



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

MEMORANDUM

TO: Nancy Vehr, Assistant Attorney General, State of Wyoming

FROM: Todd Parfitt, Director, DEQ
Steven A. Dietrich, Administrator, Air Quality Division *SAD*

SUBJECT: Frontier Refining, LLC - Notice of Violation
Docket No. 5095-13

Date: January 7, 2013

Attached is a copy of a Notice of Violation (NOV) issued to Frontier Refining, LLC for failing to: 1) continuously monitor NOx for the #1 and #2 Indeck Boilers on a lb/hr basis as required, 2) test the #1 and #2 Indeck Boilers for CO emissions for the years 2010 and 2011, 3) conduct NOx stack testing on the Unifiner (DHDS Charge Heater) during the startup conducted during August 2010, 4) determine the Unifiner (DHDS Charge Heater) firing rates for normal operations and startup and report the firing rate data on emission inventories, 5) install, calibrate, operate and maintain a FCCU PM monitoring system, 6) submit quarterly CEMs excess emission reports for the PM CEMs installed on the FCCU regenerator stack for the fourth quarter of 2011 through the second quarter of 2012.

Referral to the State Attorney General's office is consistent with the Department's policy of obtaining penalties in cases of failure to comply with air quality permit limitations.

It is hereby requested that you take appropriate enforcement action to resolve this violation, collect a penalty and, if necessary, file a complaint in District Court.

If you have any questions, feel free to contact the Air Quality Division.





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Matthew H. Mead, Governor

Todd Parfitt, Director

January 7, 2013

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, LLC for the Frontier Refinery by the Department of Environmental Quality, Air Quality Division, for failing to: 1) continuously monitor NOx for the #1 and #2 Indeck Boilers on a lb/hr basis as required, 2) test the #1 and #2 Indeck Boilers for CO emissions for the years 2010 and 2011, 3) conduct NOx stack testing on the Unifiner (DHDS Charge Heater) during the startup conducted during August 2010, 4) determine the Unifiner (DHDS Charge Heater) firing rates for normal operations and startup and report the firing rate data on emission inventories, 5) install, calibrate, operate and maintain a FCCU PM monitoring system, 6) submit quarterly CEMs excess emission reports for the PM CEMs installed on the FCCU regenerator stack for the fourth quarter of 2011 through the second quarter of 2012.

As the Department and this Division consider the failure to comply with permit conditions and air quality regulations 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



**BEFORE THE
DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE OF WYOMING**

IN THE MATTER OF THE NOTICE OF VIOLATION)
ISSUED TO FRONTIER REFINING, LLC.) **DOCKET NO. 5095-13**
MR. KEVIN BURKE, REFINERY MANAGER,)
P.O. BOX 1588, CHEYENNE, WY 82003)

NOTICE OF VIOLATION

NOTICE IS HEREBY GIVEN THAT:

1. The Department of Environmental Quality, Division of Air Quality, has found Frontier Refining, LLC (Frontier) to be in violation of permits WV-10716, MD-1115A and MD-9640 issued in accordance with W.S. 35-11-801 of the Wyoming Environmental Quality Act and Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations in the operation of the Frontier Refinery located in Laramie County, Wyoming.

2. 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."

3. 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.

4. Permit WV-10716 was issued to Frontier on September 1, 2010. Condition 3.c.ii. states:

"NO_x Emissions: Actual emissions from the #1 Indeck Boiler, #2 Indeck Boiler, and #3 Boiler shall be determined using the average annual CEM lb/hr emission rate meeting the requirements of Chapter 5, Section 2(j) and the hours of operation for each respective unit. Actual emissions from the CO Boiler shall be determined using the tested emission rate and the annual hours of operation. The CO Boiler shall be tested for NO_x emissions within 90 days of permit issuance, and at least once each calendar year. Actual NO_x emissions from the Hydrobon Debutanizer Reboiler shall be determined using the permitted emission rate (lb/hr) or stack test data, if available and appropriate, along with the hours of operation."

