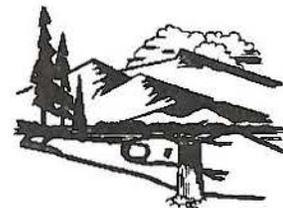




Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matthew H. Mead, Governor

Todd Parfitt, Director

March 4, 2016

Mr. Sean Saltzman
Chief, Facilities Management Service
Department of Veterans Affairs
1898 Fort Road
Sheridan, WY 82801

RECEIVED

MAR 16 2016

Permit No. **P0020542**

Dear Mr. Saltzman:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of the Department of Veterans Affairs' application to modify Air Quality Permit MD-13164 for the Sheridan VA Medical Center to allow the operation of two (2) constructed but not started-up coal-fired boilers with a reduced maximum heat input of 9.44 MMBtu/hr each, and one (1) 29.3 MMBtu/hr natural gas fired steam generator. The Sheridan VA Medical Center is located at 1898 Fort Road, in Sheridan, Sheridan County, Wyoming.

Following this agency's proposed approval of the request as published January 29, 2016, and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a thirty (30) day period in which to submit comments concerning the proposed modification, and an opportunity for a public hearing. No comments have been received. Therefore, on the basis of the information provided to us, approval to modify the Sheridan VA Medical Center as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

1. That authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being constructed or installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rules, standards, permits or orders.
2. That all substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as conditions of this permit.
3. That a permit to operate, in accordance with Chapter 6, Section 2(a)(iii) of the WAQSR, is required after a 120 day start-up period in order to operate this facility.
4. That all notifications, reports and correspondences associated with this permit shall be submitted to the Stationary Source Compliance Program Manager. Submissions may be done electronically through <https://airimpact.wyo.gov> to satisfy requirements of this permit.
5. The owner or operator shall furnish the Administrator written notification of: (i) the anticipated date of initial startup not more than sixty (60) days or less than thirty (30) days prior to such date, and; (ii) the actual date of initial start-up within fifteen (15) days after such date in accordance with Chapter 6, Section 2(i) of the WAQSR. For the generator engine such notification shall be submitted on a complete Engine Installation/Removal form. The form can be downloaded from the Air Quality website <http://deq.wyoming.gov/aqd/> or obtained from the Air Quality Division.

6. That the date of commencement of construction shall be reported to the Administrator within thirty (30) days of commencement. In accordance with Chapter 6, Section 2(h) of the WAQSR, approval to construct or modify shall become invalid if construction is not commenced within twenty-four (24) months after receipt of such approval or if construction is discontinued for a period of twenty-four (24) months or more. The Administrator may extend the period based on satisfactory justification of the requested extension.
7. That performance tests be conducted, in accordance with Chapter 6, Section 2(j) of the WAQSR, within thirty (30) days of achieving a maximum design rate but not later than ninety (90) days following initial start-up, and a written report of the results be submitted. The operator shall provide fifteen (15) days prior notice of the test date. If a maximum design rate is not achieved within ninety (90) days of start-up, the Administrator may require testing be done at the rate achieved and again when a maximum rate is achieved.
8. Initial performance tests, as required by Condition 7 of this permit, shall be conducted on the following sources:
 - i. Boiler #1 and #2 Baghouse:

<u>NO_x and CO Emissions:</u>	Compliance testing shall consist of three (3) 1-hour tests following EPA Reference Methods 1-4, 7E and 10.
<u>SO₂ Emissions:</u>	Compliance tests shall consist of three (3) 1-hour tests following EPA Reference Methods 1-4 and 6C.
<u>PM/PM₁₀/PM_{2.5} Emissions:</u>	Compliance tests shall consist of EPA Reference Test Methods 1-4, 5, 201A, and 202 or a Division approved test method.
<u>Opacity:</u>	Opacity testing shall consist of three (3) 6-minute averages of the opacity as determined by of 40 CFR part 60, appendix A, Method 9.
 - ii. Backup steam generator (Boiler #3)

<u>NO_x and CO Emissions:</u>	Testing shall consist of three (3) 1-hour tests following EPA Reference Methods 1-4, 7E and 10.
---	---
 - iii. Cummins QSX15-G9 NR2 Emergency Diesel Generator Engine

<u>NO_x and CO Emissions :</u>	To verify NO _x and CO emissions, testing shall be conducted in accordance with EPA reference methods or the State of Wyoming's Portable Analyzer Protocol.
--	---

A test protocol shall be submitted for review and approval prior to testing. Engine horsepower, and other operating conditions shall be recorded during each test run and submitted with the test report. Results shall be submitted to this Division within forty-five (45) days of completion.

