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United States of America and State of North Dakota, Plaintiffs, vs. Minnkota Power Cooperative, Inc. and Square Butte Electric Cooperative, Defendants.

Case No. 1:06-cv-034

UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NORTH DAKOTA, SOUTHWESTERN DIVISION

2011 U.S. Dist. LEXIS 148801

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CORE TERMS: station, technology, boiler, administrative record, lignite, catalyst, vendor, flue, technically, consent decree, pilot, emission, testing, feasibility, installed, feasible, Clean Air Act's, air, cyclone-fired, coal-fired, ash, sodium, coal, fuel, dissimilar, arbitrary and capricious', case-by-case, burning, channels, record reveals

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JUDGES: Daniel L. Hovland, United States District Judge.

OPINION BY: Daniel L. Hovland

OPINION

ORDER DENYING PLAINTIFF'S MOTION TO STAY AND MOTION FOR DISPUTE RESOLUTION

Before the Court is the United States' "Motion Petitioning the Court for Dispute Resolution Under the 2006 Consent Decree" filed on May 12, 2011. See Docket No. 10. The Defendants, Minnkota Power Cooperative, Inc. and Square Butte Electric Cooperative (collectively referred to as "Minnkota Power"), filed a response in opposition to the motion on June 24, 2011. See Docket [*2] No. 18. The plaintiff, State of North Dakota ("North Dakota") filed a response in opposition to the motion on June 24, 2011. See Docket No. 20. The states of South Dakota, Oklahoma, Wyoming, Nebraska, Alabama, Utah, Indiana, Kentucky, and Alaska ("the amici") filed a brief of amici curiae on July 5, 2011. See Docket No. 24. The United States filed a response brief on July 19, 2011. See Docket No. 27. The amici filed a reply brief on August 5, 2011. See Docket No. 28.

Also before the Court is the United States' "Motion to Stay Dispute Resolution Proceedings Until at Least January 27, 2012" filed on October 24, 2011. See Docket No. 29. North Dakota and Minnkota Power filed responses in opposition to the motion on November 7, 2011. See Docket Nos. 32 and 33. The United States filed a reply brief on November 15, 2011. See Docket No. 34. For the reasons explained below, the United States' motions are denied.

I. BACKGROUND

This case involves a dispute concerning a consent decree. The defendants, Minnkota Power Cooperative, Inc. and Square Butte Electric Cooperative ("Minnkota Power") operate the Milton R. Young Station near Center, North Dakota. The United States Environmental Protection Agency [*3] ("EPA") and the North Dakota Department of Health alleged in a 2006 complaint that various maintenance activities over the years at the Milton R. Young Station's two lignite-fired boilers violated the *Clean Air Act's* new source review program. This Court resolved those allegations by approving a Consent Decree in 2006 between the parties. See Docket Nos. 1 and 9. The Consent Decree set the responsibility on North Dakota to identify - based on a case-by-case assessment of the unique aspects of Minnkota Power's cyclone-fired boilers burning North Dakota lignite--the best available control technology ("BACT") that will be used to retrofit the two boilers to control air emissions of nitrogen oxides.¹

¹ "The term 'best available control technology' means an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility . . ." 42 U.S.C. § 7479(3).

The North Dakota Department of Health performed [*4] the required analysis over four years. In November 2010, the State concluded that selective non-catalytic reduction ("SNCR") technology was BACT for the boilers based on the unique physical and chemical characteristics of a boiler combusting North Dakota lignite. The EPA disagreed and contends that selective catalytic reduction ("SCR") technology in use across the country in boilers combusting non-North Dakota lignite is BACT. North Dakota ultimately concluded that the use of SCR technology on Minnkota Power's boilers would be technically infeasible because of the unique characteristics of North Dakota lignite, the cyclone-fired boilers, and their combined adverse interactions with the SCR catalyst.

The Consent Decree establishes this Court's jurisdiction to resolve disputes between the parties related to the North Dakota Department of Health's ("North Dakota" or "NDDH") NOx Best Available Control Technology ("BACT") Determination. The Consent Decree also establishes the standard of review governing the EPA's challenge to the North Dakota NOx BACT Determination: "The Court shall sustain the decision by NDDH unless the Party disputing the BACT Determination demonstrates that it is not [*5] supported by the state administrative record and not reasonable in light of applicable statutory and regulatory provisions." See Docket No. 9-2, p. 19. There is no dispute that the EPA bears the burden of proof as the party disputing the NOx BACT Determination.

II. FACTS

The federal *Clean Air Act*, 42 U.S.C. §§ 7401-7671, in general, and the *Clean Air Act* Amendments of 1977, created the Prevention of Significant Deterioration ("*PSD*") program under which existing sources of air pollution - like the Milton R. Young Station - that are located in areas in attainment with national ambient air quality standards, must obtain a preconstruction permit before undertaking a major modification of the source. See 42 U.S.C. §§ 7470-79.

The *PSD* program was incorporated into the *Clean Air Act's* existing air quality planning structure. That structure is based on the principle of cooperative federalism under which states exercise primary responsibility for air quality planning and regulation. Under the *Clean Air Act*, the states and the federal government are partners in addressing issues of air pollution. States are charged with the primary responsibility of preventing and controlling air pollution at its [*6] source. 42 U.S.C. § 7401(a)(3). The *Clean Air Act* requires states to develop state statutory and regulatory programs that implement the air quality planning objectives of the *Clean Air Act*. These state programs are incorporated into a State Implementation Plan ("SIP"), which the EPA reviews and approves. Once the EPA approves a SIP, the state acquires "SIP-approved" status for the EPA-approved air quality programs. Thereafter, the state has primary responsibility for implementing federal air quality planning goals. The EPA approved North Dakota's *PSD*-related SIP on November 2, 1979, making it a SIP-approved state for purposes of *PSD* permitting.

One of the important elements of the *PSD* program is its constraint that no existing major emitting source may be modified before it obtains a preconstruction permit requiring the installation and operation of Best Available Control Technology ("BACT") at the modified source. If an existing source undertakes a physical change or a change in its method of operation that results in a significant emissions increase, the *PSD* program requires that the existing source be retrofitted at that time with the "best available" air pollution controls. The [*7] BACT decision is made by

SIP-approved state permitting authorities on a case-by-case basis. 42 U.S.C. § 7479(a)(3). The BACT decision aims to establish an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under the *Clean Air Act*. The permitting authority must consider the case-specific energy, environmental, and economic impacts as well as other costs in determining what level of emission limitation is achievable. See also 40 C.F.R. § 51.166(b)(12) (1999).