5. On July 30, 2012 & August 2, 2012, Air Quality Engineer, Mr. Glenn Spangler conducted an inspection and record review of the facility. At this time, Mr. Spangler noted that the #1 and #2 Indeck Boilers were not being continuously monitored for NO_x on a lb/hr basis as required. Based on this information, Frontier is in violation of condition 3.c.ii. of waiver WV-10716 and Chapter 5, Section 2(j) of the Wyoming Air Quality Standards and Regulations.

6. Permit WV-10716 was issued to Frontier on September 1, 2010. Condition 3.c.iii. states:

"CO Emissions: Actual emissions from the #3 Boiler shall be determined using the average annual CEM lb/hr emission rate meeting the requirements of Chapter 5, Section 2(j) and the hours of operation for each respective unit. Actual emissions from the #1 Indeck Boiler, #2 Indeck Boiler, and CO Boiler shall be determined using the tested emission rate and the annual hours of operation. The #1 Indeck Boiler, #2 Indeck Boiler, and CO Boiler shall be tested for CO emissions within 90 days of permit issuance, and at least once each calendar year. Actual CO emissions from the Hydrobon Debutanizer Reboiler shall be determined using the permitted emission rate (lb/hr) or stack test data, if available and appropriate, along with the hours of operation."

7. On July 30, 2012 & August 2, 2012, Air Quality Engineer, Mr. Glenn Spangler conducted an inspection and record review of the facility. At this time, Mr. Spangler noted that the #1 and #2 Indeck Boilers had not been tested for CO emissions for the years 2010 and 2011. Based on this information, Frontier is in violation of condition 3.c.iii. of waiver WV-10716.

8. Permit MD-1115A was issued to Frontier on February 21, 2006. Condition 20 states:

“Annually, Frontier Refining shall verify that actual lb/hr NOx emissions for the Unifiner Charge Heater (Source No. 11) do not exceed allowable emissions during normal operation and startup conditions, if operated under startup conditions during the year, using EPA Reference Methods or a portable analyzer following the State of Wyoming’s Portable Analyzer Protocol. Notification of the test date(s) shall be provided to the Division fifteen (15) days prior to testing. Results shall be submitted to this Division within 30 days of completion.”

9. On July 30, 2012 & August 2, 2012, Air Quality Engineer, Mr. Glenn Spangler conducted an inspection and record review of the facility. At this time, Mr. Spangler noted that a unit startup occurred in August 2010. The fuel use records indicate that it occurred August 24, 2010 through August 29, 2010. NOx stack testing was not conducted for the Unifiner (DHDS Charge Heater) during this startup operation. Based on this information, Frontier is in violation of condition 20 of permit MD-1115A.

10. Permit MD-1115A was issued to Frontier on February 21, 2006. Conditions 17 & 19 limit the firing rate on the Unifiner as follows:

Condition 17 states:

“The firing rate for the Unifiner Charge Heater (Source No. 11) shall be limited to 20 MMBtu/hr (24-hour block average) for normal operation and 42 MMBtu/hr for startup conditions.”

Condition 19 states:

“Compliance with the firing rate limits for the Unifiner Charge Heater (Source No. 11) shall be determined as follows:

- A. For normal operation, 24-hour block average firing rates shall be calculated based on hourly fuel consumption and hourly heat content average of the fuel gas. Only hours in which the heater is operating shall be included in the average. Frontier Refining shall report the 24-hour block average firing rates with the annual emissions inventory. The Division may revise the reporting frequency in the operating permit.
- B. For startup conditions, hourly firing rates shall be calculated based on hourly fuel consumption and hourly heat content average of the fuel gas. Frontier Refining shall report the dates and times of any operation under startup conditions along with the hourly firing rates with the annual emissions inventory. The Division may revise the reporting frequency in the operating permit.

11. On July 30, 2012 & August 2, 2012, Air Quality Engineer, Mr. Glenn Spangler conducted an inspection and record review of the facility. At this time, Mr. Spangler noted that Frontier: 1) could not provide hourly firing rate data and the 24 hour block average firing rate for the date of interest. Frontier was not actively monitoring fuel use and/or fuel heat content and keeping records for compliance and did not have procedures in place to do this, 2) fuel heat content monitoring was not being done on an hourly basis, 3) firing rate records were not maintained for the August 2010 startup, and, 4) the 24 hour average firing rates for normal operations and hourly average firing rates for the startup are not being provided in the emission inventories. Based on this information, Frontier is in violation of conditions 17 & 19 of permit MD-1115A.

