



# 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

John Corra, Director

December 5, 2011

Mr. Kevin Burke  
Refinery Manager  
Frontier Refining, Inc.  
PO BOX 1588,  
Cheyenne, WY 82003-1588

RE: Notice of Violation

Dear Mr. Burke:

Enclosed you will find a Notice of Violation (NOV) issued to Frontier Refining, Inc. for the Frontier Refinery by the Department of Environmental Quality, Air Quality Division, for failing to: 1) follow inspection and recordkeeping requirements for Amine Treaters (A-2, A-9, A-12, A-14, A-16, A-17, A-18, CB #1-#7), Distillate Hydrotreater Unit (DHDS) and the Gasoline Desulfurization Unit (Scanfiner Unit) as required by 40 CFR Part 60, Subpart QQQ, 2) replace the carbon canister systems on both the DAF Unit and the Oily Sludge Tanks and Vacuum Truck Transfer Operation within one working day of reaching saturation in violation of conditions 7 and 8 of permit MD-8082, 3) follow the monitoring and maintenance plan for the iron sponge bed and carbon canister system in violation of condition 9 of permit MD-8082 and 4) operate the 525 hp Caterpillar 3406DITA backup air compressor engine within the operating hours limit in violation of condition 2 of waiver WV-3449.

As the Department and this Division consider the failure to comply with air quality regulations and permits to be a serious matter, I am recommending the Department refer this violation to the State Attorney General's office requesting a suit be filed in District Court to recover appropriate penalties.

If you would like to discuss settlement of this Notice of Violation prior to action on the referral by the Attorney General's office, please contact Ms. Karen Godman, Air Quality Compliance Program Principal, at 307-777-8601 no later than ten (10) days after receipt of this letter.

Should you have any questions or comments regarding this matter, please feel free to contact me or Ms. Karen Godman.

Sincerely,

Steven A. Dietrich  
Administrator  
Air Quality Division

cc: Robert Gill, Glenn Spangler, Nancy Vehr, Keith Guille

Herschler Building · 122 West 25th Street · Cheyenne, WY 82002 · <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7758 FAX 777-7882	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-6937	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
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**BEFORE THE  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE OF WYOMING**

**IN THE MATTER OF THE NOTICE OF VIOLATION )  
ISSUED TO FRONTIER REFINING, INC ) DOCKET NO. 4931-11  
MR. KEVIN BURKE, REFINERY MANAGER, )  
PO BOX 1588, CHEYENNE, WY 82003-1588 )**

**NOTICE OF VIOLATION**

**NOTICE IS HEREBY GIVEN THAT:**

1. The Department of Environmental Quality, Division of Air Quality, has found Frontier Refining, Inc. to be in violation of W.S. 35-11-201 of the Wyoming Environmental Quality Act; Chapter 5, Section 2 of the Wyoming Air Quality Standards and Regulations (WAQSR); W.S. 35-11-801 of the Wyoming Environmental Quality Act; Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations; permit MD-8082; and waiver WV-3449 in the operation the Frontier Refinery located Laramie County, Wyoming.

2. W.S. 35-11-201 of the Environmental Quality Act states, "No person shall cause, threaten or allow the discharge or emission of any air contaminant in any form so as to cause pollution which violates rules, regulations and standards adopted by the council."

3. Chapter 5, Section 2 of the Wyoming Air Quality Standards and Regulations includes the general provisions for and adopts certain New Source Performance Standards (NSPS) for New Stationary Sources by reference, including 40 CFR Part 60, Subpart QQQ, Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems (§60.690 through §60.699). The Crude Unit De-Salter, Distillate Hydrotreater Unit (DHDS), #3 Amine Unit, Gasoline Desulfurization Unit (Scanfiner Unit) are affected facilities under NSPS Subpart QQQ and are subject to the general provision requirements of Chapter 5, Section 2 and the requirements of NSPS Subpart QQQ.

4. 40 CFR Part 60, Subpart QQQ, paragraph §60.697 (b)(1)-(b)(3) requires that affected facilities and more specifically individual drain systems, junction boxes and sewer lines comply with visual or physical inspection requirements of §60.692-2 and recordkeeping requirements.

5. During the FY 2010-1 inspection and record review of the Frontier Refinery, Air Quality Engineer, Mr. Glenn Spangler noted concerns including missing inspection records, undocumented inspection dates and personnel, inspection results inconsistent with expected inspection results, source inspection results inconsistent between inspections and missed source inspections. These violations were noted at the Amine Treaters (A-2, A-9, A-12, A-14, A-16, A-17, A-18 CB #1-#7), Distillate Hydrotreater Unit (DHDS) and the Gasoline Desulfurization Unit (Scanfiner Unit). These are violations of inspection and recordkeeping requirements as required by 40 CFR Part 60, Subpart QQQ.

6. W.S. 35-11-801 states, "In granting permits, the director may impose such conditions as may be necessary to accomplish the purpose of this act which are not inconsistent with the existing rules, regulations and standards."

7. Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations prescribes the applicability and procedures for issuing permits to sources under Wyoming's construction and modification permitting program.

8. Permit MD-8082 was issued to Frontier on November 20, 2008. Conditions 7 and 8 require Frontier to install, maintain and monitor the Dissolved Air Flotation (DAF) Units carbon canister, and the Oily Sludge Tanks and Vacuum Truck Transfer Operation iron sponge and carbon canister for breakthrough.

Condition 7 states:

"Frontier Refining Inc. shall install and maintain a dedicated activated carbon canister system capable of treating the maximum air flow rate through the Dissolved Air Flotation (DAF) Units. The DAF Units shall be sealed to prevent the escape of emissions and the air leaving the unit shall be routed through a carbon canister system. The carbon canister system controlling the DAF shall be monitored to determine when it becomes saturated and replaced within one working day of reaching saturation."