This case-by-case approach is different from other regulatory programs under the *Clean Air Act* which impose nationwide emission limitations for particular sources of air pollution. Congress intended the state permitting agencies' case-by-case approach to be capable of responding to local conditions and concerns. In essence, the BACT decision is a state and local decision.

The Consent Decree requires that the State of North Dakota follow the EPA's "New Source Review Workshop Manual" in preparing the BACT Determination. See Docket No. 9. The NSR Manual establishes a five-step BACT determination process commonly known as the "top-down" method of analysis. See Administrative Record, No. [*8] 75, p. B.2. In Step One, the permitting authority lists all "potentially available" control options - those that have a "practical potential for application to the emissions unit and the regulated pollutant under evaluation." See Administrative Record No. 75, p. B.5. In Step Two, the permitting authority eliminates "technically infeasible" control options from the list of "potentially available" control options. A control option is "technically feasible" if it has been "demonstrated" or if it is both "available" and "applicable." Id., p. B.17. A control option is "demonstrated" if it "has been installed and operated successfully on the type of source under review." Id. A control option is "available" if it "can be obtained by the applicant through commercial channels or is otherwise available within the common sense meaning of the term." Id. A control option is 'applicable' if it can reasonably be installed and operated on the source type under consideration." Id. In Step Three, the remaining control options are ranked and then listed in order of control effectiveness. Id., p. B.22. In Step Four, the energy, environmental, and economic impacts of the control options are evaluated in [*9] order to support the validity of the top-ranked control option or provide clear evidence why the top-ranked control option does not qualify as BACT. Id., pp. B.26, 29. In Step Five, the most effective, technically feasible control option not eliminated in Step Four is selected as BACT, and the permitting authority sets an emission limitation that is appropriate for the particular control option. See Administrative Record No. 75, p. B.53.

In 1998, the EPA commenced a nationwide enforcement initiative against coal-fired power plants. The EPA filed complaints in federal courts throughout the country and contended that these plants had undertaken "major modifications" without the requisite preconstruction permits. As a part of the enforcement initiative, the EPA issued an information request to Minnkota Power in October of 2000, and then filed a Notice of Violation asserting that the company had undertaken major modifications at the Milton R. Young Station without first obtaining the necessary preconstruction permits. After more than six years of analysis and negotiations, the EPA, North Dakota, and Minnkota Power elected to settle the EPA's dispute through the Consent Decree approved by [*10] the Court on July 27, 2006. See Docket No. 9.

The parties were unable to agree on what constituted BACT limitations on the emission of nitrogen oxide compounds from the units at the Milton R. Young Station. Nitrogen oxides ("NOx") are emitted as a byproduct of high temperature combustion in which atmospheric molecular nitrogen (N₂) is oxidized into various compounds (NO, NO₂, NO₃, and NO₄). In the other twenty-two Consent Decree settlements, the parties agreed that NOx BACT for wall- and tangentially-fired boilers combusting bituminous and subbituminous coal was the installation of selective catalytic reduction technology ("SCR").² However, Minnkota Power's cyclone-fired boiler design - which burns North Dakota lignite - posed a challenge to the parties' ability to adopt the general approach of the other settlements. As a result, the parties agreed that North Dakota would make a case-by-case NOx BACT Determination for the Milton R. Young Station, following all applicable federal and state statutes, regulations, and guidance. The EPA agreed that North Dakota's BACT Determination would be binding unless the EPA "demonstrates that it is not supported by the state administrative record [*11] and not reasonable in light of applicable statutory and regulatory provisions." See Docket No. 9-2, p. 19.

² SCR involves injection of ammonia into the flue gas in the presence of a catalyst to reduce NOx to nitrogen and water.

Shortly after the entry of the Consent Decree in July 2006, the North Dakota Department of Health began to develop its NOx BACT Determination. A massive administrative record - 259 documents and thousands of pages of proposed determinations, EPA comments, public comments, responses to comments, correspondence, technical reports, and scientific papers - was assembled. On October 9, 2006, Minnkota Power supplied North Dakota and the EPA with its NOx BACT Analysis.

In June 2008, North Dakota provided for public comment on a Preliminary BACT Determination and received public comments. See Administrative Record No. 79. The June 2008 Preliminary BACT Determination proposed that SCR, including high dust SCR (HDSCR), low dust SCR (LDSCR), and tail-end SCR (TESCR) was not technically feasible for the Milton R. Young Station. In July 2009, North Dakota requested that Minnkota Power prepare a cost estimate under Step 4 of the top-down approach for two potentially applicable [*12] SCR technologies. Minnkota Power submitted the analysis in November 2009, with a supplement in February 2010.

In April 2010, North Dakota invited and received public comment on its second Preliminary BACT Determination. The second Preliminary BACT Determination proposed that the best available control technology was SNCR plus ASOFA, and solicited public comments to this preliminary determination. Based upon the data and information received, the second Preliminary BACT Determination proposed that SCR (HDSCR, LDSCR, and TESCR) was not the best available control technology for the Milton R. Young Station. Finally, on November 18, 2010, North Dakota issued its final NO_x BACT Determination. Throughout this process, North Dakota consulted with the EPA and took comments by the EPA into consideration. In the final NO_x BACT Determination, North Dakota issued its Findings of Fact. See Administrative Record No. 240.

With regard to the technical feasibility of the various control technologies, the North Dakota Department of Health made the following findings and conclusions.

(1) There has never been a full scale SCR of any type installed on a facility that burns North Dakota lignite. To determine [*13] technical feasibility of LDSCR and TESCR, one must compare the flue gas characteristics of the Milton R. Young Station to the flue gas characteristics of other source types to which these control technologies have been applied previously. The record reveals that the lignite combusted at the Milton R. Young Station contains high quantities of soluble sodium and potassium which can cause catalyst reaction site poisoning, blinding, and plugging of catalyst pores and channels. The soluble sodium and potassium can also form sulfates that can blind and plug the catalyst pores and plug the catalyst channels. HTI - an SCR catalyst vendor - stated that the potential exists that physical deactivation due to catalyst blinding and plugging could be severe enough to make SCR a non-viable option for controlling NO_x emissions. The flue gas characteristics of the boilers at the Milton R. Young Station are significantly different from other boilers where SCR has been applied. The high soluble sodium content (catalyst poison) and the sticky nature of the ash are characteristics that are different from facilities where SCR has been successfully applied. See Administrative Record No. 240.