12. Permit MD-9640 was issued to Frontier on February 18, 2011. Condition 11 states:

Condition 11.iv. states:

“Frontier Refining, Inc. shall install, calibrate, operate, and maintain a PM monitoring system, and record the output, for measuring emissions discharged to the atmosphere in lb/1,000 lb of coke burned, and lb/hr prior to the feed rate increase to the FCCU...”

Condition 11.v. states:

“Each continuous monitor system listed in this condition shall comply with the following:

- a. Monitoring requirements of Chapter 5, Section 2(j) of the WAQSR including the following:
 1. 40 CFR part 60, Appendix B, Performance Specification 2 for NO_x and SO₂, Performance Specification 4 for CO, Performance Specification 3 for O₂ and CO₂ and Performance Specification 11 for PM. The monitoring systems must demonstrate linearity in accordance with Division requirements and be certified in both concentration (ppm_v for gaseous emissions and mg/dscm for PM) and units of the standard (lb/hr).”

13. 40 CFR Part 60, Appendix B, Performance Specification 11 for Particulate Matter (PM), Section 8.5 requires that a 7-day calibration drift be completed prior to certification testing. In addition, 40 CFR Part 60, Appendix B, Performance Specification 11 for Particulate Matter (PM), Section 13.1 requires that calibration drift results meet the 2.0% calibration drift limit

14. On July 30, 2012 & August 2, 2012, Air Quality Engineer, Mr. Glenn Spangler conducted an inspection and record review of the facility. At this time, Mr. Spangler noted that the 7-day calibration drift testing results for October 19-26, 2011 were not completed prior to the certification testing which was completed on August 25, 26 & 30, 2011. The calibration drift test results provided also failed to meet the 2.0% calibration drift limit required by Performance Specification 11, Section 13.1. Therefore, Frontier is in violation of conditions 11. iv., 11.v. and 40 CFR Part 60, Appendix B.

15. Permit MD-9640 was issued to Frontier on February 18, 2011. Condition 12.ii. states:

“Frontier Refining, Inc. shall comply with all reporting and record keeping requirements as specified in Chapter 5, Section 2(g)...”

16. Chapter 5, Section 2(g) requires that Continuous Emission Monitoring (CEMs) reports be submitted within 30 days of the end of each calendar quarter.

17. On July 30, 2012 & August 2, 2012, Air Quality Engineer, Mr. Glenn Spangler conducted an inspection and record review of the facility. At this time, Mr. Spangler noted that Frontier failed to provide the required quarterly CEMs excess emission reports for the PM CEMs installed on the FCCU regenerator stack for the fourth quarter of 2011 through the second quarter of 2012. Based on this information, Frontier is in violation of condition 12.ii. of permit MD-9640 and Chapter 5, Section 2(g) of the Wyoming Air Quality Standards and Regulations.

18. Said violations consists of failing to: 1) continuously monitor NO_x for the #1 and #2 Indeck Boilers on a lb/hr basis as required, 2) test the #1 and #2 Indeck Boilers for CO emissions for the years 2010 and 2011, 3) conduct NO_x stack testing on the Unifiner (DHDS Charge Heater) during the startup conducted during August 2010, 4) determine the Unifiner (DHDS Charge Heater) firing rates for normal operations and startup and report the firing rate data on emission inventories, 5) install, calibrate, operate and maintain a FCCU PM monitoring system, 6) submit quarterly CEMs excess emission reports for the PM CEMs installed on the FCCU regenerator stack for the fourth quarter of 2011 through the second quarter of 2012.

19. 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.

20. 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, LLC
Notice of Violation
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DATED this 7TH day of JANUARY, 2013.



Steven A. Dietrich
Administrator
Air Quality Division



Todd Parfitt
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 East, 122 W. 25th Street, Cheyenne, Wyoming 82002. (Telephone: 307/777-7393.)