <del>Dual Fueled</del> )	Prior to 6/9/89	10.4 MMBTU/hr	NA
Emergency Generator #1	Stack 3	Diesel Emergency Generator #1	--	1000 KW	NA
Emergency Generator #2	Stack 4	Diesel Emergency Generator #2	2005	2250 KW	NA
Fuel Oil Storage Tank	NA	Fuel Oil Storage Tank	--	Less than 19,800 gallons	NA
<del>Ethylene Oxide Sterilizer #1</del>	<del>Ethylene Oxide Sterilizer Stack</del>	<del>Ethylene Oxide Sterilizer</del>	<del>--</del>	<del>--</del>	<del>NA</del>
<del>Ethylene Oxide Sterilizer #2</del>	<del>Ethylene Oxide Sterilizer Stack</del>	<del>Ethylene Oxide Sterilizer</del>	<del>--</del>	<del>--</del>	<del>NA</del>
<del>Ethylene Oxide Sterilizer #3</del>	<del>Ethylene Oxide Sterilizer Stack</del>	<del>Ethylene Oxide Sterilizer</del>	<del>--</del>	<del>--</del>	<del>NA</del>

**4.0. Source-Specific Requirements**

**4.1. Limitations and Standards**

4.1.1. Maximum allowable hourly and annual emissions from the following emission points shall not exceed the limitations set forth in Table 4.1.1.

**Table 4.1.1. Emission Limits**

Emission Point	Source ID	Pollutant	Emission Limit	
			pph	tpy
Stack 1	Boiler #1	CO	0.87	3.83
		NO <sub>x</sub>	1.49	6.51
		PM <sub>10</sub>	0.25	1.08
		SO <sub>2</sub>	5.27	23.11
		VOC	0.10	0.42
Stack 2	Boiler #2	CO	0.87	3.83
		NO <sub>x</sub>	1.49	6.51
		PM <sub>10</sub>	0.25	1.08
		SO <sub>2</sub>	5.27	23.11
		VOC	0.10	0.42
Stack 3	Emergency Generator #1	CO	8.2	2.04
		NO <sub>x</sub>	35.6	8.89
		PM <sub>10</sub>	1.1	0.26
		SO <sub>2</sub>	3.6	0.90
		VOC	1.1	0.26
Stack 4	Emergency Generator #2	CO	6.0	7.44
		NO <sub>x</sub>	55.1	68.99
		PM <sub>10</sub>	0.6	0.45
		SO <sub>2</sub>	0.8	0.99
		VOC	0.8	0.90

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4.1.2. Natural gas and #2 Fuel Oil usage shall not exceed the annual limits set forth in Table 4.1.2.

**Table 4.1.2. Fuel Usage Limits**

Equipment Identification	Natural Gas Usage (ft <sup>3</sup> per Hour)	#2 Fuel Oil Usage (MMft <sup>3</sup> per Year)	#2 Fuel Oil Usage (Gallons per Year)
Boiler #1	Combined 20,800	Combined 182.208	<del>30,000</del>
Boiler #2			<del>30,000</del>

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Compliance with the natural gas and #2 fuel oil usage limit shall be determined using a rolling continuous twelve (12) month total.  
 [45CSR§13-5.11]

4.1.3. Emergency Generator #1 is limited to 500 hours of operation per year. Emergency Generator #2 is limited to 2,500 hours of operation per year. The two emergency generators shall not be operated concurrently. Compliance with the usage limits shall be determined using a rolling continuous twelve (12) month total.

~~4.1.4. Maximum emissions to the atmosphere from the ethylene oxide sterilizer stack shall not exceed 0.25 pph, 2.4 ppd, and 0.25 tpy of ethylene oxide emissions.~~

~~4.1.5. No more than 3.6 ounces of ethylene oxide per sterilizer bottle per 16 hours may be processed in each of the three ethylene oxide sterilizers.~~

~~4.1.4. [Reserved]~~

~~4.1.5. [Reserved]~~

4.1.6. The permittee shall comply with all applicable standards and requirements of 45CSR§2 – “To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers”. The pertinent sections of 45CSR§2 applicable to this facility include, but are not limited to, the following: *{Boilers #1 and #2 Only}*

4.1.6.1. The permittee shall not cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.  
*[45CSR§2-3.1] {Boilers #1 and #2 Only}*

4.1.6.2. The permittee shall not cause, suffer, allow or permit the discharge of particulate matter into the open air from all fuel burning units located at one plant, measured in terms of pounds per hour in excess of the product of 0.09 and the total design heat inputs for such units in million B.T.U.’s per hour, provided however that no more than six hundred (600) pounds per hour of particulate matter shall be discharged into the open air from all such units.  
*[45CSR§§2-4.1 and -4.1.b] {Boilers #1 and #2 Only}*

4.1.6.3. The permittee shall not cause, suffer, allow or permit any source of fugitive particulate matter to operate that is not equipped with a fugitive particulate matter control system. This system shall be operated and maintained in such a manner as to minimize the emission of fugitive particulate matter. Sources of fugitive particulate matter associated with fuel burning units shall include, but not be limited to, the following:

- a. Stockpiling of ash or fuel either in the open air or in enclosures such as silos.
- b. Transport of ash in vehicles or on conveying systems, to include spillage, tracking or blowing or particulate matter from or by such vehicle or equipment; and
- c. Ash or fuel handling systems and ash disposal areas.

*[45CSR§2-5.1] {Boilers #1 and #2 Only}*

4.1.7. The permittee shall comply with all applicable standards and requirements of 45CSR§10 – “To Prevent and Control Air Pollution from the Emission of Sulfur Oxides”. The pertinent sections of 45CSR§10 applicable to this facility include, but are not limited to, the following: *{Boilers #1 and #2 Only}*

4.1.7.1. The permittee shall not cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows; *[45CSR§10-3.2] {Boilers #1 and #2 Only}*

4.1.7.1.1. For Type ‘b’ and Type ‘c’ fuel burning units, the product of 1.6 and the total design heat inputs for such units discharging through those stacks in million BTU’s per hour, provided however, that no more than 5,500 pounds per hour of sulfur dioxide shall be discharged into the open air from all such stacks.; *[45CSR§10-3.2.e] {Boilers #1 and #2 Only}*

- 4.4.3. *Record of Malfunctions of Air Pollution Control Equipment.* For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- The equipment involved.
  - Steps taken to minimize emissions during the event.
  - The duration of the event.
  - The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- The cause of the malfunction.
  - Steps taken to correct the malfunction.
  - Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. To determine compliance with the requirements of Section 4.1, the permittee shall: 1) maintain records of the natural gas bills from the utility company, ~~complete,~~ and ~~maintain CAMC's standard run sheets showing the dates and times of the loads to the Ethylene Oxide Sterilizers,~~ and 2) complete and maintain CAMC's standard generator logs showing the date and time of use.
- 4.4.5. The permittee shall maintain records of all monitoring data required by Section 4.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). An example form is supplied as Appendix A. Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.

#### 4.5. Reporting Requirements

- 4.5.1. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