(2) CERAM - another [*14] catalyst vendor - stated it is unaware of any SCR application experience in the industry with the level and form of sodium in the ash at the Milton R. Young Station. In its proposal to Minnkota Power, CERAM stated that the high levels of Na₂O in the ash for North Dakota lignite are not commonly found in subbituminous and bituminous coals which are fired in boilers equipped with SCR systems. CERAM also stated that the levels of K₂O in North Dakota lignite ash are in the high end range found in many biomass fuels, such as wood and switch grass. However, the levels of Na₂O are much greater than that found in biomass or coal-fired SCR applications. Regarding North Dakota lignite, the architectural engineering firm of Sargent & Lundy stated, "[t]here are attributes of this fuel in a tail-end SCR environment that are not well understood today and need more investigation to predict its performance to make it a commercially available technology" and also that "[s]ome important unanswered questions pose a significant risk for an SCR design engineer for tail-end SCR." Id.

(3) The State of Louisiana determined that SCR was not feasible for the Red River Environmental Products, LLC, activated carbon [*15] plant that uses lignite. This determination was based on a finding that the sodium sulfate in the flue gas could cause rapid deactivation of the catalyst as well as the lack of operating or empirical data. Id.

(4) Both HTI and CERAM indicated in their October 2009 proposals that they would not provide a guarantee for the catalyst life without successful pilot scale testing being done. HTI indicated that SCR may not be a viable option for the Milton R. Young Station and that pilot testing would be necessary to show whether SCR is a viable option. Id.

(5) Sargent & Lundy also recommended that pilot testing be conducted to answer questions about the effects of the soluble alkalis and ash characteristics including the size, stickiness and abrasiveness qualities of the ash. An SCR that is guaranteed to work successfully is not available for Milton R. Young

Station. Both HTI and CERAM indicated that refusal to provide a catalyst guarantee is extremely rare. They both indicated they have offered guarantees for other types of lignite (including Texas lignite), European brown coals, and biomass. Both companies indicated they were not aware of any SCR being installed in the United States without [*16] a catalyst life guarantee. Id.

(6) The Department of Justice, through its contractor Evonik Energy Services, LLC ("Evonik") provided a Request for Proposals ("RFP") to HTI and CERAM purportedly based on the flue gas characteristics of Milton R. Young Station. Both companies indicated they would provide catalyst life guarantees to Evonik based on the RFP. Within months of responding to the Evonik RFP, both companies withdrew their guarantees, indicating that Evonik did not provide a fuel analysis, ash analyses, the range of fuel and ash characteristics that could be encountered, details on the soluble constituents in the flue gas, and the fact that the fuel to be used was North Dakota lignite. HTI believed the RFP was for a facility burning eastern subbituminous coal. HTI indicated they would not have provided a guarantee if it had known that the fuel was North Dakota lignite. CERAM indicated it would not have provided a guarantee if the Evonik RFP had provided the same level of detail as Minnkota Power's RFP. North Dakota concluded that Evonik's RFP and the responsive proposals therefore proved nothing and had no value. Id.

(7) CERAM and HTI have indicated that up to one year of pilot [*17] scale testing is required before they would consider a guarantee. This is consistent with Sargent & Lundy's recommendation of one year of operation of a pilot scale test, which they indicated would take 18-24 months based on one year of operation at a cost of up to \$2 million. Id.

(8) Minnkota Power is not required under BACT to assume the risk associated with the failure of a technology that has never been used on a North Dakota fired unit or a source with similar flue gas characteristics. Minnkota Power is not required to experience resource penalties or extended trials to learn how to apply SCR to the Milton R. Young Station - a new and dissimilar source type. Technologies in the pilot scale testing phase of development need not be considered as available control technologies. Id.

(9) Based on the lack of vendor guarantees and the need for pilot testing, LDSCR and TESCR for the Milton R. Young Station cannot be obtained through commercial channels and are not otherwise available within the common sense meaning of the word. Thus, LDSCR and TESCR for the Milton R. Young Station are not "available" for purposes of Step 2 of the BACT Analysis. Id.

(10) LDSCR and TESCR have not been, and [*18] will not soon be, deployed on the same or a similar source. The Milton R. Young Station's flue gas characteristics are different from other sources that have applied LDSCR and TESCR and these unique characteristics present significant challenges to the successful application of those control technologies for the Milton R. Young Station. North Dakota concluded that LDSCR and TESCR cannot reasonably be installed at the Milton R. Young Station and are therefore not "applicable" for the Milton R. Young Station for purposes of Step 2 of the BACT Analysis. North Dakota further concluded that LDSCR and TESCR are neither "available" nor "applicable" to the Milton R. Young Station, these control technologies are technically infeasible for the Milton R. Young Station. Id.

With regard to the technical feasibility of HDSCR control technologies, the North Dakota Department of Health made the following findings and conclusions.

(1) In the November 2008 interim technical feasibility analysis, the Department evaluated HDSCR and indicated it was not technically feasible. This was consistent with the Department's June 2008 Preliminary BACT Determination. See Administrative Record No. 240.

(2) The flue [*19] gas temperature problem is another potential fatal flaw to the successful use of HDSCR at the Milton R. Young Station. An extensive engineering study must be conducted to determine if this problem can be resolved. Babcock and Wilcox estimated the cost of the study at \$275,000-\$400,000 and would take 20-24 weeks to complete. Id.

(3) Minnkota Power was unable to get a catalyst life guarantee for LDSCR and TESCR. It is unlikely that a guarantee would be offered for HDSCR when the loading of catalyst deactivation compounds is 50-90 times higher than LDSCR or TESCR. In 2007, Minnkota Power solicited information from SCR

and catalyst vendors. Although some vendor responses indicated a high degree of confidence about the successful use of HDSCR at the Milton R. Young Station, all vendor responses indicated the need for pilot scale testing to determine if there were fatal flaws for using HDSCR. Two of the companies that expressed confidence in the use of HDSCR at the Milton R. Young Station were HTI and CERAM. Each company has since refused to offer a catalyst life guarantee for LDSCR or TESCO. Id.

(4) SCR - including HDSCR - has not been applied to a North Dakota lignite-fired unit or a source [*20] with similar flue gas characteristics to the Milton R. Young Station. The Milton R. Young Station is a new and dissimilar source type category from other sources that have successfully applied SCR. Based on the lack of vendor guarantees and need for pilot testing North Dakota concluded that, HDSCR for the Milton R. Young Station cannot be obtained through commercial channels and is not otherwise available. Thus, HDSCR for the Milton R. Young Station is not "available" for purposes of Step 2 of the BACT Analysis. Id.

