

BEFORE THE ENVIRONMENTAL APPEALS BOARD  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC

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In re Desert Rock Energy Company, LLC )  
PSD Permit Number AZP 04-01 ) PSD Appeal Nos. 08-03, 08-04  
\_\_\_\_\_) )  
\_\_\_\_\_ )

**PETITIONERS' SUPPLEMENTAL BRIEF**

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Ex. 46 - Report of K. Tran: Cumulative SO2 Modeling Analyses of Desert Rock Energy Facility and Other Sources at PSD Class I Areas, (November 9, 2006)

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Ex. 58 - Desert Rock Energy Company, LLC, and The Dine Power Authority v. U.S. Environmental Protection Agency and Stephen L. Johnson, 08-cv-872; Order Denying Motion to Intervene (August 13, 2008) (Docket No. 37)

Ex. 59 - Rebuttal testimony of Judah L. Rose and Exh JLR-1.pdf

Petitioners<sup>1</sup> submit this supplemental brief in accordance with the Board's August 21, 2008 Order.

## INTRODUCTION

The air pollution and other environmental impacts allowed by EPA's PSD permit for the Desert Rock Energy Project ("DREP") pose significant risks of harm to the health and well-being of local communities on the Navajo Reservation and in neighboring states.<sup>2</sup> These communities have participated in the PSD permitting process every step of the way. They have presented numerous reasons why the plant should not be permitted at all. They have submitted extensive comments in an effort to ensure that any permit issued by EPA is informed by all necessary and appropriate analyses to ensure that the permit's terms and conditions protect the health of area residents, the Region's rivers and streams, plant and animal life, magnificent vistas, National Parks, Monuments and Wilderness Areas.

Despite their efforts, EPA issued the permit without conducting a number of analyses required to inform the permit's terms and conditions, and ensure that it contains adequate safeguards. In so doing, EPA has disregarded the Supreme Court's admonition that EPA must base its decisions on scientific information that allows it to make informed judgments based on the applicable standards of the Clean Air Act. See Massachusetts v. EPA, 127 S. Ct. 1438, 1462 (2007).

EPA has also failed to heed the Supreme Court's mandate that EPA apply the Act in a flexible manner to address the most significant public health and environmental challenge of our

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<sup>1</sup> Petitioners are Dine Care, Environmental Defense Fund, Grand Canyon Trust, Natural Resources Defense Council, San Juan Citizens Alliance, Sierra Club, and WildEarth Guardians.

<sup>2</sup> As we discuss below, these communities already suffer disproportionately from adverse effects of air, soil and water pollution attributable to two existing coal plants, associated mining and waste disposal activities, and extensive oil and gas operations.

time—global warming. See Id. at 1462. While the Supreme Court’s ruling and the plain language of the Clean Air act could not be clearer, EPA altogether fails to address carbon dioxide as an “air pollutant” in the DREF permit. EPA justifies this omission based on its failure to take required measures to limit carbon dioxide emissions in the past, and failure to officially acknowledge the adverse impact of global warming, despite overwhelming scientific consensus. EPA fails to assess possible use of Integrated Gasification Combined Cycle (“IGCC”)—a technology that can generate electricity, less pollution, and fewer collateral environmental impacts, while offering a prospect for managing carbon dioxide emissions. EPA unlawfully defers consideration of many significant issues, including environmental justice considerations of particular concern to local Navajo communities, to as yet uncompleted Endangered Species Act consultation and environmental impact statement processes. EPA also fails to conduct analyses of impacts to air quality required to ensure compliance with National Ambient Air Quality Standards and increment consumption limitations. EPA conducts no modeling of PM 2.5 impacts, and relies on outdated and flawed modeling of impacts to ambient ozone levels, despite observed ozone levels showing the area is already at the NAAQS. EPA conducts no meaningful analysis of impacts to visibility and regional haze, which threaten the region’s magnificent vistas and some of the nation’s most cherished National Parks, National Monuments and Wilderness Areas.

EPA’s wholesale failure to ensure that the permit is informed by accurate scientific information adequate to ensure that the permit’s terms and conditions will safeguard the public health, welfare and the environment, violates numerous Clean Air Act requirements. Accordingly, the DREF permit, improperly issued under the duress of a federal lawsuit, must be remanded to the agency with specific instructions to remedy its many defects.

## DISCUSSION

### I. EPA UNLAWFULLY FAILED TO ADDRESS DREF'S CARBON DIOXIDE EMISSIONS.

The United States Supreme Court recently recognized the “enormity of the potential consequences associated with man-made climate change” and that these “harms . . . are serious and well recognized.” Massachusetts v. EPA, 127 S.Ct. 1438, 1455, 1458 (2007). Reviewing the scientific literature over time, the Court showed that the science has become more definitive and the threat more alarming. Id. at 1448-50. As the Nobel Prize winning Intergovernmental Panel on Climate Change (“IPCC”) stated in 2007, “[w]arming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.”<sup>3</sup> Increased concentrations of greenhouse gases in the atmosphere are responsible for this warming. 127 S. Ct. at 1448-50 (citing scientific studies). Power plants emit a tremendous amount of these greenhouse gases, including about 40% of total U.S. carbon dioxide pollution.<sup>4</sup>

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<sup>3</sup> IPCC Fourth Assessment Report, Climate Change 2007: Synthesis Report (unedited version), at 5 (emphasis added) (AR 47.11), Ex. 48..

<sup>4</sup> AR 66, Comment Letter 23, Ex. 5, at 11. Citations to documents or portions of documents included in EPA’s administrative record for this case, available at <http://www.epa.gov/region09/air/permit/desert-rock/administrative.html>, are designated “AR \_\_\_\_.” These documents are identified in the record by a lengthy designation such as “EPA-R-09-OAR-2007-001.” Because all but the final 4-digit string of numbers are the same for each document, we refer to documents by only the final 4 digit string, omitting all zeros that precede the initial number, egs., AR 5, AR 67. We are submitting with this brief a compendium of all of the documents (or portions thereof) from the administrative record cited in the brief. We are also submitting separately a complete set of the Response to Comments (AR 120), and Supplemental Response to Comments (AR 121), citations to which are designated “RTC” and “SRTC.” References to exhibits to our initial Petition for Review, filed August 14, 2008, and this brief are designated “Ex. \_\_\_\_.” Exhibits 1-12.4 were submitted with the Initial Petition, and we are not resubmitting them with this brief. We are submitting a set of all of the remaining exhibits referenced in this brief, starting with “Ex. 14.” References to the Response of EPA Office of Air and Radiation and Region VIII to Briefs of Petitioner and Supporting Amici, filed in In re

In Massachusetts v. EPA, the Supreme Court held that carbon dioxide and other greenhouse gases are “air pollutants” subject to regulation under the Clean Air Act. 127 S. Ct. at 1460. The Court specifically rejected the Environmental Protection Agency’s (“EPA”) argument that Congress did not intend to regulate greenhouse gases through the Act. In doing so, the Court recognized the Clean Air Act as a flexible statute that is designed to accommodate newly realized threats, including global warming. See Id. at 1462.

DREP will emit an estimated 13.7 million tons of carbon dioxide per year for many decades, making it a major contributor of greenhouse gas emissions. In its original comments on the proposed permit submitted during the public comment period, Conservation Petitioners emphasized the need for EPA to address the serious consequences of DREF’s carbon dioxide emissions. AR 66, Comment No. 23, Ex. 5.<sup>5</sup> Following the Supreme Court’s decision in Massachusetts v. EPA and the IPCC’s release of its authoritative Fourth Assessment Report, Conservation Petitioners reiterated these points in supplemental comment letters. AR 57, Comment No. 1011.<sup>6</sup> Conservation Petitioners described the Supreme Court’s decision, which eliminated any doubt concerning whether “carbon dioxide” is a “pollutant” under the Clean Air Act],” laid out key findings of the IPCC and others of the harm attributable to CO2 emissions, and described in detail why the Clean Air Act and EPA Regulations require a BACT analysis for

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Deseret Power Electric Cooperative, PSD Appeal No. 07-03, on or about March 21, 2008, are designated “EPA Deseret Response Br. \_\_\_”

<sup>5</sup> Conservation Petitioners asserted that EPA must establish PSD emission limits for CO2, or, at a minimum, consider the collateral environmental impacts of carbon dioxide emissions and the collateral costs of future carbon dioxide regulation in setting BACT limits for other pollutants. AR 66, Comment No. 23, Ex. 5, at 3-12.

<sup>6</sup> (Conservation Petitioners and Others), Ex. 6, at 1-24; AR 60, Comment No. 1012 (Environmental Defense Fund), Ex. 7, at 6-9.

carbon dioxide.<sup>7</sup> Conservation Petitioners also explained that, regardless of whether carbon dioxide is a pollutant subject to regulation under the Act, EPA must exercise its discretion under Section 165(a)(2) of the Act to consider alternatives to the Project that would eliminate or reduce DREF's carbon dioxide emissions. AR 57, Ex. 6, at 20-24.<sup>8</sup>

Despite these detailed comments, and the overwhelming, undisputed evidence of the serious harm to human health and the environment to which DREF's carbon dioxide emissions will contribute, EPA issued the permit for DREF without any meaningful analysis of, or permit conditions addressing, DREF's carbon dioxide emissions. For the reasons discussed more fully below, EPA's refusal to conduct a BACT analysis and set BACT emissions limitations for carbon dioxide, EPA's failure to consider the collateral environmental impacts of carbon dioxide emissions and collateral costs of future carbon dioxide regulations in setting BACT emission limitations for other pollutants, and the agency's refusal to consider alternatives to the plant are based on conclusions of law that are clearly erroneous. The Board should therefore remand this matter to allow EPA to address these deficiencies.

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<sup>7</sup> AR 57, Comment No. 1011, Ex. 6, at 1-26; AR 69, Comment No. 1012, Ex. 7, at 6-9; AR 123.1, Ex. 12.1.

<sup>8</sup> Conservation Petitioners asserted that EPA should consider a number of specific alternatives, including denying the permit and approving a no-build alternative, requiring specific energy efficiency, conservation or demand-side management activities, development of renewable energy resources, change to less CO<sub>2</sub>intensive fuels (such as natural gas or biomass co-firing), requiring construction of a smaller source, imposing limits on hours of operation, requiring the capture and sequestration of carbon dioxide, or requiring the purchase of CO<sub>2</sub> offsets. Id. at 22.

**1. EPA’S CONCLUSION THAT BACT IS NOT REQUIRED FOR CARBON DIOXIDE BECAUSE IT IS NOT SUBJECT TO REGULATION UNDER THE ACT IS CLEARLY ERRONEOUS.**

The Clean Air Act prohibits the construction of a new major stationary source of air pollutants at the DREF site<sup>9</sup> except in accordance with a prevention of significant deterioration (“PSD”) construction permit issued by EPA.<sup>10</sup> 42 U.S.C. § 7475(a). The plain language of Sections 165(a)(4) and 169 of the Act require EPA to conduct a BACT analysis and include in the PSD permit for DREF BACT emission limitations “for each pollutant subject to regulation [under the Clean Air Act] emitted from or which results from” the facility. EPA concedes, as it must under Massachusetts v. EPA, that carbon dioxide is an air pollutant under the Clean Air Act. SRTC 5. EPA, however, did not conduct a BACT analysis and include in the DREF permit emission limitations for carbon dioxide. EPA asserts that it is not required to do so because carbon dioxide is not “presently subject to a statutory or regulatory provision that requires actual control of emissions of that pollutant,” and, therefore is not “subject to regulation under the Act.” RTC II.B.3.b.i; see SRTC 4, at 11. This determination is clearly erroneous for a number of reasons. It ignores a Delaware Clean Air Act State Implementation Plan (“SIP”) that requires actual control of carbon dioxide emissions. It is based on a clearly erroneous conclusion that pollutants “subject to regulation” include only pollutants for which Congress or EPA have required actual control of emissions, and not pollutants subject to other types of regulation such as the monitoring and reporting requirements. It is also based on a clearly erroneous conclusion

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<sup>9</sup> The Act’s PSD requirements apply to major sources of PSD pollutants located in areas that have been designated as in attainment of national ambient air quality standards. 42 U.S.C. § 7471. There is no dispute that DREF is a new major source of air pollutants, and that the PSD requirements apply. See AR 46 (Ambient Air Quality Impact Report), at 1, 4-6.

<sup>10</sup> EPA Region 9 is the permitting agency because DREF is located on the Navajo Reservation and the Navajo do not have an EPA approved Tribal PSD Program. See AR 12 (Revised PSD Permit Application), at 1-1.

that “pollutants subject to regulation” include only pollutants already subject to EPA-issued regulations that require emission reductions, and not pollutants for which EPA is required to establish emission controls but has not yet done so.

As discussed below, carbon dioxide is subject to “regulation under the Act” under the Delaware SIP, as well as under CAA monitoring and reporting requirements established by Section 821 of the 1990 Clean Air Act Amendments and separately established by Congress’ 2008 appropriations act,<sup>11</sup> and by Sections 111 and 202 of the Clean Air Act.

**A. Carbon Dioxide is Regulated Under a SIP Requiring Actual Control of CO<sub>2</sub> Emissions Adopted by Delaware and Approved by EPA Under the Clean Air Act.**

EPA’s conclusion that there is no existing “statutory or regulatory provision that requires actual control of emissions” of carbon dioxide is clearly erroneous. RTC II.B.3.b.i; SRTC 4, at 11). It overlooks a SIP provision adopted by the State of Delaware and approved by EPA. On April 29, 2008, EPA Region 3 approved a Clean Air Act State Implementation Plan revision submitted by the State of Delaware that requires actual control of emissions of carbon dioxide from generators, effective May 29, 2008. AR 123.3, 12.3, 73 Fed. Reg. 23101 (April 29, 2008). The SIP revision is set forth in Delaware Department of Natural Resources and Environmental Control, Division of Air and Waste Management, Air Quality Management Section, Regulation No. 1144. AR 123.2, Ex. 12.2. The SIP revision imposes carbon dioxide emission limitations on new and existing distributed generators. *Id.* § 3.0. It sets the following “emission standards”

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<sup>11</sup> See <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>.

for carbon dioxide:

Existing Distributed Generators	1,900 lbs/MWh
New Distributed Generators	1,900 lbs/MWh (if installed between effective date and 1/1/2012)
	1,650 lbs/MWh (if installed on or after 1/1/2012)
New Distributed Generators that use Waste, landfill or digester gases	1,900 lbs/MWh

Id. § 3.2.1 – 3.2.2. Among other things, the Regulation also prohibits operation of distributed generators for certain purposes on days when the Ground Level Pollution Forecast for Ozone is Code Red or Code Orange, requires verification by the owner every five years that distributed generators meet the Regulation’s carbon dioxide emission limitations, provides for demonstration of compliance through testing using referenced test methods, and imposes record-keeping and reporting requirements. Id. §§ 4.0, 6.0, 7.0.

Delaware’s SIP Revision, Regulation No. 1144, unquestionably is regulation of carbon dioxide under the Clean Air Act. The SIP revision was adopted and submitted to EPA by the State of Delaware under the Clean Air Act, was approved by EPA under the Clean Air Act, and is enforceable under the Clean Air Act.

Under the Clean Air Act’s cooperative federalism approach, the Clean Air Act imposes requirements on both the states and the federal government. See National Parks Conservation Ass’n, Inc., v. Tennessee Valley Authority, 480 F.3d 410, 412 (2004); see also Alaska Department of Environmental Protection v. EPA, 540 U.S. 461, 470 (2004). Under Section 109(b) of the Act, EPA must establish national ambient air quality standards (“NAAQS”) at levels that will protect the public health and welfare. 42 U.S.C. § 7409. Alaska Department of Environmental Protection v. EPA, 540 U.S. at 469. Under Section 110 of the Act, each state

must, after notice and public hearings, adopt and submit to EPA for approval plans that provide for the implementation, maintenance, and enforcement of the NAAQS. 42 U.S.C. § 110(a)(1); Alaska Department of Environmental Protection v. EPA, 540 U.S. at 470. “To gain EPA approval, a ‘state implementation plan’ (SIP) must “include enforceable emission limitations and other control, measures, means, or techniques . . . as may be necessary to meet the applicable [CAA] requirements.” Id. at 470 (quoting 42 U.S.C. § 7410(a)(2)(A)). A SIP “must include certain measures Congress specified ‘to assure that national ambient air quality standards are achieved.’” Id. (quoting 42 U.S.C. § 7410(a)(2)(C)). States must revise SIPs from time to time. See 42 U.S.C. § 7410(a)(2)(H). EPA must approve a state’s SIP Revision if it meets the substantive requirements of Section 110(a)(2) of the Act, 42 U.S.C. § 7410(a)(2). General Motors Corp. v. United States, 496 U.S. 530, 537 (1990).

EPA’s approval of a SIP Revision made its control requirements and obligations part of an “applicable implementation plan” under the Clean Air Act. See 42 U.S.C. § 7602(q). The requirements and prohibitions of an “applicable implementation plan” are enforceable by EPA under a number of provisions of the Clean Air Act. See, egs., 42 U.S.C. § 7413(a)(1), (b) (authorizing EPA to issue an order to require compliance or an administrative penalty order, or to file a civil action for penalties and other relief, including injunctive relief); § 7413(a)(2) (authorizing EPA to enforce requirements and prohibitions of an “applicable implementation plan” if the state fails to do so); General Motors Corp. v. United States, 496 U.S. 530, 540 (1990) (“the language of the Clean Air Act plainly states that EPA may bring an action for penalties or injunctive relief whenever a person is in violation of any requirement of an applicable implementation plan. § 113(b)(2), 42 U.S.C. § 7413(b)(2) (1982 ed.).” In addition states and

citizens may file a civil action under the CAA to enforce an “emission standard or limitation” of an applicable implementation plan. 42 U.S.C. § 7604(a)(1), (f)(3).

On November 1, 2007, pursuant to CAA § 110, Delaware submitted the SIP Revision, Regulation 1144, to EPA for approval. AR 123.4, Ex. 12.4, 73 Fed. Reg. 11845, 11846 (March 5, 2008). The submission satisfied a requirement under CAA § 110(a) that the state submit SIPs and SIP revisions to EPA for approval. On March 5, 2008, EPA published in the Federal Register notice of its proposal to approve the SIP revision and of the opportunity for public comment on the proposal. AR 123.4, Ex. 12.4, 73 Fed. Reg. 11845. On April 29, 2008, EPA published in the Federal Register notice of its Final Rule approving the SIP revision, effective May 29, 2008. AR 123.3, Ex. 12.3, 73 Fed. Reg. 23101. The proposed and final rule state that EPA’s approval is “under” and “in accordance with the Clean Air Act.” AR 123.4, Ex. 12.4, 73 Fed. Reg. at 11845; AR 123.3, Ex. 12.3, 73 Fed. Reg. at 23101. EPA approved the SIP Revision as meeting the requirements of the Clean Air Act. See AR 123.3, Ex. 12.3, 73 Fed. Reg. at 23102.

There can be no serious dispute that the “Regulation,” which places specific emission limitations on carbon dioxide, was adopted and submitted by Delaware to EPA under Section 110 of the Clean Air Act, and was approved by EPA under Section 110 of the Clean Air Act based on EPA’s determination that it meets the requirements of the Clean Air Act, constitutes regulation of carbon dioxide under the Clean Air Act. The SIP Revision is part of an “applicable implementation plan” that may be enforced by the state, EPA and citizens under the Clean Air Act.

Despite the fact that EPA Region 3 learned of Delaware’s proposal to revise its SIP no later than December 1, 2007, and approved the SIP on April 29, 2008, effective May 29, 2008,

EPA concluded in its July 31, 2008 Response to Comments that on that date there was no “statutory or regulatory provision that requires actual control of emissions” of carbon dioxide under the Clean Air Act. RTC II.B.3.b.i; SRTC 4, at 11).<sup>12</sup>

EPA purports to incorporate by reference into its response to comments response briefs it filed with the Board in the PSD permit appeals In re Christian County Generation, LLC, PSD Appeal No. 07-01 and In re Deseret Power Electric Cooperative, PSD Appeal No. 07-03. AR 121, Response to Late-Filed Comments 5, at 8.<sup>13</sup> In its Response to the Briefs of Petitioner and Supporting Amici filed in Deseret on March 21, 2008 (P. 53) (“EPA Deseret Response Br.”), EPA asserts, in responding to a comment concerning carbon dioxide monitoring and reporting provisions in EPA approved SIPs, that such SIP provisions would at most make carbon dioxide regulated under the Act only in the state subject to the approved SIP. EPA asserts that under the CAA’s “cooperative federalism” scheme, such SIP provisions represent a state’s choice to “adopt air quality standards more stringent than the NAAQS or other federal law provisions,” and cannot have “nationwide implications.” EPA Deseret Response Br. 53 n. 21. The plain language of the “subject to regulation under the [Clean Air Act]” standard contains no limitation based on either geography or permitting agency—be it EPA, a state, or an Indian Tribe. Where, as here, EPA has specifically approved the regulation of CO<sub>2</sub> under the CAA (in this case through notice and comment rulemaking), whether at a state, regional, or national level, CO<sub>2</sub> must

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<sup>12</sup> EPA reached this conclusion despite its obvious awareness of the SIP approval (as EPA itself approved the SIP revision). Moreover, Petitioner Environmental Defense Fund (“EDF”) submitted comments to Region 9 observing that carbon dioxide is “subject to regulation” through the Delaware SIP Revision, shortly before EPA issued its response to comments on July 31, 2008. AR 123.1, Ex. 12.1). EDF enclosed the SIP Revision and EPA’s proposed and final rules approving the SIP Revision with its comment letter. (AR 123.2 - .4, Exs. 12.2 – 12.4). EPA included these documents in the Administrative Record but made no effort to address this change in applicable law before issuing its response to comments.

<sup>13</sup> This is wholly inappropriate given EPA’s failure to include the briefs in the Administrative Record for this case and post them on its web page with the Administrative Record.

be understood as “subject to regulation” under the plain language of the Act.<sup>14</sup> A contrary determination would contravene not just the plain language of the Act, but the technology forcing purpose of the BACT requirement as well, and would be inconsistent with the manner in which EPA has long administered the PSD program as a nationwide program<sup>15</sup>.

In sum, carbon dioxide is “subject to regulation under the CAA,” by virtue of the Delaware SIP Revision, Regulation 1144, even under the unlawfully narrow interpretation of that phrase that EPA advances in its Response to Comments. The SIP Revision renders unlawful EPA’s refusal to conduct a BACT analysis and set BACT emission limitations in the DREF permit. The Board should remand this matter for EPA to conduct a BACT analysis and set BACT emission limitations for carbon dioxide.

**B. Carbon Dioxide is Regulated Under Section 821 of the Clean Air Act Amendments of 1990.**

In addition to being regulated under the Delaware SIP, carbon dioxide is regulated under Section 821 of the Clean Air Act Amendments of 1990. Section 821 requires EPA to “promulgate regulations” requiring major sources, including coal-fired power plants, to monitor carbon dioxide emissions and report their monitoring data to EPA. Section 821(a) provides:

The Administrator of the Environmental Protection Agency shall promulgate regulations within 18 months after the enactment of the Clean Air Act Amendments of 1990 to require that all affected sources subject to Title V of the Clean Air Act shall also monitor carbon dioxide emissions according to the same timetable as in Sections 511(b) and (c). The regulations shall require that such data be reported to the Administrator. The provisions of Section 511(e) of title V of the Clean Air Act shall apply for purposes

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<sup>14</sup> Accordingly, BACT is required for CO<sub>2</sub> at least for any source permitted after the May 29, 2008 effective date of EPA’s rule.

<sup>15</sup> For example, in determining what is the best available control technology, EPA looks to a nationwide database, and, at Step 1 of the BACT determination considers available technology in use anywhere. Ex. 13, NSR Manual B.5.

of this Section in the same manner and to the same extent as such provision applies to the monitoring and data referred to in Section 511.<sup>16</sup>

42 U.S.C. § 7651k note; Pub.L. 101-549; 104 Stat. 2699 (emphasis added). In 1993, EPA promulgated the regulations required by Section 821(a). The regulations require sources to monitor CO<sub>2</sub> emissions (40 C.F.R. §§ 75.1(b), 75.10(a)(3)), prepare and maintain monitoring plans (*id.* § 75.33), maintain records (*id.* § 75.57), and report monitoring data to EPA (*id.* § 75.60-64). The regulations prohibit operation in violation of these requirements and provide that a violation of any Part 75 requirement is a violation of the Act. *Id.* § 75.5. Not only do the regulations require that polluting facilities “measure . . . CO<sub>2</sub> emissions for each affected unit,” *id.* § 75.10(a), they also prohibit operation of such units “so as to discharge or allow to be discharged, emissions of . . . CO<sub>2</sub> to the atmosphere without accounting for all such emissions . . . .” *Id.* § 75.5(d).

**i. EPA’s Conclusion that “Regulation” Means Control of Emissions is Clearly Erroneous.**

EPA committed a number of errors in concluding that the monitoring and reporting requirements of Section 821 do not make CO<sub>2</sub> subject to regulation under the Clean Air Act. First, EPA erred in interpreting the term “regulation” to include only statutes or regulations that require “actual control of emissions.” EPA asserts that carbon dioxide emissions are not regulated under Section 821, because Section 821 requires only monitoring and reporting of carbon dioxide emissions, and neither Section 821 nor EPA’s Part 75 implementing regulations “impose any limitations on carbon dioxide emissions or require sources to install carbon dioxide emission controls.” AR 121 (Responses to Late-Filed Public Comments) 4, at 11; AR 120 (Responses to Public Comments) II.B.3.b.i, at 26 (pollutants “subject to regulation” refers to

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<sup>16</sup> According to the Reporter’s notes, these reference to Title V are meant to refer to Title IV, and the references to Section 511 are meant to refer to Section 412.

pollutants that are “presently subject to a statutory or regulatory provision that requires actual control of emissions of that pollutant.” AR 121 (Responses to Late-Filed Public Comments) 4, at 11 (pollutants “subject to regulation” covers “pollutants that are “actually subject to controls or limitations under the Clean Air Act or EPA implementing regulations”). This conclusion of law is clearly erroneous.

**a. The Board Should Conduct an Independent Analysis Rather than Defer to EPA’s Interpretation.**

Region 9 and OAR’s interpretations of statutes, regulations and policy statements are not entitled to deference in this case. See In re Lazarus, Inc., 7 E.A.D. 318, 351 n.55 (EAB 1997). The Board is the final decisionmaker for EPA on cases within the Board’s jurisdiction. 7 E.A.D. at 351 n.55. The Board therefore conducts its own “independent review and analysis” in such cases. In re Ocean City Asbestos Removal, Inc./Ocean State Building Wrecking and Asbestos Removal Co., Inc., 7 E.A.D. 522, 543 n.22 (1998) (quoting In re Mobil Oil Corp., 5 E.A.D. 490, 508-09 & n.30 (1994)). The Board exercises “independent judgment” to “evaluate the competing views of the Agency program and Regional offices against those of citizens, advocacy groups, industry representatives, other federal agencies and State and local governments.” In re Genesee Power Station Limited Partnership, U.S. EPA, PSD Appeal Nos. 93-1 through 93-7, 1993 WL473846 (EAB Oct. 22, 1993) (order on motion for clarification). The Board will remand a PSD permit to the issuing entity if it is based on an erroneous interpretation of the Clean Air Act. See Hadson Power 14-Buena Vista, 4 E.A.D. (EAB 1992).

**b. The Unambiguous Plain Meaning of a Statute is Conclusive and Precludes Consideration of the Agency Interpretation.**

In interpreting a statute, the Board begins by reviewing the plain meaning of the statutory language.” In re Ocean City Asbestos Removal, Inc./Ocean State Building Wrecking and Asbestos Removal Co., Inc., 7 E.A.D. at 542. The Board begins with the statutory language because it “must give effect to the unambiguously expressed intent of Congress.” Id. at 542 (quoting Chevron U.S.A., Inc. v. Natural Resources Defense Council, 467 U.S. 837, 843 (1984) (footnote omitted). “If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.” Chevron U.S.A. v. Natural Resource Defense Council, 467 U.S. 837, 842-843 (1984).

“The meaning—or ambiguity—of certain words or phrases may only become evident when placed in context.” U.S. Army, Fort Wainwright Central Heating and Power Plant, 11 E.A.D. 126, 141 (2003) (quoting Food & Drug Admin. v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 132 (2000)). For this reason, “[i]t is a “fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.” Id. (quoting 529 U.S. at 132); Davis v. Michigan Dep’t of Treasury, 489 U.S. 803, 809 (1989). Thus, in ascertaining the plain meaning of a statute, the Board “must look to the particular statutory language at issue, as well as the language and design of the statute as a whole.” Id. (determining plain meaning of and finding unambiguous CAA § 113(e)(1) by reading that provision collectively with CAA § 113(d)(1) and 302(e)) (quoting K Mart Corp. v. Cartier, Inc., 486 U.S. 281, 291 (1988)).

The plain meaning of a statute “should be conclusive, except in the rare cases, in which the literal application of a statute will produce a result demonstrably at odds with the intention of its drafters.” In re U.S. Army, Fort Wainwright Central Heating and Power Plant, 11 E.A.D. 126, 141 (EAB 2003) (quoting United States v. Ron Pair Enters., Inc., 489 U.S. 235, 242 (1989)).

Thus, it is also appropriate for the Board to also examine the “statutory purposes” of the statute it is construing. See In re Mobil Oil Corp., 5 E.A.D. 490, 1194 WL 544260, \* 12 (EAB 2004).

**c. The Unambiguous Plain Meaning of “Regulation” is Not Limited to Control of Emissions.**

The plain mean meaning of “pollutant subject to regulation under the [Act]” is not limited to pollutants for which Congress or EPA has required control of emissions, as EPA asserts, but rather, includes monitoring and reporting requirements. Webster’s defines “regulation,” as:

1: the act of regulating: the state of being regulated

2 a: an authoritative rule dealing with details and procedure <safety regulation> b: a rule or order issued by an executive authority or regulatory agency and having the force of law . . . .

Ex.14, Merriam Webster Online Dictionary (2008). Webster’s defines “regulate”<sup>17</sup> as:

1a: to govern or direct according to rule **b** (1) to bring under the control of law or constituted authority (2): to make regulations for or concerning <regulate the industries of a country>

2:a: to bring order, method or uniformity to <regulate one’s habits>

. . . .

Id. EPA points out that Black’s Law Dictionary defines regulation as “the act or process of controlling by rule or restriction.” EPA Deseret Response Br. 13. EPA however neglects to point out the example Black’s provides for this definition--- “the federal regulation of the airline industry”-- or an alternative meaning stated by Black’s. Ex. 15. The Black’s definition in fact states that regulation means:

1. The act or process of controlling by rule or restriction <the federal regulation of the airline industry>

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<sup>17</sup> This definition lists both “regulated” and “regulating,” which are referred to in the definition of regulation, as “inflected forms.”

...  
3. A rule or order, having legal force, usu. issued by an administrative agency  
<Treasury regulations explain and interpret the Internal Revenue Code> . . . .

Id. Thus both the most common meaning and the second most common potentially applicable meanings listed by Webster’s and Black’s are very similar. The most common meanings both define “regulation” to include government control over an activity in a broad sense-- such as “the federal regulation of the airline industry.” The second most common potentially applicable meaning listed by both Webster’s and Black’s is a rule or order having legal force. The monitoring and reporting requirements of Section 821(a) and EPA’s implementing regulations are “regulation” under either of these plain meanings of the term. They impose significant, mandatory requirements on sources to monitor carbon dioxide emissions, maintain records and report emissions to EPA. Sources that fail to comply are subject to enforcement and civil penalties. These requirements are regulation under the plain meaning of the term.

To the extent that the plain meaning of “regulation” is not conclusive of the plain meaning of § 165(a)(4) and 169(3), the context in which Congress used “regulation” is. Most telling is Congress’ use of two defined terms to refer to actual controls on emissions-- “emissions limitation” and “emissions standard.” Congress defined “emission limitation” and “emission standard” as:

[A] requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter.

42 U.S.C. §7602(k). Congress used these terms throughout the Act, including in Subsection 165(a)(3), which immediately precedes Subsection 165(a)(4). See, egs., 42 U.S.C. §

7475(a)(3)(“emissions from . . . such facility will not cause or contribute to air pollution in excess of . . . (C) any other applicable emission standard or standard of performance under this chapter”); 42 U.S.C. § 7651d(a)(1) (“Each utility unit subject to an annual sulfur dioxide tonnage emission limitation under this Section . . .”); 42 U.S.C. § 7412(f)(5) (“The Administrator shall not be required to conduct any review under this subsection or promulgate emission limitations under this subsection . . .”); 42 U.S.C. § 7521(f)(2) (“This percentage reduction shall be determined by comparing any proposed high altitude emission standards to high altitude emissions . . .”); 42 U.S.C. § 7617(a)(7)(“any aircraft emission standard under Section 7571 of this title”). Congress’ use of “subject to regulation under the Act,” rather than “subject to an emissions limitation” or “subject to an emissions standard” in Sections 165(a)(4) and 169(3) demonstrates that Congress did not intend to limit BACT to pollutants for which “actual controls on emissions” exist under other statutory or regulatory provisions. See In re Mobil Oil Corp., 1994 W.L. 544260, at \* 10 (“when ‘Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.’”) (quoting Chicago v. Environmental Defense Fund, 511 U.S. 328, 338 (1994); Russello v. United States, 464 U.S. 16, 23 (1983)). If Congress in Section 165(a)(4) meant to limit BACT to pollutants subject to actual control of emissions, it could have repeated the words from Section 165(a)(3) and required BACT for any pollutant subject to an “emission standard or limitation of performance under this chapter.” 42 U.S.C. § 7475(a)(3). Congress did not do so. Nor did Congress use any other words to limit the meaning of “regulation.” Instead, it required BACT for each pollutant “subject to regulation.”

Neither EPA’s Response to Comments nor the briefs it purports to incorporate by reference point to any language in the Clean Air Act that supports the narrow interpretation of “subject to regulation under the Act” that EPA advocates.<sup>18</sup>

In its Response Brief in *Deseret*, EPA asserts that it has interpreted “subject to regulation” more broadly than “emission standard” or “emission limitation,” by interpreting “subject to regulation” to apply to ozone depleting substances (“ODS”). EPA *Deseret* Response Br. 22. EPA states that ODS are “controlled through production and import restrictions” that are not within the Act’s definition of “emission limitation.” *Id.* (stating that those restrictions do not limit the “quantity, rate, or concentration of emissions on a continuous basis” (citing 42 U.S.C. § 7602(k)). Even assuming that such restrictions are not within the definition of “emission limitation,” EPA does not point to any language in the Act suggesting that Congress intended such a narrow reading of “subject to regulation” – i.e. to identify only requirements that go beyond “emission limitation[s]” but only so far as to encompass requirements that are not “emission limitation[s]” but nevertheless result in less pollution. Moreover, the Act’s restrictions on production and import of ODS cannot possibly be what Congress had in mind, as these restrictions were not part of the Act when Congress established the “subject to regulation” standard in 1977. They were added by the 1990 amendments.

EPA also asserts that the “subject to regulation under the Clean Air” standard of Section 165(a)(4) and 169(3) must be read in the context of other provisions of the Clean Air Act that

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<sup>18</sup> In its *Deseret* Response Brief, after stating that the Board must look at context and legislative history to determine whether Congress’ clear intent forecloses consideration of agency interpretation, EPA immediately launches into a lengthy discussion of why it believes its interpretation is reasonable. EPA *Deseret* Response Br. 13-14. EPA’s Response to Comments in this case takes a similar approach. SRTC 5, at 8 (stating that “[t]he response below summarizes the Agency’s recent discussion of its historic interpretation of the statute and regulations.”). EPA largely ignores the plain language of the Act, which provides no support even for consideration of the agency’s interpretation.

authorize EPA to establish “emission limitations or controls on emissions” only after “either the legislature or executive branches [sic] have made a judgment that a pollutant in fact presents a danger to public health or welfare.” EPA Deseret Response Br. 20-21. EPA argues that the PSD program applies to pollutants only “[i]f the Administrator determines under section 202 or other provisions that potential effects on public health or welfare provide a basis to set standards for an additional pollutant not previously subject to controls.” EPA Deseret Response Br. 21. This argument however is not supported by the language, structure, or statutory purposes of the Act. As stated above, Congress required BACT for “any pollutant subject to regulation” under any provision of the Act- not limited to provisions requiring control of emissions after EPA makes an endangerment finding.

The only language of the Act that EPA specifically relies on to support its assertion that Congress intended for it to make an endangerment finding for a pollutant before requiring BACT is Section 169(3). EPA asserts that Congress explicitly tied the BACT requirements to the Agency’s authority to establish emission limitations under Sections 111 and 112 of the Act.<sup>19</sup> According to EPA “[t]his linkage indicates that Congress expected BACT to apply to pollutants controlled under these programs.” *Id.* There is no question that EPA must establish BACT for pollutants for which EPA has established NSPSs under Section 111. However, no language anywhere in the Clean Air Act limits BACT to pollutants for which EPA has established NSPSs as EPA suggests. Indeed, the plain language of Section 169(3), on which EPA relies, is contrary to EPA’s position. The first sentence of Section 169(3) provides a definition of BACT to be applied broadly to “each pollutant subject to regulation under [the Act].” 42 U.S.C. § 7479(3).

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<sup>19</sup> EPA notes that Congress subsequently excluded Section 112 from the PSD program (“EPA Deseret Response Brief 14 n.4), so it appears EPA’s current argument is only that BACT limits are tied to the establishment of NSPS under Section 111.

The second sentence of Section 169(3), on which EPA relies, states: “In no event shall application of ‘best available control technology’ result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard established pursuant to section 7411 or 7412 of this title.” (emphasis added). However, this section does nothing more than prevent EPA from establishing BACT limits for pollutants regulated under sections 111 or 112 at levels that would violate standards established under those independent statutory provisions. It says nothing at all about the general scope of BACT.

Furthermore, requiring EPA to make an endangerment finding before setting BACT would directly contravene one of Congress’ stated statutory purposes in requiring the PSD program, of which the BACT requirement is an integral component. In Section 160 of the Act, Congress declared a purpose to “protect the public health and welfare from any actual *or potential* adverse effect which in the Administrator’s judgment may reasonably be anticipate[d] to occur from air pollution . . . notwithstanding attainment and maintenance of all national ambient air quality standards.” 42 U.S.C. § 7470. This is a lower threshold than the endangerment standard--a judgment by the Administrator that emissions “cause[ ] or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger the public health or welfare,” required for action under Sections 108, 111 and 202. 42 U.S.C. § 7408(a)(1)(A); 42 U.S.C. § 7521(a)(1); see also 42 U.S.C. § 7411(b)(1).<sup>20</sup> Requiring an endangerment

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<sup>20</sup> In fact, in discussing the difference between PSD and other CAA regulatory programs, EPA has stated:

The PSD provisions of the Act provide a very different focus and standard for regulation. For example, the PSD program addresses all major sources and is designed "to protect public health and welfare from any actual or potential adverse effect" from any air pollutant (section 160(1)).

Second, NSR possesses an inherent speed and flexibility in its ability to protect public health and welfare that those other programs lack. The NSR programs provide timely and focused responses to health and welfare issues arising from specific sources. These

determination before EPA may set BACT would therefore contravene a statutory purpose. Thus it is not surprising that in Alabama Power Co. v. Costle, the D.C. Circuit closely examined the structure of the PSD program and recognized that, unlike various other provisions of the Act, BACT can apply even to pollutants “determined not to present substantial public health or welfare concerns.” 636 F.2d 323, 370 n.134 (D.C. Cir. 1979). As a result, the Court agreed with EPA that BACT applies “immediately to each type of pollutant regulated for any purpose under any provision of the Act. . . .” *Id.* at 403.