9. That emissions from the following boilers shall be limited as follows:

Boiler	Boiler #1 and Boiler #2 ¹		Backup steam generator (Boiler #3)		
	lb/ton coal	tpy	lb/MMBtu	lb/hr	tpy
NO _x	8.8	44.0	0.031	0.9	4.0
CO	5.0	25.0	0.082	2.4	10.6
SO ₂	17.5	87.5	-	-	-

¹ Emissions in tpy are based on a total throughput of 10,000 tons per year for Boiler #1 and Boiler #2 combined.

10. That emissions from the Boiler #1 and Boiler #2 baghouse shall be limited as follows:

Source	gr/dscf	PM ₁₀		PM _{2.5}	
		lb/hr	tpy	lb/hr	tpy
Boiler #1 and Boiler #2 Baghouse	0.01	0.3	1.4	0.14	0.61

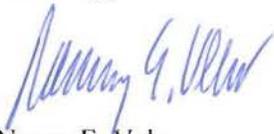
11. That the Boiler #1 and Boiler #2 baghouse shall be operated and maintained during all Boiler #1 and #2 operations. Visible emissions from the Boiler #1 and #2 baghouse shall be limited to no greater than ten percent (10%) opacity. The VA shall, on a daily basis, check for the presence of any visual emissions at the boiler baghouse on any day that the baghouse is operating. The visual observation shall be conducted at each baghouse by personnel who are educated on the general procedures for determining the presence of visible emissions but not necessarily certified to perform Method 9 observations. Observation of any visible emissions from any of these units shall prompt immediate inspection and, if necessary, corrective action.
12. The Sheridan VA Medical Center shall be limited to a sub-bituminous coal throughput of 10,000 tons per year. The Sheridan VA Medical Center shall keep records of the delivered coal.
13. The sulfur content of the received coal shall be limited to a sulfur content of 0.6% and a 12-month rolling average of 0.5%. The VA shall demonstrate the compliance with the sulfur content limits by providing the monthly coal analysis to demonstrate compliance with a sulfur content of 0.6% sulfur (as received) and a permitted 12-month rolling average of 0.5% sulfur content (as received). The monthly coal analyses and records of delivered coal as required by Condition 12 of this permit shall be submitted every six (6) months with a year-to date total for the delivered coal and the rolling average of the sulfur content of the delivered coal.
14. That the Sheridan VA Medical Center shall follow the testing requirements as follows for the three (3) boilers and emergency generator:
 - i. That every one (1) year following completion of the initial performance test or the last periodic test, the Boiler #1 and Boiler #2 baghouse shall be tested for NO_x, CO, SO₂, PM/PM₁₀/PM_{2.5} emissions, and opacity as outlined in Condition 8 of this permit. A test protocol shall be submitted for review and approval prior to testing, and notification of the test date shall be provided to the Division at least fifteen (15) days prior to the test date. Test results shall be submitted to the Division within forty-five (45) days after completion of the periodic test.

- ii. That every five (5) years or 5,000 hours of operation, whichever comes first, following completion of the initial performance test or the last periodic test, the backup steam generator (Boiler #3) shall be tested for NO_x and CO emissions as outlined in Condition 8 of this permit. A test protocol shall be submitted for review and approval prior to testing, and notification of the test date shall be provided to the Division at least fifteen (15) days prior to the test date. Test results shall be submitted to the Division within forty-five (45) days after completion of the periodic test.
15. That the stack height for Boiler #1 and Boiler #2 shall be a minimum of thirty (30) meters.
16. The Cummins QSX15-G9 NR2 diesel generator engine shall be limited to 100 hours of non-emergency annual operation. The VA shall install and maintain a non-resettable hour meter to demonstrate compliance with the hours limit in this condition. Documentation of the hours of operation shall be maintained for at least five (5) years and made available to the Division upon request.
17. The Cummins QSX15-G9 NR2 diesel generator engine shall be EPA Tier 2 certified. The VA shall maintain documentation of the diesel generator engine's tier certification.
18. The natural gas fired boiler shall be fired only with pipeline quality natural gas.
19. The Sheridan VA Medical Center shall comply with all applicable requirements of 40 CFR part 60, subpart IIII.
20. The Sheridan VA Medical Center shall comply with all applicable requirements of 40 CFR part 60, subpart Dc for Boiler #3.
21. The Sheridan VA Medical Center shall comply with all applicable requirements of 40 CFR part 63, subpart ZZZZ.
22. The Sheridan VA Medical Center shall comply with all applicable requirements of 40 CFR part 63, subpart JJJJJ.
23. The Sheridan VA Medical Center shall keep records of the hourly heat input rates for Boiler #1 and Boiler #2. For the first year of operation, the VA shall submit quarterly reports to the Division. If the VA can represent that after one (1) year, the heat input rates are below 10 MMBtu/hr for each of the boilers, then the reports shall be provided to the Division upon request.
24. All records required under this permit shall be kept for a period of at least five (5) years and shall be made available to the Division upon request.
25. Effective upon permit issuance, this permit shall supersede all previous air quality permits and waivers for the Sheridan VA Medical Center.