(5) HDSCR has not been, and will not soon be, deployed on the same or a similar source. The Milton R. Young Station's flue gas characteristics are significantly different from other sources that have applied HDSCR. These unique characteristics present significant challenges to the successful application of this control technology for the Milton R. Young Station. North Dakota concluded that because HDSCR is neither "available" nor "applicable" to the Milton R. Young Station, this control technology is technically infeasible for the Milton R. Young Station. Because North Dakota determined that SCR is not technically feasible, there was no need to complete the remaining steps [*21] of the top-down process. Thus, North Dakota declined to address the cost effectiveness of SCR for the Milton R. Young Station. Id.

In summary, North Dakota concluded that LDSCR, TESCO, and HDSCR are technically infeasible at the Milton R. Young Station units principally because of the highly site-specific nature of the cyclone-fired boilers and the unique North Dakota lignite fuel burned at the station. North Dakota set non-selective catalytic reduction ("SNCR")³ plus advanced separated overfire air ("ASOFA")⁴ as BACT for the Milton R. Young Station. These control technologies reduce NOx emissions at the Milton R. Young Station by 15,280 tons per year. Minnkota Power's installed BACT controls under the 2006 Consent Decree at a cost of approximately \$400 million.

3 SNCR involves injecting ammonia or urea into specific temperature zones to react with nitrogen oxides to produce nitrogen and water.

4 ASOFA involves the diversion of some fifteen to twenty percent of the air normally used for coal combustion from the firing zone to the upper furnace. This staged combustion technique has the benefit of lowering combustion temperatures, thereby reducing the formation of NOx. In this configuration, [*22] lignite drying system vent ports would also be relocated. See Admin. Record No. 172.

III. STANDARD OF REVIEW

A. MOTION TO STAY

It is well-established that a trial court has the inherent power to stay proceedings to control its docket, to conserve judicial resources, and to ensure that each matter is handled "with economy of time and effort for itself, for counsel, and for litigants." *Landis v. N. Am. Co.*, 299 U.S. 248, 254 (1936). The decision to stay proceedings involves an "exercise of judgment, which must weigh competing interests and maintain an even balance." Id. at 254-255. The party requesting a stay "must make out a clear case of hardship or inequity in being required to go forward, if there is even a fair possibility that the stay for which he prays will work damage to someone else." Id. at 255; see *Jones v. Clinton*, 72 F.3d 1354, 1364 (8th Cir.1996) (Beam, Circuit Judge, concurring specifically).

B. THE EPA HAS THE BURDEN OF PROOF.

The Consent Decree establishes the standard of review governing the EPA's challenge to North Dakota's BACT determination. Paragraph 147(c) of the Consent Decree provides, "The Court shall sustain the decision by NDDH unless the Party disputing the BACT [*23] Determination demonstrates that it is not supported by the state administrative record and not reasonable in light of applicable statutory and regulatory provisions." See Docket No. 9-2, p. 19. The

Consent Decree further provides, "The disputing Party shall bear the burden of proof throughout the dispute resolution process." See Docket No. 9-2, p. 19.

This standard of review mirrors the standard of review articulated by the United States Supreme Court in *Alaska Dept of Env'tl. Conservation v. EPA*, 540 U.S. 461 (2004):

[I]n either an EPA-initiated civil action or a challenge to an EPA stop-construction order filed in state or federal court, the production and persuasion burdens remain with EPA and the underlying question a reviewing court resolves remains the same: Whether the state agency's BACT determination was reasonable, in light of the statutory guides and the state administrative record.

Alaska Dept of Env'tl. Conservation, 540 U.S. at 494. The Supreme Court explained further:

Because the [*Clean Air Act*] itself does not specify a standard for judicial review in this instance, we apply the familiar default standard of the Administrative Procedure Act, 5 U.S.C. § 706(2)(A), and ask [*24] whether the Agency's action was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." Even when an agency explains its decision with "less than ideal clarity," a reviewing court will not upset the decision on that account "if the agency's path may reasonably be discerned." *Bowman Transp., Inc. v. Arkansas-Best Freight System, Inc.*, 419 U.S. 281, 286 (1974).

Id. at 496-97.

The United States Supreme Court observed in *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 377 n.23 (1989), that "the difference between the 'arbitrary and capricious' and 'reasonableness' standards is not of great pragmatic consequence." The Supreme Court described an agency's responsibility under the "arbitrary and capricious" standard in *Motor Vehicle Mfrs. Ass'n of United States, Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (citations omitted) as:

[T]he agency must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made. In reviewing that explanation, we must consider whether the decision was based on a consideration of the relevant factors and whether there [*25] has been a clear error of judgment.

Motor Vehicle Mfrs., 463 U.S. at 43 (quotes omitted). Under this general rule, the Supreme Court provided four examples of arbitrary and capricious agency action:

Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Id.

There are a number of important corollaries to these general principles. First, perfection is not required - a court should "uphold a decision of less than ideal clarity if the agency's path may reasonably be discerned." *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502 (2009). Second, the scope of review is narrow and "a court is not to substitute its judgment for that of the agency." *Id.* Third, when matters under consideration require a "high level of technical expertise" and "[w]hen specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions [*26] of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." *Oregon Natural Res. Council*, 490 U.S. at 377-78. Finally, "absent a showing of arbitrary action, we must assume that the agencies have exercised this discretion appropriately." *Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976).

IV. LEGAL DISCUSSION

A. UNITED STATES' MOTION TO STAY

On October 24, 2011, the United States moved to stay these proceedings until at least January 27, 2012. See Docket No. 29. The United States informed the Court that there is another case pending in the District of Colorado, *Wildearth Guardians v. EPA*, No. 11-cv-00001 (D. Colo.), that may affect which control technology must be installed at the Milton R. Young Station. In *Wildearth Guardians*, the plaintiffs sued the EPA under a different provision of the *Clean Air Act* than is under consideration in this case. Under the consent decree in *Wildearth Guardians*, the Colorado court must give deference to the EPA's determination of which control technology to install and can only overturn the decision if it is unreasonable. The United States requests that the proceedings in North Dakota be stayed until at least [*27] January 27, 2012.