In contrast, requiring BACT for “each pollutant subject to regulation under the Act,” including those that the Administrator has not determined meet the endangerment standard is not only consistent with but furthers the statutory purpose of the PSD program to protect the public health and welfare from any “potential adverse effect” not just those that are anticipated to “endanger” the public health or welfare. The “case-by-case” consideration of “energy, environmental, and economic impacts and other costs” required in the BACT analysis provides a mechanism for implementing this purpose. 42 U.S.C. § 7479(3). The Act provides for consideration of these costs “in accordance with regulations promulgated by the Administrator,” enabling the Administrator to guide the analysis of any potential adverse effect in the case of any given pollutant. 42 U.S.C. § 7475(a)(2). Moreover, section 165 provides “an opportunity for . . . representatives of the Administrator to appear and submit written or oral presentations on the air quality impact of such source, alternatives thereto, control technology requirements, and other appropriate considerations,” allowing the Administrator to exercise his judgment by evaluating potential adverse effects during the BACT analysis for any particular emission source. *Id.* It

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responses complement the type of long-range and general studies performed pursuant to sections 111 and 112. The NSR programs also address all pollutants from each source in every source category, while the NSPS and NESHAP programs do not. 54 Fed. Reg. 27286, 27298 (June 28, 1989).

also furthers the stated purpose of the Act as a whole to “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population”. CAA § 101(b)(1), 42 U.S.C. § 7401(b)(1). In sum, the plain meaning of “subject to regulation under the Act,” read in light of Congress’ determination not to limit BACT to pollutants for which EPA has established emission limitations or standards, and the language and context of the Act as a whole, indicates that Congress clearly and unambiguously used “regulation” in Sections 164(a)(4) and 169(3) to refer to any regulation under any provision of the Act, and did not limit BACT to pollutants for which Congress or EPA have required actual control of emissions<sup>21</sup> The plain meaning is therefore conclusive.

**d. Legislative History Does Not Support an Interpretation of “Regulation” Contrary to its Plain Meaning.**

Because the plain meaning of the statute is conclusive here, there is no need for the Board to resort to review of legislative history. See In re U.S. Army, Fort Wainwright Central Heating and Power Plant, 11 E.A.D. at 142 & n. 26 (citing Darby v. Cisneros, 509 U.S. 137, 147 (1993)). In any event, EPA points to nothing in the legislative history that supports a different result. As stated above, the operative provisions requiring BACT are CAA §§ 165(a)(4) and 169(3). EPA does not cite to any legislative history of these provisions, enacted by Congress in 1977, suggesting that BACT should be required only where another provision of the Act requires actual control of pollution. Because Sections §§ 165(a)(4) and 169(3) are the operative provisions requiring BACT, it is not surprising that nothing in either the text or legislative history of 111, 202 or other provisions which unquestionably trigger BACT says anything about whether BACT

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<sup>21</sup> EPA’s claim that “Congress provided no indication that it intended [§821] to supplant EPA’s discretion to determine which pollutants to regulate under the Act,” EPA Deseret Response Brief 17, ignores the fact that EPA has no such discretion when Congress orders EPA to regulate a pollutant, as it did in §821.

should apply after a pollutant becomes subject to regulation under those provisions. The legislative history of Section 821 has no bearing on what Congress meant by “regulation” in Sections 165 and 169.

The only legislative history relied on by EPA is statements of two Congressmen stating an intent to gather information in enacting Section 821. EPA Deseret Response Br. 17-18. Congressman Cooper stated that the amendment (Section 821(a)) “would not force any reductions right now.” However, limiting future emission increases from new and modified sources by imposing BACT emission limitations is not contrary to an intent not to force “reductions” in emissions.<sup>22</sup> Further, requiring a BACT analysis is entirely consistent with the Congressmen’s stated desire for data collection and study. In Massachusetts v. EPA, the Supreme Court specifically rejected EPA’s assertion that regulation of carbon dioxide under Section 202 of the Act was incompatible with Congressional efforts to require research on climate change. 127 S.Ct. at 1460-61 (“And unlike EPA, we have no difficulty reconciling Congress’ various efforts to promote . . . research to better understand climate change with the agency’s pre-existing mandate to regulate ‘any air pollutant’ that may endanger the public welfare.”)(footnote and citation omitted). Unlike section 202, which requires EPA to set generally applicable emission limitations, a BACT analysis is inherently flexible and requires a case-by case determination that does not mandate any particular emission limitation. Section 169(3) of the CAA requires EPA, in conducting a BACT analysis, to consider “energy, environmental, and economic impacts and other costs” in evaluating whether emission limitations can be set based on available control technologies. Conducting such analysis is entirely consistent with

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<sup>22</sup> In general, PSD is not in fact an emissions reductions program like section 112, for example, which specifically seeks to achieve significant, broad-based, overall reductions in levels of hazardous air pollutants nationwide.

Congressionally mandated data collection and evaluation efforts, as well as with future establishment of generally applicable emission limitations based on such data evaluation and collection efforts. The emissions limitations established through case-specific BACT evaluations can evolve as new information is developed. In fact, BACT analyses might generate useful information about the costs of achieving carbon reductions, the technologies available, the collateral energy implications, and the environmental and other benefits of reduced carbon output, that would serve as an important supplement to other information gathering efforts. CO<sub>2</sub> BACT review could also help identify an appropriate trajectory to eventually establish uniform emissions limits or performance requirements for CO<sub>2</sub> under other provisions of the Act. In sum, even if the Board determines that the legislative history of Section 821(a) is relevant to its interpretation of Sections 165(a)(4) and 169(3), the legislative history does not support an interpretation contrary to the statute's plain meaning described above.

Congress has clearly and unambiguously expressed its intent that “subject to regulation” encompasses any type of requirements and is not limited to provisions that require actual control of emissions.

**e. EPA’s Regulations, Regulation Preambles and Memoranda Do Not Support an Interpretation of “Regulation” Contrary to its Plain Meaning.**

Because the plain meaning of the statute is clear and unambiguous, EPA’s current and past interpretations are not relevant to the Board’s consideration. If the Board elects to consider EPA’s current and past interpretations, the Board is not bound by and should not defer to those interpretations. The interpretations do not support a contrary interpretation that is lawful, reasonable, consistent or deserving of consideration.

**i. EPA's Current Regulation and its History.**

EPA's 2002 rule sets forth the Agency's current interpretation of the BACT mandate of Sections 165 (a)(4) and 169(3).<sup>23</sup> In the rule, EPA defines the term "regulated NSR pollutant," and states that BACT is required for "each regulated NSR pollutant that [the source] would have the potential to emit in significant amounts." 40 C.F.R. §§ 52.21(b)(50) (definition of "regulated NSR pollutant"); 52.21(j)(2) (requirement for new stationary sources); 52.21(j)(3) (requirement for major modifications). The Rule states:

(50) *Regulated NSR pollutant*, for purposes of this section, means the following:

(i) Any pollutant for which a national ambient air quality standard has been promulgated and any constituents or precursors for such pollutants identified by the Administrator (e.g., volatile organic compounds are precursors for ozone);

(ii) Any pollutant that is subject to any standard promulgated under section 111 of the Act;

(iii) Any Class I or Class II substance subject to a standard promulgated under or established by title VI of the Act; or

(iv) Any pollutant that otherwise is subject to regulation under the Act; except that any or all hazardous air pollutants either listed in section 112 of the Act or added to the list pursuant to section 112(b)(2) of the Act, which have not been delisted pursuant to section 112(b)(3) of the Act, are not regulated NSR pollutants unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the Act.

The Board should not accord weight to the regulation or EPA's interpretation of it in conducting its independent analysis of the meaning of the "subject to regulation" standard because the regulation simply parrots the statutory language, and was not adopted by EPA following public notice and comment.

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<sup>23</sup> As stated above, the Board, as EPA's final decisionmaker, should not defer to EPA's interpretation of the statute. Thus this discussion concerning the extent to which court's defer to an agency decision should guide the Board, to the extent it wishes to evaluate EPA's interpretation, in according weight to various interpretations offered by EPA.

[T]he existence of a parroting regulation does not change the fact that the question here is . . . the meaning of the statute. An agency does not acquire special authority to interpret its own words when, instead of using its expertise and experience to formulate a regulation, it has elected merely to paraphrase the statutory language.”

*Gonzales v. Oregon*, 546 U.S. 243, 257 (2006).

The regulation, inserted into the final rule after the comment period had closed, parrots the language of the statute, stating that BACT is required for “[a]ny pollutant that otherwise is subject to regulation under the Act.” 40 C.F.R. § 52.21(b)(50)(iv).<sup>24</sup> EPA’s current PSD regulations also parrot this statutory language in their definition of BACT. The regulations state:

(12) *Best available control technology* means an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Act which would be emitted from the proposed major stationary source or major modification . . . .

40 C.F.R. § 52.21(b)(12).

EPA did not include its definition of “regulated NSR pollutant” in the proposed rule for which it provided notice and an opportunity for public comment in 1996. See 61 FR 38250 (July 23, 1996). The propose rule did propose did propose to change 40 CFR § 52.21 to implement an exemption of hazardous air pollutants from BACT mandated by Congress in the 1990 Clean Air Act Amendments. See 61 Fed. Reg. at 38309-38311 (preamble). Specifically, EPA proposed to

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<sup>24</sup> In the Deseret appeal, EPA wrongly suggests that Sierra Club is making an untimely appeal of the agency’s 2002 definition of a “regulated NSR pollutant”. Region VIII’s Response to Petition for Review 8. Sierra Club does not challenge EPA’s definition of “regulated NSR pollutant”; rather, it is challenging EPA’s decision to exclude the Section 821 and EPA’s implementing regulations from “regulation” as that term is used in both Section 165 and EPA’s regulations. EPA has never stated in any rulemaking proceeding that “regulated NSR pollutants” is limited to those pollutants subject to “a statutory or regulatory provision that requires actual control of emissions.” EPA has explicitly adopted this position in its Response to Comments and therefore the issue is properly before the Board.

add a new section 52.21 21(i)(14)<sup>25</sup> to implement the Congressionally mandated exemption for HAPs. The proposed rule did not include a proposed change to § 52.21 purporting to provide that that pollutants other than HAPs, including CO<sub>2</sub>, are not “subject to regulation” under the Act and therefore subject to BACT requirements.

To the extent that the Board considers the regulation, it supports the plain meaning of “subject to regulation under [the Act]” described above, rather than the interpretation set forth in EPA’s response to comments. 67 Fed. Reg. 80186 (December 31, 2002)(codified at 40 C.F.R. § 52.21). In addition to repeating the “subject to regulation” language of the statute, EPA, throughout 40 C.F.R. § 50.21 uses other terms, including “standard,” “emissions limitation,” and “emission standard,” rather than “regulation” to refer to actual control of pollution. Indeed, in the definition of regulated NSR pollutant itself, the agency refers to “standard” three times in subsections (i) – (iii). Yet EPA does not use that term or the terms “emissions standard” or “emissions limitation” in subparagraph (iv). The regulation’s definition of “regulated NSR pollutant” says nothing contradicting the statute’s mandate that BACT is required for all pollutants subject to any requirements under any provisions of the Act.

The alleged lists of pollutants “currently regulated under the Act” and “subject to Federal PSD review and permitting requirements” set forth in the preambles to the proposed and final rules (61 Fed. Reg. 38250, 38310 (July 23, 1996); 67 Fed. Reg. 80186, 80240 (Dec. 31, 2002)),

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<sup>25</sup> This proposed section provided that “The requirements of this section do not apply to any stationary source with respect to any or all of the hazardous air pollutant listed in section 112 of the Act, as well as all pollutants that may be added to the list under the provisions of section 112(b) of the Act. However, the applicable provisions of this section shall apply to any pollutant listed pursuant to sections 112(b)(1) or (b)(2) of the Act that is deleted from such list under the provisions of Section 112(b)(3) of the Act. Any hazardous air pollutants listed in Section 112 of the Act which are regulated as constituents or precursors of a more general pollutant listed under Section 108 of the Act are still subject to the provisions of this section, notwithstanding section 112(b)(6) of the Act.”

on which EPA so heavily relies (AR 120, Response to Comments II.B.3.b.i., at 26; AR 121, Response to Late-Filed Comments 4, at 11-12; EPA Deseret Response Br. 31-34) should be accorded no weight whatsoever by the Board. Although a preamble to a regulation is entitled to significant deference in interpreting the regulation, it is entitled to little, if any, deference in interpreting the overarching statute. See Federal Savings & Loan Ass'n v. D. de la Cuesta, 458 U.S. 141, 158 n. 13 (1982) (“we look to the preamble only for the administrative construction of the regulation”); Scott v. City of New York, 2008 W.L. 4104020, slip op. at 9 (S.D.N.Y. Aug. 28, 2008) (“[t]he preamble to formal regulations is an example of materials to which strong deference is due when construing regulations but not when construing the governing statute.”). The plain language of the regulation, like the plain meaning of the statute it parrots, is clear and unambiguous. Therefore, it is not appropriate for the board to look beyond the regulation to construe its meaning.

Even if would otherwise be appropriate for the Board to consider these lists, they are of no probative value on the issue before the Board. The lists were prepared in connection with the exclusion of hazardous air pollutants described above. The lists are not and do not purport to be exhaustive. The lists do not include PM 2.5, a pollutant that was regulated at the time of both lists under a NAAQS. Further, the lists were both prepared prior to the Supreme Court’s ruling that carbon dioxide is a pollutant, and it appears that EPA did not even consider carbon dioxide to be a pollutant at the time the lists were prepared. Carbon dioxide’s exclusion from the lists is therefore of no probative value to the issue before the Board.

**ii. EPA’s 1978 Regulation and its History.**

EPA has not consistently interpreted “subject to regulation under the Act” over the last 30 years.<sup>26</sup> The interpretation EPA offers in its response to comments is not consistent with the original interpretation adopted by Administrator Costle 30 years ago when EPA first implemented Sections 165(a)(4) and 169(3), as EPA alleges. Response to Late-Filed Comments 5, at 13. Indeed, in the preamble to those initial implementing regulations, EPA interpreted “subject to regulation,” as follows:

Some questions have been raised regarding what “subject to regulation under the Act” means relative of BACT determinations. The Administrator believes that the proposed interpretation published in November 3, 1977, is correct and is today being made final. As mentioned in the proposal, “subject to regulation under the Act” means any pollutant regulated in Subchapter C of Title 40 of the Code of Federal Regulations for any source type. This then includes all criteria pollutants subject to NAAQs review, pollutants regulated under the Standards for Performance of new Stationary Sources (NSPS), pollutants regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAP), and all pollutants regulated under Title II of the Act regarding emission standards for mobile sources.

43 Fed. Reg. 26380, 26397 (June 19, 1978); *See also* 42 Fed. Reg. 57479, 57481 (Nov. 3, 1977)(“The Amendments require BACT for all pollutants regulated under the Act. Thus, any pollutant regulated in Subchapter C of Title 40 of the Code of Federal Regulations will be

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<sup>26</sup> Indeed the two rules EPA has adopted to implement Congress’s 1977 BACT mandate-- its 1978 and 2002 rules-- are not consistent with each other. Although Congress in 1977 required PSD review and BACT analysis for “any pollutant subject to regulation under [the Act],” in its 1978 rule EPA defined “major stationary source” and a “major modification” triggering PSD review with reference to emission of “any air pollutant regulated under the Act.” Ex. \_\_\_\_, 43 Fed. Reg. 26380, 26403 (June 19, 1978) (emphasis added). The rule, however, adopted a definition of BACT that parroted the statutory “pollutant subject to review under the Act” language.” 43 Fed. Reg. at 26404 (former 40 C.F.R. § 52.21(b)(10). The rule further provided that “a major stationary source or major modification shall apply best available control technology for each “applicable pollutant.” 43 Fed. Reg. at 26406 (former 40 C.F.R. § 52.21(j). The rule did not define “applicable pollutant.” In 2002, EPA radically changed the language of the rule adopted in 1978, by adopting the definition of “regulated NSR pollutant,” and incorporating it as the PSD review trigger into the definition of “major modification.” 67 Fed. Reg. 80186, 80264 (December 31, 2002) (adding 40 C.F.R. 52.21(b)(49) (now b(50)), and revising 40 C.F.R. 52,21(b)(2)(i).

subject to a case-by-case BACT determination.”).<sup>27</sup> This interpretation, made contemporaneously with EPA’s adoption of its initial implementing regulations, is fully consistent with the Act in so far as it does not limit pollutants subject to regulation under the Act to pollutants subject to regulation under any particular provisions of the Act. It is also consistent in that regard with the EPA’s current regulation, which acknowledges that “pollutants subject to regulation” includes “pollutants otherwise subject to regulation [under the Act].”<sup>28</sup>

### iii. EPA Memoranda.

In conducting its independent analysis, the Board also should give little, if any, weight to the EPA memoranda on which EPA relies. The Board should give less weight to sources of interpretation that are less formal than rules adopted after notice and comment. See In re Lazarus, 7 E.A.D. 318, 352 (EAB 1997) (assessing Office of Management and Budget General Counsel’s memo). The weight that the Board should give such interpretations should depend on “the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it the power to persuade, if lacking power to control.” See In re Lazarus, 7 E.A.D. at 353 (quoting Skidmore v. Swift & Co., 323 U.S. 134, 140 (1944)). The Board should consider whether the Agency’s interpretations have been consistent over time, as “inconsistent interpretations are a leading reason that courts decline to extend deference to an agency interpretation.” In re Lazarus, 7

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<sup>27</sup> As in the final rule, this language is followed by a list of categories of pollutants that were included in the Act at that time. EPA implies that this list is somehow evidence that the agency construed “subject to regulation” to include only pollutants subject to actual emission controls (Region 8 Resp. to Pet. at 11), but the list simply reflects the statute as it then existed. Nothing in this regulatory history indicates that EPA meant to exclude from BACT requirements pollutants that later became subject to regulation under the Act. The same can be said of the 1980 PSD rules. *See* 45 Fed. Reg. at 52723 (Aug. 7, 1980).

<sup>28</sup> As we discuss more fully below, this interpretation wrongfully equates “subject to regulation” with “regulation”

E.A.D. at 353 (citing EEOC v. Arabian Oil Co., 499 U.S. 244, 257-58 (1991); (policy guide line that contradicts an earlier agency position is of limited persuasive value); General Electric Co. v. Gilbert, 429 U.S. 125, 142-43 (1976) (EEOC guideline not accorded deference due in part to its contradiction of an earlier agency announcement of policy), and other cases). Whether an interpretation was made contemporaneously with the enactment of a statute or promulgation of a regulation may also be an important consideration. In re Lazarus, 7 E.A.D. at 353. In addition, an interpretation that “lacks support in the plain language of the statute” is not persuasive. EEOC v. Arabian Oil Co., 499 U.S. at 257-58.

The Emison, Wegman, Cannon and Fabricant memoranda (Exs. 17- 20) on which EPA relies were not subject to public notice and comment. None of the memoranda are contemporaneous with Congress’ 1977 mandate that BACT applies to “any pollutant subject to regulation under [the Act],” or EPA’s 1978 or 2002 rules implementing that mandate. Not only do none of these memoranda provide “thorough” and “valid” reasoning supporting the interpretation EPA offers the Board today, none of the memoranda even specifically address the issue before the Board today-- whether BACT is required for CO2 because carbon dioxide is “subject to regulation under [the Clean Air Act].”

The only memorandum cited by EPA that renders an interpretation concerning the Clean Air Act’s PSD provisions is the Emission Memorandum. (Ex. 17). This memorandum was prepared following the Board’s remand of Region IX’s determination that it lacked authority to “consider” pollutants not regulated by the Clean Air Act in making a PSD determination. In re: North County Resource Recovery, 2 E.A.D. 229, 1986 W.L. 80843, slip op. (EAB June 3, 1986). The Board in that case held that “EPA lacks the authority to impose limitations or restrictions directly on the emission of unregulated pollutants.” Id., slip op. at 2. The Board, however,

remanded the case to the Region for consideration of “ the environmental impact of unregulated pollutants in the course of making a BACT determination for a regulated pollutant.” Id. The case was decided before Congress enacted Section 821(a) in 1990, and did not involve carbon dioxide. Further the Board did not expressly consider the meaning of the phrase “pollutant subject to regulation under [the Act].” Rather, it noted that Section 165(a)(4) and the “relevant regulations” required BACT for “each pollutant that is regulated” by the Act. Id.

The Emission memo, like the Board’s In re: North County Resource Recovery opinion, stated that the statute requires BACT for each “regulated pollutant.” The memo conflates the phrases “regulated pollutant” and “pollutant subject to regulation” under the Act without providing any rationale for doing so. It states: “A “regulated pollutant,” or a pollutant subject to regulation under the Clean Air Act,” is one which is addressed by a national ambient air quality standard, a new source performance standard, or is listed pursuant to the national emission standards for hazardous air pollutant program.” The memorandum provides no rationale for this statement. Further, the memorandum is not consistent with the preamble to the 1978 rule, which stated that pollutants “subject to regulation . . . includes all criteria pollutants subject to NAAQs review, pollutants regulated under the Standards for Performance of new Stationary Sources (NSPS), pollutants regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAP), and all pollutants regulated under Title II of the Act regarding emission standards for mobile sources.” Ex. 16, 43 Fed. Reg. 26380, 26397 (June 19, 1978) (emphasis added). Given that the Emission Memorandum was not subject to public notice and comment, provides no rationale whatsoever for its statement concerning the “subject to regulation” standard, conflicts with the interpretation set forth in the 1978 preamble, and by omitting

pollutants regulated under Title II is clearly erroneous, the Board should not give any weight to the Emission memo in conducting its independent review.

EPA asserts that the 1993 Wegman Memorandum concluded that carbon dioxide is not “subject to regulation” even following the enactment of section 821(a) in 1990, because Section 821 “only called for reporting and study of carbon dioxide and did not involve “actual control of emissions.” EPA Deseret Response Br. 35 (quoting Wegman Memo, Ex. 18). This memorandum, however, was not subject to public notice and comment and is not relevant to the issue before the Board. It addressed whether EPA can exclude consideration of carbon dioxide emissions in determining whether a source is major for purposes of Title V. The Wegman Memorandum did not make a determination based on a statutory “pollutants subject to regulation” standard. Instead, Wegman pulled a “subject to regulation standard” out of thin air in an effort to exclude carbon dioxide from the definition of “air pollutant” in 303(g). This approach has been repudiated by Massachusetts v. EPA.

Wegman stated that the definition of air pollutant in Section 302(g) governs whether pollutants are to be considered in determining whether a source is major for Title V purposes. The phrase “subject to regulation” is nowhere to be found in Section 302(g). Wegman, however, asserted that “as a result of” EPA’s determination that Congress intended a narrow construction of Section 302(g), “EPA is interpreting “air pollutant” for section 302 (g) purposes as limited to all pollutants subject to regulation under the Act.” Wegman then made clear that carbon dioxide did not meet the “subject to regulation” standard EPA created because requirements for actual control of emissions had not been established.

The effect of Wegman’s patently unlawful interpretation was to exclude any pollutant for which emission controls had not been required from the definition of “air pollutant.” The

Supreme Court’s determination that carbon dioxide falls within the capacious definition of “air pollutant” set forth in Section 302(g), and that the Act is flexible and designed to address newly realized threats such as global warming clearly rejected Wegman’s interpretation. The Wegman interpretation is contrary to the plain language of the statute as construed by the Supreme Court. Therefore, the Board should not give any weight to the Wegman Memorandum in conducting its independent analysis.<sup>29</sup>

The Cannon memo (Ex. 19) is also not deserving of significant consideration by the Board because it was not subject to public notice and comment and does not address the issue before the Board. The Cannon memo, in contradiction to the Wegman memo that preceded it and the Fabricant memo that followed it, correctly opined that carbon dioxide is an “air pollutant” under Section 302(g). The memo then opined that “[w]hile CO<sub>2</sub>, as an air pollutant, is within EPA’s scope of authority to regulate, the Administrator has not yet determined that CO<sub>2</sub> meets the criteria for regulation under one or more provisions of the Act.” *Id.* at 4; see also *id.* at 5. Because the regulations adopted under Section 821 were not based on any determination by the Administrator regarding whether CO<sub>2</sub> meets criteria for regulation under the Act, but rather on a determination made by Congress, the Cannon memo is immaterial. It says nothing about

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<sup>29</sup> The Wegman Memorandum further noted that “[t]his approach to interpreting section 302(g) is similar to the traditional practice of the prevention of significant deterioration (PSD program) under part C of Title I of the Act [See, e.g., Implementation of North Country Resource Recovery PSD Remand, Gerald Emission, Director, OAPS, dated September 22, 1987].” The Supreme Court has made clear that neither the Title V program nor the PSD program may lawfully follow this approach.

whether Congress has made a determination to regulate CO<sub>2</sub>.<sup>30</sup> Clearly, Congress has done so by adopting Section 821.<sup>31</sup>

**f. Board Decisions.**

The EAB decisions on which EPA relies, including North County Resource Recovery Assoc., 2 E.A.D. 229, 230 (Adm'r 1986), discussed above, do not directly address the meaning of “regulation,” and, therefore are not relevant to the issue before the Board. In Inter-Power of New York, Inc., 5 E.A.D. 130 (EAB 1994), the Board referred to carbon dioxide as an unregulated pollutant without analysis or citation to any authority. Moreover, the petitioner waived its arguments related to CO<sub>2</sub> by failing to address the region’s response to comments, id. at n.35, so the Board’s perfunctory remarks on the issue were made without the benefit of a fully developed record.

In Kawaihae Cogeneration Project, 7 E.A.D. 107, 132 (1997) the Board upheld a state permitting agency’s determination that “there are no regulations or standards prohibiting, limiting or controlling the emissions of greenhouse gases from stationary sources. Carbon dioxide is not considered a regulated air pollutant for permitting purposes.” However, the Board specifically based its decision on the Petitioner’s failure to provide any information that suggests

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<sup>30</sup> The memorandum was prepared for the express purpose of responding to an inquiry from Congress concerning whether EPA has the authority to establish pollution control requirements for carbon dioxide. It makes no mention of either Section 821 or the Act’s PSD provisions.

<sup>31</sup> We note that the Fabricant memorandum is also not deserving of consideration by the Board. The memorandum “formally withdraws” the Cannon memorandum “as no longer representing the views of EPA’s General Counsel.” Ex. 20, at 1. The most obvious, and fatal, flaw of this document is its reliance on reasoning that was specifically and resoundingly rejected by the Supreme Court in Massachusetts v. EPA. The Board should therefore reject any suggestion that it may form the basis of a lawful interpretation of the plain language of Sections 165(a)(4) and 169(3). Further, Fabricant makes no mention of and fails to consider whether Sections 165(a)(4) and 169(3) require regulation, even in the absence of express authorization in Section 821 itself.

that this conclusion is erroneous. *Id.* The Board therefore did not actually examine the legal merits of the state’s determination.

Finally, in *Knauf Fiber Glass*, 8 E.A.D. 121, 162 (1999), the Board stated that “[n]ot all pollutants are covered by the federal PSD review requirements.” The Board cited as an example the exclusion for hazardous air pollutants set forth in Section 112(b)(6). *Id.* The case does not address the meaning of “subject to regulation.”

**g. EPA’s Interpretation of “Regulation” Conflicts With Alabama Power Co. v. Costle.**

The D.C. Circuit’s holding in *Alabama Power Co. v. Costle*, 636 F.2d 323, 403 (D.C. Cir. 1979), also forecloses the narrow reading of the phrase, “each pollutant subject to regulation” that EPA espouses. In *Alabama Power*, industry groups challenged EPA regulations implementing the newly-enacted PSD provisions, arguing that BACT applied only to sulfur dioxide and particulate matter. The court upheld EPA’s regulation that, as characterized by the court, “applies PSD and BACT immediately to each type of pollutant regulated for any purpose under any provision of the Act, not limited to sulfur dioxide and particulates.” *Id.* (emphasis added). The court emphatically stated that the phrase “each pollutant subject to regulation” should be read broadly:

The only administrative task apparently reserved to the Agency . . . is to identify those . . . pollutants subject to regulation under the Act which are thereby comprehended by the statute. The language of the Act does not limit the applicability of PSD only to one or several of the pollutants regulated under the Act . . . .

*Id.* at 404.

The industry groups had argued that PSD requirements should not apply immediately to pollutants included in Section 166 of the Act (hydrocarbons, carbon monoxide, photochemical oxidants, and nitrogen oxides), because that provision required

EPA to study those pollutants prior to regulating them. *Id.* at 405-06. The court rejected the industry argument:

. . . Though Congress could have decided to delay the applicability of PSD for such pollutants until all studies and regulations required by Section 166 have been completed, Congress apparently chose not to do so, and it emphasized its decision on that point in at least five statutory provisions.

*Id.* at 406 (emphasis added). Thus, even though some of these pollutants were not yet subject to actual control of emissions, the court held that they were nonetheless “subject to regulation under the Act”:

. . . the plain language of Section 165 . . . in a litany of repetition, provides without qualification that each of its major substantive provisions shall be effective after 7 August 1977 with regard to each pollutant subject to regulation under the Act, or with regard to any "applicable emission standard or standard of performance under" the Act. As if to make the point even more clear, the definition of BACT itself in Section 169 applies to each such pollutant. The statutory language leaves no room for limiting the phrase “each pollutant subject to regulation” to sulfur dioxide and particulates.

*Id.* (emphasis added). Looking to the legislative history, the court observed that while Congress intended to study the Section 166 pollutants because of a lack of adequate information related to the implications of further regulating those pollutants, it nevertheless decided to extend BACT requirements “to all pollutants emitted from any new major emitting facility so that the maximum degree of emission reduction would be achieved in order to minimize potential deterioration.” *Id.* (citing 123 Cong. Rec. S9162, S9170 (daily ed. 8 June 1977)).

Although this decision predates the enactment of Section 821, the D.C. Circuit’s reasoning behind its holding that BACT applies “immediately to each type of pollutant regulated for any purpose under any provision of the Act,” *id.* at 403, applies to the subsequent enactment of statutory provisions that subject additional pollutants to

regulation, such as Section 821. The court’s rationale compels the conclusion that BACT applies to CO<sub>2</sub>.

In Alabama Power, industry groups raised arguments nearly identical to those raised in this case, and the Court’s careful analysis of the statutory text and legislative history applies with equal force here. Like Section 166, Section 821 requires study of a pollutant but does not impose immediate emissions reductions. Moreover, Congress contemplated eventual control of CO<sub>2</sub> emissions when it adopted Section 821, just as it anticipated controls of the Section 166 pollutants. As Congressman Moorhead noted in offering Section 821, “we can hardly expect to make responsible decisions about controlling these emissions if we fail to take the necessary steps to improve our understanding of the magnitude and rate of increase in these emissions.” 136 Cong. Rec. H2915-01, H2934 (May 23, 1990). In both cases, the congressional intent to study the pollutants is entirely compatible with the intent to apply BACT immediately.

**C. EPA’s Conclusion that Regulation Under Section 821 is Not Regulation Under the Clean Air Act is Clearly Erroneous.**

EPA asserts that even if carbon dioxide is regulated under Section 821(a) of the Clean Air Act Amendments of 1990, it is not regulated or “subject to regulation” under the Act, because the section is not part of the Act. Response to Late-Filed Comments 5, at 14 n.4. This is a plainly erroneous conclusion of law.

**i. Section 821 is Part of the Clean Air Act.**

Section 821 is unquestionably part of the Clean Air Act. It is part of a congressional enactment titled “Clean Air Act, Amendments,” Pub. L. 101-549, 104 Stat. 2699 (1990) and the logical presumption is that the provisions of this enactment became a part of the Clean Air Act absent some indication that Congress intended otherwise. The content of Section 821, its

relationship to other provisions of the Act, and the legislative and regulatory history all support the conclusion that it is part of the Clean Air Act.

Section 821 was conceived as part of the Clean Air Act, and separating it from the Act would render it incoherent. The monitoring, reporting and recordkeeping requirements it imposes depend on the framework in Section 412 of the Act, 42 U.S.C. § 7651k. Enforcement of Section 821 is accomplished through the enforcement mechanisms in the Act, and a violator is subject to the penalty provisions of the Act. *See* 42 U.S.C. § 7651k(e). In offering this provision, its sponsor, Congressman Moorhead, spoke of Section 821 as part of the process of “establishing a final version of the Clean Air Act.” 136 Cong. Rec. H. 2934 (May 23, 1990).

EPA has consistently treated Section 821 as a part of the Clean Air Act. In response to the Clean Air Act Amendments of 1990, EPA proposed a set of “core” regulations under the Acid Rain Program that it described as “interrelated components,” including the continuous emissions monitoring regulation. *See* 56 Fed. Reg. 63,002 (Dec. 11, 1991). The proposed rule noted that it “establishes requirements for the monitoring and reporting of CO<sub>2</sub> emissions pursuant to Section 821 of the Act.” 56 Fed. Reg. 63,002, 63,291 (Dec. 3, 1991)(emphasis added). In the same proposal, EPA asserted that “section 821 *of the Act* requires all affected units in the Acid Rain program to monitor carbon dioxide (CO<sub>2</sub>) emissions.” *Id.* (emphasis added). In its final regulations implementing Section 821, which are the same regulations that implement Section 412 of the Act, EPA stated:

The purpose of this part is to establish requirements for the monitoring, recordkeeping, and reporting of sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon dioxide (CO<sub>2</sub>) emissions, volumetric flow, and opacity data from affected units under the Acid Rain Program pursuant to Sections 412 and 821 of the CAA, 42 U.S.C. 7401-7671q as amended by Public Law 101-549 (November 15, 1990) [the Act].

40 C.F.R. § 75.1(a) (emphasis added).<sup>32</sup> The final regulations provide that a violation of the regulations is “a violation of the Act.” 40 C.F.R. § 75.5(a). Subsequent rulemaking proceedings referred to these regulations as “the ‘core’ regulations that implemented the major provisions of Title IV of the Clean Air Act (CAA or the Act), as amended November 15, 1990, including . . . the CEM regulation at 40 CFR part 75 authorized under Sections 412 and 821 of the Act.” 60 Fed. Reg. 26,510 (May 17, 1995)(emphasis added); *see also* 59 Fed. Reg. 42,509 (Aug. 18, 1994).

Even though the text, structure and history of the statute and its implementing regulations lead to the inevitable conclusion that Section 821 is part of the Clean Air Act, EPA now asserts that Section 821 is not part of the Act because it was codified as a note, and because a compilation of the Act published by a House committee after its enactment implied that Section 821 did not amend the Act. EPA Deseret Response Br. 45-47. Neither codification as a note nor characterization by a later legislative committee offers any significant insight into whether a particular provision is part of a statute.

“[T]he fact that [a] provision was codified as a statutory note is of no moment.” Conyers v. Merit Systems Protection Bd., 388 F.3d 1380, 1382 n.2 (Fed. Cir. 2004). In the specific context of the Clean Air Act, the D.C. Circuit unhesitatingly categorized a note to 42 U.S.C. § 7502 as being “in the Act.” New York v. U.S. EPA, 413 F.3d 3, 19 (D.C. Cir. 2005) (reviewing EPA’s interpretation of the New Source Review permitting process for stationary sources under the CAA) (emphasis added).

The characterization of Section 821 in a 2001 House Energy and Commerce Committee

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<sup>32</sup> The continuous emission monitoring regulations apply generally to SO<sub>2</sub> and NO<sub>x</sub> along with CO<sub>2</sub>, see 40 C.F.R. §§ 75.1 and 75.10(a) (2007), and the specific provisions for CO<sub>2</sub> monitoring refer back to the specific provisions for SO<sub>2</sub>, simply replacing one term for the other, *id.* § 75.13(a).

publication<sup>33</sup> has no bearing on whether Congress intended it to be part of the Clean Air Act.

“[P]ost-enactment legislative history is not only oxymoronic but inherently entitled to little weight.” Cobell v. Norton, 428 F.3d 1070, 1075 (D.C. Cir. 2005). A post-enactment publication of a committee is entirely meaningless in ascertaining congressional intent.

EPA has never, prior to its filings in the pending Deseret appeal, taken the position that Section 821 is not part of the Act. This argument is merely a post hoc rationale, intended to avoid the necessary legal consequences of the Supreme Court’s decision in Massachusetts v. EPA, which directly conflicts with the position EPA took prior to that decision. EPA’s response brief in that case lists “Section 821 of the CAA Amendments of 1990” in a group of provisions that it describes as “the only CAA provisions that specifically address either carbon dioxide emissions or global warming.” 2006 WL 3043970, pp. 26-27. An agency is not entitled to deference for a statutory interpretation advanced in litigation that conflicts with past pronouncements and actions of the agency. Rosales-Garcia v. Holland, 322 F.3d 386, 403 n.22 (6th Cir. 2003) (“Inasmuch as shifting agency interpretations issued in regulations are accorded less deference . . . we see no reason why we should respect shifting agency interpretations expressed in briefs.”); Akzo Nobel Salt, Inc., v. FMSHRC, 212 F.3d 1301, 1304 (D.C. Cir. 2000) (holding that deference to an agency’s position is unwarranted when the agency has changed its position and litigation counsel advance differing positions).

Even if section 821 is not part of the Act, the section incorporates Section 412(e), which is undeniably part of the Act, and EPA’s Part 75 monitoring that implement the Section 412(e)

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<sup>33</sup> See House Committee on Energy and Commerce, *Compilation of Selected Acts within the Jurisdiction of the Committee on Energy and Commerce 451-52* (Comm. Print, 2001), *available at* <http://epw.senate.gov/cleanair.pdf>. Section 821 appears under the heading “Provisions of the Clean Air Act Amendments of 1990 (Public Law 101-549) That Did Not Amend the Clean Air Act.” The category appears to describe not provisions that do not affect or were not part of the Act, but rather provisions that were added to the Act without altering the original language.

monitoring requirements were adopted by EPA under its authority under both Section 821 and section 412(e). Indeed the regulations, including their carbon dioxide monitoring requirements are part of and are inextricably intertwined with EPA's core requirements to address acid rain under section 412 of the Act. Additionally, the regulations specifying appeal procedures apply broadly to all of the core Acid Rain Program regulations, and EPA also issued the regulations under the authority of Title IV generally (the Acid Rain provisions) and Section 301. See 40 C.F.R. pt. 78. Section 301 provides general rulemaking authority for the Administrator to promulgate regulations under subchapter III of the Clean Air Act. 42 U.S.C. § 7601(a) (2006) (“[T]he Administrator is authorized to prescribe such regulations as are necessary to carry out his functions under the chapter.”)<sup>34</sup> EPA has undeniably imposed the monitoring requirements pursuant to regulations issued under the Act. This is regulation under the Act. As EPA repeatedly acknowledges, regulation under a “statutory or regulatory” provision render a pollutant “subject to regulation under the Act.” AR 120, Response to Comments II.B.3.b.i.; see also EPA Deseret Response Br. 10, 40, 43.

In addition, even if carbon dioxide monitoring and reporting is not specifically required by the Act, Congress' mandate that EPA enforce those requirements under the Act, and EPA's consistent past practice of enforcing the requirements under Section 113 of the Act, render carbon dioxide “subject to regulation under [the Act].” Section 821 provides that “[t]he provisions of Section 412(e) of Title IV of the Clean Air Act shall apply for purposes of this Section in the same manner and to the same extent as such provision applies to the monitoring and data referred to in Section 412.” Section 412(e), which is indisputably part of the Clean Air

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<sup>34</sup> In adopting the monitoring requirements at 40 C.F.R. pt. 75, EPA even defined the term “Act” to mean “the Clean Air Act, 42 U.S.C. § 7401, et seq. as amended by Public Law No. 101-549 (November 15, 1990).” 40 C.F.R. § 72.2.