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Conditions 3, 5, 6 and 7. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within sixty (60) days of permit issuance per Section 16, Chapter I, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,



Nancy E. Vehr
Administrator
Air Quality Division



Todd Parfitt
Director
Dept. of Environmental Quality

Table 1: Coal Fired Boiler NO _x , CO, and SO ₂ Emissions ¹							
Source	MMBtu/hr	NO _x		CO		SO ₂ ²	
		lb/ton coal	tpy	lb/ton coal	tpy	lb/ton coal	tpy
Boiler #1	9.44	8.8	44.0	5.0	25.0	17.5	87.5
Boiler #2	9.44						

¹ Emission factors for NO_x, CO, and SO₂ in terms of pounds per ton of coal feed taken from AP-42, Chapter 1.1, Table 1.1-3 for sub-bituminous coal, and tpy emissions calculated with a combined throughput of 10,000 tons per year.

² Emission factor for sulfur is the weight % sulfur content of the received coal (0.5%) multiplied by 35.

Table 2: Boiler #1 and Boiler #2 Baghouse PM, PM ₁₀ and PM _{2.5} Emissions ¹							
Source	MMBtu/hr	PM		PM ₁₀		PM _{2.5}	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Boiler #1	9.44	0.53	2.37	0.32	1.42	0.14	0.62
Boiler #2	9.44						

¹ Filterable portion of PM, PM₁₀ and PM_{2.5}.

Table 3: Backup Steam Generator Emissions ¹									
Source	NO _x			CO			VOC		
	lb/MMscf	lb/hr	tpy	lb/MMscf	lb/hr	tpy	lb/MMscf	lb/hr	tpy
29.3 MMBtu/hr backup steam generator (Boiler #3)	32	0.9	4.0	84	2.4	10.6	5.5	0.2	0.7

¹ Emissions factors in lb/hr are based on a fuel gas heating value of 1,020 Btu/scf.

Table 4: Backup Steam Generator Emissions ¹						
Source	SO ₂			PM/PM ₁₀ /PM _{2.5}		
	lb/MMscf	lb/hr	tpy	lb/MMscf	lb/hr	tpy
29.3 MMBtu/hr backup steam generator (Boiler #3)	0.6	<0.1	0.1	7.6	0.2	1.0

¹ Emission factors in lb/hr are based on a fuel gas heating value of 1,020 Btu/scf.

Table 5: Boiler Emission Factors							
Source	MMBtu/hr	Emission Rate (lb/MMBtu)					
		NO _x	CO	VOC	SO ₂	PM ₁₀	PM _{2.5}
Boiler #1 and Boiler #2 ¹	18.9	0.535	0.302	-	1.059	0.017	0.0074
backup steam generator (Boiler #3) ²	29.3	0.031	0.082	0.005	0.001	0.008	0.008

¹ Emission factors based on combined sub-bituminous coal throughput of 10,000 tons per year.

² Emission factors in lb/MMBtu are based on a fuel gas heating value of 1,020 Btu/scf.

Table 6: Sheridan VA Medical Center Emissions																
Source	NO _x		CO		VOC		SO ₂		PM		PM ₁₀		PM _{2.5}		HAP	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Boiler #1 and Boiler #2 ¹	10.1	44.0	10.2	25.0	-	-	20.0	87.5	Controlled with Boiler Baghouse						1.55	6.81
Boiler Baghouse	-	-	-	-	-	-	-	-	0.3	1.4	0.3	1.4	0.1	0.6	-	-
Backup steam generator (Boiler #3)	1.0	4.0	2.4	10.6	0.2	0.7	<0.1	0.1	0.2	1.0	0.2	1.0	0.2	1.0	0.05	0.24
Cummins QSX15-G9 NR2 diesel generator engine ²	8.0	0.4	4.3	0.2	-	-	-	-	0.3	<0.1	0.3	<0.1	-	-	-	-
Combustion ash handling	-	-	-	-	-	-	-	-	insignificant						-	-
Total Facility Emissions	19.1	48.4	16.9	35.8	0.2	0.7	20.0	87.6	0.8	2.4	0.8	2.4	0.3	1.6	1.60	7.05

¹ Emissions for a combined sub-bituminous coal throughput of 10,000 tons per year.

² Emissions in tpy are based on 100 hours of non-emergency annual operation.