The United States contends that judicial resources would be saved by staying these proceedings because a resolution of the Colorado case may require SCR to be installed at the Milton R. Young Station, regardless of this Court's decision. North Dakota contends that a stay is not in the public interest and would undercut its rightful role under the *Clean Air Act*. Minnkota Power argues that it would be harmed by a stay because the standard of review in the Colorado case is more favorable to the EPA.

This Court is prepared to rule on the United States' motion for dispute resolution. The interests of judicial economy, and economy of time and effort for the parties, would not be served by subjecting the parties to needless delay. The Court, in the exercise of its broad discretion, **DENIES** the motion to stay.

B. MOTION FOR DISPUTE RESOLUTION

The EPA's primary argument is that because SCR technology has been widely deployed at coal-fired power plants across the country, North Dakota should have selected SCR as the best available control technology ("BACT") for the Milton R. Young Station. It is clear that Congress insisted that a state's BACT analysis be conducted on a site specific, [*28] case-by-case basis so that generalized assertions of suitability would not prevail. In other words, what may work well on a wall-fired boiler in Kentucky burning bituminous coal may not work on a cyclone-fired boiler in North Dakota which burns North Dakota lignite. After a four-year comprehensive analysis, North Dakota concluded that the physical and chemical characteristics of the flue gas from the Milton R. Young Station boilers are unique and that standard approaches used elsewhere in the country are technically infeasible. The EPA now challenges North Dakota's technical conclusions through the process available in the Consent Decree.

1. THE EPA HAS FAILED TO PROVE THAT NORTH DAKOTA WAS UNREASONABLE IN ITS CONCLUSION THAT SCR IS NOT A "DEMONSTRATED" TECHNOLOGY.

The NSR Manual describes a "demonstrated" control technology as one "that has been installed and operated successfully on the type of source under review." See Administrative Record No. 75, p. B.17. A control technology that is "demonstrated" is "technically feasible" for purposes of the analysis under Step 2 "unless source-specific factors exist and are documented to justify technical infeasibility." *Id.* at p. B.21. After [*29] having reviewed hundreds of pages of technical materials relating to the physical and chemical characteristics of the flue gas from Minnkota Power's North Dakota lignite-fired cyclone boiler, in comparison to the flue gas from other coal-fired boilers using SCR, North Dakota concluded: "SCR - including [high dust SCR] - has not been applied to a ND lignite-fired unit or a source with similar flue gas characteristics to the [Milton R. Young Station]. [The Milton R. Young Station] is a new and dissimilar source type category from other sources that have successfully applied SCR." See Administrative Record No. 240, p. 11.

North Dakota provided voluminous technical details in support of the conclusion that the Milton R. Young Station is a "new and dissimilar source type category" from other boilers where SCR had been applied. In the BACT Determination, North Dakota pointed to the unusual quantities of soluble sodium and potassium in the fuel that can "form sulfates that can blind and plug the [SCR] catalyst pores and plug the catalyst channels." *Id.* at p. 7. Quoting an SCR vendor, North Dakota concluded "[t]he high levels of Na₂O in the ash for the North Dakota lignite are not commonly [*30] found in subbituminous and bituminous coals which are fired with SCR systems." *Id.* In its response to comments document, North Dakota found that the flue gas characteristics from the Milton R. Young Station were radically different from other coal-fired boiler SCR applications. See Administrative Record No. 241 at 4 ("The flue gas characteristics of a cyclone-fired boiler combusting North Dakota lignite is different from other coal-fired combustors. CERAM Environmental, Inc. has stated in their proposal to Minnkota that they are unaware of any SCR application experience in the industry with the level and form of sodium in the [Milton R. Young Station] ash."). The administrative record contains volumes of pages of technical information regarding the substantial differences between the application of SCR controls on boilers with different configurations and different fuels, and the present application at a cyclone-fired boiler burning North Dakota lignite. See Admin. Record No. 84 at A1-22-A1-39, and Admin. Record No. 85 at A1-22-A1-39, (pro-

viding detailed information on the differences between the Milton R. Young Station boilers and all other source types upon which SCR had successfully [*31] been installed and operated). See also, Administrative Record No. 79 at 5 ("These technological fixes are unproven to transfer to this boiler/fuel type, and the use of SCR to control NOx has only been demonstrated for utility boilers that have substantially dissimilar gas streams."). North Dakota's conclusions regarding such highly technical matters are entitled to deference unless the EPA proves them to be unreasonable, arbitrary, or capricious.

The EPA's first argument is a technicality; namely, that North Dakota failed to use the phrase "not demonstrated" when concluding that SCR is not technically feasible. When faced with the task of deciding whether SCR "has been installed and operated successfully on the type of source under review," North Dakota concluded that [the Milton R. Young Station] is a new and dissimilar source type category from other sources that have successfully applied SCR. Under the arbitrary and capricious standard of review, a court should uphold a decision of less than ideal clarity if the agency's path may reasonably be discerned. North Dakota's path is easily discerned - SCR has not been installed and operated successfully on the type of source under review [*32] or with the flue gas from North Dakota lignite coal, and is therefore "not demonstrated."

The EPA also argues that the Minnkota Power boilers are the same "type of source" as other similarly-sized coal-fired boilers because the *Clean Air Act's* New Source Performance Standards regulation treats them the same. The BACT determination is a case-by-case analysis specifically designed to avoid generalizations; namely, that SCR applied anywhere in the country at a coal-fired boiler with the same rated capacity as Minnkota Power's is the same "type of source." Minnkota Power's cyclone-fired boilers burning North Dakota are unique and the record clearly reveals that North Dakota took that fact into account when making its BACT Determination.

B. THE EPA HAS FAILED TO PROVE THAT NORTH DAKOTA WAS UNREASONABLE IN ITS CONCLUSION THAT SCR IS NOT AN "AVAILABLE" TECHNOLOGY.

The NSR Manual describes an "available" technology as follows:

A control technique is considered available . . . if it has reached the licensing and commercial sales stage of development. A source would not be required to experience extended time delays or resource penalties to allow research to be conducted on a new technique. Neither [*33] is it expected that an applicant would be required to experience extended trials to learn how to apply a technology on a totally new and dissimilar source type. Consequently, technologies in the pilot scale testing stages of development would not be considered available for BACT review.

See Administrative Record No. 75, p. B.18. The NSR Manual also states "availability" is fact specific:

[T]he applicant should make a factual demonstration of infeasibility based on commercial unavailability and/or unusual circumstances which exist with application of the control to the applicant's emission units. Generally, such a demonstration would involve an evaluation of the pollutant-bearing gas stream characteristics and the capabilities of the technology.