Act provides that “[i]t shall be unlawful for the owner or operator of any source subject to this subchapter to operate a source without complying with the requirements of this section and the regulations implementing this section.” Not only did Congress clearly intend Section 821 to be an enforceable part of the Act, EPA agreed. EPA’s Part 75 monitoring regulations, which apply to the carbon dioxide monitoring mandated by Section 821, state: “[a] violation of any applicable regulation in this part . . . is a violation of the Act.” 40 C.F.R. § 75.5(a). Because the CO<sub>2</sub> emissions monitoring and reporting requirement is enforceable under the Act, CO<sub>2</sub> is regulated under the Act.<sup>35</sup>

Even if section 821 is not part of the Act, it is undeniably enforceable under the Act because it incorporates section 412(e). Additionally, it is enforceable under the Act’s regulations because the regulations implementing section 821 and section 412 are one and the same, and they were clearly promulgated under the Act. As the regulations explicitly affirm, 40 C.F.R. § 75.5(a), a Clean Air Act regulation creates an enforceable duty under the Act itself. At a minimum, the CO<sub>2</sub> monitoring and reporting requirements imposed by section 821 are enforceable under the regulations, so CO<sub>2</sub> is regulated under the Act.

**ii. The CO<sub>2</sub> Monitoring Requirements of Section 821 Are Enforceable Under Sections 113 and 304.**

The Section 821 monitoring and reporting requirements are directly enforceable by EPA under Section 113, and through Title V permits by EPA and citizens under Sections 113 and 304 of the Clean Air Act, respectively. Title V permits must contain terms and conditions that require compliance with section 821 requirements. Section 502(b) of the Act mandated that EPA

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<sup>35</sup> Because §821 is inextricably intertwined with §412, the lack of an express statement within the former that it amends the Act does not undermine the conclusion that it is part of the Act.

promulgate regulations establishing permit program requirements that would assure compliance “with each applicable standard, regulation or requirement under this chapter.” 42 U.S.C. § 7661a(b)(5)(A); see also 42 U.S.C. § 7661c(a). Accordingly, the regulations in 40 C.F.R. Part 71, which govern the Federal Operating Permit Program, require that Title V permits include all “applicable requirements.” *See* 40 C.F.R. §§ 71.1(b), 71.3(c)(1), 71.7(a)(1)(iv). Applicable requirements include “[a]ny standard or other requirement of . . . 40 CFR parts 72 through 78.” 40 C.F.R. § 71.2. Because the regulations implementing the CO<sub>2</sub> monitoring requirements imposed by section 821 are contained in 40 C.F.R. Part 75, those requirements constitute “applicable requirements” to be included in Title V permits. *See* 40 C.F.R. §§ 75.1, 75.10(a)(3); *see also* 40 C.F.R. § 72.2 (defining a continuous emission monitoring system for CO<sub>2</sub> emissions). The regulations implementing section 821 are thereby incorporated into Title V permits issued under the Clean Air Act.

The Title V regulations further provide:

Violations of any applicable requirement; any permit term or condition . . . or any regulation or order issued by the permitting authority pursuant to this part are violations of the Act and are subject to full Federal enforcement authorities under the Act.

40 C.F.R. § 71.12 (emphasis added); see also 40 C.F.R. § 75.5(a) (providing that a violation of CO<sub>2</sub> monitoring and reporting requirements is a violation of the Clean Air Act).

Section 113(a)(3) of the Clean Air Act authorizes EPA to take enforcement action, including the filing of a civil action whenever it finds that any person “has violated, or is in violation of . . . any requirement or prohibition of” a Title V permit or Title IV acid rain requirement. 42 U.S.C. § 7613(a)(3). Section 304(a)(1) of the Clean Air Act authorizes any person to commence a civil action against any person who is alleged to have violated or to be in violation of an “emission standard or limitation under this chapter.” Section 304(f) defines

“emission standard or limitation” to include a standard, condition or schedule under “any permit issued pursuant to subchapter V of this chapter . . . .” 42 U.S.C. § 7604(f). Thus citizens may file suit under the Clean Air Act to enforce compliance with terms of Title V permits. Moreover, regulations adopted under the Clean Air Act create duties under the Act enforceable through citizen suits, particularly regulations like those in 40 C.F.R. Part 75, which indicate on their face that they were issued pursuant to the Act. See Sierra Club. v. Leavitt, 355 F. Supp. 2d 544, 553-57 (D.D.C. 2005); 40 C.F.R. § 75.1. The CO<sub>2</sub> monitoring requirements are therefore enforceable both by EPA under Section 113, and by citizens under Section 304.

**iii. EPA Is Bound By Its Past Interpretations of the Relationship Between Section 821 and Other Parts of the Clean Air Act.**

EPA has interpreted section 821 as part of the Clean Air Act and violations of section 821 requirements as violations of the Act in published rules. See, e.g., 40 C.F.R. §§ 75.1, 75.5; see also 40 C.F.R. § 71.12. The agency cannot change that interpretation by fiat in this proceeding. Adopting the view that Section 821 is not part of the Act would substantively amend and revise EPA’s authoritative interpretation of the statute and existing Clean Air Act enforcement regulations, rules that were created through notice and comment procedures. Under the doctrine laid out by the D.C. Circuit in Paralyzed Veterans of America v. D.C. Arena L.P., 117 F.3d 579 (D.C. Cir. 1997), if the agency wishes to adopt the position it has taken in this case, it is required to do so first through notice and comment rulemaking.

In Paralyzed Veterans, the D.C. Circuit held that once an agency issues an “authoritative interpretation” of its own regulations, the agency cannot freely amend that interpretation without first offering proper opportunities for notice and comment:

Under the APA, agencies are obliged to engage in notice and comment before formulating regulations, which applies as well to “*repeals*” or “*amendments*.” *See* 5

U.S.C. § 551(5). To allow an agency to make a fundamental change in its interpretation of a substantive regulation without notice and comment obviously would undermine those APA requirements. That is surely why the Supreme Court has noted (in dicta) that APA rulemaking is required where an interpretation “adopt[s] a new position inconsistent with ... existing regulations.”

*Id.* at 586 (quoting Shalala v. Guernsey Memorial Hosp., 514 U.S. 87, \_\_\_, 115 S.Ct. 1232, 1239 (1995)); see also Environmental Integrity Project v. EPA, 425 F.3d 992, 998 (D.C. Cir. 2005)(vacating EPA monitoring rule due to EPA failure to allow for notice and comment in accordance with Paralyzed Veterans).

**iv. EPA Has, Without Exception, Enforced Violations of Section 821 as Violations of the Clean Air Act.**

Not surprisingly, EPA has consistently enforced the CO<sub>2</sub> monitoring, reporting and recordkeeping obligations imposed by section 821 and EPA’s own Part 75 regulations through the enforcement provisions of the Clean Air Act. See In the Matter of IES Utilities, No. VII-95-CAA-111, EPA Supp. Br. Ex. 1 at 3-21; In the Matter of Indiana Municipal Power Agency, No. CAA-05-2000-0016, *id.* at 22-46; In the Matter of City of Detroit, No. CAA-05-2004-0027, *id.* at 47-61; United States v. Block Island Power Co., CA-98-045 (D.R.I.), *id.* at 62-118; Sierra Club v. Public Service Co. of Colorado, No. 93-B-1749 (D. Colo.), *id.* at 119-168. In each of these cases in which EPA has enforced section 821, it has used Section 113 of the Clean Air Act to do so. See IES Utilities, EPA Supp. Br. Ex. 1 at 3-7, 16; Indiana Municipal Power, *id.* at 22-25, 37; City of Detroit, *id.* at 48-49; Block Island Power, *id.* at 62-63, 86; Public Service Co. of Colo., *id.* at 126.

In three of those cases, EPA has assessed civil administrative penalties. See IES Utilities, EPA Supp. Br. Ex. 1 at 16-18; Indiana Municipal Power, *id.* at 38-39; City of Detroit, *id.* at 56.

Section 113(d)(1)(B) provides that EPA may assess such penalties of up to \$25,000 per day of violation when EPA determines that someone:

(B) has violated or is violating any other requirement or prohibition of this subchapter or subchapter III, IV–A, V, or VI of this chapter, including, but not limited to, a requirement or prohibition of any rule, order, waiver, permit, or plan promulgated, issued, or approved under this chapter, or for the payment of any fee owed the United States under this chapter (other than subchapter II of this chapter);

42 U.S.C. § 7413(d)(1)(B). Thus, in those three cases, EPA alleged that violations of section 821 and the implementing regulations were violations of various parts “of this chapter”, i.e., the Clean Air Act, and then imposed hundreds of thousands of dollars in penalties for those violations.

EPA also enforced section 821 under section 113(b)(2), wherein the Administrator is authorized “to commence a civil action for a permanent or temporary injunction, or to assess and recover a civil penalty of not more than \$25,000 per day for each violation, or both”:

(2) Whenever such person has violated, or is in violation of, any other requirement or prohibition of this subchapter, section 7603 of this title, subchapter IV–A, subchapter V, or subchapter VI of this chapter, including, but not limited to, a requirement or prohibition of any rule, order, waiver or permit promulgated, issued, or approved under this chapter, or for the payment of any fee owed the United States under this chapter (other than subchapter II of this chapter).

42 U.S.C. § 7413(b)(2). See Block Island Power, EPA Supp. Br., Ex. 1 at 62-63, 86. Thus, consistent with its practice in the administrative penalty cases, in at least one instance of violations of section 821, EPA duly invoked federal court jurisdiction for violations “of this chapter.” Id.

Finally, in one case, EPA also invoked its right under § 304(c)(2) to intervene in an ongoing citizen suit; in turn, that suit was brought under § 304(a)(1)(A) for violations of “an emission standard or limitation under this chapter.” See Public Service Co., EPA Supp. Br. Ex. 1 at 122.

At least five times – and at least twice in federal court – EPA has contended that section 821 is a provision of the Clean Air Act and/or that violations of section 821 are violations of the Clean Air Act. EPA’s consistent enforcement history confirms that section 821 is indeed part of the Clean Air Act, that its CO<sub>2</sub> monitoring and reporting requirements are enforceable under the Act, and that CO<sub>2</sub> is therefore regulated under the Act.

We note that EPA has denied that Section 821 is enforceable under the Clean Air Act in a supplemental brief filed in the Deseret appeal on August 8, 2008. In the supplemental brief EPA also alleges that even if Section 821 is enforceable under the Clean Air Act that did not render CO<sub>2</sub> “subject to regulation.” EPA’s Supplemental Brief filed August 8, 2008 in the Deseret case, after Region 9 issued the DREF permit, is not part of EPA’s Response to Comments in this case. Despite the fact that Petitioners clearly stated in their comments that Section 821 is enforceable under the Clean Air Act, EPA in its response to comments did not deny that Section 821 is enforceable under the Clean Air Act. EPA’s Response to Comments rested solely on EPA’s assertion that Section 821 is not part of the Clean Air Act or Chapter 85 of Title 42 of the U.S. Code. Petitioners therefore are not required to address the two issues regarding enforcement that EPA did not raise in order to obtain a remand. Nevertheless, Petitioners specifically incorporate by reference into this brief the Response of Petitioner Sierra Club to EPA’s Supplemental Brief, filed on or about September 11, 2008 in the Deseret Appeal, a copy of which is attached hereto as Exhibit 23.<sup>36</sup> The brief addresses those issues.

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<sup>36</sup> We note that EPA in its Partial Opposition to Motion for Extension of Time and Opposition to Motion for Stay of Certain Issues (P. 5) specifically suggested that “efficiencies” can be accomplished by incorporating by reference arguments made in the Deseret case into their petitions or supplemental briefs in this case.

**C. Even If CO<sub>2</sub> is Not Subject to Regulation Under the Act Because of Section 821, it is Now Subject to Regulation Under the Act By Virtue of Congress' 2008 Appropriations Legislation**

In the Fiscal Year 2008 Consolidated Appropriations Act, Congress specifically required that EPA undertake rulemaking to establish monitoring and reporting requirements for all greenhouse gases (including CO<sub>2</sub>), economy wide. The relevant provision reads:

not less than \$3,500,000 shall be provided for activities to develop and publish a draft rule not later than 9 months after the date of enactment of this Act, and a final rule not later than 18 months after the date of enactment of this Act, to require mandatory reporting of greenhouse gas emissions above appropriate thresholds in all sectors of the economy

H.R. 2764; Public Law 110–161, at 285 (enacted Dec. 26, 2007), attached as Exhibit 21.

Additionally, Congress made clear that the agency, in adopting these requirements, is to use its existing authority under the CAA. In this regard, the Conference Report states:

*\$3,500,000 within the Federal Support Air Quality Management program for the Agency to use its existing authority under the Clean Air Act to develop and publish a rule requiring mandatory reporting of greenhouse gas emissions above appropriate thresholds in all sectors of the economy. Bill language to this effect is provided in the administrative provisions section. The Agency is directed to publish a draft rule no later than nine months after the date of enactment of this Act, and a final rule no later than 18 months after the date of enactment of this Act. The Agency is further directed to include in its rule reporting of emissions resulting from upstream production and downstream sources, to the extent that the Administrator deems it appropriate. The Administrator shall determine appropriate thresholds of emissions above which reporting is required, and how frequently reports shall be submitted to EPA. The Administrator shall have discretion to use existing reporting requirements for electric generating units under Section 821 of the Clean Air Act.*

Conference Report at 1254, attached as Exhibit 22.

Accordingly, whether or not section 821 is a part of the CAA, EPA has a separate and distinct statutory obligation to regulate CO<sub>2</sub> – through mandatory emission monitoring requirements under the CAA – which also triggers BACT obligations for Desert Rock. The fact that the Appropriation Act allows EPA to use existing requirements for EGUs under section 821

is of no moment. EPA's obligation under the Appropriations Act is much broader than the agency's authority under section 821, (requiring *economy wide* reporting), thus even if EPA exercises its discretion to rely on section 821, it must still exercise its authority under the CAA more generally to require CO<sub>2</sub> reporting from all other sectors of the economy.

As a result of the 2008 Appropriations Act, the question of whether section 821 is or is not a part of the CAA is effectively moot.

**D. Carbon Dioxide Is Subject to Regulation Under Sections 111 and 202 Because the Endangerment Standard Requiring Regulation under Those Sections Is Met.**

In addition, to being currently regulated under the Delaware SIP, Section 821, and by virtue of the 2008 Appropriations Act, carbon dioxide is also subject to regulation under Sections 111 and 202 of the Clean Air Act. Petitioners' comments demonstrate that EPA must conduct a BACT analysis and set BACT emission limitations for carbon dioxide because EPA is authorized to regulate carbon dioxide emissions under Sections 111 and 202 and there is no question that the endangerment standard of Sections 111 and 202 is met. AR 57, Comment 1011, Ex. 6, at 11 -12. Petitioners demonstration that the endangerment standard is met is not controverted by EPA, and EPA offers no lawful basis for refusing to conduct a BACT analysis for DREF. Further, information that became available subsequent to the close of the public comment period on the proposed DREF permit confirms that EPA has effectively made an endangerment determination.

**i. EPA Must Regulate Carbon Dioxide Under Sections 111 and 202 When It Finds That Emissions of a Pollutant Cause or Contribute Significantly to Air Pollution that May Reasonably Be Anticipated to Endanger the Public Health or Welfare.**

Section 111 requires EPA to promulgate regulations establishing standards of performance for emissions of "air pollutants" from new stationary sources. 42 U.S.C. § 7411.

Section 202 requires EPA to promulgate regulations establishing standards applicable to emissions of “any air pollutant” from motor vehicles. 42 U.S.C. § 7521. Regulation under Sections 111 and 202 is required where the “Administrator” makes an endangerment determination, that is, where the Administrator determines that an air pollutant “cause[s], or contribute[s] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.” 42 U.S.C. § 7411(b)(1)(A); 42 U.S.C. § 7521(a)(1). This standard, reflecting the precautionary nature of the Clean Air Act, does not require proof of actual harm. Congress directed that regulatory action taken pursuant to an endangerment finding would be designed to “precede, and, optimally, prevent, the perceived threat.” Ethyl Corp. v. EPA, 541 F.2d 1, 13 (D.C. Cir. 1976). EPA is not required to document “proof of actual harm” as a prerequisite to regulation; rather, EPA is supposed to act where there is “a significant risk of harm.” Id. at 12-13. In Ethyl Corp. v. EPA, noting the novelty of many human alterations of the environment, the Court of Appeals for the District of Columbia Circuit found:

Sometimes, of course, relatively certain proof of danger or harm from such modifications can be readily found. But, more commonly, ‘reasonable medical concerns’ and theory long precede certainty. Yet the statutes and common sense demand regulatory action to prevent harm, even if the regulator is less than certain that harm is otherwise inevitable.

Id. at 25 (emphasis added).<sup>37</sup>

The 1977 Clean Air Act Amendments confirmed and adopted the precautionary interpretation enunciated in Ethyl, enacting special provisions, Pub. L. No. 95-95, § 401, 91 Stat. 790-91 (August 7, 1977), designed to “apply this interpretation to all other sections of the act relating to public health protection.” H.R. Rep. No. 294, 95th Cong., 1st Sess. 49 (1977); Accord, id. at 51

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<sup>37</sup> Accord, Industrial Union Dep’t v. American Petroleum Institute, 448 U.S. 607, 656 (1980) (plurality) (agency need not support finding of significant risk “with anything approaching scientific certainty,” but rather must have “some leeway where its findings must be made on the frontiers of scientific knowledge,” and “is free to use conservative assumptions in interpreting the data,” “risking error on the side of overprotection rather than underprotection”).

(amendments are designed inter alia to “emphasize the precautionary or preventive purpose of the act (and, therefore, the Administrator's duty to assess risks rather than wait for proof of actual harm)”). Congress rejected the argument that, “unless conclusive proof of actual harm can be found based on the past occurrence of adverse effects, then the standards should remain unchanged,” finding that this approach “ignores the commonsense reality that ‘an ounce of prevention is worth a pound of cure.’” Id. at 127.

**ii. The Endangerment Standard is Met.**

Carbon dioxide unquestionably meets the endangerment standard requiring regulation of carbon dioxide from coal plants, motor vehicles and other sources under Sections 111 and 202. In Massachusetts v. EPA, the Supreme Court recognized the “enormity of the potential consequences associated with man-made climate change” and that these “harms . . . are serious and well recognized.” 127 S.Ct. 1438, 1455, 1462 (2007). Increased concentrations of greenhouse gases in the atmosphere are responsible for this warming. 127 S. Ct. at 1448-50 (citing scientific studies). Petitioners submitted to the Board with their comments the summaries of the IPCC’s four working groups, and summarized a number of the working groups’ findings in their comments, including the following:

- The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005, which exceeds by far the natural range over the last 650,000 years;
- Fossil fuel use is the primary source of the increased atmospheric concentration of carbon dioxide since the pre-industrial period;
- Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level;
- For the next two decades, warming of about 0.2 Degrees Celsius per decade is projected for a range of emission scenarios;

- Projected climate change-related exposures are likely to affect the health status of millions of people, particularly those with low adaptive capacity; and
- There is greater than a 90% likelihood that hot extremes, heat waves and heavy precipitation events will continue to become more frequent; and
- Warming in the mountains of western North America is projected to cause decreased snowpack, more winter flooding, and reduced summer flows, exacerbating competition for over-allocated water resources;
- Drought and flood events will likely increase in frequency and extent, affected crop production in some areas
- If global average temperatures increase by more than 1.-2.5 Degrees Celsius, approximately 20-30% of plant and animal species assessed so far are likely to be at increased risk of extinction, and there are projected to be major changes in ecosystem structure and function, species' ecological interactions, and species' geographic ranges, with predominantly negative consequences for biodiversity, and ecosystem goods and service, e.g., water and food supply;
- Unmitigated climate would, in the long term, be likely to exceed the capacity of natural, managed and human systems to adapt.
- In order to stabilize the concentrations of GHGs in the atmosphere, emissions would need to peak and decline thereafter.

AR 57, Ex. 6 at 3-5. Petitioners also summarized, and incorporated by reference certain EPA reports available on EPA's web page and other sources. See AR 57, Ex. 6 at 13-16. These sources identify a number of anticipated harms to human health and the environment attributable to global warming, including:

- worsening air quality, including increased ozone levels and PM concentrations and associated respiratory and other adverse health effects. Ex. 6, at 14;
- loss of life of human life due to an increase in the magnitude, frequency and duration of heat waves, Id. at 13;
- increased risk of infectious disease, including vector borne diseases, Id. at 14;
- increased frequency and severity of extreme weather events, such as hurricanes, droughts, and floods, which present danger to humans, reduce available water, and threaten drinking water supplies, Id. at 14-15;

- impacts to plants and animals and ecosystems as a whole, including decrease in migratory bird habitat, increased fires and insect outbreaks in forests, loss of coastal wetlands, increase in acidity of ocean water with negative consequences for coral, Id. at 15
- adverse effects on agriculture, including decreased crop yields in some areas and increased soil erosion, Id. at 16.

**iii. Petitioners' Comments Demonstrate that It is Appropriate to Apply BACT Requirements to Coal Plant Carbon Dioxide Emissions.**

In addition to demonstrating that carbon dioxide emissions meet the endangerment standard, Petitioners submitted evidence demonstrating that coal plants and the Desert Rock plant in particular contribute to global warming and that it is appropriate to apply BACT requirements to DREF's carbon dioxide emissions. Petitioners presented evidence that coal-fired power plants are the nation's largest source of CO<sub>2</sub> emissions, that CO<sub>2</sub> is the primary greenhouse gas contributing to global warming, and that DREF's anticipated emissions of 13.7 million tons per year will make a significant contribution to coal plant emissions in the western states. Ex. 5, at 3-6, Ex. 6 at 2-7. Petitioners also presented evidence of available technologies, suitable for consideration in a BACT analysis, that can both lower carbon dioxide emissions now and increase the likelihood that carbon capture and sequestration technologies can be added on in the future to dramatically reduce carbon dioxide emissions, including IGCC (Ex. 5, at 24-41, and Thompson Affidavit). Petitioners submitted a BACT analysis demonstrating that had EPA properly evaluated IGCC in the DREF BACT analysis, IGCC would have been the selected technology for the DREF facility. Ex. 5, at 31-41; Thompson Affidavit. Petitioners also presented evidence of carbon dioxide emission limitations for coal-fired power plants that had been adopted by three western states. Ex. 6, at 19.

**iv. EPA Has Effectively Made An Endangerment Finding for Carbon Dioxide.**

In its response to comments, EPA made no effort to rebut Petitioners' demonstration that the harm caused by carbon dioxide meets the endangerment standard or that BACT requirements may appropriately be applied to coal plants to address such endangerment. Indeed, EPA's own actions subsequent to the close of the public comment period and documents relied on by EPA in its response to comments confirm that EPA, itself, has concluded that the endangerment standard is met and effectively made an endangerment determination.

In particular, documents relied on by EPA in its response to comments demonstrate EPA made an endangerment finding for greenhouse gases under Section 111 in 1996, when EPA required standards of performance controlling landfill gas emissions. The gas consists of 50% methane, 50% carbon dioxide, and less than 1% non-methane organic compounds." Ex. 24, at 2-1. Indeed, in a background technical document, EPA, as early as March 1991, acknowledged that air emissions of greenhouse gases, including carbon dioxide and methane "contribut[ed] to the phenomenon of global warming," and that the "global warming effects" of those emissions posed "potential adverse health and welfare effects." Ex. 24, at 2-2, 2-3, 2-15. EPA noted that while there was considerable uncertainty as to the timing and ultimate magnitude of global warming, there was in 1991, a "strong scientific agreement" that the increasing emissions of greenhouse gases "will lead to temperature increases" and that efforts were underway to develop control options. Ex.24, at 2-15.

In March 1996, EPA issued its final rule requiring control of landfill gas emissions, after determining that the gas "contributes to global climate change," and meets the endangerment standard. Although the Rule was designed in part to control emissions of the trace amounts of non-methane organic compounds in the gas, one of the specific justifications that EPA

articulated for adopting the Rule (particularly at the level of stringency chosen) was to limit emissions of methane to avoid global warming impacts. See 56 Fed. Reg. 24468, 24481 (March 12, 1996) (“[i]n considering which alternative to propose as BDT, EPA decided to consider both NMOC’s and methane reductions”); 61 Fed. Reg. 9905, 9906 (“Briefly, specific health and welfare effects from [landfill gas] emissions are as follows . . . methane emissions . . . contribute to global climate change as a major greenhouse gas”); Id. at 9914 (anticipated “methane reductions . . . are also an important part of the total carbon reductions identified under the Administration’s 1993 Climate Change Action Plan”). While the rule was directed at reducing methane rather than carbon dioxide emissions, EPA noted in the preamble to the final rule that “[c]arbon dioxide is also an important greenhouse gas contributing to climate change.” 56 Fed. Reg. at 24472. EPA also quantified the benefits of the rule based on “equivalent reduction in CO<sub>2</sub>.” Id. (stating that “1.1 to 2.0 billion trees would need to be planted . . . to achieve an equivalent reduction in CO<sub>2</sub> as achieved by today’s proposal”).<sup>38</sup>

Any ambiguity as to whether EPA has determined that carbon dioxide emissions meet the endangerment standard of Sections 111 and 202 was eliminated through EPA’s actions in response to a petition to regulate greenhouse gas emissions, including carbon dioxide, from motor vehicles. On October 20, 1999, nineteen organizations filed a rulemaking petition asking EPA to regulate those emissions under Section 202. Massachusetts v. EPA, 127 S. Ct. 1438, 1449 (2007). EPA denied the petition on September 8, 2003. EPA gave two reasons for its decision: (1) that Congress did not intend to authorize regulations to address global climate change, and therefore greenhouse gases, including carbon dioxide, are not “air pollutants” under

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<sup>38</sup> While EPA recognized uncertainty regarding the precise “rate and magnitude” of global warming, as discussed above, this is no barrier to EPA’s finding that greenhouse gases are emissions that contribute to adverse health and welfare effects.

Section 302(g) of the Clean Air Act, and EPA lacks authority to issue regulations addressing them; and (2) even if the agency had the authority to set greenhouse gas emission standards it would be inappropriate and unwise, and would conflict with other administration priorities to do so.<sup>39</sup> 127 S. Ct. at 1450, 1459-60. EPA cited a number of policy reasons in support of the second rationale for its decision. For example, EPA stated its view that adopting motor vehicle regulations under Section 202 would amount to an “inefficient, piecemeal approach,” and it stated its preference for delaying regulatory action until more is understood about “the potential options for addressing” the problem. Ex. 50 ,68 Fed. Reg. 52922, 52931.

The case ultimately reached the Supreme Court with 13 states, the District of Columbia, two cities and 12 organizations participating on the side of the original Petitioners. 127 S. Ct. at 1446 n. 2-4.<sup>40</sup> On April 2, 2007 the Supreme Court issued its opinion rejecting both grounds for the agency’s decision. The Court held that because greenhouse gases, including carbon dioxide, “fit well within the Clean Air Act’s capacious definition of ‘air pollutant’ we hold that has the statutory authority to regulate the emission of such gases from new motor vehicles.” 127 S. Ct. at 1459-62. The Court also specifically rejected the agency’s second rationale noting that it rested on “reasoning divorced from the statutory text.” *Id.*

In response to the Court’s ruling in Massachusetts v. EPA, President Bush on May 14, 2007, announced that he had directed the EPA Administrator to issue standards to reduce

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<sup>39</sup>EPA had earlier described this position in the August 28, 2003 Farbricant Memorandum, discussed above.

<sup>40</sup> Petitioners included Sierra Club, Environmental Defense, and Natural Resources Defense Council, parties to this petition and Center for Biological Diversity, who has filed a separate petition in this case. *Id.*

emissions of greenhouse gases from motor vehicles under Section 202 of the Clean Air.<sup>41</sup> In a press briefing immediately after the President's announcement, the Administrator stated:

On April 2, 2007, the U.S. Supreme Court decided in Massachusetts versus EPA that the Clean Air Act provided EPA the statutory authority to regulate greenhouse gas emissions from new vehicles if I determine in my judgment whether such emissions endanger public health and welfare under the Clean Air Act. Today the President has responded to the Supreme Court's landmark decision by calling on EPA and our federal partners to move forward and take the first regulatory step to craft a proposal to control greenhouse gas emissions from new motor vehicles.

...

[O]ur target for a draft proposal will be fall of this year. And as part of that proposal, we will address the endangerment finding as part of the proposal.

...

The proposal - the sequence, we develop a proposed rule-making; then we take public comment on that proposed rule-making, which I said we would - our goal is to have a proposal out this fall, fall of 2007. Then there would be a notice and comment; then we then review all of those comments, and then make a final decision, which would then be issued in the final regulation, which the President has asked for us to have it completed by the end of 2008.<sup>42</sup>

By stating that it was moving forward with proposed regulations under Section 202(a)(1), EPA acknowledged its view that endangerment was occurring and that any remaining scientific uncertainty on climate change was not so profound as to preclude the agency from making a judgment on endangerment. This follows because Section 202(a)(1) "condition[s] the exercise of

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<sup>41</sup> Statement of President Bush, May 14, 2007, available at <http://www.whitehouse.gov/news/releases/200705/2007-0514-4.html> (attached as Ex.25). The President simultaneously directed EPA to issue regulations for the content of motor vehicle fuels, to reduce the amount of carbon dioxide released when those fuels are burned, under Section 211 of the Clean Air Act, 42 U.S.C. § 7545. The fuel regulations were not subject to this litigation, and relief is sought only for the action due under Section 202 regarding motor vehicle emissions.

<sup>42</sup> Briefing, May 14, 2007, available at <http://www.whitehouse.gov/news/releases/2007/05/20070514-6.html>, attached as Ex. 26.

EPA's authority on its formation of a 'judgment'" concerning the statutory endangerment standard. 127 S. Ct. at 1462.

Throughout the summer and fall of 2007, in public statements, in testimony under oath to Congressional committees, and in Federal Register notices, the EPA Administrator and his agency repeatedly reiterated the intention to issue an endangerment determination, as well as proposed standards, by the end of 2007. For example, at a hearing on November 8, 2007, before the House Committee on Oversight and Government Reform, the Administrator said:

Of course, before the agency, given the Supreme Court decision in *Massachusetts v. EPA*, the focus is on mobile sources. So we are, as I have already mentioned, going to be proposing regulating CO<sub>2</sub> greenhouse gases, from mobile sources by the end of this year.<sup>43</sup>

EPA reaffirmed its end-of-the-year schedule in a formal "regulatory plan" published on December 10, 2007: "[W]e have established a schedule to issue a notice of proposed rulemaking by the end of 2007 and a final rule by the end of October 2008." Unified Agenda, Environmental Protection Agency, 72 Fed. Reg. 69922, 69934 (Dec. 10, 2007). EPA cited the Supreme Court's ruling as the legal basis for its plan, and it characterized that ruling as requiring EPA to make an endangerment determination. *See id.* ("On April 2, 2007, the Supreme Court ruled that the EPA must determine, under Section 202(a) of the Clean Air Act, whether greenhouse gas emissions (GHG) from new motor vehicles cause or contribute to air pollution that endangers public health or welfare."). An investigation conducted by the House Committee on Oversight and Government Reform has established that, consistent with its announced schedule, EPA had in fact completed its internal process of drafting an affirmative endangerment determination during fall 2007. Letter from Chairman Henry A. Waxman to EPA Administrator

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<sup>43</sup> Hearing on EPA Approval of New Power Plants: Failure to Address Global Warming, before the Committee on Oversight and Government Reform, House of Representatives, at 57 (Nov. 8, 2007), available at: <http://oversight.house.gov/documents/20071115145634.pdf>, Attached as Ex. 27.

Stephen L. Johnson dated March 12, 2008, at 3-6 (attached as Ex. 30). The House investigation concluded that the Administrator personally approved the affirmative determination and that, in early December of 2007, EPA transmitted a fully-drafted Federal Register notice announcing the affirmative endangerment determination to the White House Office of Management and Budget where it now apparently sits. Id. at 5-6. In addition, the investigation found that EPA had completed an extensive scientific review document in support of the endangerment determination (id., at 3-5), but that work regarding the endangerment determination stopped once the proposed determination was sent to the White House. Id. at 7.

Further evidence that the Administrator has in fact completed his scientific review and reached his conclusions regarding the adverse effects of greenhouse gas emissions is found in the Federal Register notice published on March 6, 2008, to explain the Administrator's action under Section 209 of the Clean Air Act denying California permission to implement its own greenhouse gas emission standards. 73 Fed. Reg. 12156 (March 6, 2008). In this notice, the Administrator endorsed the conclusion of the Intergovernmental Panel on Climate Change (IPCC) that global warming "is unequivocal and is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising average global sea level." 73 Fed. Reg. 12165, citing IPCC (2007) Summary for Policymakers. He also expressly concluded that greenhouse gas emissions, including from motor vehicles, are contributing to global warming. Id. at 12165 ("It is widely recognized that greenhouse gases have a climatic warming effect."); id. at 12162 (acknowledging the contribution of motor vehicle emissions to global greenhouse gas concentrations). The Administrator also catalogued the diverse dangers that such warming pose to public health and welfare. For example, he specifically found that "[s]evere heat waves are projected to intensify in magnitude and duration

over the portions of the U.S. where these events already occur, with likely increases in mortality and morbidity, especially among the elderly, young, and frail." *Id.* at 12167 n.2.<sup>44</sup> The Administrator made these findings after a full notice and comment process.<sup>45</sup>

**v. EPA's Conclusion that Pollutants "Subject to Regulation" Are Limited to Pollutants that are Currently Regulated is Clearly Erroneous.**

Rather than address Petitioners' demonstration that endangerment attributable to carbon dioxide emissions requires compliance with BACT requirements for carbon dioxide, EPA presents a number of excuses for not complying with BACT requirements. Each of EPA's excuses is based on clear legal error. First, EPA committed clear error by interpreting "subject to regulation" to include only pollutants that are "currently regulated." SRTC 5, at 14 (EPA disagrees that "subject to regulation" includes emissions that are "capable of being regulated," regardless of whether they are "currently regulated."); *see also* RTC II.B.3.b.i, at 26 ("subject to regulation" describes "pollutants that are presently subject to a statutory or regulatory provision that requires actual control of emissions of that pollutant")(emphasis added); SRTC 5, at 12

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<sup>44</sup> As but one additional example, EPA recognized that "[t]he IPCC projects with virtual certainty declining air quality in U.S. and other world cities due to warmer and fewer cold days and nights and/or warmer/more frequent hot days and nights over most land areas." *Id.* 63, citing IPCC (2007) Summary for Policymakers. EPA also participated in the creation of a document specifically cataloging the expected harms associated with global warming. AR 62. While commenters submitted this to the record in this proceeding, amazingly EPA declined to consider it in its final permit decision, despite its own involvement in its creation. Among other things, the document has obvious value as one factor in EPA's consideration of whether or not to select a "no build" option based on the profound potential impacts climate change.

<sup>45</sup> Ultimately, the Administrator denied the California waiver, but only because he concluded that the harms from global warming being felt in California are occurring across the country and because vehicular greenhouse gas emissions from all over the country are contributing to those harms. *See id.* at 12162-69. On this basis, he concluded that California does not have "compelling and extraordinary conditions" as provided in Section 209(b) of the Clean Air Act. *Id.* at 12156. California and other Petitioners in this case are separately challenging EPA's denial of the waiver as inconsistent with the statute. *State of California v. US. Environmental Protection Agency*, Nos. 08-70011 and 08-70030 (9th Cir. filed Jan. 2, 2008).

(EPA interprets “subject to regulation under the Act . . . to cover pollutants that are actually subject to controls or limitations under the Clean Air Act or EPA implementing regulations”). It is telling that EPA’s Response to Petitioners’ comments on this point which equates “subject to regulation” to “currently regulated” is not based on any provision of the Clean Air Act or EPA’s regulations. Id. 5, at 14. EPA’s interpretation is clearly erroneous. The plain meaning of “subject to regulation under [the Clean Air Act]” in Sections 165(a)(4) and 169(3) includes pollutants for which emission controls are not currently required but may be required in the future.

Section 165(a)(4) prohibits construction of a facility to which PSD requirements apply unless a PSD permit unless:

the proposed facility is subject to the best available control technology for each pollutant subject to regulation under this chapter emitted from, or which results from, such facility.

42 U.S.C. § 7475(a)(4) (emphasis added).

It is a fundamental tenet of statutory construction that meaning should be given to all of the words of a statute. See TRW, Inc. v. Andrews, 534 U.S. 19, 31 (2001). EPA’s interpretation impermissibly reads the words “subject to” out of the statute. “Subject to” as used in Section 165(a)(4) clearly and unambiguously includes regulation that is not presently applicable to a pollutant (or, in the terms of EPA, requirements to which a pollutant is not presently subject). This is evident from the two ways in which Congress used the term “subject” in Section 165(a)(4) itself. First, Congress prohibited construction of a source unless BACT emission limitations are applicable to the source at the time of construction. Congress did this by prohibiting construction unless the source “is subject to” BACT. In the words of EPA, Congress prohibited construction unless the source is “presently subject to” or “actually subject” to BACT requirements at the time of construction. Second, Congress described the pollutants for which

BACT is required by stating that BACT is required for “each pollutant subject to regulation under [the Act].” Because the Act uses the word “is” to define the BACT requirement that must actually apply to the source at the time it begins construction, but omits “is” in describing the pollutants for which BACT is required, Congress achieves a broader application of BACT than just to pollutants which are already regulated in fact.

If Congress had intended to limit BACT only to pollutants presently subject to a statutory or regulatory requirement it would have omitted “subject to” and used “regulated under,” as it has elsewhere in the Act. See 42 U.S.C. § 7475(e)(3)(B) (directing Administrator to promulgate regulations that will “require an analysis of the ambient air quality [and other factors] at the site of the proposed major emitting facility in the area potentially affected by the emissions from such facility for each pollutant regulated under this chapter”) (emphasis added);<sup>46</sup> Indeed, with respect to the very provisions at issue here, Sections 111 and 202 of the Clean Air Act, Congress used the phrase “regulated under” to refer to pollutants for which EPA has imposed requirements after making an endangerment finding. 42 U.S.C. § 7661a(b)(3)(B)(ii) (defining “regulated pollutant” for purposes of fees to include “each pollutant regulated under section 7411 or 7412 of this title.”) The Board must give some meaning to Congress’ use of the distinctly different statutory terms “subject to regulation” and “regulated under.” Barnhart v. Sigmon Coal Co., 534 U.S. 438, 452 (2002) (quotations omitted) (“[W]hen Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.”) (internal

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<sup>46</sup> See also 42 U.S.C. § 7412(n)(7) (“air emissions of which are regulated under Subtitle C of the Solid Waste Disposal Act”); 42 U.S.C. § 7561h(d) (“[a]ny unit . . . that does not increase hourly emissions for any pollutant regulated under this chapter shall not be subject to a standard of performance”); 42 U.S.C. § 7661f(c)(1)(D) & (E) (defining “small business stationary source” as a source that emits less than 50 tons per year of “any regulated pollutant” or less than 75 tons per year of all “regulated pollutants”).

quotations and citations omitted); see also New York v. EPA, 413 F.3d 3, 39-40 (D.C. Cir. 2005) (giving effect to Congress’s use of the word “emitted” instead of terms “potential to emit” or “emission limitation” used in other provisions of the Clean Air Act when construing NSR modification definition).

The plain meaning of Section 165(a)(4) is clear and unambiguous, and EPA’s Response to Comments offers no argument based on the statute or otherwise to support a contrary interpretation. EPA committed clear error in limiting pollutants “subject to regulation” to pollutants for which Congress or EPA presently requires control of emissions.