Condition 8 states:

"Frontier Refining Inc. shall install and maintain a dedicated iron sponge bed and activated carbon canister system capable of treating vapors from the Oily Sludge Tanks and Vacuum Truck Transfer Operation. The iron sponge bed shall be sealed to prevent the escape of emissions and the air leaving the unit shall be routed through a carbon canister system. The carbon canister and iron sponge controlling this system shall be monitored to determine when it becomes saturated and replaced before breakthrough occurs."

9. During the FY 2010-1 inspection and record review of the Frontier Refinery, Air Quality Engineer, Mr. Glenn Spangler reviewed maintenance and replacement records of the DAF Unit and the Oily Sludge Tanks and Vacuum Truck Transfer Operation from the refinery EMPAC tracking system from November 2009 through July 2010. During this review, it was noted that the carbon canister change-outs have not been completed as required. Frontier's records included the following required change-out dates and closeout dates for carbon canister replacements: 1/6/10 and 2/11/10, 3/11/10 and 3/17/10, 3/31/10 and 5/17/10, 5/14/10 and 5/19/10, 6/15/10 and 6/15/10, and 7/8/10 and 7/9/10. Therefore, the replacement timeframe was not met for four of the six documented change-outs. Additionally, documented monitoring results for five weekly monitoring events completed from January 8, 2010 to February 5, 2010 show high hydrocarbon concentrations and note that the east bed is waiting for replacement. The failure to replace the carbon canister systems on both the DAF Unit and the Oily Sludge Tanks and Vacuum Truck Transfer Operation within one working day of reaching saturation are violations of conditions 7 and 8 of permit MD-8082.

10. Permits MD-8082 was issued to Frontier on November 20, 2008. Permit MD-8082 requires development of a monitoring and maintenance plan through condition 9 as follows:

Condition 9 states:

"Frontier Refining Inc. shall submit a monitoring and maintenance plan for the iron sponge bed and carbon canister system within 90 days of startup."

11. During the FY 2010-1 inspection and record review of the Frontier Refinery, Air Quality Engineer, Mr. Glenn Spangler noted that an initial monitoring and maintenance plan for the DAF Unit carbon canister change-outs was submitted on October 7, 2009. The plan calls for weekly monitoring for breakthrough. Hardcopy and database information provided by Frontier during the inspection did not include records for carbon canister monitoring for breakthrough for seven weeks during the period from January 8, 2010 to August 8, 2010. These weeks include the weeks of February 14, March 21, April 4, May 23, May 30, June 27 and July 11, 2010. The failure to follow the monitoring and maintenance plan is a violation of condition 9 of permit MD-8082.

12. WV-3449 was issued to Frontier on June 15, 2005. WV-3449 limits hours of operation for the 525 hp Caterpillar 3406DITA backup air compressor engine through condition 2 as follows:

Condition 2 states:

“Hours of operation for the engine shall be limited to 2,160 hours per year. Frontier Refining, Inc. shall document and maintain a record of hours of operation for a period of at least five (5) years and shall be made available to the Division upon request.”

13. During the FY 2010-1 inspection and record review of the Frontier Refinery, Air Quality Engineer, Mr. Glenn Spangler noted that the compressor engine operated 3,623 hours during 2009. Exceeding the operating hours for the 525 hp Caterpillar 3406DITA backup air compressor engine is a violation of condition 2 of waiver WV-3449.

14. Said violations consist of the failure to: 1) follow inspection and recordkeeping requirements for Amine Treater (A-2, A-9, A-12, A-14, A-16, A-17, A-18 CB #1-#7), Distillate Hydrotreater Unit (DHDS) and the Gasoline Desulfurization Unit (Scanfiner Unit) as required by 40 CFR Part 60, Subpart QQQ, 2) replace the carbon canister systems on both the DAF Unit and the Oily Sludge Tanks and Vacuum Truck Transfer Operation within one working day of reaching saturation in violation of conditions 7 and 8 of permit MD-8082, 3) follow the monitoring and maintenance plan for the iron sponge bed and carbon canister system in violation of condition 9 of permit MD-8082 and 4) operate the 525 hp Caterpillar 3406DITA backup air compressor engine within the operating hours limit in violation of condition 2 of waiver WV-3449.

15. Under W.S. 35-11-901(a), any person who violates any provision of Article 2 of [the Environmental Quality Act] ... or any rule, regulation, standard or permit adopted pursuant to those provisions, or who violates any determination or order of the council pursuant to Article 2 of [the Environmental Quality Act] ... is subject to a penalty not to exceed ten thousand dollars (\$10,000.00) for each violation for each day during which the violation continues, a temporary or permanent injunction, or both a penalty and an injunction.

16. This notice is being sent to you pursuant to W.S. 35-11-701(c), which requires that, in any case of the failure to correct or remedy an alleged violation, the Director of the Department of Environmental Quality shall cause a written notice to be issued and served upon the person alleged to be responsible.

Frontier Refining  
Notice of Violation  
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DATED this 5<sup>th</sup> day of DECEMBER, 2011.



Steven A. Dietrich  
Administrator  
Air Quality Division



John V. Corra  
Director  
Department of Environmental Quality

Please direct all inquiries to Steven A. Dietrich, Administrator, Division of Air Quality, Department of Environmental Quality, Herschler Building, 2nd Floor, 122 W. 25th Street, Cheyenne, Wyoming 82002. (Telephone: 307/777-7393.)