Id. at p. B.19.

A control technology that is "available" and "applicable" is "technically feasible" for purposes of Step 2 top-down analysis.

The record reveals that North Dakota included three types of SCR technology in its Step 1 "potentially available" control technology list: (1) low-dust SCR ("LDSCR"); (2) tail-end SCR ("TESCR"); and (3) high-dust SCR ("HDSCR"). The first two types treat flue gas downstream of particulate and sulfur dioxide [*34] control devices (hence, the "low-dust" and "tail-end" applications). Because the flue gas characteristics at the inlet to both types of SCR are the same, North Dakota considered them together in its Step 2 technical feasibility review. A high-dust SCR is installed before the particulate control device and was reviewed separately by North Dakota.

LDSCR and TESCR availability. After reviewing hundreds of pages of technical documents and responding to the EPA comments on its draft BACT findings, North Dakota made the following technical findings with respect to the availability of LDSCR and TESCR:

3. The lignite combusted at [the Milton R. Young Station] contains high quantities of soluble sodium and potassium which can cause catalyst reaction site poisoning, blinding, and plugging of catalyst pores and channels. . . . During combustion of this fuel in the cyclone furnaces at [the Milton R. Young Station], a significant portion of these organically associated elements are either vaporized or form small particles that leave the boiler in the flue gas. Soluble sodium and potassium are catalyst poisons even in dry conditions in the SCR. The soluble sodium and potassium can also form sulfates [*35] that can blind and plug the catalyst channels.

4. The flue gas characteristics of [the Milton R. Young Station] are significantly different from other boilers where SCR has been applied

* * *

5. CERAM stated it is unaware of any SCR application experience in the industry with the level and form of sodium in the ash at [the Milton R. Young Station]

* * *

7. Regarding North Dakota lignite, Sargent and Lundy (S&L) states, "[t]here are attributes of this fuel in a tail-end SCR environment that are not well understood today and need more investigation to predict its performance to make it a commercially available technology."

* * *

11. Both HTI and CERAM indicated in their October 2009 proposals they will not provide a guarantee for the catalyst life without successful pilot scale testing being done. HTI indicated that SCR may not be a viable option for [the Milton R. Young Station] and that pilot testing would be necessary to show whether SCR is a viable option. S&L also recommended that pilot testing be conducted to answer questions about the effects of the soluble alkalis and ash characteristics including the size, stickiness and abrasiveness qualities of the ash. . . .

See Administrative [*36] Record No. 240, pp. 7-9. Based on these technical findings - which are supported by the administrative record - North Dakota concluded that LDSCR and TESCR were not "available." Specifically, North Dakota concluded:

(1) "LDSCR and TESCR have not been, and will not soon be deployed on the same or a similar source."; and

(2) "Based on the lack of vendor guarantees and need for pilot testing, LDSCR and TESCR for [the Milton R. Young Station] cannot be obtained through commercial channels and is not otherwise available within the common sense meaning of the word."

See Administrative Record No. 240, p. 10.

HDSCR availability. After reviewing hundreds of pages of technical documents and responding to the EPA comments on draft BACT findings, North Dakota made technical findings for HDSCR that are similar to the LDSCR/TESCR findings. Specifically, North Dakota found that because HDSCR would be installed before the particulate control device, the loadings of sodium and potassium would be fifty to ninety times higher than LDSCR/TESCR, with significant adverse effects on the ability of the SCR catalyst to function as designed. In addition, North Dakota found that the high flue gas temperatures from [*37] the cyclone boilers would have adverse effects on the HDSCR catalyst. Similar to LDSCR/TESCR, vendors were unwilling to provide guarantees for SCR catalyst performance, and recommended pilot scale testing to prove the applicability of HDSCR to the Milton R. Young Station units.

Based on these findings - supported by the administrative record - North Dakota concluded that HDSCR was not "available." Specifically, North Dakota concluded:

(1) "HDSCR has not been, and will not soon be, deployed on the same or a similar source In addition, the flue gas temperature problem may not be solvable (a complex study is required)."; and

(2) "Based on the lack of vendor guarantees and need for pilot testing, HDSCR for [the Milton R. Young Station] cannot be obtained through commercial channels and is not otherwise available within the common sense meaning of the word."

Id. at p. 12.

The Court finds that North Dakota's technical findings and conclusions are not unreasonable. They are the product of a four-year BACT review process, and are supported by the voluminous administrative record. North Dakota's findings that no "same or similar source" to the Milton R. Young Station had installed HDSCR, [*38] LDSCR, or TESCO supports a finding of unavailability. Further, the record reveals that up to twenty-four months of pilot scale testing would be needed before any SCR could be determined as viable for application at the Milton R. Young Station. This supports the finding that no SCR currently is commercially available for this application. The fact that no SCR vendor is willing to provide a performance guarantee supports the conclusion that SCR is not commercially available for application at the Milton R. Young Station.

The EPA suggests that North Dakota concluded in its 2008 Preliminary BACT Determination that SCR is "available," and then reversed its position without justification in the Final BACT Determination. The EPA offers the following from North Dakota's 2008 document in support of its assertion: "[SCR] would initially appear to be available for use at the [Milton] R. Young Station." See Administrative Record No. 79, p. 15. However, that same document reveals North Dakota's final conclusion regarding availability:

SCR has not reached [the licensing and commercial] stage for North Dakota lignite-fired cyclone boilers, and because of the difference in the gas stream, the Department [*39] concludes that Minnkota [Power] need not experience extended trials to learn how to apply the technology on such a dissimilar source type. The EPA's contention that technological solutions will be developed is speculative.

Id. at p. 6.

Second, the EPA suggests that Minnkota Power believes that SCR is "available" and that North Dakota ignored this conclusion in its Final BACT Determination. A cursory review of the administrative record reveals that Minnkota Power has consistently asserted that SCR is unavailable for cyclone-fired boilers burning North Dakota lignite.

Third, the EPA contends that North Dakota failed to consider extensive information regarding the application of SCR at other coal-fired boilers. However, the administrative record reveals that North Dakota carefully considered the differences between North Dakota lignite and other coals nationwide, and also reviewed extensive materials from Sargent & Lundy, a company that has designed approximately 46% of the SCR systems in the United States. Because the NSR Manual itself does not require the application of otherwise widespread control technologies on a "new and dissimilar source type." North Dakota supported its findings [*40] and conclusions that a cyclone-fired boiler burning North Dakota lignite is a "new and dissimilar source type" to which SCR serving other types of sources is not "available."