**vi. EPA’s Conclusion that Requiring BACT for CO2 Would be Inconsistent With the Congressional Objective of Reasoned Decisionmaking is Clearly Erroneous.**

EPA also committed clear error in asserting that Petitioners’ interpretation of “subject to regulation” would be inconsistent with the Congressional objective of reasoned decisionmaking under the Clean Air Act. (Response to Late-Filed Comments 5, at 15 (citing 42 U.S.C. § 7607(d)(9)). The section of the Clean Act on which EPA relies, Section 307(d)(9), does not set forth either Congressional objectives or substantive law requirements applicable to the Board’s consideration. It sets forth a standard of review applicable to appeals from action of the EPA administrator.<sup>47</sup>

**vii. EPA’s Conclusion that Requiring BACT for Pollutants Meeting the Endangerment Standard is Unworkable is Clearly Erroneous and Not Supported by Evidence.**

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<sup>47</sup> EPA’s interpretation of the Clean Air Act in a manner contrary to its plain language and EPA’s failure to squarely address Petitioners’ comments is an example of agency action that falls short of reasoned decisionmaking. See Defenders of Wildlife v. EPA, 420 F.3d 946, 961 (9<sup>th</sup> Cir. 2005) (agency decisionmaking “based on contradictory views of the same words in the same statutory provision . . . was not the result of reasoned decisionmaking.”)

EPA also committed clear error in rejecting Petitioners' claim based on the unsubstantiated assertion that Petitioners' interpretation would present an unworkable interpretation of the Act. EPA must base any rejection of Petitioners' claim on applicable law and has failed to do so. Further, EPA presents no evidence to support its assertion that Petitioner's interpretation would impose an unworkable burden, and does not fairly characterize and respond to the issues presented by Petitioners. (Response to Late-Filed Comments 5, at 15). Petitioners did assert that "subject to regulation" means "capable of being regulated," is not limited to pollutants that are "currently regulated," and includes pollutants for which EPA possesses but has not exercised authority to impose requirements. Ex. 6, at 8. However, Petitioners tied this assertion to a requirement that the pollutant meet the endangerment standard. Ex. 6, at 11-12. Petitioner's explained that carbon dioxide is "subject to regulation" under Sections 111 and 202 because there is no question that the endangerment standard is met. (Ex. 6, at 11-12). Petitioners interpretation would not present an unworkable interpretation of the Act and result in "an administratively unworkable program," as EPA baldly alleges. (Response to Late-Filed Comments 5, at 15). Nor would it be inconsistent with the Board's observation in In re: Knauf Fiberglass, 8 E.A.D. at 162 that "[n]ot all air pollutants are covered by the federal PSD review requirements." 8 E.A.D. 121, 162 (EAB 1999). Petitioners interpretation would not require PSD review for any substance meeting the definition of "air pollutant," as EPA alleges. PSD review would be required only for those currently unregulated pollutants for which regulation is required because the applicable threshold standard is met.

**viii. EPA's Assertion that Requiring BACT for Carbon Dioxide Would Usurp Its Discretion is Clearly Erroneous**

EPA further asserts that requiring BACT here would usurp its discretion to interpret statutory requirements, set regulatory priorities and implement the PSD program in an orderly

and reasonable manner. (Response to Comments 6, at 15). These claims ring hollow. While EPA does have considerable discretion, that discretion is not unbridled. As is described above, EPA's interpretation of "subject to regulation" is contrary to the plain language of the Act. Here there is absolutely no question that the standard for an endangerment finding is met, and EPA, itself, has determined that the standard is met. Though it dealt with a rulemaking, Massachusetts v. EPA is nevertheless instructive here. The Court acknowledged Section 202 conditioned EPA action to regulate carbon dioxide on its exercise of a judgment, but made clear that "the judgment must relate to whether an air pollutant 'cause[s], or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare.'" 127 S.Ct. at 1462 (citing 42 U.S.C. § 7521(a)). Of particular relevance here, the Court admonished the agency that its exercise of "judgment" is "not a roving license to ignore the statutory text, but rather "a discretion to exercise discretion within defined statutory limits." Id. The Court further warned that EPA "can avoid taking further action only if it determines that greenhouse gases do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do." Id. "To the extent that this constrains agency discretion to pursue other priorities of the Administrator or the President, this is the congressional design." Id.

As in Massachusetts v. EPA, EPA, here, has interpreted the Clean Air Act in a manner contrary to its plain language, and offered "reasoning divorced from the statutory text" to justify its inaction. EPA offers no explanation whatsoever how conducting a BACT analysis for carbon dioxide before a rulemaking establishing a generally applicable standard would interfere with

orderly and reasoned implementation of the PSD program,<sup>48</sup> is inconsistent with any requirement of the Clean Air Act or any Congressional purpose. As discussed above, the BACT analysis' flexible case-by-case determination that does not mandate any particular result and may provide information useful to setting a broadly applicable standard is inherently compatible with EPA's subsequent establishment of a generally applicable standard through rulemaking. Conducting BACT before such a rulemaking is not only consistent with but furthers the purposes of the Clean Air Act.

Further since concluding that the science-based standard for regulating carbon dioxide is met and effectively making an endangerment finding, EPA has once again backpedaled. EPA has made clear through its recent actions, that is once again impermissibly relying on policy considerations "divorced from the statutory text" to delay regulation of carbon dioxide under Section 202. Unlike its previous footdragging, EPA's current approach is directly contrary to the Supreme Court's stern warning that its decision whether to regulate carbon dioxide under Section 202 must be based on the scientific considerations informing an endangerment determination under Section 202, rather than policy considerations. EPA is continuing to weigh the same policy considerations that the Supreme Court ruled it was impermissible for it to consider. For example, EPA is continuing to weigh whether action to address global warming emissions should be taken as part of a broader regulatory approach. EPA has also impermissibly thrown additional policy considerations into the mix, including its view as to the effect regulation under carbon dioxide would have on this case. In an Advance Notice of Proposed Rulemaking issued July 30, 2008, EPA stated:

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<sup>48</sup> EPA itself has acted in a manifestly unreasonable manner, since at least 1999, in failing to require control of carbon dioxide emissions under its PSD and other programs. A year and a half after the Supreme Court's admonition EPA has still not exercised its discretion as the Supreme Court has specifically required.

The main issue that has been raised is whether EPA should be establishing facility specific emission limits for CO<sub>2</sub> in these permits as a result of the Court's decision. EPA's interpretation, discussed in more detail later in this notice, is that CO<sub>2</sub> is not a regulated pollutant under the Act and that we therefore currently lack the legal authority to establish emission limits for this pollutant in PSD permits. That interpretation has been challenged to EPA's Environmental Appeals Board, and we anticipate a decision in this case later this year. The Appeals Board's decision could also affect several other permits awaiting issuance by EPA, and may have significant implications for the entire PSD program. The broader consequences of CO<sub>2</sub> and other GHGs being classified as a regulated pollutant are discussed later in this notice.

73 Fed. Reg. 44354, 44400

Requiring BACT limits for carbon dioxide here would not unlawfully usurp the agency's discretion. EPA has already determined that an endangerment finding should be made, thus, it has no discretion left to exercise in determining whether BACT is required. The policy considerations it continues to assess in determining whether to issue a rulemaking under Section 202 are irrelevant to whether BACT is required in this case.

Even if EPA could lawfully exercise discretion to decline to require a BACT analysis in this case, the Board as EPA's final decisionmaker should decline to exercise such discretion and remand for a BACT analysis. In the alternative, due to EPA's clear legal errors and its effective failure to even consider the detailed evidence presented by Petitioners in this case, the Board should remand for EPA to further consider Petitioner's request for a BACT analysis for carbon dioxide. In its response to comments, EPA made no effort to dispute any of Petitioners' conclusions or evidence concerning the endangerment caused by carbon dioxide emissions contributing to global warming (See, eg., Ex. 6, at 12-13). Indeed, EPA's sole response to any of these assertions is not even set forth in EPA's response to Petitioner's demand for BACT emission limitations. Curiously, in response to Petitioners' request that EPA consider the entire

IPCC Fourth Assessment Report and make it part of the Record,<sup>49</sup> EPA asserts that “commenter highlighted the findings of the IPCC working groups that contributed to the report, but did not articulate how those findings should lead EPA to a different conclusion about the legal basis for regulating greenhouse gas emissions through a PSD permit.” SRTC 6, at 16. Petitioners have thoroughly articulated why EPA should reach a different conclusion, and EPA, relying on its narrow interpretation of “subject to regulation” that is contrary to the plain language of the Act, has failed to satisfy its obligation to either establish BACT limits for CO<sub>2</sub> or articulate a response sufficient to justify inaction. Accordingly, the Board should remand this case to EPA for EPA to conduct a BACT analysis for carbon dioxide.

**ix. EPA Failed to Provide the Public with Notice regarding its Interpretation of the Act Prior to Issuing the DREF Permit.**

Especially in light of Massachusetts v. EPA, the agency was required to provide the public with notice of the basis for its refusal to set emission limitations for carbon dioxide or to otherwise consider climate-related emissions or impacts, and the agency did not do so. By failing to solicit comment on the appropriateness of its decisions in this regard, in light of relevant factual, legal and policy considerations, EPA committed clear procedural error. Where EPA is addressing an issue of profound significance – here by expressly adopting an interpretation of the CAA – it must explain its decision and the basis for that decision and invite public comment.<sup>50</sup> EPA has an obligation to solicit and consider public comments on these

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<sup>49</sup> The Report was not available when Petitioners filed their supplemental comment letter.

<sup>50</sup> The Board has in the past addressed the requirement to present all significant issues in the public notice for a permit. See, e.g., In re Indeck Elwood, PSD Appeal 03-04 (EAB 2006). In Indeck, the Board chastised Illinois EPA for failing to address in its public notice the impacts of a proposed coal plan on a nearby national prairie, stating:

Overall, we, too, are struck by the remarkably low profile the proximity of a nationally protected prairie - essentially a preservation site for vegetation of national and historic

issues, and it should have done so in the immediate wake of the Court's decision in Massachusetts.

The effect of EPA's approach in this instance has been to stifle meaningful public understanding and dialogue, and undermine the EPA's ability to make a truly well-informed decision about how to address GHG under the PSD program. Because EPA only addressed GHG emission in this case in response to public comment – and did not acknowledge the relevance of GHG issues in the public notice on the draft permit or in any supplemental notice after Massachusetts v. EPA – no one has ever had the opportunity to engage in an informed dialogue with the agency on this issue (with full advanced knowledge of the agency's proposed position and justifications) prior to the agency's final decision on a permit.<sup>51</sup>

As this administrative appeal makes abundantly clear, there are a host of significant issues that are directly implicated by this permit decision which remain unresolved because they were not adequately addressed on the record. These shortcomings are the direct result of EPA's failure to adequately notify the public upfront of the agency's specific expectations regarding its treatment of CO<sub>2</sub>-related considerations. Had the agency's position been discussed and presented to the public prior to issuance of the final permit, an adequate record could have been

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significance - assumed in IEPA's approach to the process of developing the permit before us. The fact that such a preserve is adjacent to, and apparently downwind from, the site for a proposed power plant would presumably have attracted IEPA's attention to a significant degree, and by all rights *should have featured prominently in the notice given the public* concerning the permit. Yet, the issue instead appears to have been given secondary status, to the point of not being referenced at all in the public notice. This strikes us as *not only unfortunate but also the stuff of which legal vulnerability is made*. *Id.* (emphasis added). In the present case, the absence of any public notice regarding EPA's intent to specifically limit its authority to address CO<sub>2</sub> in the PSD permitting context is at least as glaring a public notice oversight.

<sup>51</sup> In this instance, commenters took it upon themselves to anticipate EPA's likely treatment of CO<sub>2</sub> based on statements the agency has made in other contexts, and submit unsolicited supplement comments, in an effort to bring important issues before the policy decisionmaking prior to issuance of the final rule. This, however, is insufficient.

fully developed, and the agency, in light of public comments and additional information, may have reached a different decision. At least, the agency would have had the opportunity to explore the full range of factual, legal, and policy consideration, on the record, and without the prejudice inherent in having already issued a final permit.

As a result of these procedural shortcomings, the issuance of the final permit was inappropriate absent a reopening of the comment period. Thus, to remain consistent with Board's "long-standing policy" allowing the agency to resolve important permitting issues at the Regional level, the Board should remand this permit to EPA with instructions to specifically solicit and consider comments on its intended statutory interpretation, and to develop a full record on the significant factual, legal, and policy implications.

## **II. EPA's Categorical Refusal to Consider IGCC as a Control Option in the BACT Determination for the Desert Rock Energy Facility is Based on Clearly Erroneous Conclusions of Law.**

EPA's Draft PSD permit issued for the Desert Rock Energy Facility does not reflect a BACT analysis assessing integrated gasification combined cycle ("IGCC") technology as a production process for generating electricity from the Navajo coal, or as fuel cleaning, or as an innovative fuel combustion technique. AR 46, AAQIR at 35. Nor do the final permit's BACT limits reflect any such consideration of IGCC. AR 120, RTC at 13-21. Although Sithe Global submitted two public reports (and an ostensibly confidential "position paper")<sup>52</sup> on IGCC to

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<sup>52</sup> One of the EPA-requested evaluations of IGCC has been withheld from the Administrative Record for the permit, and has been kept confidential by the Agency, at the request of Sithe Global. See AR 113 at 90, email communication from Gus Eghneim of Wood Group to Robert Baker, U.S. EPA Region 9, Subject: IGCC for Desert Rock (May 8, 2005)(referencing a "confidential position paper prepared by Sithe Global on the potential use of IGCC for desert [sic] Rock."). Because this "position paper" assertedly includes a legal analysis and conclusions, it is clearly a separate document from the purely technical reports on IGCC, entitled "Desert Rock Energy Project Design Comparison to Integrated Gasification Combined Cycle and Circulating Fluidized Bed Combustion" (September 2005) contained in the Administrative

EPA, the BACT limits established for Desert Rock are not based on any of that information,<sup>53</sup> nor does the BACT analysis incorporate any of the significant comments EPA received on IGCC in response to the Draft Permit.<sup>54</sup> AR 66 , Comment Ltr. 23 and Appendix – (Declaration of John Thompson, and attachments thereto) (Declaration attached as Ex. 28). This is because EPA has simply and categorically refused to consider IGCC as a control option for analysis in the BACT determination for Desert Rock.

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Record at AR 34 (a report which replaced “integrated Gasification Combined Cycle Compared to the Desert Rock Energy Project” (May 3, 2005) (AR 27). Those documents do not offer any legal views, nor do they provide a full BACT analysis, but describe the applicant’s position on the technical parameters related to deployment of IGCC at Desert Rock.

The email communication that is in the record notes that the ostensibly confidential position paper “is submit[ed] at the request of EPA Region IX” and that it “shows very clearly that IGCC would not make technical or economic sense for Desert Rock.” From this statement, Petitioners question whether this document may in fact contain the nearest thing to a BACT analysis including IGCC prepared by the applicant for Desert Rock. This is, of course, entirely unclear, as the document has been withheld from the public. It is also quite unclear how much the legal and technical work it allegedly contains influenced EPA’s decision not to include IGCC in the public BACT determination. What is certain is that Petitioners and other members of the public were not given the opportunity to review or provide comment on this “position paper” or the analysis it contains. That is contrary to law. 40 C.F.R. §§124.9(b) (contents of record must include all supporting data furnished by the applicant), 124.18(a) (Administrator shall base final permit decision on materials in the administrative record).

<sup>53</sup> The Sithe reports that are in the record do not purport to be, nor do they contain, a top-down BACT analysis for Desert Rock. Instead, these reports document the applicant’s views on the technical details related to IGCC at the time they were submitted. Sithe notes that its reports include emissions data and efficiency and financial data for an IGCC and a comparison to the planned project. AR 34 at 1-1. They do not list all available [language from statute], consider their technical feasibility, order them according to emissions control stringency with the most stringent option first, evaluate collateral impacts, and then select the most stringent remaining option as the basis for the BACT emissions limit for any of the specific pollutants emitted by Desert Rock. Compare AR 34 at 1-1 (describing report as containing emissions, efficiency and financial data on IGCC and a comparison with “the planned Desert Rock project”) with NSR Manual at B.5-B.75(outlining the generally accepted top-down BACT analysis).

<sup>54</sup> As described further herein, EPA has failed adequately to fully respond to these comments, which in addition to addressing the legal obligation to consider IGCC in the BACT determination for the proposed Desert Rock project, also provide a detailed technical assessment of the availability and feasibility of IGCC, and its benefits in terms of reduced air emissions (including the capacity to capture CO<sub>2</sub> for permanent sequestration), and collateral environmental benefits.

As the basis for its decision, EPA in its Response to Comments document offers only a reiteration of its view previously expressed in the AAQIR, that IGCC need not be considered at all in the BACT analysis for a coal-fired power plant. RTC at 13-14, AR 120; AAQIR at 35, AR 46. Although the Agency devotes 15 pages to an attempt to explain away its statutory obligations, EPA offers no response to the technical comments it received, nor support for its assertion that the design changes implied by considering IGCC as the basis for BACT at Desert Rock would impermissibly ‘redefine the source.’ EPA does not respond to detailed comments on the ‘availability’ of IGCC, or its feasibility for application at Desert Rock. Nor does the Agency acknowledge the statutory limits on its discretion to avoid considering production processes or innovative fuel combustion techniques such as IGCC in the BACT determination.<sup>55</sup> Instead, the Agency simply shunts all consideration of this technology choice to a toothless ‘alternatives analysis’ on the bald legal assertion that IGCC would impermissibly “redefine the source”.

The Agency’s decision is based on its erroneous legal conclusion that it has virtually unconstrained authority to eliminate a control technology option that offers lower air pollutant emissions levels, in the name of applying its “redefining the source policy”. But, as shown below, EPA may not apply its policy preference so as to read out of the statute a technology

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<sup>55</sup> EPA asserts that it “evaluated whether IGCC should be listed at Step 1 and considered the commenter’s arguments [that it should be included] ....” RTC at 13, AR 120; AAQIR at 35, AR 46. However, that ‘evaluation’ of submissions by the applicant and commenters was not made part of the record for the Desert Rock BACT analysis. Nor does EPA document its step 1 decision other than to baldly assert legal authority to keep the IGCC production process out of the BACT determination. Compare RTC at 13-21, AR 120 (providing legal conclusions, but no record analysis or response to comments about availability) & AAQIR at 35, AR 46 (asserting baldly that “EPA did consider whether IGCC is a BACT option, but concluded it is not”) with RTC Appendix A, at 224-226, AR 120 Appendix A. EPA’s failure to include its evaluation of IGCC for consideration at Step 1 is clear error of law, as the BACT record must include all relevant analyses of fact and law. See Alaska DEC v. EPA, 540 U.S. 461 (2004).

choice Congress expressly intended must be considered in the BACT determination. See Sierra Club v. EPA, 443 F.3d 653, 656 (7th Cir. 2007); New York v. EPA, 413 F.3d 3, 39 (D.C. Cir. 2005) (statutes must be construed so that “if it can be prevented, no ... word shall be superfluous, void, or insignificant”); see also 123 Cong. Rec. S9434-35 (June 10, 1977)(debate on P.L. 95-95)(statements of Mr. Huddleston, explaining the intent that gasification be considered in determining BACT). As discussed below, EPA’s decision also is inconsistent with EAB precedent and related federal case law, and with the technology forcing purpose of the BACT provisions.

In this instance, as a result of its clearly erroneous conclusions of law, described in more detail below, EPA clearly failed to consider “all potentially applicable control alternatives” in the BACT determination, which constitutes clear error, and therefore is grounds for remand. In re: Knauf, 1999 EPA App. LEXIS 2, \*49; In re: Masonite Corp., 1994 EPA App. LEXIS 36, \* --, 5 EAD 551, 568-69, 572 (EAB 1994), In re: Brooklyn Navy Yard Res. Recov. Facility, 1992 EPA App. LEXIS 39, \* 19-20, \*24-25, 3 EAD 867, 875 (Admn’r 1992).

**1. The Plain Language of the Statute Requires EPA to Consider “Production Processes,” “Available” “Innovative Fuel Combustion Techniques” and “Fuel Cleaning” in Determining BACT.**

EPA’s failure to include IGCC in the analysis underlying the Desert Rock BACT determination for all air pollutants is clearly erroneous as a matter of law, because it is contrary to the plain language of the statute. The Clean Air Act defines “best available control technology” as:

an emissions limit based on the maximum degree of reduction of each pollutant subject to regulation under [the Act] emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis ... determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning ... or innovative fuel combustion techniques for control of each such pollutant.

42 U.S.C. §7479(3) (emphasis added). EPA agrees that this definition requires it to “evaluate both add-on pollution control technologies and lower polluting process [sic]” in determining BACT. RTC, at 16, AR 120 (citing In re: Prairie State Generating Co., PSD Appeal No. 05-05, slip op. at 33 (Aug. 24, 2006). But despite detailed record comments by the applicant and others on the availability and the technical and economic feasibility of IGCC as an electricity production process at Desert Rock, EPA simply excluded IGCC even from the first step of the analysis for the BACT determination.<sup>56</sup>

The statutory language is clear, however, that BACT must be “based on” an evaluation of “production processes” and “available systems and techniques” for controlling each air pollutant, explicitly including “innovative fuel combustion techniques” and “fuel cleaning.” 42 U.S.C. §7469(3); Sierra Club v. EPA, 499 F.3d 653, 655 (7<sup>th</sup> Cir. 2007) (noting that “the Act is explicit” that the options listed in the statute’s BACT definition must be considered in the BACT determination). Where “production processes . . . methods, systems, and techniques” are available, especially if they are

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<sup>56</sup> “In an effort to lend some consistency and a framework to BACT determinations being made by permit issuing authorities...EPA has issued a guidance document that is widely used in PSD reviews.” In re Knauf at \*19-20 (referring to U.S. EPA, New Source Review Workshop Manual (Draft Oct. 1990) (“NSR Manual”). The Manual, while “not a binding rule,” is “looked to it as a statement of the Agency’s thinking on certain PSD issues.” Id. (citing In re Maui Elec. Co., PSD Appeal No. 98-2, slip op. at 6-7 (EAB, Sept. 10, 1998), 8 E.A.D. \_\_\_; In re Kawaihae Cogeneration Project, PSD Appeal Nos. 96-9, 96-10, 96-11, 96-14 & 96-16, slip op. at 8 n.11 (EAB, Apr. 28, 1997), 7 E.A.D. \_\_\_). The Manual contains a five step process for selecting BACT: The first step involves identifying and listing all “available” control options, the second step includes analyses of the technical feasibility of the control options identified in step 1; the third step of the BACT analysis is to list the technically feasible control options in order of stringency, with the most stringent option listed first. And in step four, collateral energy, environmental, and economic impacts are considered, beginning with the “top” control option. In re: Knauf, at \*21-25 (citing, inter alia, NSR Manual at B.5, B.7, B.17-21, B. 22 & B.26). Ultimately, at step five, “the most effective control alternative not eliminated \* \* \* is selected as BACT.” Id. quoting NSR Manual at B.53.

“innovative fuel combustion techniques” or “fuel cleaning,” as these are specifically included by Congress, they must be considered in the BACT analysis in order to identify “the maximum degree of reduction . . . achievable.” 42 U.S.C. § 7469(3). To read the statute otherwise also would nullify the specific Congressional directive to consider one of the most effective ways to reduce emissions – that is, by utilizing a production process that is inherently cleaner, or that by its nature allows superior emissions control, or both.

Furthermore, the statute requires meaningful evaluation of the full range of available control options in the BACT determination, which is among the most vital aspects of the PSD permitting process. See, e.g., In re: Knauf, 1999 EPA App. LEXIS 2, \* 26, \*33 (noting the importance of BACT and remanding a PSD permit where there wasn’t consideration of the full range of options because “it is impossible to know whether the most stringent option available was chosen as BACT”). Only after throwing a wide net to “develop a comprehensive list of control options” does EPA have discretion to begin eliminating specific BACT options from further consideration, and then only based on the factors set out in the statute.<sup>57</sup> And, then, only after EPA has specifically and legitimately justified an exclusion of more stringent controls, and has considered the collateral environmental impacts of any such exclusion, may the Agency decide on emissions limits specific to a particular proposal. In re: Knauf, 1999 EPA App. LEXIS 2, \*22. But because of the up-front exclusion of IGCC in this instance, the BACT analysis for Desert Rock is inadequate – “it is impossible to know whether the most stringent option available has been chosen” as the basis for BACT. Id. at \*33; see also

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<sup>57</sup> The statute states that the permitting authority, on a case-by-case basis may “take into account energy, environmental, and economic impacts and other costs” in determining the BACT emissions limits for a major emitting facility. 42 U.S.C. §7479(3).

Friends of the Chattahoochee, Inc. v. Couch, No. 2008CV146398 (Sup. Ct. Fulton Co. GA June 30, 2008)(remanding a PSD permit because the BACT analysis did not reflect IGCC).

**2. EPA’s Application of its Redefining the Source Policy to IGCC at Desert Rock Is Contrary to Law.**

EPA takes the explicit position that it has unbridled authority to leave control options completely unexplored in the BACT determination by simply asserting that they will require a ‘redesign’ of the ‘proposed facility’ as the permit applicant has defined it. See id; see AAQIR at 35, AR 46. EPA’s decision is not based on an evaluation of whether IGCC is “available” at the Desert Rock site, nor does the Agency refer to any other statutory limits on its discretion to apply its “redesigning the source” policy that might provide a reasonable limiting principle. The Agency asserts only that it is “not persuaded to change [its] view that [IGCC] would redefine the source...and thus need[s] not be listed as a potentially applicable control option”). RTC at 13, AR 120. Indeed, the agency goes even further here, saying that “EPA does not interpret the Clean Air Act to mandate evaluation of IGCC in a BACT analysis in cases involving proposed coal-fired steam electric generating facilities.” RTC at 20, AR 120.

EPA’s rationale for categorically excluding IGCC from any BACT analysis for coal-fired power plants, not just Desert Rock, is based on a clear error of law, as it disregards the statutory limits on EPA’s discretion as affirmed by the courts. Specifically, the U.S. Supreme Court has observed that the “strong normative terms maximum and achievable” in the statutory definition of BACT constrain the permit issuing authority’s discretion in conducting a BACT determination – and in selecting BACT for a facility. Alaska Dep’t Env’tl. Conservation v. EPA, 540 U.S. 461, 489 (2004).

Additionally, as described more fully below, the Seventh Circuit Court of Appeals has noted that there are explicit statutory limits on EPA's exercise of its redefining the source policy. See Sierra Club, 499 F.3d at 656. In particular, EPA may not act so as to effectively read out of the BACT definition specific control technology options listed there. Id.

EPA quotes the EAB's recent ruling in Prairie State as support for its decision, specifically the part of the opinion stating that "the permit issuer must be mindful that BACT, in most cases, should not be applied to regulate the applicant's objective or purpose for the proposed facility." RTC at 14, AR 120 (quoting Prairie State, slip op. at 30). This reliance is misplaced, as the Board's Prairie State decision is entirely consistent with the idea that EPA may not categorically exclude consideration of IGCC in a BACT analysis for a coal fired plant, as has it has done for Desert Rock. In Prairie State, EPA argued that permitting authorities are not required to consider in the BACT determination, control technology options that would, if put in place, defeat the "primary purpose" for which the applicant had submitted the proposal. In re: Prairie State, slip op. 23-25 (describing EPA's position before the EAB, as submitted in briefs by the Office of Air and Radiation). In that case, a proposed Illinois coal-fired power plant was planned on the site of a new coal mine, and the question raised was whether (as a element of its BACT analysis) the applicant was required to consider burning coal from an off-site source that was lower in sulfur than the coal from the co-located, co-proposed mine. EPA argued (as did the permitting authority, Illinois EPA) that requiring the source to use coal other than that from the co-proposed mine would constitute an impermissible

redefinition of the source. *Id.*, slip op at 23-24 (describing EPA Office of Air & Radiation’s brief).

Ultimately, the Board in Prairie State held that, in the very narrow factual circumstances of that case, the use of coal from the co-proposed mine was so integral to the very purpose and intent of the project that requiring the use of another source of coal would defeat the “basic business purpose” of the original permit application. Prairie State, slip op at 37. Accordingly, the EAB ruled that Illinois did not “clearly err when it determined that consideration of low-sulfur coal, because it necessarily involves a fuel source other than the co-located mine, would require Prairie State to redefine the fundamental purpose or basic design of its proposed Facility, and that, therefore, low-sulfur coal could appropriately be rejected from further BACT analysis at step 1 of the top-down review method.” Prairie State slip op. at 36-37.

The tightly tailored ruling in Prairie State is clearly consistent with a reading of the Act that significantly restricts EPA’s discretion to reject a BACT control option based on the “redefinition of the source” principle. Indeed, the ruling recognizes that such restrictions are compelled by the Act itself. First, the EAB found that the default assumption under the PSD program is that the use of potentially cleaner fuels (such as low-sulfur coal) will normally be a required part of the BACT analysis.<sup>[18]</sup> Similarly, the plain language of the Act presumes that production process changes and innovative fuel combustion techniques will be fully considered in the BACT analysis. Only where some unique or unusual element of the facility’s basic

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<sup>[18]</sup> Prairie State slip op. at 22 (“Petitioners correctly observe that . . . consideration of ‘clean fuels’ must be a part of the BACT analysis. Specifically . . . the Agency must consider both the cleanliness of the fuel and the use of add-on pollution control devices.”). Indeed, numerous other PSD permits have identified the use of clean fuel (including low sulfur coal) as BACT for new major sources. See, e.g. In re AES Puerto Rico 8 E.A.D. 324 (EAB 1999); In re Encogen Cogeneration, 8 E.A.D. 244 (EAB 1999); In re Hawaiian Commercial & Sugar Co., 4 E.A.D. 95, 99 n.7 (EAB, July 20, 1992).

business purpose makes a particular BACT-related consideration fundamentally incompatible with the underlying objectives of the permit application, has the EAB recognized that preliminary assessment of that BACT-related consideration might be unnecessary.<sup>[19]</sup>

Second, the Board's Prairie State decision in fact reflects an understanding that the concept of redefining the source must be subordinate to the primary, statutory, objectives of the BACT analysis. That is, the specific requirements of the BACT definition itself establish the obligations of both permit applicants and permitting authorities. This means that a wide net must be cast to find available lower emitting control technology options, and it is only when there is a fundamental conflict with the basic business purpose of the applicant's proposal that such an option can be lawfully excluded from consideration. This also is consistent with basic principles of statutory interpretation, as discussed below.

Additionally, the Prairie State Board concluded that while the permit issuer should look "in the first instance" at "how the permit applicant, in proposing the facility, defines the goals, objectives, purposes, or basic design for the proposed facility," the permit applicant cannot manipulate the definition of the facility in order to avoid otherwise required BACT analyses or consideration of certain methods or measures to reduce emissions. Prairie State slip op. at 29-30.

In evaluating the permit, the permit issuer must "discern which design elements are inherent to [the] purpose [of the facility], articulated for reasons independent of air quality permitting, and

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<sup>[19]</sup> In *Prairie State*, for example, the Board concluded that the mine and the coal-fired power plant under common ownership or control, were proposed together as a single source under the PSD provisions, and the mine was intended to supply the entirety of the power plant's fuel throughout the plant's operating life. Therefore, the EAB concluded, the plant and the mine were integral parts of a single proposal and the use of coal from another source would undermine the fundamental purpose of that proposal. If the mine were capable of supplying less than the full fuel needs of the power plant over its entire operational life, for example, the Board's analysis would likely have been different; the Board's decision suggests that in such a case the consideration of low-sulfur supplemental fuel would have been required.

which design elements may be changed to achieve pollutant emissions reductions without disrupting the applicant's basic business purpose for the proposed facility." Id. at 30 (emphasis added). Here, nothing about considering IGCC in the BACT analysis, or even the selection of IGCC technology as the basis for one or more BACT emissions limits, is inconsistent with the applicant's stated "basic business purpose" of producing and selling electricity produced from the local Navajo coal.<sup>58</sup> Desert Rock Revised permit application at 2-1 AR 12.

Contrary to EPA's assertions in the RTC, this understanding of the limits on EPA's discretion is entirely consistent with prior rulings by the Administrator and the EAB, in which the history of this policy arose and has been developed. In particular, two early decisions by the EPA Administrator introduced the "redefining the source" policy, as permitting a significantly narrower exclusion from BACT than the sweeping exclusions of available control technologies that EPA now advocates. In In re Pennsauken County, New Jersey, Resource Recovery Facility the petitioner asked the EPA Administrator to deny a PSD permit to a municipal waste combustor and, instead, require the county to dispose of its waste by co-firing it with coal in existing power plants. See 2 E.A.D. 667 (Adm'r, Nov. 10, 1988). In effect, the petitioner wanted EPA to order the applicant to refrain from building a new waste combustor, and instead to engage in an entirely different type of business activity: electricity generation, rather than waste disposal. 1998 EPA App. LEXIS 27 at \*12. The Administrator rejected this option because the petitioner's argument was based on his general objection to a waste combustor, not specific objections to the emission controls or process technology selected as the basis for BACT

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<sup>58</sup> Similarly, "the business objective of avoiding risk associated with new, innovative or transferable control technologies is not treated as a basic design element," and so cannot serve as the basis for rejection of a technology at the initial step of the BACT determination. Prairie State slip op. at 30 n.23. Cost and business risk considerations instead are addressed during the later steps of the top-down BACT analysis. See NSR Manual Section B.

for the proposed source. Thus, the Administrator held, the petitioner was asking EPA to “redefine the source” from a waste combustor located at one site, to a power plant located elsewhere.<sup>[20]</sup>

In a later case citing the Pennsauken County decision the Administrator reaffirmed that the meaning of “source,” within the then-newly-created “redefining the source” policy, refers to the “fundamental purpose” of project.<sup>[21]</sup> In that case, In re Hibbing Taconite Co., 2 EAD 838 (Adm’r 1989), the Administrator further explained that the “redefining the source” policy did not allow the permitting agency to blindly accept the source design proposed by the applicant. 2 E.A.D. at 842-843. In Hibbing, the permit applicant wanted to burn petroleum coke at its taconite plant, but EPA required that the applicant consider burning natural gas – a lower polluting process and cleaner fuel – as part of a BACT determination. Id. The Administrator specifically rejected the idea that requiring consideration of cleaner fuel constitutes “redefining

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<sup>[20]</sup> “Petitioner Filipczak’s fundamental objections to the Pennsauken permit are not with the control technology, but rather, with the municipal waste combustor itself. He urges rejection of the combustor in favor of co-firing a mixture of 20% refuse derived fuel and 80% coal at existing power plants. These objections are beyond the scope of this proceeding and therefore are not reviewable under 40 C.F.R. 124.19, which restricts review to “conditions” in the permit. Permit conditions are imposed for the purpose of ensuring that the proposed source of pollutant emissions-- here, a municipal waste combustor-- uses emission control systems that represent BACT, thereby reducing the emissions to the maximum degree possible. These control systems, as stated in the definition of BACT, may require application of ‘production processes and available methods, systems, and techniques, including fuel cleaning as treatment or innovative fuel combustion techniques’ to control the emissions. The permit conditions that define these systems are imposed on the source as the applicant has defined it... [T]he source itself is not a condition of the permit.” *Pennsauken County*, 2 E.A.D. at 673 (emphasis added).

<sup>[21]</sup> *See In re Hibbing Taconite Company*, 2 E.A.D. 838, 843 n.12 (Adm’r 1989) (“In Pennsauken, the petitioner was urging EPA to reject the proposed source (a municipal waste combustor) in favor of using existing power plants to co-fire a mixture of 20% refuse derived fuel and 80% coal. In other words, *the petitioner was seeking to substitute power plants (having as a fundamental purpose the generation of electricity) for a municipal waste combustor (having as a fundamental purpose the disposal of municipal waste).*”) (emphasis added).

the source” where the fundamental purpose, or source category proposed by the applicant, remains the same.<sup>[22]</sup>

In other words, from its inception, even prior to the 1990 Draft NSR Manual, the “redefining the source” policy has merely stood for the concept that EPA will not require an applicant to abandon its intended purpose for some other industrial venture.<sup>59</sup> This understanding is not clearly inconsistent with the Act’s specific requirement to consider production processes, fuel cleaning, and innovative fuel combustion techniques as methods for reducing emissions from industrial sources regulated under the PSD program. Accordingly, even the EAB’s analysis in Prairie State would require evaluation of IGCC as part of the BACT analysis, unless there was a specific, objectively discernable reason why doing so would be

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<sup>[22]</sup> EPA explained:

[O]ne argument that could be made is that the Region, by requiring the burning of natural gas to be an alternative to be considered in the BACT analysis [for a petroleum coke-fired plant], is seeking to “redefine the source.” Traditionally, EPA has not required a PSD applicant to redefine the *fundamental scope* of its project... [The redefining the source] argument has no merit in this case.

*EPA regulations define major stationary sources by their product or purpose (e.g., "steel mill," "municipal incinerator," "taconite ore processing plant," etc.), not by fuel choice. Here, Hibbing will continue to manufacture the same product (i.e., taconite pellets) regardless of whether it burns natural gas or petroleum coke...* The record here indicates that there are other taconite plants that burn natural gas, or a combination of natural gas and other fuels. Thus, it is reasonable for Hibbing to consider natural gas as an alternative in its BACT analysis.

2 E.A.D. at 843 (emphasis added).

<sup>59</sup> Nor are the EAB’s Old Dominion, SEI Birchwood, and Hawaii Commercial & Sugar cases, cited by EPA in its RTC, to the contrary. In each of those cases, petitioners sought to replace a proposed coal-fired power plant with one burning an entirely different fuel. See RTC at 13-14, AR 120. In In re: SEI Birchwood Inc., 5 EAD 25, 1994 EPA App. LEXIS 31, at \*\*10-12 (Jan. 27, 1994), petitioners sought a complete fuel switch from coal to gas, as was also the case in In re: Old Dominion Electric Coop., Clover Virginia, 3 EAD 779, 793 n. 38 (Adm’r 1992). In In re: Hawaii Comm’l & Sugar Co., 4 EAD 95, 99-100 (EAB July 20, 1992) petitioners sought a fuel switch from coal to oil combustion. Considering IGCC in the BACT determination for Desert Rock, however, does not require a fuel switch – as selecting IGCC as the basis for BACT for one or more pollutants at Desert Rock would still result in the development of a coal-fired electric generating facility.

fundamentally at odds with the primary objective of the project, based on appropriate considerations not related to cost or the avoidance of risk. For Desert Rock, EPA has articulated no such rationale.<sup>[23]</sup>

In fact, while EPA cites Prairie State, in that case the EAB recognized that Illinois did require permit applicants to consider IGCC in the BACT assessment, and referenced that analysis as a core justification for accepting Illinois EPA’s application of the “redefining the source” policy. There, Petitioners had argued that the scope of EPA’s “redefining the source” policy lacked any “principled standards,” and would therefore allow permit applicants to define-away basic elements of the BACT analysis (a observation that is equally valid in this case). See Prairie State slip op. at 33. The EAB rejected this argument, but in doing so relied specifically on Illinois EPA’s policy of requiring consideration of IGCC in the BACT analysis to demonstrate why the policy was not fatally overbroad.<sup>[24]</sup> Id. at 33-37. The EAB noted that Illinois EPA “required Prairie State to submit a detailed analysis of [IGCC] as a method for controlling emissions from the proposed Facility.” Prairie State slip op at 35. The EAB explained:

IGCC is not simply an add-on emission control technology, but instead would have required a completely redesigned ‘power block.’ . . . [Illinois EPA’s] demand that Prairie State provide a detailed analysis of IGCC, which [Illinois EPA] noted has the promise to achieve greater [emissions] reductions, demonstrates that [Illinois EPA’s] application of the policy against redefining the design of the source through application of BACT did

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<sup>[23]</sup> “The assertion, and finding, that the design is for reasons independent of air quality permitting must be reasonable and supported by the record.” Prairie State slip op. at 34 n.29. For Desert Rock, as discussed below, EPA has failed to make any evidence-based finding that IGCC is incompatible with the fundamental business purpose of the project – it merely asserts, based on a flawed legal analysis, that because IGCC would require a change in the design schematics of the project it can be rejected out of hand. AR 120, RTC at 13-17.

