

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 8

IN THE MATTER OF:)
) **Notice of Violation**
Northern Border Pipeline Company)
Omaha, Nebraska)
and) **DOCKET NO. : CAA-08-2009-0006**
TransCanada Northern Border, Inc.)
Omaha, Nebraska)
)
Proceedings Pursuant to)
Section 113 of the)
Clean Air Act, 42 U.S.C. § 7413)

STATUTORY AUTHORITY

This Notice of Violation (NOV) is issued to Northern Border Pipeline Company and TransCanada Northern Border, Inc. (Respondents) for violations of the Clean Air Act (Act) at their Compressor Station No. 2, located in Roosevelt County, Montana, approximately 23 miles north-northeast of Wolf Point and 50 miles east of Glasgow, on the Fort Peck Indian Reservation. This NOV is issued pursuant to Section 113 of the Act, as amended, 42 U.S.C. § 7413. The authority to issue this NOV has been delegated to the Regional Administrator for EPA Region 8 and further redelegated to the Assistant Regional Administrator for the Office of Enforcement, Compliance and Environmental Justice.

RESPONDENTS

1. Northern Border Pipeline Company is a corporation, doing business in the Fort Peck Indian Reservation, that owns Compressor Station No. 2, located approximately 23 miles north-northeast of Wolf Point and 50 miles east of Glasgow, on the Fort Peck Indian Reservation. TransCanada Northern Border, Inc., a wholly-owned subsidiary of TransCanada Pipelines Limited, is the operator of Compressor Station No. 2. The facility was installed in 1992 to provide additional capacity in the Northern Border pipeline, which runs from Port of Morgan, Montana, to Ventura, Iowa. The pipeline transports natural gas originating in Canada to the Midwest market.
2. Respondents each constitute a "person" as defined in Section 302(e) of the Clean Air Act, 42 U.S.C. § 7602(e), and the federal regulations promulgated pursuant to the Clean Air Act.

STATUTORY AND REGULATORY BACKGROUND

3. The Clean Air Act establishes a regulatory scheme designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. Section 101(b)(1) of the Clean Air Act, 42 U.S.C. § 7401(b)(1).

Requirements for Prevention of Significant Deterioration Permits

4. On June 19, 1978, U.S. EPA promulgated the Prevention of Significant Deterioration (PSD) of air quality regulations pursuant to Title I, Part C of the Act. 43 Fed. Reg. 26403 (June 19, 1978). The PSD regulations were revised on August 7, 1980 (45 Fed. Reg. 52676) in response to a decision of the U.S. Court of Appeals for the D.C. Circuit. These regulations are codified at 40 C.F.R. § 52.21. Subsequent to 1980, the PSD regulations have been periodically revised.
5. Section 107(d) of the Act, 42 U.S.C. § 7407(d), requires each state to designate those areas within its boundaries in which the air quality has attained the National Ambient Air Quality Standards (NAAQS), those areas in which air quality has failed to attain the NAAQS, and those areas which cannot be classified due to insufficient data. The Act also requires EPA to promulgate a list of these areas and their attainment status. These designations have been approved by EPA and are codified at 40 C.F.R. Part 81. An area that meets the NAAQS for a particular pollutant is designated as an "attainment" area; one that does not is designated as a "non-attainment" area; and where there are insufficient data, an area is designated as "unclassifiable."
6. The Prevention of Significant Deterioration provisions of Title I of the Act require preconstruction review and permitting of stationary sources. To obtain the required permit, the source must agree to install the Best Available Control Technology (BACT) for an attainment pollutant. Sources may not operate unless they meet the emission limits that would have been imposed by the permitting process.
7. Pursuant to Title I Part C of the Act (Section 165(a), 42 U.S.C. § 7475(a)), the PSD provisions require that no construction or operation of a major stationary source occur in an area designated as attainment without first obtaining a permit under 40 C.F.R. § 52.21. The operation of a major stationary source unless the source has applied BACT pursuant to 40 C.F.R. § 52.21(j), is prohibited.
8. 40 C.F.R. § 52.21(b)(1)(i)(a) defines a "major stationary source" as any stationary source which emits, or has the potential to emit, 250 tons per year or more of any air pollutant subject to regulation under the Act.
9. 40 C.F.R. § 52.21(b)(4) defines "potential to emit" as the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any

physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

10. 40 C.F.R. § 52.21(b)(21) defines “actual emissions” and states that for any emissions unit that has not begun normal operations on the particular date, actual emissions shall equal the potential to emit (PTE) of the unit on that date. 40 C.F.R. § 52.21(b)(21)(iv).
11. An applicant for a permit to construct a stationary source is required to submit all information necessary to allow the permitting authority to perform any analysis or make any determination required in order to issue the appropriate permit. 40 C.F.R. § 52.21(n).
12. Any owner or operator of a source subject to 40 C.F.R. § 52.21 who commences construction after the effective date of the PSD regulations without applying for and receiving a PSD permit, shall be subject to appropriate enforcement action. 40 C.F.R. § 52.21(r)(1).
13. 40 C.F.R. § 52.21(i) prohibits the construction of any new major stationary source without a permit which states that the source would meet the requirements of 40 C.F.R. § 52.21(j) through (r).
14. The Administrator’s authority for reviewing a source located on an Indian Reservation shall not be redelegated other than to a Regional Office of the Environmental Protection Agency pursuant to 40 C.F.R. § 52.21(u)(3).

Requirements for Title V Operating Permits

15. Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), and 40 C.F.R. § 71.7(b) provide that, no source subject to Title V may operate except in compliance with a Title V permit.
16. 40 C.F.R. § 71.1(b) provides that all sources subject to the Part 71 regulations shall have a permit to operate that assures compliance by the source with all applicable requirements.
17. 40 C.F.R. § 71.7(b) provides that no source subject to Part 71 requirements may operate without a permit issued under a Part 71 program.
18. Major stationary sources of air pollution and other sources covered by Title V are required to apply for an operating permit that includes emission limitations and such other conditions as are necessary to assure compliance with applicable requirements of the Act. CAA Sections 502(a) and 504(a), 42 U.S.C. § 7661a(a) and § 7661c(a).

FACTUAL BACKGROUND

19. On January 10, 1991, Northern Border notified EPA Region 8 of their plans to construct a 20,000-horsepower gas turbine-driven compressor station in Roosevelt County, Montana, located within the boundaries of the Fort Peck Indian Reservation. This initial notification provided calculations to show that the total NO_x emissions were 248.2 tons per year, which is below the PSD major source permit threshold of 250 tons per year.
20. On February 13, 1991, EPA Region 8 made a determination that Northern Border had incorrectly calculated the potential to emit of the planned new compressor station, and the potential to emit for NO_x emissions exceeded 250 tons per year, which would require a PSD permit. EPA stated that “EPA has determined that average ambient temperatures can not be used in limiting the potential to emit, since ambient temperatures can change from previously measured averages.” Furthermore, the letter stated that “The potential to emit emissions are based on the maximum emitting capacity, regardless of temperature.”
21. On April 4, 1991, Northern Border notified EPA of a design change to reduce the diameter of the impeller wheel of the compressor from 34.73 to 31.38 inches. Northern Border stated in the letter, “the effect of changing the design of the compressor wheel, an integral compressor component, is that the compressor then cannot exceed 19,300 horsepower **under any circumstance.**” Additionally, the letter stated, “the design change results in reducing the potential to emit to less than 250 tons per year.”
22. On April 12, 1991, EPA Region 8 responded to the April 4, 1991 letter, and concurred that the design change from 34.73 inches to 31.38 inches would limit the compressor engine to 19,300 horsepower, and the revised potential to emit would be 243.5 tons per year. EPA agreed that **a PSD permit would not be required based on the accuracy of the emission data** submitted by Respondents.
23. On March 30, 1992, Northern Border commenced construction of Compressor Station No. 2. Startup of the Compressor Station No. 2 occurred on October 2, 1992, and the initial performance test under the New Source Performance Standards (NSPS) was conducted on February 22 and 23, 1993.
24. The Fort Peck Indian Reservation where Northern Border’s Compressor Station No. 2 is located in Roosevelt County was designated as unclassifiable and/or attainment for all regulated pollutants during the time Northern Border’s Compressor Station No. 2 began construction on March 30, 1992.
25. The Fort Peck Indian Reservation is designated as a Class I area.