Fourth, the EPA argues that North Dakota unreasonably found that SCR was not available because no SCR vendor was willing to guarantee the catalyst life. North Dakota cited the NSR Manual's evaluation of vendor guarantees in determining availability:

Vendor guarantees may provide an indication of commercial availability and the technical feasibility of a control technique and could contribute to a determination of technical feasibility or technical infeasibility, depending on circumstances. However, EPA does not consider a vendor guarantee alone to be sufficient justification that a control option will work. Conversely, lack of a vendor guarantee by itself does not present sufficient justification that a control option or an emissions limit is technically infeasible. Generally, decisions about technical feasibility will be based on chemical, and engineering analyses (as discussed above) in conjunction with information about vendor guarantees.

See Administrative Record No. 75, p. B.20. North Dakota conducted extensive [*41] chemical and engineering analyses regarding the physical and chemical characteristics of the Milton R. Young Station flue gas which, in conjunction

with the lack of vendor guarantees from leading SCR catalyst suppliers in the world, led to the conclusion that SCR is not available for cyclone-fired boilers burning North Dakota lignite.

Fifth, the EPA argues that North Dakota improperly relied on the need for "pilot testing" of SCR catalyst to reach its unavailability conclusion. The NSR Manual is clear that the expectations for applying an existing control technology to a new source type are limited:

A source would not be required to experience extended time delays or resource penalties to allow research to be conducted on a new technique. Neither is it expected that an applicant would be required to experience extended trials to learn how to apply a technology on a totally new and dissimilar source type.

See Administrative Record No. 75, p. B.18. Having concluded that a cyclone boiler firing North Dakota lignite is "new and dissimilar" from other coal-fired boilers using SCR, North Dakota inquired as to whether Minnkota Power would be required to "experience extended trials to learn how [*42] to apply" SCR to the Milton R. Young Station. North Dakota's judgment was that as many as two years of catalyst pilot testing would be required at the cost of millions of dollars before it could determine whether SCR technology was a viable option. North Dakota then concluded that the "extended time delays" and "extended trials" rendered SCR technology unavailable at the Milton R. Young Station. The EPA describes this conclusion as "absurd" because SCR is in use at hundreds of coal-fired boilers. However, it is clear and undisputed that none of these are cyclone-fired boilers burning North Dakota lignite. The Court finds that North Dakota's case-by-case examination as to the availability of SCR technology for a unique set of boilers is neither unreasonable nor arbitrary and capricious.

C. EPA HAS FAILED TO PROVE THAT NORTH DAKOTA WAS UNREASONABLE IN ITS CONCLUSION THAT SCR IS NOT AN "APPLICABLE" TECHNOLOGY.

The NSR Manual describes an "applicable" control technology as follows:

Technical judgment on the part of the applicant and the review authority is to be exercised in determining whether a control alternative is applicable to the source type under consideration. In general, a commercially [*43] available control option will be presumed applicable if it has been or is soon to be deployed (e.g., is specified in a permit) on the same or a similar source type. Absent a showing of this type, technical feasibility would be based on examination of the physical and chemical characteristics of the pollutant-bearing gas stream and comparison to the gas stream characteristics of the pollutant-bearing gas stream characteristics of the source types to which the technology had been applied previously.

See Administrative Record No. 75, p. B.18. A control technology that is both "applicable" and "available" is technically feasible for purposes of Step 2 of the top-down method. North Dakota found that "there has never been a full scale SCR - of any type - installed on a facility that burns North Dakota lignite" and that "[t]he flue gas characteristics of [Milton R. Young Station] are significantly different from other boilers where SCR has been applied." See Administrative Record No. 240, p.7. North Dakota concluded that SCR has "not been, and will not soon be, deployed on the same or a similar source." *Id.* at p.10.

Despite the absence of SCR application on cyclone boilers firing North Dakota [*44] lignite, North Dakota conducted an analysis of the "physical and chemical characteristics" of the Milton R. Young Station flue gas to determine if SCR technology could successfully be applied. The analysis included comparative assessments of coal quality and contents, and a review of the work at the University of North Dakota which concluded that "[t]he ash deposition behavior of the lignites from North Dakota is the most complex and severe of any coals in the world, and installation of catalysts for NOx reduction is going to be plagued with problems." North Dakota concluded that "[Young Station]'s flue gas characteristics are significantly different from other sources that have applied [SCR] and these unique characteristics present significant challenges to successful application of those control technologies for [Young Station]." See Administrative Record No. 240, p.10.

The Court finds that North Dakota's findings and conclusions are not unreasonable, or arbitrary and capricious. It is well-established that when matters under consideration require a high level of technical expertise and when specialists

express conflicting views, an agency must have discretion to rely on the reasonable [*45] opinions of its own qualified experts even if a court may find contrary views more persuasive.

In response, the EPA contends there are five separate deficiencies in North Dakota's findings and conclusions. First, the EPA disagrees that a cyclone-fired boiler burning North Dakota lignite is not a "same or similar source type" as other coal-fired units using SCR. It is important to note that the standard of review is not what the EPA would have concluded even if a reviewing court may find the EPA's view more persuasive. Instead, the standard of review is whether North Dakota's conclusion is unreasonable. The administrative record outlines in detail a comparative examination and analysis of coal types, boiler types, and technical conclusions regarding impacts of fuel and boiler types on SCR operability. The Court finds that there is no evidence that North Dakota's decision is arbitrary. Any disagreement must be resolved in favor of North Dakota, unless the EPA proves that North Dakota acted in an arbitrary and capricious manner. The EPA has not met their burden.

The EPA also suggests that North Dakota's technical findings are deficient with respect to the differences between the Milton [*46] R. Young Station units and other coal-fired units in the country. The EPA's references to Gulf Coast lignite studies and same general principles for SCR design are not evidence that North Dakota's case-by-case BACT review determination is arbitrary and capricious.

The EPA also argues that anything less than SCR at the Milton R. Young Station would impede Congress' goal in establishing BACT requirements. The Court finds that Congress placed the BACT determination and responsibility with the state to be determined on a case-by-case basis. Congress intended that BACT be understood to have broad flexibility in how it should and can be interpreted, depending on the site, and the weight assigned to the statutory factors is to be determined by the state.

D. EPA HAS FAILED TO PROVE THAT NORTH DAKOTA ACTED UNREASONABLY IN NOT SETTING THE BACT EMISSION LIMITATION AT A HIGHER LEVEL.