<sup>[24]</sup> Indeed, since the EAB effectively affirmed IEPA’s authority to require consideration of IGCC as part of the BACT analysis for the coal-fired plant proposed in Prairie State, such consideration cannot be a fundamental “redefinition” of a coal fired power plant source that is categorically impermissible under the Act, as EPA now asserts. RTC at 20, AR 120.

not treat “very few” design changes as consistent with the proposed Facility’s basic design. . . . To the contrary, [Illinois EPA’s] consideration of IGCC demonstrates that [it] gave due regard to Prairie State’s objective in submitting a permit application for the proposed Facility, namely development of an electric power generating plant that would be co-located and co-permitted with a 30-year supply of fuel, and then explored every potential add-on technology and potentially lower-emitting production processes or methods consistent with that basic design to determine the maximum emissions reductions achievable for the Facility.

*Id.* at 35-36 (emphasis added).<sup>[25]</sup> And, while the EAB ultimately concluded in *Prairie State* that IGCC was not required at that particular facility, that determination resulted from the Board’s conclusion that IGCC had not been shown, in the circumstances of that case, to offer the opportunity for greater emissions reductions. See *Prairie State* slip op. at 47. But that is not the case for Desert Rock.<sup>[26]</sup>

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<sup>[25]</sup> In its analysis, the EAB specifically recognized that EPA guidance requires consideration of process-related technology advances like IGCC. *Prairie State* slip op. at 33 (“The NSR Manual also states with respect to production processes, that where ‘a given production process or emission unit can be made to be inherently less polluting’ ‘the ability of design considerations to make the process inherently less polluting *must be considered* as a control alternative for the source.’”). The EAB went on to explain that “viewing the proposed facility’s basic design as something that generally should not be redefined through BACT review does not prevent the permit issuer from taking a ‘hard look’ at whether the proposed facility may be improved to reduce its pollutant emissions.” *Id.* at 33-34. By “hard look” it is clear that the EAB means a real, substantive BACT examination that explains in detail the technological, engineering, process, and/or design factors that make a particular emission control option incompatible with the projects objectives. *See id.* at 34 (citing *Knauf*, 8 E.A.D. 121, 127 (EAB 1999)). The EAB explained that a permit issuer’s failure to take a sufficiently hard look at the design issues has “the potential to circumvent the purpose of BACT, which is to promote use of the best control technologies as widely as possible.” *Id.* (quoting *Knauf*, 8 E.A.D. at 140). Significantly, the EAB gave short shrift to EPA’s essentially meaningless “alternatives analysis” which would have relegated consideration of any process, technique or alternative approach to pollution control to an analysis separate and apart from the BACT determination.

<sup>[26]</sup> The statute on its face requires EPA to take a “case-by-case” approach to BACT determination, and not rely on categorical exclusions of particular control technologies. 42 U.S.C. §7579(3).

Finally, in upholding the EAB’s decision in *Prairie State*, the 7<sup>th</sup> Circuit (in a decision written by Judge Posner) acknowledged that EPA could not read specific terms out of the statute:

Suppose this were not to be a mine-mouth plant but Prairie State had a contract to buy high-sulfur coal from a remote mine yet could burn low-sulfur coal as the fuel source

Indeed, in this instance, the “fundamental scope” of the project, as defined by the applicant, is simply the construction of a coal fired power plant in the Four Corners area, AR 12, Desert Rock Revised Application at 1-1, 2-1 and the “basic business purpose” for the Desert Rock is generating electricity while utilizing Navajo coal provided by the BHP Billiton mine. *Id.* As discussed below, comments in the record demonstrate that IGCC is an available production process and innovative fuel combustion technique for achieving that fundamental scope and basic business purpose, but, tellingly, EPA has failed to respond to them. Moreover, the applicant’s statements in the record about why it would not select IGCC reflect its perceptions about the financial risks of the innovative IGCC combustion/production process. But these arguments cannot be the basis for categorically rejecting a production process or innovative fuel combustion technique from consideration in the BACT analysis, on redesigning the source grounds.<sup>[27]</sup> EPA’s position on this point constitutes clear error.

### **3. EPA’s Position Violates Fundamental Tenets of Statutory Construction.**

EPA’s statements in the RTC reflect an interpretation of its own discretion as virtually unfettered – allowing EPA to engage in the off-hand dismissal of IGCC and other production

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instead. Some adjustment in the design of the plant would be necessary in order to change the fuel source from high-sulfur to low-sulfur coal, but if it were no more than would be necessary whenever a plant switched from a dirtier to a cleaner fuel the change would be the adoption of a “control technology.” *Otherwise “clean fuels” would be read out of the definition of such technology.*

*Sierra Club v. EPA*, 499 F.3d 653, 656 (7<sup>th</sup> Cir. 2007) (citation deleted) While Judge Posner did not address the “process change” or “innovative combustion technique” language, his observation is equally true there – EPD may not, in the name of avoiding “redefinition” of a source, interpret away the specific provisions of the Act.

<sup>[27]</sup> Again, as the Board in *Prairie State* held, the “business objective of avoiding risk associated with new, innovative or transferable control technologies is not treated as a basic design element, but *instead is considered under step 2 of the top-down method.*” *In re Prairie State*, 2006 EPA App. LEXIS 38, \* 58 n.23 (emphasis added).

process and innovative fuel combustion techniques where they are identified as potential BACT level controls for new power plant projects. This proposition is simply untenable as a matter of statutory interpretation.

**A. EPA’s Position Impermissibly Writes the Phrases “Production Process” and “Innovative Fuel Combustion Techniques” Out of the Statutory Definition of BACT, and Therefore Constitutes Clear Legal Error.**

EPA asserts that it may categorically exclude the IGCC from the BACT determination analysis for Desert Rock, despite the fact that the applicant itself placed IGCC in the record,<sup>60</sup> because doing so would (in the Agency’s view) “redefine the source proposed by the applicant ...” RTC at 13, AR 120; see also AAQIR at 35, AR 46 (asserting “IGCC is not [a BACT option] because it would fundamentally change the basic design of the proposed source.”).

First, as discussed above, the Act specifically calls for consideration of “the application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each pollutant.” CAA § 169(3). As a matter of statutory interpretation this language, on its face, requires the BACT analysis to “include” the consideration of available innovative fuel combustion technologies like IGCC that allow for the generation power from coal with significantly lower emissions. Categorical exclusion of IGCC or other “innovative combustion techniques” from the BACT

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<sup>60</sup> DREF Revised Application at 2-2, AR 12.

determination effectively reads this specific language out to the Act,<sup>[30]</sup> and as explained below is flatly in conflict with relevant legislative history.

EPA insists that “the ‘innovative fuel combustion techniques’ phrase appears in the BACT definition among a list of examples of things...” and that this treatment affords EPA the discretion to exclude IGCC. RTC at 17. This reading of the statute it is contrary to the plain meaning of the word “include” -- “to take in or comprise as part of a larger aggregate or principle.” Webster’s New Collegiate Dictionary (1973). Congress in the BACT determination requires as the “larger principle” that BACT be based on “application of production processes and available methods, systems, and techniques,” and then clarifies that that principle “include[s]” or comprises “fuel cleaning ... or innovative fuel combustion techniques.” EPA’s attempt to use this construction to exclude an innovative fuel combustion technique strains credulity, and is clear error. For, where a statute is clear on its face, an agency has no discretion to interpret it in a manner that is at odds with the plain meaning of the text absent an “extraordinarily convincing justification.” *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1041 (D.C. Cir. 2001). EPA has provided no such justification here.

Moreover, EPA seeks to void specific language of the Act base on a purported prohibition on “redefining the source” that has no specific basis whatsoever in the text of the statute. To the extent that any of the general language of sections 165 or 169 might be construed to support a prohibition on redefining the source, the express language of

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<sup>[30]</sup> See *Gustafson v. Alloyd Co.*, 513 U.S. 561, 574 (1995) (“[T]he court will avoid a reading which renders some words altogether redundant.”); *TRW Inc. v. Andrews*, 534 U.S. 19, 31 (2001) (“‘It is a cardinal principle of statutory construction’ that ‘a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant.’”) (quoting *Duncan v. Walker*, 533 U.S. 167, 174 (2001)).

169(3) is controlling. Courts have consistently ruled that more specific language in a statute governs more general language. National Cable & Telecomms. Ass'n, Inc. v. Gulf Power Co., 534 U.S. 327, 335-36 (2002) (noting that “specific statutory language should control more general language when there is a conflict between the two ... but only within its self-described scope”); D. Ginsberg & Sons v. Popkin, 285 U.S. 204, 208 (1932) (“General language of a statutory provision, although broad enough to include it, will not be held to apply to a matter specifically dealt with in another part of the same enactment. Specific terms prevail over the general in the same or another statute which otherwise might be controlling.”) (citations omitted).

Second, in Sierra Club, the court affirmed the clear limitations on EPA’s authority to determine “where control technology ends and a redesign of the ‘proposed facility’ begins,”<sup>61</sup> Id. at 655, 656 (but see RTC at 13-20 , AR 120 (failing to mention this statutory limit on Agency authority)). Specifically, on the question whether, at Prairie State, off-site low sulfur coal could be left out of the BACT analysis, the court noted that “adjustment in the design of the plant” necessary to permit the facility to burn cleaner fuel has to be acceptable under the BACT definition’s directive to consider “clean fuels,” or “[o]therwise ‘clean fuels’ would be read out of the [statute’s BACT] definition ....” Id. at 656 (emphasis added). The boundaries on EPA’s discretion, therefore are, on the one side, the statute’s express directive to consider “clean fuels” (and “fuel cleaning ... or innovative fuel combustion techniques for control of each ... pollutant”), and on the other

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<sup>61</sup> The seventh circuit did not address the issue whether IGCC was properly considered as a ‘production process’ or ‘innovative fuel combustion technique’ by the permit issuing authority, because that issue was not before it. To the contrary, in the decision below, the EAB noted positively the Illinois EPA’s decision that IGCC should be included at step 1 of the BACT determination. In re: Prairie State, 2006 EPA App. LEXIS 38, \*68-69 & n.30.

side, the applicant’s fundamental business purpose. *Id.* at 656-657 (citing *Prairie State*, slip op. at 20-21, 23, 31-36). So, in the context of considering “clean fuels” in the BACT determination, the court upheld the EAB’s ruling that a design change consistent with the basic business of the proposed source must be reviewable for BACT purposes – that is, EPA may not exclude a technology where the design changes it requires are “no more than would be necessary whenever a plant switched from a dirtier to a cleaner fuel.” *Id.* at 656.

Following this construction of the statute’s requirements, adjustments in Desert Rock’s design that are “necessary to permit the facility to” use a cleaner production process or innovative fuel combustion technique have to be acceptable under the BACT definition, or the phrases “production process” and “innovative fuel combustion techniques” are read out of the statute. And, indeed, EPA’s decision here does read those phrases out of the BACT definition, as the Agency has not shown that the design changes associated with using an IGCC production process are “more than would be necessary” to switch Desert Rock to different and cleaner “production process” or “innovative fuel combustion technique” for generating electricity from coal.<sup>62</sup>

EPA further announces its view that it can simply “consider[] the IGCC process to be an alternative to the proposed source that should be evaluated under section 165(a)(2) of the Act rather than as a BACT candidate under 165(a)(4).” RTC at 15. In doing so, EPA contorts the language of the statute to find a conflict, asserting that “the language in sections 165 and 169 of the CAA distinguishes between the consideration of alternatives to a proposed source on the one

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<sup>62</sup> Indeed, by shunting all consideration of “alternative production processes” out of the BACT determination entirely and into a toothless “alternatives analysis” EPA writes “production processes” out of the BACT definition completely, not just with respect to the IGCC production process.

hand and selection of BACT for the proposed source on the other.”<sup>63</sup> RTC at 14-15. This, the Agency says, sets up “competing BACT obligations”, that “EPA is to reconcile.” Id. at 16. No such conflict exists in the statute. Section 165(a) contains the preconstruction permitting requirements for new major emitting facilities, requiring a permit “for such proposed facility,” 42 U.S.C. §7475(a)(1), mandating a public hearing on “the air quality impact of such source, alternatives thereto, control technology requirements, and other appropriate considerations,” 42 U.S.C. §7475(a)(2), and requiring each proposed facility to be subject to BACT, *id.* §7475(a)(4). BACT is then defined in a separate section of the Act, as described above, to include consideration of “production processes and available methods, systems and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques....” 42 U.S.C. §7479(3).

Reading the statute “as a harmonious whole,” FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 133 (2000), these sections simply subject to public scrutiny all choices related to the PSD permit, including control options for BACT at the proposed source. Section 165(a)(2) does not authorize EPA or an applicant to relegate consideration of BACT pollution controls to a separate “alternatives analysis,” particularly after the public hearing and comment process is complete.<sup>64</sup> While EPA may have discretion to “draw the line” between what is BACT control technology and what constitutes such a complete redesign of the proposed facility that it is an “alternative” to the proposed source, there are limits based in reason, and in the plain

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<sup>63</sup> EPA misleadingly insinuates, RTC at 14, that the Seventh Circuit “affirmed” the EAB Prairie State decision on this point, but in fact the Court did not consider the question of the appropriateness of “alternatives analysis” under CAA §165(a)(2) on appeal. Sierra Club, 499 F.3d at 655 (noting that alternatives analysis under section 165(a) of the CAA was not at issue, only compliance with the BACT requirement).

<sup>64</sup> The “alternatives analysis” for Desert Rock, including EPA’s legal analysis of its authority, is included in the RTC, not in the AAQIR, and therefore was not available to the public for comment. See AAQIR, AR 46.

language of the statute, on that discretion. Sierra Club, 499 F.3d at 655. Because Congress placed consideration of “production processes,” and “innovative fuel combustion techniques” squarely within the section 169(3) BACT definition, EPA is not authorized to simply and categorically declare that they will only be evaluated in a separate “alternatives analysis”. Here, EPA baldly asserts that IGCC is “something fundamentally different” from the conventional coal plant offered up by the applicant, so that it can be avoided in the BACT analysis, but fails to explain why any other alternative production processes or innovative fuel combustion technique for turning coal into electricity would not suffer the same fate. This effectively writes those elements of BACT right out of the statute.

Furthermore, while the courts and EAB have recognized that the “fundamental scope” of the applicant’s project constitutes the limit on EPA’s authority to demand design changes in the name of pollution control, it strains logic and acceptable norms of statutory construction for EPA to draw this line at the very blueprint turned in by the project proponent with its PSD application. Such an approach effectively reads any additional requirements for control technologies beyond those proposed by the applicant right out of the BACT definition. And yet, EPA asserts that “the phrases ‘proposed facility’ and ‘such facility’ in sections 165(a)(4) and 169(3) respectively refer to the specific facility proposed by the applicant, which has certain inherent design characteristics.” RTC at 15. This view of the statute, taken to its logical conclusion, renders completely toothless the list of control options Congress said must be “included” in the BACT analysis, for if a reviewing authority is limited by the language as EPA suggests, it would necessarily be limited to the blueprint for the proposed facility as proposed by the applicant.

Finally, even assuming arguendo that there is a distinction in the Act between the kinds of “alternatives” to a proposal that must be considered apart from the BACT determination, EPA

has not shown that IGCC, a production process for turning the same raw material into the same product at the Desert Rock site, is sufficiently “alternative” for application at Desert Rock that it need not be considered in the BACT determination for that facility. Reading EPA’s response in its entirety makes clear that the Agency’s purpose and focus here is on avoiding a BACT determination that includes IGCC, in favor of promoting a separate (and toothless) alternatives analysis process.<sup>65</sup> Specifically, the Agency says that it, as the permitting authority, need not perform a BACT analysis based on commenters’ submissions on IGCC. RTC at 220 (Appendix A). The agency utterly fails to explain why this is the case, or why it cannot require the applicant to undertake and submit a BACT analysis including IGCC, particularly as Congress required it to do so. See 42 U.S.C. §7479(3)(requiring the “permitting authority” to determine the achievability of “maximum” emissions reductions as part of the BACT analysis).

**B. EPA’s Categorical Exclusion of IGCC from the BACT Analysis Collides with the Legislative History and the Fundamental Technology-forcing Purpose of the BACT Definition.**

The case-by-case BACT analysis was designed by Congress in order to promote the adoption of newer, cleaner technologies and production processes over time, through their required inclusion in new plants within an industry at the time of their construction. See In re: Tennessee Valley Auth., 2000 EPA App. LEXIS 25, \*78-79 (“the program Congress established was particularly aggressive in its pursuit of state-of-the-art technology at newly constructed sources”); In re: Columbia Gulf Transmission, 1989 EPA App. LEXIS 26, \*10 (“BACT ... is

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<sup>65</sup> Cf. Sierra Club, 499 F.3d at 654 (noting that where “the applicant intentionally designs a plant in a way calculated to make measures for limiting the emissions of pollutants ineffectual,” a redesign sufficient to change the fundamental scope of the proposed project can be required). Where, as here, the permit issuing authority has contorted the BACT determination process so as to avoid including certain pollution controls, that, also, is clear error.

principally a technology-forcing measure that is intended to foster rapid adoption of improvements in control technology”). To categorically exclude available innovative fuel combustion techniques or production process changes from the BACT analysis, therefore is contrary to the fundamental “purpose of BACT ... [which] is to promote use of the best control technologies as widely as possible.” In re: Knauf at \*47-? (requiring consideration at Step 1 of the BACT determination, and beyond, of a lower emitting production process within the same industry).

As noted supra, the BACT definition requires an emissions limit “based on” the “maximum” “achievable” reductions “through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques . . . .” 42 U.S.C. §7479(3) (emphasis added). The legislative history of the 1977 Act describes specifically Congress’s intent that gasification technologies would be evaluated as part of the process for setting BACT limits. The congressional history of the BACT definition includes the following discussion:

Mr. HUDDLESTON. Mr. President, I send to the desk an unprinted amendment.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk read as follows:

The Senator from Kentucky (Mr. HUDDLESTON) proposes an unprinted amendment numbered 387: On page 18, line 15, after “ment” insert “or innovative fuel combustion techniques.”

Mr. HUDDLESTON. Mr. President, the proposed provisions for application of best available control technology to all new major emission sources, although having the admirable intent of achieving consistently clean air through the required use of best controls, if not properly interpreted may deter the use of some of the most effective controls.

The definition in the committee bill of best available control technology indicates a consideration for various control strategies by including the phrase “through application of production process and available methods, systems, and techniques, including fuel cleaning or treatment.” And I believe it is likely that the concept of BACT is intended to include such technologies as low Btu gasification and fluidized bed combustion. But, this intention is not explicitly spelled out, and I am concerned that without clarification, the possibility of misinterpretation would remain.

It is the purpose of this amendment to leave no doubt that in determining best available control technology, all actions taken by the fuel user are to be taken into account— be they the purchasing or production of fuels which may have been cleaned or up-graded through chemical treatment, gasification, or liquefaction; use of combustion systems such as fluidized bed combustion which specifically reduce emissions and/or the post-combustion treatment of emissions with cleanup equipment like stack scrubbers.

The purpose, as I say, is just to be more explicit, to make sure there is no chance of misinterpretation.

Mr. President, I believe again that this amendment has been checked by the managers of the bill and that they are inclined to support it.

Mr. MUSKIE. Mr. President, I have also discussed this amendment with the distinguished Senator from Kentucky. I think it has been worked out in a form I can accept. I am happy to do so ....

123 Cong. Rec. S9434-35 (June 10, 1977)(debate on P.L. 95-95)(emphasis added).

EPA, incredibly, reads this history as authorizing it to exclude gasification technology from the BACT analysis for a coal fueled power plant. RTC at 17, AR 120. EPA asserts “that Senator Huddleston intended for the phrase ‘innovative fuel combustion technique’ to encompass ‘gasification’ ... does not necessarily require EPA ... to identify the IGCC option as a candidate for further analysis [in the] ... BACT review.” *Id.* This view ignores the fact that Senator Huddleston was not simply speaking to the Senate but offering an amendment that was accepted by the Senate as a whole, and that this dialogue serves as the underlying history for this section of the Act. This history clearly shows that not only were “production processes” and “innovative fuel combustion techniques” such as IGCC not meant to be read out of the BACT

definition, gasification technologies specifically were intended to be included in the BACT analysis. In light of this history, as well as the clear statutory requirements set forth above, EPA's attempt to exclude IGCC as a categorical matter from the BACT analysis for a coal-fired power plant (as the Agency asserts it can do at RTC 20: "EPA does not interpret the CAA to mandate evaluation of IGCC in a BACT analysis in cases involving proposed coal-fired steam electric generating facilities") is contrary to law.

**4. The Top-Down BACT Process is a Longstanding, Consistent, and Sufficient Vehicle for Examining Inherently Cleaner Control Technology Options, Including IGCC.**

The top-down BACT process has been used by EPA, and other, state permitting authorities for more than 20 years. See In re: Pennsauken, slip op. at 4-5 (describing the genesis of the top-down approach to BACT analysis). EPA's interpretation of the statutory definition of BACT as requiring a detailed systematic analysis of the BACT definition factors, by the permit applicant,<sup>66</sup> was first set out in general guidance in 1987. Id. at 5 (citing In re: Honolulu Resource Recovery Facility, PSD Appeal No. 86-08 at 7, 6 n.9 (Adm'r June 22, 1987); NSR Manual at B.2. From its inception the top-down BACT analysis has required a detailed showing that there are significant technical, economic, energy, or environmental factors or other costs warranting the use of something other than the most stringent available technology as the basis for BACT.

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<sup>66</sup> "Under the top-down methodology, applicants must apply [BACT] unless they can demonstrate that the technology is technically or economically infeasible. The top-down approach places the burden of proof on the applicant to justify why the proposed source is unable to apply the best technology available." In re: Spokane Regional Waste-to-Energy Applicant, PSD Appeal No. 88-12 (EPA June 9, 1989), at 9 (internal quotation marks omitted); see also In re: Inter-Power of New York, Inc. PSD Appeal Nos. 92-8 and 92-9 (EAB March 16, 1994) ("Under the 'top-down' approach, permit applicants must apply the most stringent control alternative, unless the applicant can demonstrate that the alternative is not technically or economically achievable.")

Because the BACT determination is the central feature of the Act's PSD program,<sup>67</sup> a common BACT analysis framework for use by all permit issuing authorities is a significant feature in realizing the program's goal to prevent significant deterioration in clean air areas, while allowing economic growth. 42 U.S.C. §7470(3). Allowing business and economic development in the form of additional air pollutant emitting facilities, while requiring air emissions to remain relatively steady or to decrease in an area, necessarily requires the introduction of new, more effective, innovative pollution controls on the new facilities. These goals come together in the BACT definition's insistence that the permit issuing authority evaluate the "best available controls", considering associated energy, environmental, and economic impacts and other costs". Indeed, this analysis allows for pollution control "[t]echnology transfer from one source category to another ... for BACT purposes." Spokane Regional Waste to Energy Facility, PSD Appeal No. 88-12 (June 9, 1989), p. 18, n. 24. In turn, a consistent framework for BACT analysis provides certainty to the permit issuing authority, and certainty to the applicant about the particular BACT analysis requirements with which it must comply. EPA's 1990 NSR Manual, documenting the earlier Agency directives on the BACT analysis, and building on prior experience to establish the organizational basis for a structured a top-down BACT process, has been frequently used, looked to and relied on by applicants and permit issuing authorities alike since its issuance. In re Prairie State, slip op. at 16; In re Knauf, 8 EAD 121 199 EAP App. LEXIS 2 \*19-20 (EAB 1999).

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<sup>67</sup> In re: Prairie State, slip op. at 8, (citing In re BP West Coast Prods. LLC, Cherry Point Co-Generation Facility, PSD App. No 05-01, slip op. at 7 (EAB June 21, 2005), 12 EAD \_\_\_, In re Knauf, 8 EAD 121, 123-124 (EAB 1999).

The NSR Manual's BACT framework was not the result of a formal agency rulemaking, and as such is not legally binding,<sup>68</sup> so, a strict application of the top-down BACT methodology it describes is not mandatory. In re: Prairie State, slip op. at 16 (quoting In re Cardinal FG Co., PSD Appeal No. 04-04, slip op. at 12 (EAB Mar. 22, 2005)). But “ ‘a careful and detailed analysis of the criteria identified in the regulatory definition of BACT is required, and the methodology described in the NSR Manual provides a framework that assures adequate consideration of the regulatory criteria and consistency within the PSD permitting program.’ ”

Id.

The top-down BACT process, implemented as documented in the NSR Manual,<sup>69</sup> in fact is designed to integrate and incorporate consideration of all of the elements and factors in the BACT definition. As such, it is complementary to the PSD program's underlying goal that as new, more effective control technology choices become available, it is adopted as the basis for

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<sup>68</sup> EPA has conceded this point to the U.S. Supreme Court. Alaska Dep't Env'tl. Conservation v. EPA, 540 U.S. 461, 475 n.7 (2004). While the NSR Manual is not accorded the same weight as a binding Agency regulation, however, it has been looked to as the most current statement of the Agency's thinking on BACT issues. In re: Masonite Corp., 1994 EPA App. LEXIS 36, \* 21 n. 8 (citing In re: Inter-Power of New York, Inc., PSD Appeal Nos. 92-8 and 92-9, at 6 n.8 (EAB, Mar. 16, 1994); In re: Hawaiian Commercial & Sugar Co., PSD Appeal No. 92-1, at (EAB, July 20, 1992)).

<sup>69</sup> As discussed above, at step 1 of the analysis, the applicant must list all of the “production processes and available methods, systems and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for the control of each ... pollutant” emitted by the proposed facility. 43 U.S.C. §7479(3); NSR Manual at B.5, B.7. At the second step, analysis of technical feasibility for each listed option is performed, including “clearly documented analyses based on physical, chemical, and engineering principles, that technical difficulties would preclude [its successful use].” NSR Manual at B. 7. Technical feasibility includes an assessment of whether a particular technology is “demonstrated,” that is, installed and operated successfully elsewhere, or if not demonstrated, then whether it is “available” and “applicable” – whether it can reasonably be installed and operated on the source type under consideration.<sup>69</sup> At step 3 of the top-down BACT analysis, the remaining control technologies from the initial list are ranked in declining order of emissions control effectiveness and document emissions reductions, economic impacts, associated environmental and energy impact associated with the application of each. NSR Manual at B.7-B.8. At step 4, the applicant must provide “an objective evaluation of each ... impact of the control alternative.” Id. at B.8.

the BACT emissions limit for new facilities so that incrementally cleaner air can be achieved through the application of better and better “best controls.”<sup>70</sup> The BACT determination at each step incorporates the issues that are germane to the adoption of a new, or more innovative technique for air pollution control: its technical feasibility (at step 2), associated energy environmental, and cost impacts of adopting the new cleaner controls or production process options (at step 3), collateral impacts associated with taking a new approach (at step 4). It does so, as required by the statute, on a “case-by-case” basis, such that the determination of BACT emissions limits for a new facility truly can yield the “best” available” and “maximum emissions reductions” while satisfying the applicant’s business objectives.

EPA’s entirely separate “alternatives analysis” for the Desert Rock facility effectively serves as a repository for the detailed technical comments the agency received related to the availability, feasibility, and economic and other costs and benefits associated with IGCC as the basis for BACT. Tellingly referring to the comments received as a “BACT analysis,” the agency nevertheless categorically refuses to consider IGCC as a BACT control, as described above. RTC at 224, Appendix A, AR 120. EPA offers only cursory responses, outside the BACT response to comments, on the “hard look” at IGCC’s technical feasibility, costs (including economic risks), environmental benefits, associated energy use and efficiency issues, and other factors relevant to the BACT analysis, including collateral impacts, provided by commenters. *Id.* at 225-226, AR 120. EPA thus does not provide the “detail and analysis necessary to show that the rejected technology was technically or economically unachievable,”<sup>71</sup> and indeed does not even respond to each element of the commenter’s analysis, other than to assert in a conclusory fashion that it does not “provide a sufficient basis to deny a permit for the

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<sup>70</sup> Up to and including, where appropriate control technology transfer from one source category to another, as noted above.

<sup>71</sup> See In re Mecklenburg Cogeneration, LP, 3 E.A.D. 492, 494 n.3 (Adm’r 1990).

proposed plant.” Id. at 226, AR 120 (emphasis added). But of course a BACT analysis, as discussed above and elsewhere herein is not aimed at “denying a permit” for a facility, but rather ensuring that the facility once constructed will achieve “the maximum degree of reduction” of each air pollutant it emits. 42 U.S.C. §§ 7475(a)(1), 7479(3). EPA’s treatment of the comments submitted, therefore is clear error. The permit should be remanded with directions to EPA to include up-to-date information<sup>72</sup> about IGCC technologies in the BACT determination for Desert Rock.

**5. The Comments Submitted on IGCC are Material to the BACT Outcome, and EPA’s Failure to Adequately Respond to Them is Clear Error.**

As described below, the IGCC-specific analyses submitted by Petitioners demonstrate that IGCC is a “production process” and an “available” “innovative fuel combustion technique” or “fuel cleaning.” Moreover commenters demonstrate that IGCC is technically feasible at Desert Rock, and would yield the “maximum” emissions reductions profile that can occur at an electric generating facility fueled by the Navajo coal, as the applicant intends. AR 66, Comment Ltr. 23, Attachment --, Declaration of John Thompson (Nov. 10, 2006) (hereinafter “Thompson Decl.”). These comments offer detailed information about and analysis of the availability of the technology in 2006, and plug that information into the five-step top down BACT analysis. The analysis demonstrates both that IGCC should have been considered in the BACT analysis for Desert Rock, and that its inclusion would have had material effects on the BACT limit selected. IGCC is demonstrated to be an available “production process” for generating electricity from local coal, as the applicant intends, and moreover, is technically feasible, cost effective, and

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<sup>72</sup> Where an “innovative fuel combustion technique” is at issue, using four or five year old information does not provide the permit issuing authority with accurate data about feasibility, costs, emissions reductions, or any of the other factors relevant to the BACT determination under the statute.

provides the maximum degree of emissions reductions for several of the air pollutants emitted by the Desert Rock facility.

Despite the fact that “[t]he permitting authority is ... obligated to respond to ‘all significant comments’,”<sup>73</sup> submitted on the BACT analysis underlying a PSD permit, EPA does not rebut the specific points raised in the IGCC BACT analysis provided by Petitioners, as described above.<sup>74</sup> Although acknowledging that “IGCC has many potential environmental benefits, including reduced overall air pollutant emissions and reduced solid wastes,” the Agency summarily dismisses using this technology as the basis for BACT, and so does not include any of the information in the BACT analysis for Desert Rock. AR 120, RTC at 224. As set forth below, the points raised by the commenter are significant – they go right to the heart of the BACT determination for Desert Rock – and had EPA properly considered them, rather than categorically dismissing IGCC for application at a coal-fired power plant, there is a strong possibility of a different BACT result for the Desert Rock plant, for several air pollutants. See Citizens for Clean Air v. EPA, 959 F.2d at 845 (citing Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 533 (1978), and describing significant comments as those raising the possibility of a different BACT outcome).

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<sup>73</sup> Citizens for Clean Air v. EPA, 959 F.2d 839, 845 (9<sup>th</sup> Cir. 1992) (quoting 40 C.F.R. §127.17(a)(2)),

<sup>74</sup> Nor does the Agency even mention, anywhere in its Response to Comments the “position paper” on IGCC submitted to it by the applicant, despite the applicant’s statements to the effect that that it believes its “confidential” analysis provides conclusive evidence regarding the use of that technology as a basis for the BACT emissions limit. See AR 113 at 90, email communication from Gus Eghneim of Wood Group to Robert Baker, U.S. EPA Region 9, Subject: IGCC for Desert Rock (May 8, 2005)(referencing a “confidential position paper prepared by Sithe Global on the potential use of IGCC for desert [sic] Rock.”). The email communication that is in the record notes that the position paper “is submit[ed] at the request of EPA Region IX”.

EPA's failure to fully and meaningfully consider the comments it received on IGCC and its applicability at Desert Rock therefore "materially affected the quality of the permit determination," and the identified error "may alter the permitting decision." Cf. In re: Mecklenburg Cogeneration, LP, 3 E.A.D. 492, 494 n.3 (Adm'r 1990)(petitioners must show a compelling reason to believe that the omissions led to an erroneous permit BACT determination). Petitioners present more than sufficient evidence to meet this burden, below, and the permit therefore should be remanded to correct this clear error by EPA. See In re: Pennsauken County Resource Recovery Facility, PSD Appeal No. 88-8 (Nov. 10, 1988), pp. 8-9 (permit determination remanded where rejected technology was in use domestically in the same type of facility but the BACT determination lacked the "detail and analysis" necessary to show that the rejected technology was technically or economically unachievable).

**6. Technical Evidence in the Record Demonstrates That IGCC Should be Considered At Step 1 of the BACT Analysis.**

As set forth above, the top-down BACT analysis is the long-accepted method for evaluating emissions control options and determining the "best" available control to serve as the basis for a BACT determination reflecting "maximum" emissions reductions, considering the statutory factors. Comments submitted to EPA demonstrate that IGCC is not only appropriately considered in the BACT analysis for Desert Rock, but that it could readily survive the four additional steps of the top-down analysis and be selected as the basis for BACT emissions limits for one or more air pollutants at Desert Rock.

The record demonstrates that IGCC is a "production process" The NSR Manual explains that the statutory phrase "production process" is defined "in terms of its physical and chemical unit operations used to produce the desired product from a specified set of raw materials." NSR

Manual at B 13. The Manual further provides that “[l]ower polluting processes should be considered based on demonstrations made on the basis of manufacturing identical or similar products from identical or similar raw materials.” Id. at B.10.

As the record clearly shows, Desert Rock’s “product” will be electricity, and the “specified set of raw materials” for use in producing the electricity is coal from the adjacent mine on Navajo lands. Desert Rock Energy Facility Application for PSD Permit at 1-1, 2-1 (Revised, dated May 7, 2004), AR 12 (hereinafter “Desert Rock Revised Permit Application”)(stating the purpose of the application is development of an electric power generation facility, on Navajo Nation land, using Navajo Nation coal reserves). Commenters describe with specificity the IGCC process and its clear applicability as a “production process” for converting the local Navajo coal into electricity. AR 66, Comment Ltr. 23, & Attachment --, Declaration of John Thompson, ¶¶ 14-17, 24, 25- 33 (Nov. 10, 2006) (hereinafter “Thompson Decl.”). The record further demonstrates that using an IGCC process at this site and at this scale is consistent with the applicant’s fundamental stated business purpose and intention<sup>75</sup> that the facility be a technologically advanced “mine-mouth coal-fired power plant; ... adjacent to [and utilizing] Navajo Nation coal reserves” from the nearby mine operated by BHP Billiton. Desert Rock Revised permit application at 2-1; accord, Desert Rock DEIS at ES-1 (noting the purposes of the facility include “[u]s[ing] Navajo Nation coal to generate electricity” to “[h]elp meet demand for up to 1,500 MW of electrical power in the rapidly growing southwestern United States.”), AR 12;

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<sup>75</sup> See Sierra Club, 499 F.3d at 657 (look to applicant’s “fundamental purpose” to determine scope of redefining the source policy); see also In re: Prairie State, 2006 EPA App. LEXIS 38, \*58 (look to applicant’s “basic business purpose for same).

Distilled to its essence for BACT-analysis purposes, IGCC clearly is another “process” or method for using the same Navajo coal to create heat and drive the turbines in order to produce the same desired product (electricity), as does the applicant’s proposed pulverized coal plant. See id. at 9 ¶ 27 (citing Thompson Decl. Attachment 3 and noting that the design fuel for the Desert Rock poses no technical barrier for using IGCC).

The record demonstrates that IGCC is an “innovative fuel combustion technique.”

Commenters further demonstrate with specificity that IGCC is an “innovative fuel combustion technique” within the plain meaning of that term. As a factual matter, the IGCC process at the Desert Rock site would be used to convert the Navajo coal to synthetic gas (“syngas”) composed primarily of hydrogen, carbon monoxide and carbon dioxide, then clean the syngas, and then combust it in a combined cycle power block. Thompson Decl. at ¶ 14. EPA does not refute these assertions.<sup>76</sup> And, as a legal matter, a coal-fired power plant “is still the same kind of statutorily defined ‘facility’ under the Clean Air Act whether the coal is burned directly in a boiler or is first converted to gas and then burned to create the heat of combustion that drives the turbines.”

Friends of the Chattahoochee, Inc. v. Couch, No. 2008CV146398 (Sup. Ct. Fulton Co. GA June 30, 2008), slip op. at 13-14 (holding that the statutory definition of BACT requires consideration

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<sup>76</sup> Although EPA asserts that IGCC plants use both combustion turbines to burn the syngas and steam turbines to produce electricity in a combined-cycle application, these statements are both unsupported, and in conflict with the record for Desert Rock. Compare AR 120, RTC Appendix A at 224 with AR 66 Comment Ltr. 23 attachment – (Thompson Decl. ¶ 17). In his declaration, Petitioners’ expert states that “clean syngas enters a combustion turbine where it is burned to produce electricity. The heat from the exhaust gases is captured in a heat recovery system generator, and the resulting steam is used to produce more electricity. AR 66 comment letter 23 attachment – (Thompson Decl. ¶ 17). The comments show that rather than requiring two kinds of combustion as EPA insinuates, in an IGCC, the coal gas is cleaned and then combusted, and it is the waste heat from that process that is recovered to produce additional electricity – a more efficient overall process for converting coal into energy for sale or use.

of IGCC as an “innovative fuel combustion technique”).<sup>77</sup> The court based its decision on the federal statutory and regulatory definitions of “major emitting facility” and the fact that EPA’s own regulations include IGCC in the definition of “fossil-fuel fired steam electric plant.”<sup>78</sup> *Id.* at 14 (citing 42 U.S.C. §7479(1); 40 C.F.R. §60.41Da). Here, also IGCC should be evaluated in the BACT determination as an “innovative fuel combustion technique” and EPA’s failure to do so is clear error.

The record demonstrates that IGCC is “fuel cleaning.” Commenters also demonstrate that the IGCC process is “fuel cleaning” in the plain meaning of the term. Petitioners’ expert in his declaration states that an IGCC at the Desert Rock site would take the local Navajo coal, convert it to syngas, and clean it significantly by removing particulate matter, sulfur, and other pollutants before combusting it. Thompson Decl. ¶¶ 14, 16, 17. EPA does not refute these assertions, indeed EPA’s RTC does not discuss at all the application of IGCC (or any other control technology) “fuel cleaning.”

The record demonstrates that IGCC is “available” at the Desert Rock site. The statutory term “available” means that “the technology ‘can be obtained by the applicant through commercial channels or is otherwise available within the common sense meaning of that term.’”

In re: Maui Electric Co., 1998 EPA App. LEXIS 104, \*29-30 (EAB, September 10, 1998)(quoting NSR Manual at B.17). Furthermore, the “availability” of a technology for

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<sup>77</sup> This decision is not unique: several states, including Illinois, Michigan, and most relevant to Desert Rock, the state of New Mexico, have “agree[d] that ... IGCC ... should be considered in the BACT analysis ....” AR 66, Comment Ltr. 23 at ---.; see also *In re Prairie State Generating Co.*, slip op. at 36 (Aug. 24, 2006) (IGCC was “consistent with [the] basic design” of a proposed mine-mouth pulverized coal plant).

<sup>78</sup> For PSD purposes, IGCC and pulverized coal plants are “fossil fuel-fired steam electric plants of more than 250 million BTUS,” both are “coal fired electric utility steam fired generating units” under 40 CFR 60.41 Da. 70 Fed. Reg. 9706, 9715 (Feb. 25, 2005).

inclusion at the first step of the top-down BACT analysis is understood in “the broadest sense,” because the “goal of this step is to develop a comprehensive list of control options.” In re: Knauf, 1999 EPA App. LEXIS 2 at \*\*21-22; NSR Manual at B.10 (stating that the objective at step 1 of the BACT analysis is to identify all control options with potential application to the source and pollutant under evaluation); *id.* at B.6 (emphasizing that a proper Step 1 list is “comprehensive”).