26. On April 18, 1997, Northern Border notified EPA Region 8 that they were planning to install a new compressor impeller wheel on Compressor Station No. 2. The NO_x potential to emit data submitted by Northern Border for the new impeller wheel was determined to be 244.4 tons per year. The size of the new impeller wheel was 28.5 inches.
27. On May 21, 1997, EPA Region 8 concurred that **a PSD permit would not be required based on the accuracy of the emission data** presented by Northern Border Pipeline Company in the April 18, 1997 letter.
28. On February 29, 2000, Northern Border submitted to EPA Region 8 their application for a 40 C.F.R. Part 71 Title V Operating Permit for the Northern Border Pipeline Company Compressor Station No. 2.
29. On April 6, 2000, EPA Region 8 issued a completeness determination for the above listed Title V Operating Permit application. The potential to emit for NO_x for the facility was listed as 247.1 tons per year, based on data submitted by Northern Border.
30. The effective date for the Title V Operating Permit for the Northern Border Pipeline Company Compressor Station No. 2 was September 9, 2000, and the expiration date for the permit was September 9, 2005.
31. On July 22, 2003, EPA conducted a full compliance evaluation at the Northern Border's Compressor Station No. 2. The inspection report was completed on May 3, 2004. The report identified several PSD applicability questions for the facility. The final inspection report and PSD applicability questions were sent to Northern Border on May 18, 2004.
32. On August 2, 2004, Northern Border responded to EPA's questions listed in the May 18, 2004 letter. Northern Border stated that "The impeller installed in 1997 reduced horsepower output of the turbine under normal sustainable pipeline operating conditions to 18,561. Certain operating conditions, such as downstream system outages, may result in instances where the horsepower exceeds 18,561."
33. On September 28, 2004, EPA asked Northern Border to provide the correlation equation or a graphical representation of the emission curves detailing the relationship between temperature, horsepower and NO_x emissions in pounds per hour for the turbine located at Northern Border Compressor Station No. 2.
34. On November 29, 2004, Northern Border responded to the questions listed in EPA's September 28, 2004 letter. Northern Border provided the information received from Rolls-Royce detailing the relationship between temperature, horsepower and NO_x emissions in pounds per hour for the turbine located at Compressor Station No. 2. This emission data showed that NO_x emissions for the turbine were 232 tons/yr. It was later

discovered that Rolls-Royce had provided to Northern Border the NOx emission data for a different turbine model than the model located at Compressor Station No.2.