The *Clean Air Act* prohibits a permitting authority from setting a BACT emission limitation lower than an applicable standard under the Act's New Source Performance Standard. See 42 U.S.C. § 7479(3) ("In no event shall application of 'best available control technology' result in emissions of any pollutants which will [*47] exceed the emissions allowed by any applicable standard established pursuant to section 7411 or 7412 of this title.") However, these standards only apply to newly constructed or modified sources. 40 C.F.R. § 60.1(a). Neither of the two Milton R. Young Station units were newly constructed or modified after the 2005 New Source Performance Standard cited by the EPA.

E. EPA HAS FAILED TO PROVE THAT NORTH DAKOTA ACTED UNREASONABLY IN DEVELOPING ITS FINAL BACT DETERMINATION IN RESPONSE TO PUBLIC COMMENTS.

The Consent Decree set out the following process for making a BACT Determination:

Within six months after entry of this Consent Decree, [Minnkota Power] shall submit to [North Dakota] for review and approval, and to EPA for review, a NOx Top-Down BACT Analysis for each existing coal-fired Unit at [the Milton R. Young Station]. * * * [North Dakota] shall review [Minnkota Power's analysis], and shall develop its BACT Determination After consultation with EPA, [North Dakota] shall provide to the Parties its BACT Determination

See Docket No. 9, pp. 22-23. North Dakota spent four years on this process. The voluminous administrative record reveals almost three dozen formal communications [*48] between the parties to the Consent Decree and the public in which every aspect of North Dakota's BACT Determination was set forth and evaluated in successive preliminary, draft, revised draft, and then the final BACT Determinations. See Administrative Record Nos. 63-64, 74, 79, 84-85, 87-88, 90-91, 95-97, 99, 101-102, 104, 1072, 174, 176, 225-232, 237, 246, and 249. Despite the voluminous record of consultations, communications, and comments, the EPA contends that it did not have adequate opportunity to consult with North Dakota on the issue of technical feasibility. The EPA complains of North Dakota's "reversal" of its position on the technical feasibility of LDSCR/TESCR between an April 2010 Draft BACT Determination and the final BACT Determination in November 2010.

The record reveals that North Dakota did not reverse its position on the technical infeasibility between April 2010 and November 2010. The April 2010 Draft BACT Determination stated that LDSCR/TESCR was not BACT because of technical infeasibility and cost considerations:

"[T]he Department has significant concerns whether LDSCR and TESCR are technically feasible for M.R. Young Station. * * * Based on concerns regarding technical [*49] feasibility of LDSCR and TESCR, the high cost effectiveness, the high incremental cost and increased greenhouse gas emissions, the Department has determined that neither LDSCR nor TESCR represent BACT at M.R. Young Station."

See Administrative Record No. 172.

This conclusion is consistent with North Dakota's June 2008 Preliminary BACT Determination findings on technical infeasibility. The June 2008 and April 2010 Draft BACT Determinations were the subject of formal public comments. The record reveals that the EPA had more than sufficient opportunity to comment on North Dakota's preliminary findings regarding both technical infeasibility and cost considerations. Clearly, the EPA was never denied an opportunity to comment on all aspects of North Dakota's final BACT Determination.

The record further reveals that North Dakota took the EPA's comments seriously. The EPA disputed North Dakota's 2008 draft findings regarding the technical feasibility of LDSCR/TESCR. In response, North Dakota collected additional technical information in 2008 and early 2009 regarding the technical feasibility of these controls. See Administrative Record No's. 101, 102, 104, and 105 (reports from the EPA and Minnkota [*50] Power). By July 2009, North Dakota raised the possibility that the case for technical feasibility of LDSCR/TESCR was approaching the point that it asked Minnkota Power to prepare a cost-effectiveness analysis for these controls under Step 4 of the top-down analysis. See Administrative Record No. 172, App. A ("[W]e believe that low dust and tail end SCR are technically feasible and have the potential for successful application at the Milton R. Young Station."). North Dakota raised this possibility in part because of vendor "guarantees" that had been solicited by a contractor the EPA engaged to assist in preparing its comments. North Dakota wrote: "Based on the empirical data available at that time, vendor information that TESCR is feasible at the Milton R. Young Station and the use of low dust SCR on biomass fired boilers, the Department concludes that tail end low dust SCR appear to be technically feasible at Milton R. Young Station." See *id.* at 31 (emphases added) (including references to vendor statements solicited by EPA's contractor). Minnkota Power subsequently provided the requested economic analysis in February 2010, and also provided additional information as to why LDSCR/TESCR [*51] technology was technically infeasible, and could properly be excluded from the top-down approach in Step 2.

The EPA's contractor had solicited vendor "guarantees" regarding LDSCR/TESCR in support of its argument that these controls constituted BACT, and made the results of the solicitation available to North Dakota in its comments on the April 2010 Draft BACT Determination. The record reveals that North Dakota had considered the EPA-solicited vendor guarantees in its LDSCR/TESCR best available control technology process in evaluating the technical feasibility of these controls. In the spring of 2010, it became clear to North Dakota that the EPA's solicitation omitted key information about the units under consideration. When the vendors were presented with actual information about the units for which they had offered a "guarantee," they abruptly withdrew the guarantees.

In response, North Dakota contacted the EPA and Minnkota Power, and followed up with the vendors the EPA had originally contacted by communicating directly with both CERAM and HTI in September 2010. North Dakota subjected both vendors to detailed questioning regarding the technical feasibility of LDSCR/TESCR on Minnkota [*52] Power's unique flue gas in its cyclone-fired boilers burning North Dakota lignite, particularly in light of the "guarantees" they offered the EPA's consultant. The vendors expressed concern regarding high sodium (double the amount noted in the EPA solicitation), the amount of aerosols impacting the SCR, chemical poisoning, catalyst blinding, the need for extensive pilot testing, the fact that no SCR projects in the United States are undertaken without guarantees, and noted the variability of combusted coal and its impact on SCR performance beyond the average. North Dakota described their investigation and its conclusions in the BACT Determination. See Administrative Record No. 240, p. 3.

The record reveals that North Dakota performed its duties reasonably and with due diligence. The record demonstrates that North Dakota originally found in 2008 that LDSCR/TESCR was technically infeasible, and provided the public the opportunity to comment on that finding. North Dakota reviewed that finding in 2009 in response to the EPA assertions of the availability of vendor guarantees and continued gathering technical information. Once the vendor guarantees were explored, North Dakota maintained [*53] its original position in its April 2010 Draft BACT Determination.