Commenters amply demonstrate (and EPA does not refute this point), that IGCC is “available;” on that basis it should be included at step 1 of in the BACT determination. Thompson Decl. at ¶¶ 18-25 (describing the long history of the coal gasification process in the United States, details about other existing IGCC plants, and the commercial availability and status of the technology at the time the declaration was submitted in 2006).

The record demonstrates that IGCC is technically feasible at Desert Rock. Petitioners’ expert provides detailed evidence based on engineering, physical and chemical principles, showing that there are no technical barriers to using the IGCC process to generate electricity at Desert Rock. Thompson Decl. at ¶¶ 10-33. And the applicant offers in its publicly-available reports in the record on IGCC that it is a “technology [that] may be considered for a new large coal fueled power plant . . . .” *Id.* at 2-2, AR 12. This statement is supported moreover, by the EAB ruling in In re: Prairie State, that at that site, the permit applicant had not erred in finding IGCC was demonstrated and technically feasible for application at that coal-fired power plant. In re Prairie State, slip op. at 45-47. EPA does not refute these comments, here.

The record demonstrates that IGCC offers the best control effectiveness at Desert Rock for several pollutants, including mercury, carbon monoxide, SO<sub>2</sub>, particulate matter, and carbon dioxide, and so should survive Step 2.

The Desert Rock record shows that IGCC not only is technically feasible but also is an “inherently lower-polluting production process/practice,” for generating electricity than the supercritical combustion process permitted by EPA. In re: Knauf, 1999 EPA App. LEXIS 2, \*21 (citing NSR Manual at B.10, B.13); Thompson Decl. at ¶¶ 34-50, 52-60 (describing the lower air emissions, greater efficiency, and the opportunity for greenhouse gas reductions available through use of the IGCC process at Desert Rock.<sup>79</sup>

The Prairie State case upheld a decision to eliminate IGCC at step 2 of the BACT determination for a coal-fired power plant, because despite its technical feasibility, “at that time,”<sup>80</sup> IGCC’s achievable control effectiveness was very similar to the control alternatives proposed by the Prairie State applicant. The EAB held that IGCC could be eliminated in that limited instance, on that “narrow exception” to the general rule that technically feasible options must continue into the third step of the top down analysis. In re Prairie State, slip op. at 46.

The record here, however demonstrates on the basis of physical, chemical, and engineering principles, that for application in the particular circumstances of the Desert Rock facility, IGCC’s achievable emissions profile is significantly better for various air pollutants than the applicant’s preferred approach. Thompson Decl. ¶¶ 39-48 (showing that for SO<sub>2</sub>, NO<sub>x</sub> filterable PM, CO, sulfuric acid mist, and VOCs, IGCC would yield significantly lower air emissions at Desert Rock than the supercritical PC plant proposed by Sithe). In addition the

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<sup>79</sup> While Sithe attempts to refute this point, the company’s submission is internally inconsistent, compare AR 34 at 2-1 (asserting IGCC not lower emitting “or pollution free”), with id. at 2-1, 2-2, 4-14 Table 1, 4-12 (lower inherent emissions of CO, mercury, lower SO<sub>2</sub>, sulfuric acid mist, plus the potential to capture CO<sub>2</sub>). The record further offers evidence that in some places, Sithe’s analysis is simply incorrect. Thompson Decl. at ¶ 55 (Sithe’s conclusions concerning IGCC efficiency are wrong). EPA, however, has not responded to the details of the record before it.

<sup>80</sup> The Prairie State permit decision was made in 2005, and the EAB made its decision in 2006, based on a record dating to 2002. PS slip op. at 10.

record demonstrates that, unlike the applicant's preferred technology, IGCC offers the technical ability to eliminate some or all of the CO<sub>2</sub> emissions associated with converting coal to electricity. This is due both to the increased efficiency of IGCC compared with the supercritical technology favored by the applicant, and fact that IGCC offers the option of removing some or all of the carbon dioxide from the syngas prior to its combustion, for reuse or sequestration. Id. ¶¶56-59.

EPA does not refute the evidence presented in these comments, based on the step 2 considerations of engineering, and physical and chemical parameters, citing only the applicant's view that IGCC is not "commercially viable" for Desert Rock. AR 120 at 225, Appendix. These considerations are not related to technical feasibility, but more appropriately addressed at step 3 of EPA's top-down BACT analysis, however. NSR Manual at B.7-B.8.

The record demonstrates that IGCC Could Survive Step 3 of the BACT analysis.

As noted above, IGCC offers technically feasible significant reductions in the emissions of a host of air pollutants, including CO<sub>2</sub>, at Desert Rock. This is particularly true where IGCC technologies are accompanied by additional controls, an issue which also is within the scope of the BACT analysis. See In re: Knauf 1999 EPA App. LEXIS 2, \*33 (BACT analysis was inadequate where it did not evaluate combinations of inherently lower polluting production processes and controls).

As such, IGCC should be included in a step 3 analysis in a top-down BACT analysis conducted consistently with EPA's longstanding policy set forth in its NSR Manual. At that step, details about cost-effectiveness, as well as other impacts on energy and collateral impacts should be identified for each control option. NSR Manual at B.7-B.8. IGCC's additional costs, as well as the quantification of the additional environmental benefits it offers in terms of reduced

air emissions, the ability to control CO<sub>2</sub>, and other collateral environmental benefits of IGCC<sup>81</sup> should be documented by the Desert Rock applicant at this step of the analysis.

The Record Demonstrates that IGCC represents “maximum emissions reductions” for Desert Rock. As shown above, the record includes all of the information necessary to conduct a robust step four analysis including a consideration of direct energy, environmental, and economic impacts and associated collateral impacts, both beneficial and adverse, of using IGCC at Desert Rock. As described above, the record shows that the IGCC process affords the opportunity to achieve the applicant’s business purpose (using Navajo coal from the Billiton mine) at the lowest emissions profiles for SO<sub>2</sub>, mercury, CO, and other air pollutants, and, additionally offers the immediate potential for CO<sub>2</sub> capture.

Moreover, at the time commenters submitted their analysis for Desert Rock, there was no case-by-case requirement for MACT for the plant. At this juncture, however, and as described further below, a case-by-case MACT analysis and determination is required at Desert Rock, before construction can commence. Relevant to this point, the record demonstrates that IGCC offers significantly low emissions of mercury – one of the many HAPs emitted by coal-fired power plants. Thompson Decl. ¶ 43.

Petitioners’ technical expert furthermore provided detailed cost effectiveness analyses for Desert Rock leading him to the conclusion that IGCC is the most cost-effective control option relative to the applicant’s preferred choice. Thompson Decl. ¶¶ 61-70. EPA fails to refute this analysis. EPA does not engage in a comprehensive BACT assessment of all of the relevant step 4 factors for IGCC, instead the agency in its “alternatives analysis” simply notes that the

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<sup>81</sup> See Thompson Decl. ¶¶ 28, 56-60 (documenting lower water use requirements, the lower solid waste production, and the opportunities to capture CO<sub>2</sub> as a result of the choice of IGCC technology).

applicant has “concluded that IGCC is not a commercially viable option for the Desert Rock site.” AR 120 at 225. The Agency further provides only cursory, unsupported, and conclusory statements about reliability and efficiency of IGCC plants in general. Specifically, while noting that it believes these issues are “matters of technical judgment ... [that] have the potential to significantly add to the cost due to the economic risks of uncertain performance,” AR 120 at 226, the Agency provides absolutely no basis for its statements, nor does it refute commenters’ detailed discussion to the contrary.

In summary, had EPA undertaken the BACT analysis the statute requires, considering the IGCC technology at Desert Rock with the necessary detail it is possible that neither the applicant nor EPA could show that IGCC is technically or economically not a viable option for Desert Rock. Indeed, had EPA undertaken any indepth look at IGCC technology at all, the record shows that the outcome of EPA’s BACT analysis likely would be affected. That fact in and of itself is sufficient basis for a remand of the PSD permit. In re Mecklenburg Cogeneration, LP, 3 E.A.D. 492, 494 n.3 (Adm’r 1990).

The record shows that IGCC is production process, and an available innovative fuel combustion technique and fuel cleaning, with a “practical potential for application” to convert the same coal into electricity at Desert Rock as would the proposed facility. The record also shows that IGCC can achieve the applicant’s fundamental goals for the Desert Rock facility, while yielding fewer air pollutant emissions, including carbon dioxide. Additionally, the record demonstrates that the cost and risk concerns raised by the applicant and EPA are rebuttable, and under EPA’s established top-down BACT analysis should be the subject for a thorough and detailed assessment, along with the other statutory BACT factors, before BACT is finally determined for Desert Rock. EPA and the applicant have utterly failed to undertake such an

analysis, or to adequately respond to the analysis submitted by commenters. The Desert Rock permit should be remanded to correct that clear error.

### **III. EPA’S FAILURE TO CONDUCT A PROPER BACT COLLATERAL IMPACTS ANALYSIS IS CLEARLY ERRONEOUS.**

Section 169(3) requires that a BACT analysis for a “pollutant subject to regulation,” include a collateral impacts analysis--a “case-by-case” analysis, “taking into account energy, environmental, and economic impacts and other costs.” If the Board agrees with EPA’s position that carbon dioxide is “not subject to regulation” under the Act, and declines to require a BACT analysis for carbon dioxide, the Board should remand this matter and direct EPA to conduct BACT analyses for NO<sub>x</sub>, SO<sub>2</sub>, CO, sulfuric acid mist, and VOCs that take into account both the collateral environmental impacts of carbon dioxide emissions and the collateral costs of future carbon dioxide regulation. A remand is required because EPA improperly excluded IGCC from the BACT analysis and Petitioners have clearly met their burden to show that IGCC may have made a difference in the result of the BACT analyses. The Board should require EPA, on remand, to conduct BACT analyses that include consideration of IGCC as a control technology, and consider both the collateral environmental impacts and collateral costs of future carbon dioxide regulation. Further, regardless of how the Board rules on whether carbon dioxide is subject to regulation, the Board should require EPA to consider in the collateral impact analyses collateral environmental impacts involving hazardous air pollutant emissions, solid waste disposal, water use, plant and animal species, soil and vegetation, and environmental justice concerns.

In their comments, Petitioners asserted that where control technologies considered in a BACT analysis have different collateral environmental impacts, EPA must go through a collateral impacts analysis that takes those differing collateral impacts into account in selecting

among control technologies. AR 66, Ex. 5, at 6-7. Petitioners asserted that if the Board declines to require a BACT analysis for carbon dioxide itself, the required collateral impacts analysis included in the BACT analyses for regulated NSR pollutants must include consideration of both the collateral environmental impacts and collateral costs of future carbon regulation. AR, 66, Ex. 5, at 6-12. EPA's response to comments disputes this. AR 120, at 27-33. EPA asserts that EPA need not consider the collateral environmental impacts of carbon dioxide emissions because the record does not suggest and Petitioners "have not provided any evidence" that consideration of those collateral environmental impacts would have resulted in a different choice of control technologies for regulated pollutants. AR 120, Response to Comments II.B.3.c.i., at 28-30. This conclusion is clearly erroneous. It is based on EPA's erroneous exclusion of IGCC from consideration in the BACT analysis. As we discussed above, Petitioners provided substantial evidence, including an expert affidavit, demonstrating that IGCC is an available control technology that should have been considered in the BACT analysis. This included evidence that IGCC can achieve significantly lower levels of carbon dioxide emissions over the life of a coal fired power plant. Ex. 28, Thompson Decl. ¶¶ 56-59. EPA's statement that Petitioners have "not presented any evidence" on this issue (RTC II.B.3.c.i., at 28) shows that EPA based its conclusion that Petitioners have not met their burden here on EPA's exclusion of IGCC from the BACT analysis. Because EPA committed clear error in excluding IGCC from the BACT analysis, its conclusion that Petitioners have not met their burden to show that consideration of the collateral environmental impacts of carbon dioxide emissions would have made a difference to the outcome of the BACT analysis is also clearly erroneous.

Further, EPA misstates Petitioners' burden. Petitioners need not show that consideration of the collateral environmental costs of carbon dioxide emissions would have resulted in a

different choice in control technologies. AR 120, at 28-29. Petitioners need only show that EPA's failure to consider the collateral environmental costs of carbon regulation "materially affected the quality of the permit determination," and that the identified error "may alter the permitting decision." In re: Prairie State Generating Co., 13 E.A.D. \_\_\_\_, slip op. at 58-59 (EAB August 24, 2006) (quoting In re Mecklenburg Cogeneration, LP, 3 E.A.D. 492, 494 n.3 (Adm'r 1990)). For the reasons discussed above, Petitioners presented more than sufficient evidence to meet this burden.

One of the main goals of the collateral impacts analysis is to require consideration of measures that have the collateral benefit of reducing environmental and economic impacts or costs attributable to emissions of unregulated pollutants. As the Environmental Appeals Board has explained:

[I]f application of a control system results directly in the release (or removal) of pollutants that are not currently regulated under the Act, the net environmental impact of such emissions is eligible for consideration in making the BACT determination. The analysis may take the form of comparing the incremental environmental impact of alternative emission control systems with the control system proposed as BACT; however, as in any BACT determination, the exact form of the analysis and the level of detail required will depend upon the facts of the individual case. Depending upon what weight is assigned to the environmental impact of a particular control system, the control system proposed as BACT may have to be modified or rejected in favor of another system. In other words, EPA may ultimately choose more stringent emission limitations for a regulated pollutant than it would otherwise have chosen if setting such limitations would have the incidental benefit of restricting a hazardous but, as yet, unregulated pollutant.

In re North County Resource Recovery Assocs., 2 E.A.D. 229, 1986 W.L. 80843, at \* 2 (EAB 1986); see also In re South Shore Power, LLC, 2003 EPA App. Lexis 13, at \*29 (EAB 2003), (finding non-regulated pollutants reviewable under BACT collateral impacts analysis "exception to the general rule against reviewing non-regulated pollutants in PSD proceedings"); In re Genesee Power Station, 4 E.A.D. 832, 848 (EAB 1993) (noting BACT analysis must include

unregulated pollutants “whenever choosing one control technology over another for a regulated pollutant has the incidental effect of increasing or decreasing emissions of unregulated pollutants”); In re Hibbing Taconite Co., 2 E.A.D. 838, 1989 EPA App. Lexis 24, at \*16 (EAB 1989) (requiring “the permitting authority to take into account the control technology’s impact on unregulated pollutants in every permit proceeding”).

EPA has specifically stated that emissions from greenhouse gases should be considered in a collateral impacts analysis. NSR Manual at B. 49 (“Significant differences in . . . greenhouse gas emissions may be considered.”) (attached as Ex.13). Thus, even if the Board finds that EPA was not required to set BACT limits for carbon dioxide in the Desert Rock permit, the agency still must consider the collateral impacts of greenhouse gas emissions from the proposed plant in setting BACT limits for other pollutants.<sup>82</sup>

EPA suggests that the Board should not require consideration of costs of carbon dioxide emissions through a collateral impacts analysis because the agency’s longstanding interpretation is that “the primary purpose of the collateral impacts clause is to temper the stringency of the technology requirements whenever one or more of the specified collateral impacts—energy, environmental, and economic renders use of the most effective technique inappropriate.” AR 120, at 29 (citing Columbia Gulf Transmission Co., 2 E.A.D. 824, 826 (EAB 1989) and Old

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<sup>82</sup> In further support of this obligation, Sections 160(1) and (5) of the Clean Air Act note that the permitting authority is required to consider the general environmental impacts of its permitting decisions, notwithstanding attainment and maintenance of all national ambient air quality standards. See 42 U.S.C. § 7470(1), (5). Recognizing that attainment and maintenance of NAAQS does not sufficiently evaluate “all the consequences” of a permitting decision’s environmental impacts, Congress called on EPA and administering state agencies to do more. Id. § 7470(5). Notably, this statement of purpose encompasses all “air pollutants,” not just those “subject to regulation.” Id. § 7470(1). Thus, Congress intended agencies to carefully evaluate the adverse environmental impacts of any increase in greenhouse gas emissions resulting from permitting decisions.

Dominion Electric Cooperative, 3 E.A.D. 779, 792 (Adm’r 1992) (analysis “is generally couched in terms of discussing which available technology ... produces less adverse collateral effects, and, if it does, whether that justifies its utilization even if the technology is ‘otherwise less stringent.’”) EPA does not explain how even if the Board allowed consideration of environmental impacts only to the extent that they provide a basis for rejecting the most stringent technology it would bar the collateral impacts analysis Petitioners’ have requested.<sup>83</sup> In any case, EPA’s past interpretations do not preclude consideration of the costs of carbon emissions here, as EPA suggests. Regardless of what EPA has viewed to be the “primary purpose” of or how the analysis has been “generally couched,” nothing in the Act precludes consideration of collateral environmental costs in selecting a more stringent technology than otherwise would have been selected. Further, the Board’s past decisions have recognized that it is appropriate to do so. See In re North County Resource Recovery Assocs., 2 E.A.D. 229, 1986 W.L. 80843, at \* 2 (EAB 1986) (“EPA may ultimately choose more stringent emission limitations for a regulated pollutant than it would otherwise have chosen if setting such limitations would have the incidental benefit of restricting a hazardous but, as yet, unregulated pollutant”); Old Dominion Electric Cooperative, 3 E.A.D. 779, 792 (EAB 1992) (citing id.).<sup>84</sup> EPA’s suggestion that the

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<sup>83</sup> Presumably, EPA is intimating that if IGCC is the most stringent technology, EPA can exclude IGCC based on alleged higher costs, but cannot at the same time weigh IGCC’s collateral environmental and economic benefits. Such an interpretation has no basis in the language of Section 169(3).

<sup>84</sup> We note that in Old Dominion Electric Cooperative, 3 E.A.D. 779, 792 (Adm’r 1992), the Board rejected the Petitioner’s allegations as lacking in clarity, and noted that the Petitioner had made no “specific comparison of alternative technologies.” Id. Here, Petitioners have presented specific evidence regarding the differences in collateral environmental costs of IGCC and pulverized coal technology. Further, in Columbia Gulf Transmission Co., 2 E.A.D. 824, 826 (Adm’r 1989), the Board rejected the permitting agency’s assertion that the negligible environmental impact of the regulated pollutant that was the subject of the BACT analysis may be considered as a collateral environmental impact of cost. Petitioners make no such claim here.

Board may not consider collateral environmental costs to select a more stringent control technology for regulated pollutants is clearly erroneous.

EPA also erroneously suggests that the collateral environmental impacts analysis should only consider local impacts. RTC II.B.3.c.i, at 31 (EPA's interpretation is that the analysis should "focus on local impacts"), *id.* (citing legislative history "explaining that the collateral impacts clause was added to provide permitting authorized with flexibility to consider the impact of the facility on the character of the community in which it is located") There is no language in the CAA that even remotely suggests that the collateral impacts analysis can only extend to local impacts. The fact that Section 169(3) requires a "case-by-case" analysis does not in any way preclude consideration of impacts to problems of a global nature. The CAA, including its PSD requirements, is clearly designed to address problems of an interstate, national and, even global nature. *See, e.g.*, 42 U.S.C. § 7401(b)(1) (declaring a Congressional purpose "to protect and enhance the quality of the Nation's air resources"), § 4470(4) (declaring a Congressional purpose to assure that emissions in one state "will not interfere with any portion of the applicable implementation plan to prevent significant deterioration of air quality for any other State"). Further, the Court in Massachusetts v. EPA specifically rejected EPA's assertion that the agency may avoid addressing global warming by clinging to an alleged political history that emphasized efforts to address local issues. *See* 127 S. Ct. at 1450-51, 1459-62. While local impacts and site-specific concerns are certainly factors EPA must consider in a collateral impacts analysis, they are not the only factors. And, as the Board noted in North County, "the exact form of the analysis and level of detail required will depend upon the facts of the individual case." 2 E.A.D. 229, 1986 W.L. 80842, at \*2 (EAB 1986). Further, Petitioners presented evidence that global warming impacts to which Desert Rock's carbon dioxide emissions will contribute will be felt

locally. Indeed, the Southwestern United States is anticipated to be especially hard-hit by the adverse impacts of global warming. Among other things, warming in the area's mountains is projected to cause decreased snowpack and reduced water flows, exacerbating competition for water resources. Ex. 6, at 4 (citing IPCC Working Group 2 Report). Further, numerous commentators from the local community expressed concern about the plant's global warming impacts. See RTC II.B.3.a.i., at 22. EPA's assertion (Id., at 31) that "any predicted impacts in the area surrounding the facility that are potentially due to climate change are not the type of local environmental impact that is readily traceable back to the particular source subject to PSD review" is of no moment. Many Clean Air Act programs, including standards for emission of pollutants from motor vehicles under Section 202, are designed to address sources that emit a small share of the pollutants that contribute to major air pollution problems. In Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie, 508 F. Supp. 2d 295 (D. Vt. 2007), the court, relying on Massachusetts v. EPA, stressed the importance of controlling greenhouse gas emissions, even where the sources at issue make only a small contribution to the very large global problems presented by global warming. EPA's suggestion that carbon dioxide emissions may not be considered in the collateral impacts analysis for a coal-fired power plant because they contribute to a global problem faced by everyone strains credulity.

EPA's reliance on the Emison Memorandum, and the Board's decisions in Inter-Power of New York, Inc., 5 E.A.D. 130 (EAB 1994) and Kawaihae Cogeneration Project, 7 E.A.D. 107 (EAB 1997) (AR 120, at 31-32) is also misplaced. The Emison memorandum, which is not entitled to any weight by the Board for the reasons discussed above, does not address carbon dioxide at all. It does not include carbon dioxide within its definition of "regulated pollutant,"

and says nothing about whether carbon dioxide is an unregulated pollutant.<sup>85</sup> In Inter-Power of New York, Inc., 5 E.A.D. 130 (EAB 1994), the Board rejected the petitioners request that Region II consider carbon dioxide and hydrogen chloride in issuing a PSD permit. The Board noted that carbon dioxide and hydrogen chloride were “unregulated pollutants,” and stated that “the Region was not required to examine control technologies aimed at controlling these pollutants.” Id. at 151. The Board quoted In re Spokane Regional Waste-to-Energy, PSD appeal No. 88-12, at 6 n.9 (Adm’r, June 9, 1989), stating that “[u]nless the advocated additional control technology is available for the primary purpose of controlling emissions of regulated pollutants, the permit issuer is not required to include that control technology in the BACT analysis.” Id. In the case now before the Board, IGCC is available for the primary purpose of controlling regulated NSR pollutants. In sum, none of EPA’s excuses provide a lawful basis to exclude consideration of the collateral environmental costs of carbon dioxide emissions from a BACT analysis for regulated NSR pollutants that considers IGCC as an available control technology.

EPA must also consider the collateral costs of anticipated carbon regulation in its BACT analysis for regulated NSR pollutants. EPA’s sole excuse for refusing to do so is its assertion that “the costs, if any, are too speculative to assess in the BACT analysis at this time.” RTC II.B.3.c.i., at 31. Like many of EPA’s other positions in this case, this one has no foundation in either the language of the Clean Air Act or record evidence. EPA does not attempt to rebut Petitioners’ demonstration that “the regulation of CO2 emission in the U.S. in the very near future is a virtual certainty.” AR 66, Ex. 5, at 10-11. Further, because coal-fired power plants are the largest source of carbon dioxide emissions in the United States, it is certain to be among

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<sup>85</sup> The memorandum in fact stressed the need to analyze the effects of air toxics, charging permitting authorities with the responsibility to analyze the toxic effects of unregulated pollutants, while addressing “[o]ther types of environmental effects” in response to public comments. Ex. 17, at 3.

the first sectors affected by carbon-related regulation. Id. at 11. Indeed, three leading financial institutions have adopted “Carbon Principles” and an “Enhanced Dilligence” framework to “to help lenders better understand and evaluate the potential carbon risks associated with coal plant investments.” Ex. 30. Under this framework, investors factor the financial risks of future carbon dioxide regulation into their assessment of particular coal-fired power plant projects. Id. The investors also assess opportunities to use carbon capture technologies. Id. Indeed, in February 2008, the Chairman of the House Committee on Oversight and Government Reform in an information request to the Rural Utility Service of the United States Department of Agriculture (“RUS”) stated that if RUS has failed to account for “the risk of substantial additional costs associated with [a] new plant’s massive greenhouse gas emission,” it has put both taxpayers and ratepayers in jeopardy. Ex. 30; see Ex. 59 (Rebuttal Testimony of Judah L. Rose before the Florida Public Service Commission) (discussing need for utilities to take CO2 allowance prices into account when planning for future generation).

Uncertainty concerning the amount of anticipated costs of carbon regulation, where it is clear that there will be some costs, is not a legal justification to do nothing to address the single largest public health and environmental problem facing the world today. The Ninth Circuit’s decision in Center for Biological Diversity v. National Highway Traffic Safety Administration, 538 F.3d 1172 (9<sup>th</sup> Cir. 2008) is instructive. The case involved a National Environmental Policy Act challenge to a rule setting corporate average fuel economy (“CAFÉ”) standards for light trucks. States, cities and public interest organizations challenged a cost benefit analysis that “did not monetize the benefit of reducing carbon dioxide emissions,” which the agency had recognized was “the main greenhouse gas emitted as a result of refining, distribution, and use of transportation fuels.” Id. at 1192. The court, applying an arbitrary and capricious standard, held

that the agency's failure to monetize the benefits of carbon dioxide reductions in setting CAFÉ standards violated the agency's statutory duty to set the "maximum feasible" fuel economy standard. The court specifically rejected the agency's assertion that the value of reducing greenhouse gas emissions was too uncertain to support explicit valuation and that the range of "of published estimates of damage costs from controlling carbon dioxide emissions, costs for controlling or avoiding their emissions, and costs of sequestering emissions that do occur" too broad to allow for quantification.<sup>86</sup> Id. The court also stated that although the record evidenced a "range of values, the value of carbon emissions reduction is certainly not zero." Id. at 1200. The court relied on these findings to conclude the agency's failure to quantify the value of carbon emission reductions arbitrary and capricious. Id.

The Supreme Court has admonished EPA that it cannot "avoid its statutory obligation [to set standards [under Section 202] by noting the uncertainty surrounding various features of climate change." 127 S. Ct. at 1463. Here, EPA should not be permitted to avoid considering the costs of carbon regulation altogether simply because there is uncertainty as to their magnitude. While the Supreme Court did leave open the possibility, however slim, that EPA may attempt to avoid regulation under Section 202 by making a reasoned judgment that greenhouse gases do not contribute to global warming, the agency, despite its continuing footdragging, has not chosen that path. In any case, the agency cannot skirt the Supreme Court's mandate that carbon dioxide is a "pollutant." Therefore, if the Board rules that carbon dioxide is not a "pollutant subject to regulation," but rather an "unregulated pollutant," the agency must account for the undisputed costs of anticipated regulation of carbon dioxide emissions in collateral impacts analysis under Section 169(3).

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<sup>86</sup> The court cited to an estimate of \$ 50 per ton of carbon published by a committee of the National Academy of Sciences and supported by several commentators. Id. at 533.

Regardless of the Board's ruling on the status of carbon dioxide, the Board should require EPA on remand to include in its collateral impact analyses for regulated NSR pollutants, consideration of environmental costs attributable to differential impacts of IGCC and pulverized coal technologies on hazardous air pollutant emissions, solid waste disposal, water quality, water use, soil and vegetation, and animal and plant species, some of which involve environmental justice issue. Petitioners noted in their comments that Section 169(3) requires consideration of differences in impacts related to these issues (AR 66, Ex. 5, at 7 & n. 10), and presented evidence of IGCC's advantages relative to pulverized coal technology regarding these issues.

Petitioners demonstrated that an IGCC plant uses approximately one-half to two-thirds less water than a pulverized coal plant and generates 30-50% less solid waste. (AR 66, Ex. 5 at 33; Ex. 28, Declaration of John Thompson ¶ 28). Coal combustion wastes ("CCW" or "CCB") generated by coal-fired power plants contains a number of heavy metals and other toxic constituents, including arsenic, selenium, mercury, lead, calcium, manganese, boron, selenium and sulfates. (AR 75, Comment No. 684). More than 100 million tons of CCW from the nearby San Juan Generating Station and Four Corners Power Plant, have been disposed of in two mines in the vicinity of the DREF site, the San Juan and the Navajo mines. (AR 75, Comment 684; AR 57.11, Comment Letter 1011, Ex. 11, at 80-86)). DREF plans to dispose of its CCW in the Navajo Mine. CCWs disposed of in the San Juan Mine are believed to be responsible for contaminating the Shumway Arroyo, which flows directly into the San Juan River, contaminating drinking water supplies and killing more than 1400 sheep. (AR 75, Comment 684, AR 57.11, Comment Letter 1011, Ex. 11, at 84). Total dissolved solids, sulfates, boron and selenium have been measured in the Chaco River at higher levels downstream than upstream of

the Navajo Mine, where DREF plans to dispose of its CCW. Comment Letter 1011, Ex. 11, at 84.

EPA did not address issues involving water use and solid waste disposal, and its actual or potential impacts to human health, water resources, vegetation and soils, plant and animal life. Instead, EPA deferred consideration of such issues to an ongoing environmental impact proceeding in which BIA is the lead agency, which we discuss below. (AR 120, Response to Public Comments, at 173-75 EPA, however, in Section 309 comments on the draft environmental impact statement for DREP (“DEIS”), was critical of the manner in which CCW and its impacts was addressed in the DEIS. EPA stated:

EPA has concerns regarding the thoroughness of the evaluation of potential impacts from placement of coal combustion byproducts (CCBs) in Navajo Mine. The DEIS does not consider the effect that advanced pollution control technology will have in CCB composition, nor does it evaluate and disclose all available information regarding existing CCB disposal impacts.

AR 57.8, Comment Letter 1011, Ex. 8.

The advantages of IGCC over pulverized coal technology in limiting these types of environmental impacts, some of which present environmental justice concerns, require consideration through a BACT collateral impacts analysis.

Taking collateral environmental impacts into account when assessing various BACT options, necessarily includes examining how different BACT options affect species listed as threatened or endangered. In re: Indeck-Elwood, LLC, slip op. at 108 (EAB September 27, 2006). As we discuss below, EPA did not examine DREF’s impacts to the Colorado pikeminnow, razorback sucker, Mancos milkvetch, Mesa Verde cactus, the polar bear,. threatened corals and other species at all, much less compare the differential impacts of IGCC and pulverized coal technologies. Just as EPA deferred consideration of solid waste, water use

and water quality issues to BIA's as yet uncompleted EIS, EPA deferred consideration of impacts to affected species to an uncompleted consultation with the Fish and Wildlife Service under Section 7 of the Endangered Species Act. BIA is the "lead agency" on the consultation.

Plant and animal species are threatened by DREF's emissions of hazardous air pollutants including mercury; disposal of coal combustion waste generated by DREF and its potential to contaminate areas streams, including the San Juan River; diminished water flows to which DREF's massive water consumption may contribute; and DREF's carbon dioxide emissions, which will contribute to global warming that poses a grave threat to species. An IGCC plant emits less mercury than a pulverized coal plant. Ex. 28, Declaration of John Thompson ¶ 64. Petitioners' evidence that IGCC offers benefits over pulverized coal through reducing each of these impacts to species shows that the collateral impacts analysis under Section 169(3) must assess differential impacts of IGCC and pulverized coal technologies on these species.

The relative advantages of IGCC over pulverized coal technology concerning solid waste, water use, water quality, local plant and animal species, including listed ESA species that inhabit local waters, impact the local community, and are collateral environmental effects that EPA must consider, even if the Board adopts EPA's unlawfully narrow construction of Section 169(3). For these reasons, the Board should require EPA to include in its BACT analysis on remand, consideration of the differential impacts of IGCC and pulverized coal technologies on hazardous air pollutant emissions, solid waste disposal, water use, water quality, plant and animal species.

#### **IV. EPA UNLAWFULLY FAILED TO ASSESS THE IMPACT OF CASE-BY-CASE MACT ON THE PSD PERMIT.**

Comments on the Draft Permit, and EPA's responses to those comments, make clear that until a case-by-case MACT review has been conducted EPA has no way of assessing how the technology-forcing MACT requirements are likely to affect the proposed plant's ability to control PSD pollutants. As discussed below, it is unreasonable and unlawful for EPA to issue the PSD permit for Desert Rock without first, or simultaneously, conducting the required case-by-case MACT determination, and specifically determining, on the record, the impact that MACT-related requirements will have on the PSD control technology assessment (especially the BACT analysis) and the corresponding permit limitations.

##### **1. The Clean Air Act Requires Case-by-case MACT for Desert Rock.**

The CAA requires that EPA list "all categories of and subcategories of major sources" of HAP, CAA § 112(c)(1),<sup>87</sup> and promulgate regulations that establish "emissions standards . . . applicable to new and existing sources of hazardous air pollutants [that] require the maximum degree of reduction in emission" that the Administrator determines is achievable, CAA § 112(d)(2). These "maximum achievable control technology" standards for new sources must be no less stringent than "the emission control that is achieved in practice by the best controlled similar source." CAA § 112(d)(3). The Act requires that EPA meet certain deadlines for promulgating standards under section 112(d) to control emissions of these pollutants from identified categories of major sources. See, e.g., 42 U.S.C. § 7412(c)(5), (c)(6), (c)(8), (e)(1), (e)(3). However, when EPA has failed to promulgate emission standards under section 112(d),

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<sup>87</sup> A major source is, without limitation, "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year of any hazardous air pollutant or 25 ton per year or more of any combination of hazardous air pollutants." CAA § 112(a)(1) (emphasis added). There is no dispute that Desert Rock is a major source under section 112.

new sources (and modifications to existing sources) must obtain MACT emission limitations, established on a case-by-basis, before they can be built. See 42 U.S.C. § 7412(g)(2). In particular, Section 112(g)(2)(B) provides:

After the effective date of a permit program under subchapter V of this chapter in any State, no person may construct or reconstruct *any* major source of hazardous air pollutants, unless the Administrator (or the State) determines that the maximum achievable control technology emission limitation under this section for new sources will be met. Such determination shall be made on a case-by-case basis where no applicable emission limitations have been established by the Administrator.

In 2000, EPA added coal- and oil-fired electric generating units (“EGUs”) to the list of major sources of HAP, <sup>88</sup> after completing the study of hazardous emissions from EGUs as required under CAA section 112(n).<sup>89</sup> By virtue of this action, EGUs became a listed section 112 source category for which EPA is required to establish MACT standards.

It is undeniable that EPA has failed to meet its obligation to promulgate MACT standards for new and existing coal- and oil-fired electric generating units (EGUs). This failure is made clear by a recent decision by the United States Court of Appeals for the D.C. Circuit. New Jersey v. EPA, 517 F.3d 574 ( D.C. Cir. 2008) (mandate issued March 14, 2008). In vacating EPA’s “clean air mercury rule,” the Court acknowledged that the Agency had illegally attempted to remove EGUs from the list of source categories established pursuant to CAA § 112(c). Accordingly, EPA’s purported “delisting” was ineffectual, and the December 2000 source category listing of EGUs remains in effect.<sup>90</sup>

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<sup>88</sup> See 65 Fed. Reg. 79825, 79828 (Dec. 29, 2000) (2000 Listing Decision).

<sup>89</sup> U.S. Environmental Protection Agency, *Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units—Final Report to Congress* (“Utility Study”), ES 1-2 (Feb. 1998). The full report is available at: <http://www.epa.gov/mercury/report.htm> and is incorporated by reference here.

<sup>90</sup> Specifically, in vacating EPA’s delisting decision and the associated Clean Air Mercury Rule (CAMR), the Court concluded:

In the RTC, EPA acknowledges that by virtue of the D.C. Circuit’s decision in New Jersey Sithe is now obligated to obtain a MACT determination before it may begin construction on the Desert Rock plant. Supp. RTC at 21 (“EPA agrees with the commenter that a case-by-case MACT determination must be completed pursuant to Section 112(g) of the CAA and the implementing regulations under 40 CFR Part 63 before the Permittee may begin actual construction of the Desert Rock facility.”). Thus, at this juncture, it is clear that the proposed Desert Rock plant is subject to case-by-case MACT review.

**2. Case-by-case MACT Issues are Properly Before the Board on Review.**

As discussed above, EPA acknowledges that the specific outcome of the New Jersey case more than a year after the close of the comment period changed the nature of the substantive preconstruction requirements to which the Desert Rock project is subject. As discussed below, this justifies the Board’s broad consideration of the unique issues related to the applicability of case-by-case MACT.

Pursuant to 40 C.F.R. § 124.13 “in order to demonstrate that an issue has been preserved for appeal, a petitioner must show that any issues being appealed were raised with reasonable specificity during the public comment period.” In re Indeck Elwood, PSD Appeal 03-04, slip op. at 23 (EAB, Sept. 22, 2006), 13 E.A.D. \_\_\_. “Alternatively, a petitioner may demonstrate that an issue was not reasonably ascertainable during the public comment period.” Id. n.49 (citing In re

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[I]n view of the plain text and structure of section 112, we grant the petitions and vacate the Delisting Rule. *See Allied-Signal, Inc. v. U.S. Nuclear Regulatory Comm’n*, 988 F.2d 146, 150-51 (D.C. Cir. 1993). This requires vacation of CAMR’s regulations for both new and existing EGUs. EPA promulgated the CAMR regulations for existing EGUs under section 111(d), but under EPA’s own interpretation of the section, it cannot be used to regulate sources listed under section 112; EPA thus concedes that if EGUs *remain listed under section 112, as we hold*, then the CAMR regulations for existing sources must fall. Resp’t Br. at 99, 101-02; see also Delisting Rule, 70 Fed. Reg. at 16,031. 517 F.3d at 584.

Encogen Cogeneration Facility, 8 E.A.D. 244, 250 n.8 (EAB 1999)). In this instance, not surprisingly, commenters raised issues on the Draft Permit related to the control of mercury emissions and the Clean Air Mercury Rule (“CAMR”), the rule EPA had promulgated in 2005 establishing New Source Performance Standards for mercury at the same time it purported to remove EGUs from the list of source categories subject to regulation under section 112 of the Act. See, e.g., AR 71, Comment 53 at 1-2; AR 73, Comments 70 at 2; AR 66 at 50-52.

In addition, MACT-related issues in general were raised by commenters on the Draft Permit. The State of New Mexico, for example, made the following comment:

EPA has neglected to discuss or include in the PSD permit the NESHAPS<sup>91</sup> standards which must apply to a source this large. In fact, EPA has neglected to discuss HAPS emissions entirely in the TSD. Based on experience with other plants of this size, NDEP is sure that this facility is major source of HAPS. As such, 40 CFR 63 Subparts ZZZZ [for stationary internal combustion engines] and DDDDD [for auxiliary boilers] would apply, as discussed above. EPA needs to address HAP emissions and include the specific NESHAPS standards in the appropriate emission unit specific sections of PSD permit.

AR 67, Comment 11 at 2-3.<sup>92</sup>

However, commenters also filed supplemental comments on March 4, 2008, shortly after the New Jersey decision, to alert EPA with specificity to the concerns regarding the implications

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<sup>91</sup> EPA refers to the federal MACT-based emissions standards that it establishes through federal rulemaking pursuant to section 112(d) of the Act as National Emission Standard for Hazardous Air Pollutants or “NESHAP.” These are distinct from case-by-case MACT standards that are established on a source-specific basis under section 112(g).