35. The November 29, 2004 Northern Border letter also stated that recorded operating data showed that the highest horsepower achieved by the turbine at Compressor Station No. 2 was 19,050 hp. This horsepower is higher than the horsepower of 18,561, which was presented in the April 18, 1997 Northern Border potential to emit calculations, as the greatest horsepower achievable by the turbine with an impeller wheel of 28.5 inches.
36. On March 2, 2005, Northern Border submitted a letter to EPA stating that they had just learned that Rolls-Royce had provided the NOx emission data for a different turbine model than the model located at Compressor Station No. 2. Rolls Royce provided emission data for a Triple-Dish Anti-Smoke Combustor (model 4448), which they thought was installed at Compressor Station No. 2. Northern Border has always had a Low CO Combustor (model 4476) installed at Compressor Station No. 2. Northern Border submitted the NOx emission data for a Low CO Combustor (model 4476) with a maximum horsepower of 19,050 in their March 2, 2005 letter. The NOx emission data showed that the maximum NOx emission rate for the turbine is 63 lb/hr, which equates to a NOx potential to emit of 276 tons/yr. The NOx potential to emit from the manufacturer emission factors taking into consideration the monthly average temperatures is 260 tons/yr.
37. On March 8, 2005, Northern Border submitted their Title V permit renewal application and asserted that the Compressor Station No. 2 turbine's NOx potential to emit is 245 tons/yr. In the Title V renewal application packet, Northern Border submitted the same manufacturer NOx emission factors as were submitted in the March 2, 2005 letter, which showed that the facility's potential to emit was 276 tons/yr. However, Northern Border used a different procedure to calculate the potential to emit for NOx. Instead of using the maximum design heat input to the turbine, Northern Border used the actual fuel usage of 1,404,011 MMBTU/year and the highest manufacturer NOx emission factor of 0.349 lbs NOx per MMBTU. Therefore, Northern Border incorrectly performed the potential to emit calculation for the turbine located at Compressor Station No. 2. In order to calculate the potential to emit for the turbine, Northern Border needed to use the maximum design heat input for the turbine of 181 MMBTU/hr or 1,585,560 MMBTU/year, instead of the actual heat input for the turbine from fuel use.
38. Northern Border attempted to limit the potential to emit of its turbine by installing an impeller wheel with a smaller diameter on the compressor, which would limit its horsepower. However, the 28.5 inch impeller wheel did not limit the turbine horsepower to below 18,561, or below the NOx potential to emit of 250 tons per year; therefore, EPA believes that the NOx potential to emit when the turbine impeller wheel was 31.38 inches was also over 250 tons per year.

39. Northern Border's Compressor Station No. 2 emits or has the potential to emit at least 250 tons per year of NO_x and is a major stationary source under the Act for both PSD and Title V.

VIOLATIONS

40. Pursuant to 40 C.F.R. § 52.21(r), any owner or operator who constructs or operates a source without obtaining a permit will be subject to an appropriate enforcement action. Respondents failed to obtain a PSD permit or undergo PSD review, including application of BACT, prior to beginning actual construction, in violation of 40 C.F.R. § 52.21(r).
41. The violations noted in paragraph 40 exist from at least the date of start of construction and continue until the appropriate permits are obtained and the necessary pollution control equipment is installed and operated.
42. It is a violation to operate each affected source without BACT controls for NO_x every day of such operation.
43. Pursuant to 40 C.F.R. § 71.1(b) all sources subject to the Part 71 regulations shall have a permit to operate that assures compliance by the source with all applicable requirements. Respondents failed to obtain a Title V permit that assured compliance with the PSD regulations.

ENFORCEMENT

Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), provides that at any time after the expiration of 30 days following the date of the issuance of this NOV, the Regional Administrator may, without regard to the period of violation, issue an order requiring compliance with the requirements of the state implementation plan or permit, and/or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties of not more than: (1) \$25,000 per day for each violation prior to January 31, 1997; (2) \$27,500 per day for each violation after January 31, 1997, but before March 15, 2004, (3) \$32,500 per day for each violation after March 15, 2004, but before January 12, 2009, and (5) \$37,500 per day for each violation after January 12, 2009. Section 113(c) of the Act, 42 U.S.C. § 7413(c), provides that criminal sanctions may also be imposed, to redress knowing violations of the Act. Section 306 of the Act, 42 U.S.C. § 7606, allows that any facility found in violation of the Act may be barred from federal grants, loans, or contracts.

OPPORTUNITY FOR CONFERENCE

Respondent may, upon request, confer with EPA. The conference will enable Respondent to present evidence bearing on the findings of violations, on the nature of the violations, and on any efforts Respondent may have taken or proposes to take to achieve compliance. Respondent has the right to be represented by counsel. A request for a conference must be made within 10 calendar days of receipt of this NOV, and the request for a conference or other inquiries concerning the NOV should be made in writing to:

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By offering the opportunity for a conference or participating in one, EPA does not waive or limit its right to any remedy available under the Act.

EFFECTIVE DATE

This NOV shall be effective immediately upon issuance.

Date Issued: 29 January, 2009. Sharon L Kerche
ja Andrew M. Gaydosh
Assistant Regional Administrator
Office of Enforcement, Compliance and
Environmental Justice