<sup>92</sup> While this comment, not surprisingly, did not raise the specific issue of case-by-case MACT for EGUs, anomalously, in response to this general comment, EPA erroneously states:

A MACT standard for the oil- and coal-fired utility steam generating unit source category was proposed in January 2004. However, a final rule has not been promulgated. Pursuant to 36.40(c), the requirements of 40 CFR Part 63, Subpart B do not apply to electric utility steam generating units. Therefore, a case-by-case MACT determination is not required. RTC at 187. This response is clearly contrary to law, based on New Jersey v. EPA, and indicates that EPA did not in fact consider the interplay between case-by-case MACT and PSD. The fact that EPA’s response to a generalized comment regarding applicable NESHAP reflects such a fundamentally flawed understanding of the law itself is sufficient to serve as the basis for Board review of the MACT issues raised in this Petition.

of case-by-case MACT on its ongoing PSD review. As it is also appropriate for the Board to exercise jurisdiction regarding these case-by-case MACT issues because these issues were not “reasonably ascertainable” during the comment period on the Draft Permit, the board should broadly consider the MACT-related issues raised in this Petition.<sup>93</sup> Additionally, since EPA in fact reviewed these comments and elected to respond, its response must be held to ordinary standards of rationality.<sup>94</sup>

### **3. MACT Includes Technology-Forcing Requirements That Are More Stringent Than BACT.**

The MACT process is a analytic exercise with a more stringent set of technology-forcing criteria that is likely to result in more stringent emission limits than BACT. Indeed, there is a long line of D.C. Circuit case law defining the parameters of the MACT process and acknowledging Congress’s intent to impose particularly stringent controls on HAP.

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<sup>93</sup> Petitioners note that the situation here is very different than that in In re Christian County (PSD Appeal No. 07-01 (EAB 2007)) where the Board found that the CO<sub>2</sub> related implications flowing from the Supreme Court’s decision in Mass v. EPA were reasonably ascertainable during the comment period for that permit. In this instance, unlike in Christian County, the New Jersey case was still in its early stages during the comment period for Desert Rock (in fact, while one-page petitions for review were filed in 2005, opening briefs in the New Jersey case were not filed until January 2007, months after the Desert Rock comment period had closed). Moreover, it only became clear that the delisting-related challenge would significantly factor into the Court’s decision when the court issued its Order scheduling oral argument in November 2007, approximately a year after the close of the comment period on Desert Rock Draft Permit). Also, there is no evidence here, as there was in Christian County, that this issue had in fact been raised or specifically considered by the parties in other proceedings prior to the relevant comment period. Thus, in order to give meaning to the term “reasonably” in the rule’s reference to “reasonably ascertainable,” the Board must recognize “reasonable” limits on the ability of the public in permit proceedings to foresee the outcome of possibly related ongoing, early-stage litigation. Finally, and significantly, only *one* of Petitioners here was even involved in the New Jersey case. Thus, unlike in Christian County, most of the Petitioners *could not possibly* have anticipated the implications for Desert Rock of the ultimate outcome of ongoing, early-stage litigation to which they were not even parties, and in which no briefing had yet occurred. According, the Board’s jurisdiction over the MACT-related issues raised here is proper.

<sup>94</sup> To the extent that the Board has any question about the appropriateness of reviewing these MACT-related claims, it should exercise its discretion to do so as discussed in Conoco Phillips. In re Conoco Phillips Co., PSD Appeal 07-02, slip op. at n.31 (EAB, June 2, 2008), 13 E.A.D. \_\_\_. See Exs. 31 and 32.

The MACT process involves a two-step analysis that results in numerical emissions limits for hazardous air pollutants.<sup>95</sup> The first step requires that the regulatory authority establish a “MACT floor” – a minimum level of stringency for the MACT standard based on specifically enumerated criteria. For new major sources, such as Desert Rock, the MACT floor may “not be less stringent than the emission control that is achieved in practice by the best controlled similar source.” 42 U.S.C. § 7412(d)(3). The second step of the MACT analysis involves consideration of “beyond the floor” controls – emission limitations that are more stringent than the MACT floor. Such additional pollution control requirements are mandatory where they would be “achievable” considering cost and other factors enumerated in the Act. See 42 U.S.C. § 7412(d)(2); see also See Nat’l Lime Ass’n v. EPA, 233 F.3d 625, 639 (D.C. Cir. 2000) (hereinafter “National Lime”).

MACT standards must include emission limitations for each HAP that a facility will emit, and the Clean Air Act specifically lists more than 180 individual hazardous air pollutants that are potentially subject to control under the Act’s MACT program. See 42 U.S.C. § 7412(b). As the D.C. Circuit has explained, the regulating agency has a “clear statutory obligation to set emission standards for each listed HAP” that a facility will emit. National Lime, 233 F.3d at 634. Therefore, when a facility is subject to the Clean Air Act’s case-by-case MACT provisions, EPA (or a state regulatory authority under section 112(g) or 112(j)) must establish emissions limitations for each and every HAP that the facility will emit. With respect to electric generating units, like Desert Rock, this means EPA must specifically identify the full range of HAP

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<sup>95</sup> Under certain circumstance EPA may impose work practice requirements in lieu of numerical emission limits, but this authority is specifically constrained by the act. See 42 U.S.C. § 7412(h).

emissions the facility will emit, and establish standards pursuant to section 112(g) that address each of those HAPs.

In its 2000 Listing Decision, EPA acknowledged that “Coal- and oil-fired electric utility steam generating units . . . emit a significant number of the 188 HAP on the section 112(b) list.” 65 Fed. Reg. 79825, 79828 (Dec. 29, 2000). And in the final report to Congress, required under CAA § 112(n), EPA explained that EGUs typically emit some 67 listed HAP (including in addition to mercury, toxics like arsenic, beryllium, cadmium, chromium, dioxins, lead, and manganese). Utility Study, at ES 1-2. Once the applicant has identified each HAP that its proposed facility will emit, the regulator must establish MACT *independently for each HAP*. That is, for each HAP the regulator must identify the individual best performing similar source and identify the emission performance that that source achieves in practice. While such emission limitations may include standards for categories of pollutants that are represented by a “surrogate” pollutant, a regulator may not arbitrarily identify a surrogate without specifically linking the surrogate with *each HAP* that it is intended to represent. See *Mossville Env’tl Action Now v. EPA*, 370 F.3d 1232, 1243 (D.C. Cir. 2004).<sup>96</sup> Accordingly, in this instance, EPA will

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<sup>96</sup> The Court in *Mossville* rejected EPA’s reliance on vinyl chloride as a surrogate for all HAP from PVC production facilities, ruling unambiguously that EPA was required to “establish a correlation between the surrogate and the HAP” and that to do so the agency was affirmatively required to identify each HAP that the facility would emit, and directly link each such HAP with the chosen surrogate. 370 F.3d at 1243. It was fatally insufficient for EPA to simply assert without detailed, HAP-specific analysis that vinyl chloride was an appropriate surrogate for all HAP. In fact, surrogates are appropriate only where they meet certain criteria intended to ensure that they will actually serve to demonstrate MACT level control of all represented HAP. In particular, the D.C. Circuit has explained that the use of surrogates is permissible only if it is scientifically reasonable. See *National Lime* at 637. At minimum, to rely on a surrogate, the regulator must demonstrate that the surrogate and the class of pollutants it represents are “invariably present” together in the emissions; that the applicable control technology “indiscriminately captures” both the surrogate and the represented pollutants; and that these controls are the “*only means by which facilities ‘achieve’ reductions*” in the target pollutants. See *Sierra Club v. EPA*, 353 F.3d 976, 984 (2004) (*citing *National Lime* at 639) (addressing*

need to identify the emission limitation achieved in practice by the single best performing similar source for each of dozens of HAP that the Desert Rock plant is likely to emit.

Each such MACT floor must accurately reflect the level of performance that the relevant best performing source *actually achieves*, and may not consider cost, technical or economic feasibility, or achievability for the source that will be subject to the MACT limit. See, e.g., National Lime, 233 F.3d at 640 (“cost may not influence the determination of a MACT floor, which depends exclusively upon the emission reductions achieved by the best-performing sources.”); Cement Kiln Recycling Coalition v. EPA, 255 F.3d 855, 857-58 (D.C. Cir. 2001) (same).

On numerous occasions, the D.C. Circuit has specifically rejected EPA’s attempt to set floor at levels that it believed would “reflect what the agency determines to be *achievable* through the use of particular technology.” Cement Kiln, 255 F.3d 855, 861 (“EPA may not deviate from section [112(d)(3)]’s requirement that floors reflect what the best performers are *actually achieving* by claiming that floors must be *achievable* by all sources using MACT technology.”) (emphasis added). Whatever process EPA uses to establish MACT floors, it “must show not only that it believes its methodology provides an accurate picture of the relevant sources’ actual performance, but also *why* its methodology yields the required estimate.”<sup>97</sup> Id. at

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EPA’s use of PM as a surrogate for metal HAP). If a target HAP and its proposed surrogate do not behave similarly with respect to controllability, then the surrogate approach is impermissible. For example, if different control technologies, or the same technology used under different conditions, will remove HAP in different proportions with respect to the surrogate pollutant, then the surrogate may not be used unless there is a mechanism to ensure that in each instance the individual target HAP itself will be controlled at least to the degree that that HAP is controlled by the best performing source.

<sup>97</sup> In this respect, EPA may not rely on permit limits as reflecting the MACT floor unless it can affirmatively demonstrate that the relevant permit limits, in fact, reflect the emissions control *achieved in practice* by the relevant best performing sources. Northeast Maryland Waste Disposal Authority v. E.P.A., 358 F.3d 936, 953-54 (D.C. Cir. 2004) (citing Sierra Club v. EPA,

862; see also Sierra Club v. EPA, 233 F.3d at 632 (“to comply with the statute, EPA’s method of setting emission floors must reasonably estimate the performance of relevant best performing plants”).

Significantly, when identifying a MACT floor for new units, the method of control that the reference unit employs is *entirely irrelevant*. The actual performance of the best performing similar source (for each HAP) is the MACT floor – whether that level of performance is achieved through use of emissions control equipment, through process controls or cleaner processes, through management of operating parameters, through use of cleaner inputs or fuels, by some other mechanism, or by some combination of measures. See Cement Kiln, 255 F.3d at 863 (“The statute itself . . . directs EPA to consider factors such as ‘process changes, substitution of materials or other modifications . . . design, equipment, work practice, or other operational standards. . . [or] a combination of above, suggesting that ‘Congress itself recognized that many factors . . . affect sources’ emissions” (internal citations omitted)) (quoting Sierra Club’s Opening Brief in *Cement Kiln*).<sup>98</sup>

Indeed, the effectiveness of measures leading to superior emissions performance at the MACT floor reference facility need not be quantified, or even quantifiable. See Cement Kiln, 255 F.3d at 865. Once the best performing source has been identified for a particular pollutant, that source’s actual level of performance is the MACT floor even if the regulator can not identify

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167 F.3d 658 (D.C.Cir.1999)). This is a significant departure from BACT, where EPA routinely relies on permit limits with no demonstration that the permit limits reflect the best actually performance.

<sup>98</sup> The Legislative History of the CAA Amendments of 1990 states:

The technologies, practices or strategies which are to be considered in setting emission standards under this subsection go beyond the traditional end-of-stack treatment or abatement systems. The Administrator is to give priority to technologies or strategies which reduce the amount of pollution generated through process changes or the substitution of materials less hazardous.

S. rep. No. 101-228, at 168. See also National Lime, 233 F.3d at 634.

how the source achieves its emissions control, and even if the source does not *intentionally* control emissions at all. See Sierra Club v. EPA, 479 F.3d at 882-83 (D.C. Cir. 2007) (explaining that reliance on the actual performance of the relevant best performing source as the MACT floor “requires neither an intentional action nor a deliberate strategy to reduce emissions”). In short, with respect to MACT floors, method of control and achievability at the proposed facility as proposed are *categorically irrelevant* – if a proposed facility can not achieve the identified MACT limit, the proposed facility *NOT* the MACT limit must change.<sup>99</sup>

Finally, the quality of inputs and fuel may not serve as a justification for ignoring a facility as the best performing similar source. Inputs, including fuel quality, are without question within the scope of those measures that Congress intended sources would use to comply with MACT requirements. Moreover, the unavailability of comparable fuels or inputs is *not* a justification for deviating from the statutory obligation to identify and impose MACT floor limits that reflect the actual performance of the best performing similar source. See Sierra Club, 479 at 882-83 (rejecting EPA’s reliance on the same justifications it offered in Cement Kiln for deviating from the MACT floor requirements in the Act, “i.e., a lack of data to quantify the effects of non-technology factors and a concern that floors based on clean [inputs] would be unachievable because of the inability of [sources] to switch [inputs]”).<sup>100</sup>

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<sup>99</sup> As the D.C. Circuit has recognized, “section [112(d)(3)] provides that ‘the maximum degree of reduction in emission that is deemed achievable . . . shall not be less stringent than’ what the best-performing sources ‘achieve.’ Section 112(d)(3) therefore limits the scope of the word ‘achievable’ in section [112(d)(2)].” Cement Kiln, 255 F.3d at 861. See also Sierra Club v. EPA, 479 F.3d 875 (D.C. Cir. 2007).

<sup>100</sup> Finally, “similar source” for purposes of new EGU’s should be broadly construed – to do otherwise would undermine the clear intent of Congress to emphasize process changes and other emission control options not associated with end-of-stack controls. EPA itself has acknowledged that “similar source” is a broader term than “source category,” explaining that it “believes that because the Act specifically indicates that existing source MACT should be determined from within the source category and does not make this distinction for new

In short, it is clear from the language of the MACT provisions and from relevant case law, that the emissions control analysis under this regulatory program is different from and significantly more stringent than BACT.<sup>101</sup> As discussed below, these differences have important implications for the regulatory process at issue in this case.

#### **4. EPA’s Failure to Consider the PSD Implications of Mandatory MACT Review is Unreasonable and Unjustifiable.**

EPA cannot conduct a reasonably complete BACT analysis without first (or simultaneously) performing a MACT analysis. In this instance, EPA not only failed to conduct a case-by-case MACT analysis, it failed to perform *any* meaningful independent analysis of what MACT would require and what implications MACT-related requirements would have on the proposed facility’s ability to control PSD pollutants. Moreover, EPA did not meaningfully respond to comments pointing out the importance of considering the interactions between MACT and PSD (and the BACT emission limits in particular).

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source MACT, that Congress intends for transfer technologies to be considered when establishing the minimum criteria for new sources.

61 Fed. Reg. 68,384-385. This is consistent with Congressional intent for process changes, substitution, and other non-technology controls to play a preferential role in reducing HAP. See National Lime, 233 F.3d at 634 (“The technologies, practices or strategies which are to be considered in setting emission standards under this subsection go beyond the traditional end-of-the-stack treatment or abatement system. The Administrator is to give priority to technologies or strategies which reduce the amount of pollution generated through process changes or the substitution of materials less hazardous. Pollution prevention is to be the preferred strategy wherever possible.”(citing S. Rep No. 101-228, at 168)). Accordingly, it would be inconsistent with the intent of the Act for a regulator to narrowly define the universe of sources that it considers to be “similar” to artificially exclude control options that are in fact contributing to the superior emissions performance at the best performing sources. At minimum, with respect to coal-fired EGUs, “similar source” should be understood to include all coal-based steam generating units as EPA defines that term in its regulations.

<sup>101</sup> As the Board knows well, BACT expressly requires consideration of cost and other factors, and contemplate limits that are tempered on a case-by-case basis to ensure availability, technological feasibility, and practical and economic achievability of control measures that will allow the source to meet the identified numerical emissions limitation.

In response to Petitioners comments, EPA makes three points. First, EPA points out that “112(b)(6) exempted HAPs listed under section 112(b)(1) from the PSD requirements in part C. It would therefore not be appropriate to include emission limits for HAPs in the PSD permit.” Supp. RTC at 21. Second, EPA’s substantive response to the observation that the MACT and PSD permitting process (especially BACT) may have important interactions is that its “present understanding of pollutant control technologies gives us no basis to believe that HAP controls will affect the controls selected as BACT for criteria pollutants.” *Id.* at 22. Finally, EPA observes that “[t]he section 112(g) case-by-case MACT determination will go through public review. At that time, the public will have an opportunity to comment on the determination itself and raise any concerns related to the MACT determination.” EPA also notes that, if necessary, when it conducts the MACT analysis “EPA will assess whether revisions to the PSD permit are necessary and can propose revisions to the relevant parts of the PSD permit at that time if there is cause to do so.” *Id.* at 22-23. These responses reflect the sum total of EPA’s assessment of the potential interaction between MACT and PSD – they are inadequate on their face, and we address each response below.<sup>102</sup>

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<sup>102</sup> EPA does also respond in slightly more detail to one example of a potential interaction that Petitioners included in the March 4 Comment Letter. *See* Supp. RTC at 22. This issue relates to the possibility of increases in hazardous solid waste as a result of more stringent MACT-based mercury control requirements. Among other things, commenters suggested that the volume and toxicity of solid waste (which may be affected by stringent mercury control requirements) should be one of the factors considered in the 165(a)(2) analysis of the “alternatives,” including of course the “no build” alternative. The comment states “EPA should expressly consider the toxicity of the facility’s coal combustion waste (CCW) . . . as an *additional justification* for conducting a robust evaluation of alternatives to the project (both under BACT and under CAA § 165(a)(2)).” Despite this comment, which clearly contemplated *adding* consideration of CCW to the issues *already identified* in the record for selecting an alternative (including a “no build” alternative), EPA responded in full that “the commenter has not identified the specific alternative that is recommended to reduce CCW. We have otherwise considered alternatives to the proposed source in the discussion above and in Appendix A of the document responding to comments submitted during the comment period.” Supp. RTC at 22. However, EPA never

With regard to EPA's first response, Petitioners do not argue (nor did the relevant comments) that EPA was required to physically include HAP-specific emission limits in the PSD permit. EPA's response, therefore, is in fact no response at all. EPA further responds to commenters observations about potential interaction between MACT and PSD by explaining that its "regulations do not require a section 112(g) case-by-case MACT determination to be made as part of or before issuance of the PSD permit, but 'actual construction' may not begin until such a determination is made." Supp. RTC at 21. This response, similarly, misses the point. The fact that EPA's regulations are silent about how case-by-case MACT determinations and PSD permitting process must proceed in relation to one another is immaterial to the core question at issues here, whether in this instance EPA may reasonably finalize the PSD permit for Desert Rock without first (or simultaneously) performing a case-by-case MACT analysis. As discussed below, the PSD permitting process here is rendered substantively inadequate by EPA's failure to adequately consider and account for all relevant factors affecting the technologies that the source will utilize, including control measures (of any kind) that are required by case-by-case MACT.

The main point of the March 4 Comment Letter was that because "MACT limitations for mercury and other HAP are likely to require changes to facility design and/or operational parameters . . . the detailed analysis of emissions performance and other environmental implication[s] of the project required under the PSD program may no longer be fully accurate."

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performed an evaluation of hazardous waste implication of the project in connection with its consideration of alternatives (including a no-build alternative), and never explained why consideration of CCW as an "additional justification" in the alternatives analysis it did conduct was unnecessary or inappropriate. In effect, EPA completely ignored this component of Petitioners' comment. In any event, the commenters reference to the CCW example, in no way diminishes the broader and more significant point of the comment – that EPA needs to assess the technology implications of MACT and PSD *together* to "address any impact that the MACT emission control requirements will have on the analysis of the appropriateness of the project and on the stringency of the PSD permit limitations and/or other permit conditions." See March 4 Comment Letter at 6.

As a result, the comments pointed out that “[i]n order to ensure that the PSD permit requirements continue to reflect the greatest degree of emission reduction achievable, pursuant to the criteria of CAA § 165 and 169, and to ensure that all other environmental impacts are appropriately considered, EPA must reexamine the PSD permit limits and other permit conditions in light of the MACT analysis required by section 112(g).” March 4 Comment Letter at 5. Finally, the comments observed that “EPA must provide the public with an opportunity to comment on EPA’s conclusions regarding the affect that compliance with section 112(g) will have on the appropriateness of the project and on the level of stringency of the emission limits under section 165.” *Id.* at 5-6.

To the extent that EPA’s response suggests, as a categorical matter, that the statute contemplates the management of HAP emissions under the MACT provisions as a distinct and isolated process bearing no relationship to PSD – this understanding of the CAA is belied by the language and structure of the Act itself. Certainly, the Act creates different regulatory programs, in general, for control of criteria air pollutants and HAP. *Compare* CAA Subchapter I, Part A to Subchapter I, Part C. However, in the context of preconstruction review under the PSD program, the Act *specifically recognizes* the significance of *all* preconstruction requirements.

Indeed, the PSD permitting provisions reference MACT (both directly and indirectly) and provide a clear indication that Congress recognized the collective significance of the various preconstruction permitting requirements, and the potential for interaction between parallel analyses, especially MACT and BACT.

**A. Section 165(a)(3) Contemplates Case-by-case MACT as a PSD Requirement.**

In 165(a), the very first subsection in the preconstruction provisions of the PSD requirements – where Congress identifies the basic prohibitions of the PSD program -- Congress

also broadly lays out the various preconstruction obligations for new major sources of emissions and *makes compliance with those preconstruction obligations a substantive component of PSD.*

See 42 U.S.C. § 7475(a).<sup>103</sup> In particular, this section states:

No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless . . .

(3) the owner or operator of such facility demonstrates, as required pursuant to section 110(j) . . . that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of *any . . . applicable emission standard or standard of performance under this chapter.*

42 U.S.C. § 7475(a) (emphasis added).<sup>104</sup> Thus, contrary to EPA’s assertion that MACT and PSD are distinct and insular, the Act incorporates compliance with case-by-case MACT into the core prohibition of the PSD provisions, manifestly acknowledging the interrelatedness of these preconstruction requirements. That is, in addition to the obligation to obtain a PSD permit (§165(a)(1)), to meet specific public participation requirements (§165(a)(2)), to impose BACT (§165(a)(4)), and to conduct an analysis of air quality impacts (§165(a)(6)), the PSD provisions themselves require an applicant to “demonstrate” that it will meet case-by-case MACT (165(a)(3)). The lone statutory and regulatory process for making such a “demonstration” is under section CAA § 112(g) and EPA’s implementing regulations. Accordingly, EPA is wrong to the extent that it suggests that case-by-case MACT is not a PSD requirement.<sup>105</sup>

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<sup>103</sup> This is the very section of the Act through which Congress imposes among other things.

<sup>104</sup> Section 110(j) in turn states:

As a condition for issuance of any permit required under this title, the owner or operator of each new or modified stationary source which is required to obtain such a permit must show . . . that the technological system of continuous emission reduction which is to be used will enable such source to comply with the standards of performance which are to apply to such source and that the construction or modification and operation of such source will be in compliance with all other requirements of this Act.

42 U.S.C. § 7410(j).

<sup>105</sup> Again, the only potentially valid (but irrelevant) point that EPA makes is that MACT related HAP emission limits themselves need not be incorporated into the permit required under 165(a)(1).

Because a case-by-case MACT “demonstration” (pursuant to 112(g)) has been subsumed as one of the PSD program’s emission limitation requirements (through 165(a)(3)), and because it is likely to have significant implications for the level of control achievable and appropriate under another mandatory PSD emission control provision (BACT), it is unreasonable for the MACT analysis to occur in isolation, as a separate and distinct process after the other PSD analysis has already reached its conclusion. EPA has provided *no* answer in the record to this obvious flaw in the permitting process here.

**B. Section 169(3) Contemplates Cross-consideration of MACT in the BACT Analysis.**

Significantly, the Act specifically references the section 112 MACT provisions in the definition of BACT. After generally defining BACT, the Act states:

In no event shall application of ‘best available control technology’ result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard established pursuant to section . . . 112 of this title.

42 U.S.C. § 7479(3). This language further demonstrates that Congress was both aware of possible interactions between MACT and PSD review, and that it specifically wanted permitting authorities to take MACT into consideration when adopting PSD limits.

In effect, this provision establishes MACT as the “floor” for BACT emission limits where the two programs target the same pollutants (or, for example, where HAP emission controls use a PSD pollutant as a surrogate). Where MACT applies on a case-by-case basis as a function of section 112(g), and where the MACT analysis has yet to occur (as is the case here), it is *impossible* to know what the minimum stringency of the BACT limit must be. As a result, it is not just unreasonable to finalize the PSD permit in the absence of a case-by-case MACT

analysis, that analysis is essential to a mandatory component of BACT (identification of minimum stringency where MACT and BACT overlap).<sup>106</sup>

### C. EPA's Failure to Conduct a MACT Analysis Requires a Remand

EPA's second response to commenters' concerns regarding MACT-PSD interactions, demonstrates that EPA, in fact, has no concept of what impact MACT is likely to have on emission limits and other conditions in the PSD permit. In effect, EPA takes the position that it need not meaningfully consider the possibility of interactions prior to final approval of a PSD permit *at all*. In this regard, EPA concluded, *without analysis or meaningful explanation*, that its "present understanding of pollutant control technologies gives [it] no basis to believe that HAP controls will affect the controls selected as BACT for criteria pollutants." Supp. RTC. at 22. Because this response does not reflect any exercise of "reasoned judgment," it is patently inadequate. Nor is there any discussion or analysis anywhere else in the record showing that EPA ever specifically evaluated this issue. To the extent that EPA acknowledges that MACT-BACT interaction are possible (which it has), it must articulate a rational basis somewhere in the record for concluding that they are unlikely to occur – EPA has failed to do so. See In re Shell Offshore, Inc., OCS Appeal 07-01, slip op. at 48 (EAB, Sept. 14, 2007), 13 E.A.D. \_\_ ("In sum, the Region's cryptic and conclusory explanation set forth in its Response to Comments does not provide a basis upon which we can properly perform a review. . . . Accordingly, we cannot conclude that it meets the requirement of rationality . . . and we must remand the Region's permitting decision to the Region to provide an explanation of its rationale, supported by record

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<sup>106</sup> However, the Board need not even reach this issue to remand the Desert Rock Permit, it is enough here that the final permit decision is manifestly unreasonable because EPA has conducted no case-by-case MACT analysis, and therefore has not (and can not) assess the potential implications of the MACT process on the PSD BACT analysis. Nor has EPA provided the public with any opportunity to comment on EPA's analysis or conclusions on this issue.

evidence. . . . The Region should supplement the record as necessary during the remand process.”) (citing DC MS4, 10 E.A.D. 323 at 342-43 (EAB 2002);<sup>107</sup> In re Conoco Phillips Co., PSD Appeal 07-02, slip op. at 22 (EAB, June 2, 2008), 13 E.A.D. \_\_ (“a petitioner [should not] be required to guess at what the permitting authority’s rationale actually was. . .”).

Amazingly, at the same time, EPA specifically recognizes the underlying proposition that formed the basis of the March 4 Comment Letter, and that justifies review now – the fact that “because the section 112(g) case-by-case MACT review has not yet been conducted, *neither EPA nor the commenter can say to what extent, if any, the design or operational parameters will change and whether any such changes will contravene the terms of the PSD permit.*” Id. (emphasis added).

EPA’s unexplained confidence notwithstanding, there is every reason to believe that the case-by-case MACT determination will affect the BACT analysis. Each of these two regulatory programs is inherently technology-based, and technology-forcing in the broadest sense of that term, potentially affecting not just add-on control technology, but process technology, raw inputs, fuel quality, fuel mix, operational parameters, work practices, etc. Thus, the impact of one regulatory program on these “technology” choices for the project necessarily will have implications for what is achievable or appropriate under the other program. And because the analysis under the MACT program is more rigid than BACT, as described above, MACT is likely to drive at least some of the basic emission control options for the Desert Rock plant. The fact that the MACT program addressed HAP while PSD addresses non-HAP pollutants, as EPA points out, while superficially compelling, is ultimately not particularly significant. EPA almost always elects to use surrogate pollutants for at least some HAP – and often those surrogates

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<sup>107</sup> The Shell case also involved a novel question of the interaction between PSD and another regulatory program (the Act’s Outer Continental Shelf permitting provisions). See id.

include pollutants that are actually regulated under the PSD program or that are subject to similar control strategies. See Sierra Club v. EPA, 353 F.3d 976, 984 (2004) (citing National Lime at 639) (addressing EPA's use of PM as a surrogate for metal HAP).<sup>108</sup>

As a result, in order to meet the strict HAP-related emissions requirements, sources will most likely need to rely on technologies (broadly construed) that are capable of reducing both HAP *and* PSD pollutants, thus creating the technical capacity to achieve even greater PSD emissions reductions than would be required under the PSD program alone. For example, a given level of control might be considered not cost-effective under PSD analysis, alone, but may be entirely feasible when considered in the light of the case-by-case MACT requirements. That is, the level of emissions control that represents the "greatest reduction achievable" for purposes of the PSD program is likely to be directly affected by emissions control measures that are required as a practical matter as a result of case-by-case MACT review.

Nor is it sufficient to simply to assume that later-adopted MACT emission limits can simply supersede the earlier PSD limits. While MACT may enable greater reduction in PSD pollutants that should be accounted for in the PSD permitting process, it is unlikely to actual

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<sup>108</sup> As an additional example, EPA describes its use of surrogates for the control of HAP from hazardous waste combustors as follows:

The following [HAP] are regulated for each of these source categories: dioxins and furans ("D/F"); semivolatile metals (lead and cadmium) ("SVM"); low volatile metals (arsenic, beryllium and chromium) ("LVM"); mercury, particulate matter ("PM") (as a surrogate for the remaining HAP metals (antimony, cobalt, manganese, nickel, and selenium), and also to control HAP metals in all inputs to the units which are not hazardous waste); hydrogen chloride/chlorine (measured as total chlorine) ("TCI"); carbon monoxide/total hydrocarbons ("CO/HC") (as surrogates for non-dioxin organic HAP (and in a few cases, dioxin as well); and destruction removal efficiency ("DRE") (an aspect of control of non-dioxin organic HAP, and in a few cases, dioxin). 72 FR 54875, 54877 (September 27, 2007). EPA has also identified CO, VOC and formaldehyde as HAP surrogates in the past. 73 Fed. Reg. 3568, 3571 (Jan. 18, 2008) (In controlling HAPs from stationary internal combustion engines EPA explains that "[t]he final NESHAP regulate HAP . . . through formaldehyde, CO, or VOC which EPA has established are appropriate surrogates for HAP emissions from certain engine types").

impose appropriate regulatory limits on PSD pollutants. That is, future MACT limits cannot simply serve as surrogates for tighter PSD permit limits. As a technical matter, while MACT limits often include PSD pollutant surrogates in some capacity, MACT may require use of PSD-relevant control technology without actually establishing more stringent limits for PSD pollutants. Because MACT does not incorporate or require a broad review of the achievability of additional PSD pollutant reductions (in light of the MACT-required technologies), the MACT process in isolation will be insufficient to ensure that the appropriate level of PSD pollutant control will be achieved.<sup>109</sup>

Even the Permit Application recognized the significant interrelationship between MACT and PSD, based expressly on the fact that both regulatory programs focus on “technology-based” emissions control. In its Permit Application, Steag Power LLC (the then proponent of this project) explained:

While new MACT regulations for utility power plants, industrial boilers, and engines have been proposed by EPA, they are not yet final. It is clear that any newly proposed coal fired power plant will have to be designed for aggressive mercury control to meet future requirements. Furthermore, many of the same control technologies that represent

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<sup>109</sup> Nor will the HAP surrogates under MACT themselves necessarily require specific limits on co-controllable PSD pollutants that would be appropriate for PSD. As just one example, where PM is used a surrogate for HAP metals, a MACT limit may allow the source to choose whether it comply by controlling PM or by controlling “total HAP metals” – as a result, while significant additional controls may be necessary (that would be capable of economically achieving a more stringent PM limits), the source may not actually be subject to a more stringent PM limit if it opts instead to comply by way of total metals. *See* 70 Fed. Reg. 76918, 76926 (for boilers, allowing sources to choose to comply with the alternative total selected metals (“TSM”) emission limit instead of the surrogate PM limit, where the eight metals included as TSM represented the most common and the largest emitted metallic HAP from boilers) (this rule was vacated for other reasons by the D.C. Circuit, *see NRDC v. EPA*, 489 F.3d 1250 (D.C. Cir. 2007)). Other examples might include fuel-related requirements that could significantly change what the appropriate PSD limit would be; installation of additional new or redundant control equipment to reduce HAP that could make lower emissions of PSD pollutant “achievable”; process changes (such as switch to CFB or IGCC) that could make completely different PSD limits necessary; and limits on operational parameters that could have implications for PSD pollutants.

BACT candidates have also been shown capable of mercury reduction, and therefore *it is useful to consider the holistic application of state-of-the-art emissions control during facility design*. As of this writing, a case-by-case MACT analysis is required for mercury, and has been presented herein as part of the overall control technology review of the proposed facility.

AR 12 at p.4-1.<sup>110</sup> In short, where the applicant *itself* has acknowledged the need for “holistic application” of MACT and PSD review together in the overall design for the plant, EPA’s off-hand and unsupported dismissal of this issue must be rejected.<sup>111</sup>

At best, EPA’s decision to perform the MACT and PSD analyses in isolation might allow cross-pollination to occur in only one direction (the PSD analysis might affect the MACT determinations but not vice versa). Thus, what EPA essentially acknowledges by its assertion that there will be no implications for PSD, is that the outcome of the MACT analysis is essentially a foregone conclusion, and that EPA has already decided that it will conform the MACT analysis (which it has not performed) to the BACT analysis that it has already performed under the PSD provisions. This approach is inherently unlawful and unreasonable.

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<sup>110</sup> While Steag may have nominally considered technology implications of mercury control in its initial application, there has *never* been any broader consideration of HAP emission controls. However, as a result of New Jersey v. EPA, EGUs are now subject to case-by-case MACT for *all* HAP emitted from such facilities, not just mercury. As discussed above, once listed each source in the category must establish MACT limits for each and every HAP listed under section 112 that the source will emit. See 42 U.S.C. § 7412(d)(2); Nat’l Lime Ass’n v. EPA, 233 F.3d 625, 634 (D.C. Cir. 2000) (finding a “clear statutory obligation to set [MACT] emission standards for each listed HAP”); Mossville Env’tl. Action Now v. EPA, 370 F.3d 1232, 1242 (D.C. Cir. 2004) (same); Sierra Club v. EPA, 479 F.3d 875, 883 (D.C. Cir. 2007) (same). Additionally, the D.C. Circuit in New Jersey v. EPA foreclosed any argument that EPA might rely on its “appropriate and necessary” finding to limit the range of HAP that EGUs must control. New Jersey, 517 F.3d at 582 (explaining that “Section 112(n)(1) governs how the Administrator decides *whether* to list EGUs;” it says nothing about *how* the statutory requirements of section 112 apply to EGUs once listed (emphasis added)). Moreover, once EPA promulgated the Clean Air Mercury Rule in 2005, and purported to “delist” EGUs, any meaningful consideration of MACT (even for mercury) in this PSD permitting process ceased.

<sup>111</sup> Aside from its assertion that it has “no basis to believe that HAP controls will affect the controls selected as BACT,” EPA provides no other explanation in the record, nor does it reference any aspect of the PSD technical review for the proposition that case-by-case MACT is unlikely to have any impact on the term and conditions of the PSD permit.

In particular, this approach is unlawful because MACT is set based on specific statutory requirements, as described above, not on the basis of a preexisting BACT analysis or previously adopted PSD permit limits for a facility. Moreover, this approval is inherently unreasonable because. To the extent that EPA suggests that the burden rests with commenters to do the necessary analysis to show that specific changes to the PSD permit are required, this is manifestly unreasonable. First, the record here contains virtually no information about HAP emission or the precise means by which such emissions would or could be controlled (indeed, Desert Rock has proceeded throughout the PSD process under the assumption that HAP emissions controls would not be required – except perhaps for mercury). Second, as EPA well knows (and implicitly acknowledges in the RTC) a MACT analysis itself is complicated undertaking; it requires a broad survey of exiting HAP emission performance of all similar sources, the calculation of a floor, the assessment of above the floor controls and potential HAP-related environmental impacts. In every respect, EPA (or Sithe) is best situated to perform the initial MACT analysis (having ready access to relevant emissions data, the ability to require relevant data from the applicant, etc), and it is entirely unreasonable for EPA to expect that commenters on a PSD permit would have the capacity to independently perform a MACT analysis in the agency's stead (and without the cooperation of the permit applicant). As a result, it was entirely appropriate for commenters to raise the general concern and expect that EPA would take meaningful action to ensure that any interaction between the two technology-driven preconstruction approval processes would be fully accounted for in the PSD permitting process.

As both EPA and the Permit Applicant have essentially acknowledged, the only way to ensure that both MACT- and PSD-related factors have been fully accounted for is to conduct the two analyses in tandem. Combining the ideas of EPA and the original Applicant – while

consideration of “the holistic application of state-of-the-art emissions control during facility design” is appropriate to fully address MACT-BACT interactions, “because the section 112(g) case-by-case MACT review has not yet been conducted, . . .EPA . . . can [not] say to what extent, if any, the design or operational parameters will change and whether any such changes will contravene the terms of the PSD permit.” And as a result, EPA has not met its obligation to ensure the integrity of the PSD permitting process in this regard, and the Board must remand the permit to the agency to cure this deficiency by conducting a co-extensive case-by-case MACT determination.<sup>112</sup>

**D. EPA Can Not Rescue This Permit by Promising to Reopen the Permit Later.**

Finally, EPA’s assertion that its failure to address potential MACT-BACT interactions is harmless because it will provide a public comment period on a future case-by-case MACT determination and can reopen and revise the PSD permit later if necessary, is not an adequate answer to Petitioners concerns. Supp. RTC at 22-23. It is manifestly inadequate for EPA to point to the public notice opportunity in the MACT determination process as resolving the agency’s failure to perform and necessary analysis in the PSD permitting process. Nor can a comment opportunity in an entirely different regulatory exercise cure EPA’s failure to provide the public with any adequate understanding of the basis for its decisionmaking *here*. In short, EPA has an independent obligation to complete *this* regulatory action in a rational and reasonable manner, and cannot rely on its ability to potentially reopen the permit later as an

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<sup>112</sup> Even if the Board does not require EPA to conduct a case-by-case MACT determination before re-issuing a final PSD permit for Desert Rock, it must, *at minimum*, require on remand that EPA provide a detailed technical justification for any conclusion that MACT will have no impact on the terms and conditions of the PSD permit. As discussed above, Petitioners believe this is inadequate, and that the only way to meaningfully demonstrate what impact MACT is likely to have is to actually *conduct* a case-by-case MACT determination – EPA’s statements in the RTC suggest the same thing.

excuse to shirk that responsibility. EPA must adequately justify and explain this permit decision on its own terms, on the record *now*, not later when another analysis proves that it is substantively flawed. See In re Conoco Phillips Co., PSD Appeal 07-02, slip op. at 26 (EAB, June 2, 2008), 13 E.A.D. \_\_\_ (“The [permitting authority’s] rationale for its conclusions, however, must be adequately explained and supported in the record.” (citing In re Dominion Energy Brayton Point, LLC, 12 E.A.D. 490, 510 (EAB 2006))).

Moreover, EPA’s construct is flawed because public comments on EPA’s ultimate MACT process can have no direct affect on PSD permit limits that have already been issued in final form, thus, the promise of a future opportunity for public comment is illusory. EPA is in fact saying that the public can attempt to raise these issues in a future MACT process, where EPA may or may not actually revisit the impact of MACT-level controls on PSD in an independent analysis. Thereafter, according to EPA, it may or may not reopen the PSD permit (presumably based on its own exercise of discretion), at which point the public may get an actual opportunity to comment on what is appropriate for purposes of PSD. This is simply not a valid substitute for a meaningful opportunity to address these issues now.<sup>113</sup>

Aside from depriving the public of the ability to meaningfully comment on the agency’s *current* PSD-related decisionmaking, EPA’s failure to perform any real evaluation of MACT, or the interaction between MACT and PSD, has denied the permit decisionmaker of access to information that is necessary for him to make a reasoned and well informed decision. For that reason alone, EPA itself should be seeking, in the wake of New Jersey v. EPA, to supplement the

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<sup>113</sup> Moreover, should EPA in its discretion decide *not* to reopen the PSD permit, the public would have no clear ability to raise any concerns regarding that decision, or the actual PSD permit implications, to the EAB

record for this permitting action, revisit the technical PSD analysis, and provide a supplemental comment period.<sup>114</sup>

In sum, because EPA has failed to provide the public (and the relevant agency decisionmaker) with critical information necessary to identify the appropriate level of control for PSD pollutants, and denied the public a meaningful opportunity to consider and comment on the agency's analysis of the potential interactions between MACT and PSD in this instance (which it has yet to even conduct), at minimum the Board should remand the permit to EPA with instructions to provide an adequate explanation of its decision and allow the public an opportunity to comment on both the agency's decision and its underlying technical rationale.<sup>115</sup>

**5. Policy Considerations Cannot Overcome EPA's Obligation to Consider MACT-related Implications.**

EPA's approach of looking at PSD in isolation is not justified either by concerns about administrative economy or potential prejudice to the permit applicant.

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<sup>114</sup> Indeed, in an April 25, 2008 Letter, commenters identified the failure to perform a MACT analysis for the proposed Desert Rock plant as a deficiency that "render[s] DREP's permit application incomplete and substantively inadequate." Ex. 8, Letter to Wayne Nastri, EPA Region 9, Regional Administrator, "Request to withdraw EPA's qualified determination of completeness for the Desert Rock PSD permit application and Request to Deny Final PSD Permit," at p.3 (April 25, 2008) (We note that EPA did not respond to this letter in connection with issuing the Final Permit). Consistent with that comment, the Board should rule here that Desert Rock's permit application is substantively incomplete based on the failure to include any assessment of the potential effects of mandatory MACT-related HAP emission controls.

<sup>115</sup> As the Board has explained: "Although the reopening of the comment period is discretionary, and the Board often defers to the permit issuer's discretion in deciding not to reopen a comment period, we nonetheless . . . may determine that reopening the comment period is warranted." In re D.C. Water and Sewer Authority, NPDES Permit Appeal No. 05-02, slip op. at 62 (EAB, March 19, 2008), 13 E.A.D. \_\_\_. Accordingly, even if EPA provides a facially valid technical justification for its decision to forego making any MACT-related changes to Desert Rock's PSD Permit in response to this Petition, Petitioners' believe that the circumstance of this case warrant an EAB remand for purposes of allowing public comment alone, as this will be the first instance that the public has any real understanding of EPA's rationale and the public otherwise will have no meaningful opportunity to evaluate and comment on EPA's detailed justification.

First, EPA has identified no legitimate concerns based on considerations of administrative economy related to pursuing MACT review and PSD review in concert. Indeed, to the extent that administrative economy is a concern, joint consideration of MACT and PSD would make the process more, not less, streamlined. This was, in fact, precisely the point of the original permit Applicant's recognition of the benefits of "holistic" consideration "of state-of-the-art emissions control during facility design." AR 12 at p.4-1.

EPA suggests that if the MACT analysis turns out to have significant implications for the PSD review (which Petitioners believe is inevitable in an intellectually honest review), the agency will reopen and revise the PSD permit. However, it makes no sense for the approval process to bounce back and forth between the PSD and MACT analyses, at each stage reassessing what impact a new decision in one process will have on the other. This is, however, precisely the process that EPA suggests that it will follow. In fact, this approach is much more likely to result in an effort to shoehorn the second technology-based review into the mould of the first, to avoid revisiting the first review to perform additional analyses and adopt appropriate additional reductions or controls.<sup>116</sup> In short, this process would serve no legitimate agency or public interest.

Second, EPA's fundamentally flawed approach to coordinating MACT and PSD review cannot be understood as furthering a legitimate interest in avoiding some unreasonable prejudice to the permit applicant. As EPA itself acknowledges, Sithe may not begin construction unless

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<sup>116</sup> Moreover, this approach would have a manifestly negative impact on public participation, because if EPA conducts a joint review the public necessarily will have an opportunity to comment on the agency's full analysis regarding interaction between PSD and MACT, while both permitting processes are still on the table. On the other hand, if EPA conducts these analyses in serial, the public will only have the opportunity to argue for *reopening* of the PSD permit, a process with clearly different opportunities for both internal agency appeal and judicial challenge.

and until it obtains a final and effective MACT determination consistent with applicable EPA regulations. See Supp. RTC at 21; see also 40 C.F.R. § 63.42-43 (providing that construction may not begin until a source has a final and effective MACT determination). Indeed, it would be unwise for Sithe to make any irrevocable commitments of resources prior to the MACT analysis, as it will not have a full understanding of the applicable emissions limitations and necessary emissions controls, process technologies, and other design and operational parameters until that regulatory process reaches completion (and, if EPA is permitted to follow its preferred approach, until EPA has then assessed whether it is necessary thereafter to revisit the PSD permitting process). Accordingly, a remand directing EPA to conduct the PSD and MACT evaluations in concert would not materially prejudice the applicant.

**6. EPA's Compartmentalization of MACT and PSD Review is Part of a Broader Pattern That Undermines the Integrity of This Permit Process**

The fact is, EPA's insular treatment of PSD and MACT review is part and parcel of an even more significant general shortcoming of this permit decision – the compartmentalization of *all* the environmental reviews, including NEPA, ESA, PSD, MACT and Environmental Justice reviews. As discussed elsewhere in this brief, EPA has also deferred other critical components of the PSD analysis, such as species impacts, impact on soils and vegetation, environmental justice considerations, and meaningful consideration of alternatives, relegating them to separate processes under NEPA and ESA, thereby rendering the PSD review itself fundamentally incomplete, and unreasonably depriving the public of its ability to fully understand and participate in the PSD permitting process. As with these other shortcomings, the failure to consider the actual technology-related implications of the required MACT analysis similarly defers until another day consideration of critical factors bearing on *this* PSD decision. This compartmentalization serves no legitimate articulated agency interest, and threatens to

undermine the environmental review process with serious consequence for public health and welfare.

For the reasons outline above, EPA's permit decision is arbitrary and unreasonable and must fall. EPA must conduct an additional assessment, provide the public an opportunity to comment, and re-issue the Final Permit only when and if it the Applicant has adequately demonstrated that it will comply with emission limits that fully and appropriately account for the combined obligations of both MACT and PSD. Accordingly, the Board must remand the PSD permit to EPA with instructions conduct coextensive MACT and PSD assessments that meaningfully and comprehensively account for all material interactions between the two programs.

**V. EPA DID NOT COMPLY WTH APPLICABLE REQUIREMENTS IN SETTING THE NO<sub>x</sub> AND SO<sub>2</sub> BACT LIMITS FOR THE MAIN BOILERS. THEREFORE, THESE LIMITS MUST BE REMANDED TO EPA FOR A PROPER DETERMINATION.**

**1. BACT Is Intended to Ensure Best Achievable Emissions Performrance.**

The Best Available Control Technology (BACT) determination for oxides of nitrogen (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) for the Desert Rock Energy Facility (DREF) represents a currently all too common fundamental breakdown of the BACT determination process, although as explained below there was one positive example of the proper application of BACT to DREF. Unfortunately, that positive example was eviscerated by the time it made it into the final DREF permit. The Environmental Appeals Board (EAB) must grant review to help get BACT back on track.

The Clean Air Act defines BACT, in relevant part, as:

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 through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of "best available control technology" result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard established pursuant to section 7411 or 7412 of this title.

42 U.S.C. § 7479(3). The applicable PSD regulation, which define BACT largely the same as the statute, provides:

*Best available control technology* means an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

40 C.F.R. 52.21(b)(12)(2007).

The Supreme Court has noted that the definition of BACT contains the strong, normative terms "maximum" and "achievable[.]" Alaska Department of Environmental Conservation v. Environmental Protection Agency, 540 U.S. 461, 485 (2004)(Alaska DEC). The Supreme Court also held that a BACT determination must be "made on reasonable grounds properly supported

on the record[.]” Alaska DEC, 540 U.S. at 490. The EAB evaluates the BACT determination as it is documented in the record to see if it reflects ‘considered judgment’ by the Agency. In re: Knauf Fiber Glass, GmbH, 1999 EPA App. LEXIS 2, \*27 (EAB) (citing In re: Ash Grove Cement Co., RCRA Appeal Nos. 96-4 & 96-5, slip op. at 41 (EAB Nov.14, 1997)).

In addition, the BACT standard is intended to require the use of “the latest technological developments [in pollution control] as a requirement in granting the permit,” so as to “lead to rapid adoption of improvements in technology as new sources are built,” rather than “the stagnation that occurs when everyone works against a single national standard for new sources.” A&P S. Rep. No. 95-127 (Part 1 of 2), at 18 (1977). BACT is a technology forcing requirement. See In re: Tennessee Valley Auth., 2000 EPA App. LEXIS 25, \*78-79 (“the program Congress established was particularly aggressive in its pursuit of state-of-the-art technology at newly constructed sources”); In re: Columbia Gulf Transmission, 1989 EPA App. LEXIS 26, \*10 (“BACT ... is principally a technology-forcing measure that is intended to foster rapid adoption of improvements in control technology”); S. Rep. No. 95-127 at 18 (BACT’s forward-looking emphasis is the “most important” mechanism promoting the Clean Air Act’s “philosophy of encouragement of technology development.”); See generally Alabama Power v. Costle, 636 F.2d 323, 372 (D.C. Cir. 1980) (noting that Prevention of Significant Deterioration Program is intended to be “technology forcing”).

Finally, Congress has declared that the purpose of the PSD program, including its BACT determinations is:

to assure that any decision to permit increased air pollution in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decisionmaking process.

42 U.S.C. § 7470(5).

Despite the plain language of the definition of BACT and the clear case law, permitting authorities routinely look exclusively at BACT limits in existing permits to establish BACT for new sources without serious case-specific examination of what the maximum degree of emissions reduction actually is for the source in question (based on the full range of technologies and emissions control options available). A BACT limit in another permit has little to do with the maximum reductions and technology forcing that BACT mandates. While in theory a BACT limit in another permit could reflect another agency's determination of what is BACT for another source, because BACT must be based on a reasoned, documented analysis, the BACT limit in another permit, without its supporting analysis, does not provide any useful information in making a BACT determination.

Not only does setting BACT limits based exclusively on other BACT limits in existing permits deviate from the plain language of the definition of BACT, it also eliminates the technology forcing and progressive nature of BACT. All too often these days, the only way BACT limits for coal-fired power plants advance to be more protective is when a particular source is forced to accept a lower limit not because of BACT but because of another requirement like the ambient impacts analysis or protection of air quality related valued.

Another common error and one that EPA commits in connection with issuing the final DREF permit, but only after the public comment period closed, is the belief that an agency can only consider emission data from existing sources that represent the 20 or more year lifetime of a facility. See e.g. AR 120 at 72 (an ozone season, that is five months of continuous emission monitoring data is, to EPA, a "very brief period of time."). Setting such an impossibly high and arbitrary standard for what information to consider in a BACT analysis results in BACT no longer being a progress, technology forcing standard. Under such an approach, BACT would

stagnate, which is exactly what Congress did not want. A&P S. Rep. No. 95-127 (Part 1 of 2), at 18 (1977).

In this case, as explained below, EPA's BACT analysis prior to the public comment period for NO<sub>x</sub> and SO<sub>2</sub> for the main boilers was limited to a review of other limits in previously issued permits. There was a smattering of information about removal efficiency in the application and Ambient Air Quality Impact Report (AAQIR) but EPA never provided a connection between this thin information and the emission limits in the draft permit. After the public comment period had ended, the record now reveals (mainly through e-mails), that EPA did begin to gather some information relevant to establishing appropriate emission limits should be for DREF based on the maximum reduction achievable considering economic, environmental and energy impacts. This information was largely gathered in response to Petitioners' comments. However, the NO<sub>x</sub> and SO<sub>2</sub> BACT limits must be remanded because the public was never given the opportunity to review and comment on EPA's actual BACT analysis. For NO<sub>x</sub>, the record now reveals that EPA determined what is the maximum reduction achievable for DREF but then EPA illegally made that limit not applicable by including what EPA calls an "Optimization Plan." In addition, EPA's response to comments fails to respond at all to some important data (such as actual emission data from a coal fired power plant in Kentucky called Trimble I) that is much lower than the BACT limit for DREF. While EPA spent a considerable amount of effort dismissing the emission limit in the recently permitted Trimble II, it failed to consider actual emissions from Trimble I, which is currently operating. Therefore, as explained below, the NO<sub>x</sub> and SO<sub>2</sub> BACT must be remanded.

**2. The NO<sub>x</sub> Limit for the Main Boiler Does Not Represent a Permissible BACT Limit.**

**A. There is No Record of EPA Conducting a Proper BACT Analysis Prior to the Public Comment Period**

In the Draft Permit upon which the public was allowed to comment, the NO<sub>x</sub> limit were:

On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of NO<sub>x</sub> from each PC boiler into the atmosphere in excess of the following amounts:

- 1 408 lb/hr, averaged over a 3-hour period.
- 2 0.060 lb/MMBtu, averaged over a 24-hour period.
- 3 378.5 lb/hr, averaged over a rolling 365-day period.

During the startup and shutdown periods defined in Condition L.2. below, the combined emissions from each PC boiler unit, verified by the CEMS, shall not exceed the following:

...  
NO<sub>x</sub>: 797 lb/hr, averaged over a 3-hour period

AR 54 at 5, 7. Although it is not completely clear, it appears that the 0.060 lb/MMBtu averaged over a 24-hour period limit was the only limit which EPA meant to represent BACT. It seems that EPA included the pounds per hour limits in the draft permit for purposes of compliance with some applicable requirement other than BACT.

The NO<sub>x</sub> limits changed for the final permit. The final permit provides:

1. The 60-month period beginning with initial startup shall be considered the "NO<sub>x</sub> Optimization Period."
2. Prior to commencement of construction, the Permittee shall submit the following information to EPA:
  - a. Design specifications from the boiler and SCR system vendors, which indicate that the boilers and SCR systems were designed to achieve a NO<sub>x</sub> emission rate of 0.035 lb/MMBtu on a rolling 365-day average. The specifications shall identify the parameters and conditions used for catalyst design such as:
    - Plant performance factors (e.g., fuel type and ash characteristics, combustion type, boiler performance, air heater design, particulate

collection devices, and SCR soot blowers),

- Operating conditions (e.g., plant load factor, flue gas flow rate, inlet NO<sub>x</sub> levels, temperature, and the impact of O<sub>2</sub> and water content on catalytic potential), and

- System scale-up factors (e.g., non-ideal flow distribution, temperature distribution, ammonia-to-NO<sub>x</sub> molar ratio distribution, and catalyst blockage).

b. An SCR catalyst management plan which sets forth measures that will be taken to maintain the system and optimize its performance. Such measures shall include, but not be limited to:

- Periodic SCR system evaluations and physical inspections of the catalyst, reactor, and ammonia injection system;

- The collection of performance and operational data such as inlet NO<sub>x</sub> levels, removal efficiency, ammonia-in-ash levels, number of system starts/stops, operational load range, total hours, fuel data, and ash data; and

- Periodic testing of catalyst samples to assess catalyst activity and measure it against design deactivation rates. Such tests may include a catalyst activity test to determine the catalyst activity under specific plant conditions, a physical properties test to evaluate the physical properties such as catalyst surface area and porosity, and a chemical composition test to evaluate the impact of coal and ash properties on catalyst design and performance. The maintenance plan shall also specify the records that will be maintained so EPA can determine whether the measures in the plan are being followed and whether the plant's operating parameters and conditions are consistent with the catalyst design conditions.

3. During the NO<sub>x</sub> Optimization Period, the Permittee shall not discharge or cause the discharge of NO<sub>x</sub> from each PC boiler into the atmosphere in excess of the following amounts:

- a. 408 lb/hr, averaged over a 24-hour block period
- b. 0.060 lb/MMBtu, averaged over a 24-hour block period
- c. 0.05 lb/MMBtu, averaged over a rolling 365-day period
- d. 378.5 lb/hr, averaged over a rolling 365-day period

...

4. Following the NO<sub>x</sub> Optimization Period, the Permittee shall not discharge or cause the discharge of NO<sub>x</sub> from each PC boiler into the atmosphere in excess of the following amounts except as specified in Condition IX.E.5:

- a. 0.060 lb/MMBtu, averaged over a 24-hour block period
- b. 0.05 lb/MMBtu, averaged over a rolling 30-day period
- c. 340.5 lb/hr, averaged over a rolling 30-day period
- d. 0.0385 lb/MMBtu, averaged over a rolling 365-day period
- e. 262.1 lb/hr, averaged over a rolling 365-day period.

...

5. If, during the NO<sub>x</sub> Optimization Period, the Permittee determines that any of the NO<sub>x</sub> limits in Condition IX.E.4 are not feasible, the Permittee shall submit an application to EPA for an adjustment of those limits.

a. The application shall, at a minimum, contain the following information:

i. All validated CEMS data collected during the NO<sub>x</sub> Optimization Period for NO<sub>x</sub> emissions from each PC boiler. The CEMS data shall be recorded and reported in the units of lb/MMBtu on an hourly average

ii. All records specified in the catalyst management plan

iii. A report containing an analysis of:

1. The extent to which the initial catalyst design conditions (identified in Condition IX.E.2.a) differ from actual operating parameters and conditions during the NO<sub>x</sub> Optimization Period,

2. The impact any differences identified pursuant to the paragraph above have on the ability to comply with the NO<sub>x</sub> emission limits of Condition IX.E.4, and

3. Actions taken to mitigate the impacts identified pursuant to the paragraph above.

b. If, after the applicable review process following such a submission, it is demonstrated through data and information gathered during the NO<sub>x</sub> Optimization Period that a different NO<sub>x</sub> limit is necessary, the limits in Condition IX.E.4 shall be adjusted accordingly.

c. If the application specified in this condition is postmarked prior to the end of the NO<sub>x</sub> Optimization Period, the emission limits in Condition IX.E.3 shall

remain in effect until EPA evaluates the application and makes a final decision regarding the adjustment to the limits in Condition IX.E.4.

AR 120.1 at 7-10.

There are generally three categories of information agencies must consider for setting BACT emission limits. The first is emission limits in other permits. As explained above, this information is of very limited value in that it is backward looking and BACT is a forward looking, technology forcing strategy. Furthermore just looking at a permit limit does tell a permitting authority very little about what is the maximum reduction that can be achieved, considering environmental, economic and energy impacts, at a new proposed facility. The second category is actual emission data from actual operating sources. See e.g. New Source Review Workshop Manual (NSR Manual), Ex. 13, at B.24 (experience of other sources provides basis for determining achievable limits).<sup>117</sup> The third category is a case-specific evaluation of what can be achieved at the source based on currently existing control technology. See e.g. NSR Manual at B.24 (Manufactures' data and engineering estimates provide basis for determining achievable limits); Id. at B.64 (Vendor Guarantee provides support for basis for choosing emission level). Thus, if one knows that a source of air pollution is going to emit NO<sub>x</sub> from the boiler at a rate of 0.30 lb/MMBtu based on the design of this boiler and the operations of other similar boilers and you know that vendors routinely guarantee 90% or more remove efficiency from Selective Catalytic Reduction (SCR) at the end of the catalyst life, then you know that an emission limit of 0.03 lb/MMBtu reflects the maximum reduction achievable. However, this

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<sup>117</sup> Petitioners note, that it is not reasonable to simply assume that what is actually being achieved at an existing facility is accurately reflected in its existing air quality permit. See, e.g., Northeast Maryland Waste Disposal Authority v. E.P.A., 358 F.3d 936, 953-54 (D.C. Cir. 2004) (explaining for MACT limits under section 112 that EPA may not rely on permit limits as reflecting the statutory standard unless it can affirmatively demonstrate that the relevant permit limits, in fact, reflect the emissions control *achieved in practice* by the relevant best performing sources) (citing Sierra Club v. EPA, 167 F.3d 658 (D.C.Cir.1999)).

0.03 lb/MMBtu limit may be technology forcing in that no one else may have that low a permit limit. Again, to simply reject the 0.03 lb/MMBtu that represents the maximum reduction achievable simply because no other source has such a low limit is to deviate from the plain language of the definition of BACT and from the Congressional intent for BACT to be a technology forcing standard that prevents stagnation at one nation wide emission limit.

There is no evidence in the record that indicates that prior to the end of the public comment period, EPA consider anything other than the first category of information, - emission limits contained in permits issued in the past – in determining the NOx BACT limit for DREF.<sup>118</sup> There is no evidence of examination or discussion of actual emission rates achieved. See AR 12 at 4-3 to 4-9. There is just one piece of evidence in the record prior to the end of the public comment period about actual emission rates achieved at actual plants. That is, Petitioners provided EPA with evidence that 6 coal fired PC units were actually achieving emissions lower than DREF’s NOx limit. See AR 25 at 4<sup>th</sup> page. Four of these units were in Texas at W.A. Parish, one was Kentucky at Trimble Unit 1, and one was in Pennsylvania at Montour Unit 1. Id. These units burned both bituminous and subbituminous coals. Id. There is no indication in the record that EPA considered this or any other emission data from actual facilities prior to the end of the public comment period. There was no discussion of what the uncontrolled emission rate is or the emission rate with Low-NOx burners going into the inlet of the SCR, only the “typical” emission rate and removal efficiency. AR 46 at 8 – 14 (AAQIR).<sup>119</sup> EPA did not review actual emission data from actual coal-fired power plants even though it had that data in front of it. EPA explained:

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<sup>118</sup> Environmentalist raised this issue at AR 67, comment letter 15, pdf page 33-36

<sup>119</sup> The AAQIR appears to be largely just cut and pasted out of the permit application. Compare AR 12 and AR 46.

EPA's independent analysis of available control technologies for pulverized coal fired boilers included reviewing the DOE/NETL (National Energy Technology Laboratory) database, EPA's RACT/BACT/LAER Clearinghouse, EPA's National Coal BACT Workgroup database, the EPA spreadsheet of recently permitted and proposed coal-fired power plants, review of issued permits or applications for permits, discussions with EPA and State permitting staff, trade journals, information from industry conferences and vendor guarantees.

AR 46 at 12.

Despite EPA's claim, there is no information in the administrative record regarding the claimed applications for permits, discussions with State permitting staff, trade journals, information from industry conferences and vendor guarantees that EPA alleges to have reviewed. And no such materials were ever made available for public comment and review, nor did EPA ever explain *how* it relied on this material in reaching a decision on either the draft or final DREF permit. Moreover, painfully absent is an evaluation of what levels of emissions coal fired power plants are actually achieving. This is critical information to consider in making a BACT determination because market based programs or programs that allow fleet wide averaging for NO<sub>x</sub>, such as the NO<sub>x</sub> SIP Call in the Eastern U.S., the Texas Nonattainment SIPs and the Acid Rain NO<sub>x</sub> requirements throughout the U.S. means coal fired power plants often have actual emission rates that are significantly lower than their permit limits. The definition of BACT does not allow EPA to ignore actual emission performance at existing plants in setting BACT limits, regardless of what regulatory programs or other incentives are motivating the observed level of performance. The definition of BACT is only concerned with what is achievable, not why. See 42 U.S.C. § 7479(3); 40 C.F.R. 52.21(b)(12). EPA had all of this information at its finger tips because almost all coal fired steam electric generating units report their NO<sub>x</sub> emissions to EPA and the data is available on the EPA's Clean Air Markets Web Page. See

<http://camddataandmaps.epa.gov/gdm/index.cfm?fuseaction=emissions.wizard>. EPA completely failed to use this tremendous resource prior to the end of the public comment period.

Also absent was data supporting an evaluation of the inlet emission rate achievable with Low NOx Burners and then the ultimate emission rate with the addition of SCR. See AR 46 at 8 – 18. For example, if Low NOx Burns can achieve 0.17 pounds per million British thermal units of heat input (lb/MMBtu) and as EPA admits SCR can remove 90% of the NOx, an emission rate of 0.017 is achievable. Environmentalists submitted evidence that an uncontrolled NOx level of 0.17 lb/MMBtu is achievable. See AR 66 at 39 and attachment 14, (file is named “BR-1710” on EPA’s web page). Thus, EPA’s BACT analysis is arbitrary because it fails to consider an important part of the issue, that is what emission rates actual units are actually achieving.

EPA does gratuitously throw in the statement that the DREF limit is lower than emission rates “achieved by pulverized coal fired boilers recently.” AR 46 at 13. EPA’s provides absolutely no evidence to support this bald assertion, and bald assertions without any factual support at all cannot stand. This is especially true when the bald assertion is directly contradicted by evidence in the record such as the evidence that the W.A. Parish and Trimble Unit 1 power plants achieve emission rates lower than DREF’s permit limit.

The key point is not the actual emission numbers. The key point of why EPA’s decision is arbitrary is that EPA’s analysis ignores an important aspect of the issue, that is, what actual plants are achieving. As EPA explains in the NSR Manual, one must use “the most recent regulatory decisions and performance data for identifying the emission performance level(s) to be evaluated in all cases.” NSR Manual at B.23. Because EPA completely ignored performance

data prior to the close of the public comment period, its BACT determination is arbitrary and must be overturned.<sup>120</sup> See 42 U.S.C. § 7470(5).

As EPA failed to consider what NO<sub>x</sub> emission rates other plants actually achieve and what emission rate was achievable at DREF considering its design and current technology, Petitioners had to start from scratch with their comments and guess what would ultimately be the legal and factual basis for EPA's NO<sub>x</sub> BACT limit for the main boilers. Petitioners explained in their comments that SCR system designers have analyzed EPA's Clean Air Market's CEMS data to determine the NO<sub>x</sub> levels that are currently being achieved by over 100 SCR-equipped coal-fired boilers. This analysis identified 25 units that are achieving NO<sub>x</sub> emissions less than 0.05 lb/MMBtu on an hourly basis. See AR 67, Ex. 6, p. 28; AR 67 Ex. 7, p. 75-77. The November 2, 2006 McIlvaine Utility E-Alert notes: "Haldor Topsoe reported they have provided catalyst for several installations that consistently run at less than 0.03 lb/MMBtu NO<sub>x</sub>." Ex. 17.<sup>121</sup> The McIlvaine reports are one of the sources the NSR Manual states should be considered in a BACT analysis. NSR Manual, p. B.11.

Petitioners explained that experience outside of the U.S. should also be considered in a top-down BACT analysis. NSR Manual, p. B.11. Several facilities outside of the U.S. have achieved lower NO<sub>x</sub> emission limits. These include the 250 MW Amager Power Station in Denmark, which is achieving NO<sub>x</sub> levels of less than 0.04 lb/MMBtu. This plant started up in October 2000 and was designed for 2.5% Sulfur coal but currently burns coal with a sulfur content similar to that proposed for Desert Rock. Operating and emissions data are summarized

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<sup>120</sup> Because EPA's error was a lack of analysis, rather than an incorrect analysis, it is of no moment that the emission rates for Trimble and Parish are reported in 30 day rolling averages and the draft permit contains a 24 hour average limit.

<sup>121</sup> Utility E-Alert 798, November 2, 2006, Hot Topics, Haldor Topsoe Catalyst Efficiency Revisited, page pdf 12.

in AR 67, Ex. 10. Several units are operating at low NOx levels in Japan. Petitioners also pointed out that several vendors offered to guarantee the NOx emissions from Trimble 2 at 0.03 to 0.04 lb/MMBtu. AR 67, Ex. 2 at 1<sup>st</sup> and 2<sup>nd</sup> page. Most major SCR vendors currently offer and have offered and provided SCRs guaranteed to achieve 0.03 lb/MMBtu and below for units firing all coal types. These include Babcock Power, Haldor Topsoe, CERAM, Siemens, and Cormetech. See e.g., vendor presentations at the McIlvaine SCR Hot Topic session on October 12, 2006,<sup>122</sup> and vendor guarantees offered for Trimble Unit 2 in AR 67, Exhibit 2. The Trimble unit will burn a high sulfur, high nitrogen bituminous coal. The boiler outlet NOx level for this facility (0.3 lb/MMBtu) is likely higher than Desert Rock, requiring a higher efficiency SCR. Further, Texas concluded over 5 years ago that a NOx limit of 0.030 lb/MMBtu “is technically feasible... based on the literature and discussion with SCR vendors.” At that time, one utility (Reliant) had awarded a contract to construct SCRs on four coal-fired boilers guaranteed at 0.030 lb/MMBtu (the four Parish Units). AR 67, Ex. 3.

The public comment period ended on November 13, 2006. AR 120 at 1. It was only after the public comment period had closed that the record demonstrates any consideration of these two aspects of BACT; what actual units achieve and what can be achieved considering current technology. The record shows that upon considering these issues, EPA agreed with the Environmentalists. EPA agreed that the “efficiency of the control device is an important consideration in a BACT analysis.” AR 120 at 37.

On September 24, 2007, well after the public comment period ended, the EPA had a telephone conference call with DREF personnel including former EPA employee Jeff Holmstead. See AR 86 at pdf page 4. During that conversation, EPA acknowledges that the

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<sup>122</sup> Voice recording available online to subscribers of McIlvaine Power Plant Knowledge System.

“comments raised some good issues, [especially] BACT limits.” See AR 86 at pdf page 4. EPA acknowledged that the Parish plant’s units had achieved 0.03 lb/MMBtu for 16 quarters for 4 units in 2003. Id. EPA also acknowledged that Parish, and in fact, 58 units achieved 0.15 lb/MMBtu with low NOx burners only. Id. EPA pointed out that with an emission rate of 0.15 lb/MMBtu before the SCR and an SCR that removes 90%, you would achieve an emission rate below the 0.06 lb/MMBtu in the DREF permit. Id. DREF returned to the familiar refrain that there have not been BACT emission limits set that stringent **in the past**. Id. DREF stated that they were troubled that EPA was actually having a conversation about what units actually achieve and what is achievable, presumably because they felt like they had already reached a “deal.” AR 86 at pdf page 5. In an earlier conversation, Mr. Holmstead said that “everyone recognizes the difference between limit and actual operating date.” AR 86 at pdf page 3. The definition of BACT does not include setting emission limits based on deals between the regulated entity and the regulator. Rather, BACT is based on the maximum reduction achievable.

On September 25, 2007, almost a year after the public comment period ended, the NOx BACT analysis continued in earnest. EPA provided DREF with extensive information about actual emission rates from actual coal fired power plants as well as information about NOx emission rates prior to post-combustion control such as SCR. See AR 109, 111 . Again, this information was not available or discussed prior to the public comment period.

In October, 2007, again long after the public comment period had ended, EPA had another conversation with DREF personnel. See AR 88. This time, Matt Haber from EPA Region 9 was on the call. See AR 88 at 1<sup>st</sup> page. Mr. Haber explained that he had analyzed actual emissions data from an actual power plant, that is, the W.A. Parrish facility, and

determined that 0.035 lb/MMBtu is achievable based on that fact that 0.035 lb/MMBtu had been achieved. Id.<sup>123</sup> Mr. Haber added that some buffer should be added to account for “variability.” Id. The record does provide an analysis of the variability and its translation into a numeric value for the emission limit. Thus EPA’s decision is arbitrary. However, one can speculate that the final NOx BACT limit of 0.0385 lb/MMBtu on an annual average is based on the 0.035 lb/MMBtu actual achievable and a 10% buffer added for variability. The notes go on to say EPA would have internal discussions to make final decision. AR 88 at 4<sup>th</sup> page.

In its response to comments, EPA did not actually address its pre-comment period failure to consideration of what is achievable by examining actual emission data and actual uncontrolled emission rates and actual removal percentages. See AR 120 at 39 - 40, Comments and Response e & f. EPA said: “Yet it also recognized that: ‘The BACT analysis, however, must be solidly grounded on what is presently known about the selected technology’s effectiveness at controlling pollutant emissions.’” AR 120 at 40. No one is disputing that. However, it is also indisputable that actual emission data and actual or guaranteed removal efficiencies are information that is “solidly ground on what is presently known.” EPA’s response to comment does address emission rates in that it notes that long term emission rate data is more useful in setting a BACT limit than short term emission rate data. AR 120 at 42 - 43. However, EPA does not explain why the permit application and the AAQIR did not consider any emission rate data, including long term emission rate data. EPA’s failure to explain its failure to consider actual emission data

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<sup>123</sup> The emission data analyzed in various formats is included in the Excel files in AR 88.

and actual or guaranteed removal percentages dictates that the permit must be vacated and remanded.<sup>124</sup>

It is worth noting that EPA adds the statement that: “We remain persuaded that the PSD emissions limits in the DREF are lower than any others that have been achieved over a similar facility’s decades long lifetime and are BACT.” AR 120 at 43. This statement represents a clear error of law. If long term emission data is defined as “decades” of emission data, that would completely eviscerate the technology forcing nature of BACT. Thus, on remand, EPA should be instructed to consider long term emission data as measured in months or years as well as decades.

In the response to comments, EPA spends much time attacking the difference between the coal at the W.A. Parish plant in Texas and the coal to be burned at DREF. See AR 120 at 60.<sup>125</sup> However, EPA fails to provide any response to the fact that the paper that EPA attached to its response to comments establishes that even on bituminous coal, low NOx burners can achieve 0.34 lb/MMBtu and that with additional improvements, this bituminous coal fired unit was able to achieve 0.23 – 0.24 lb/MMBtu, which with 90% removal from an SCR, would be

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<sup>124</sup> Although the permit may be severable, without a valid NOx and SO2 BACT limit for the main boilers, construction cannot commence. See 42 U.S.C. § 7475(a)(4). Thus, it is appropriate to vacate the permit.

<sup>125</sup> EPA’s argument suffers from serious flaws. For example, EPA compares the maximum nitrogen content of the DREF coal to the typical nitrogen content of PRB coal that is burned at W.A. Parish. See AR 120 at 60 and AR 120, Attachment 19 at 3. If EPA had conducted its real NOx BACT analysis prior to the public comment period, then Petitioners could have pointed out these discrepancies to the Agency in Petitioners’ comments. There are other examples of EPA’s responses that also contain misleading analysis. For example, EPA said that the W.A. Parish data showing low emission rates is only for what EPA’s calls a “brief period” 2003 – 2004. AR 120 at 61. However, EPA had received an e-mail in which Texas authorities explained that the reason the emission rates at W.A. Parish went up after the 2003 – 2004 time frame is because the emission limit imposed on W.A. Parish was raised so there was no regulatory driver to continue its previously low emission rates. Why the EPA author leaves this fact out of its response to comments is unknown but troubling.

below the 0.0385 lb/MMBtu non-applicable emission limit in the DREF permit. See AR 120, Attachment 39 at 10. Furthermore, EPA includes a chart in its response to comments that establishes the same point. EPA's chart shows that at 0% PRB coal, the units in question were achieving between approximately 0.275 lb/MMBtu and 0.225 lb/MMBtu without an SCR. See AR 120 at 60. EPA provides an attachment to its response to comments which states one type of bituminous coal, Illinois #6, can have nitrogen content up to 1.4%. See AR 160, Attachment 18 at third page. These bituminous coal NOx emission rates that EPA provides in its response to comments are again much lower pre-SCR NOx emission rates than one would need to meet an emission limit of 0.0385 lb/MMBtu with the top choice of 90% reduction from an SCR. For example, even at the high end of the range EPA cites, an SCR would only have to remove 78.2%. Nowhere does EPA provide an analysis or justification for BACT only requiring 78.2% NOx removal.

Again, Petitioners' point is not to prove to the EAB that Petitioners are right about all this information. Rather, the point is that by failing to consider actual emission rates and what is actually achievable until after the close of the public comment period, EPA denied Petitioners the opportunity to understand and comment on EPA's legal and factual basis and to provide information in the record to address it.

Finally, we note that EPA's response to comments completely fails to address the Trimble Unit 1 plant's low emission rates. AR 120. While EPA spent a fair amount of ink discussing Trimble Unit 2's proposed emission limit, this does not excuse EPA's failure to address the fact that Trimble Unit 1 has lower emission rates than the BACT limit for DREF and it burns fuel that EPA says should result in higher emission rates. EPA's response to comments also fails to address the comment about emission rates that are guaranteed at 0.03 lb/MMBtu.

See e.g. AR 120 at 67. Vendor guarantees are a separate class of information from permit limits and actual emission data and EPA ignored this class of information in its AAQIR and in the response to comments. Thus, the permit must be remanded.

### **3. THE NOX OPTIMIZATION PLAN IS ILLEGAL**

#### **A. The Public Did Not Have an Opportunity to Review and Comment on the NOx Optimization Plan.**

EPA completely failed to provide the public with an opportunity to comment on the NOx Optimization Plan which is found in Condition IX.E of the final permit. Thus, the permit must be remanded. Petitioners obviously did not comment on this issue because they had no way of knowing that an Optimization Plan would be placed in the permit after the end of the public comment period. Accordingly, because this relates to a significant change incorporated into the final permit, it is proper for Petitioners to raise the issue on review.

In the AAQIR issued with the draft permit, EPA provided no discussion about a NOx Optimization Plan. See AR 46 (AAQIR). Nor was it in the draft permit. See AR 54 at 5 (draft permit). There was no Optimization Plan in DREF's suggested permit submitted with its comments. See AR 68 at pdf page 27. EPA first publicly announced the Optimization Plan for NOx in its response to comments issued with the final permit. See AR 120 at 65.

The Optimization Plan first appeared in the record on October 5, 2007 well after public comment period closed and after EPA had given the opinion that BACT is 0.035 lb/MMBtu with a buffer for variation. See AR 89. There were numerous conversations about the language of the Optimization Plan condition as well as numerous drafts of the language but the public was never given an opportunity to engage in this dialogue in any manner. See e.g. AR 113 at pdf page 68; 71-72; 74 - 76; 79 – 82; 84-85; AR 113 attachments labeled “Draft optimization

condition.doc”; “Draft optimization condition [from 1054 am e-mail].doc”; “Draft optimization condition [from 515 pm e-mail].doc”; “Draft optimization condition [from 314 pm e-mail].doc”

EPA may claim that Petitioners should not be heard to complain about a lack of an opportunity for public comment on the Optimization Plan because the Optimization Plan makes the final permit “better” than the draft permit. This is not true. Rather, after the optimization period, the NOx standard gets less stringent in one regard. During the optimization period there is an emission limit of 408 pounds per hour over a 24 hour period. *See* AR 120.1 at 7-10. After the optimization period, there are no pounds per hour limit over a 24 hour period. *Id.* This is especially important as the permit is currently written because the lb/MMBtu limit does not apply during startup and shutdown. Thus, the permit gets less protective of public health and welfare after the optimization period because there is, effectively, no emission limit during periods of startup and shutdown.<sup>126</sup>

The condition regarding the application to modify the NOx emission limits after the optimization period also has serious flaws, but the public was not given a chance to comment on these flaws. For example, the condition only requires the applicant to submit CEMs data in lb/MMBtu units. *See* AR 120.1 at 9, Condition IX.E.5.a.i. This will deprive EPA and the public the ability to evaluate compliance or potential compliance with the lb/hour emission limits contained in Condition IX.E.4.c & e because one cannot use lb/MMBtu data alone to determine lb/hour emissions.

Any claim that because the Optimization Plan made the permit more stringent, the public was not entitled to have an opportunity to comment on it is also legally wrong. Just because a new permit condition makes the permit less bad does not mean the public can be denied their

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<sup>126</sup> See also, specific discussion of the DREF startup/shutdown requirements, *supra*.

opportunity to comment. The public is entitled to a permit that complies with the law and a permit may only be issued after an opportunity for informed public participation. See 42 U.S.C. § 7470(5).

Another important part of the NOx Optimization Plan that the public was never permitted to comment on was its duration. In the response to comments, EPA states:

It should be noted that a 5-year optimization period was established to ensure that it encompasses a complete catalyst life-cycle and includes a small amount of additional time necessary for the Permittee to compile and analyze the operating data.

AR 120 at 62. If allowed to comment and if having been told that catalyst life cycle was the factual basis for the 5 year period, Petitioners would have submitted technical information explaining that the catalyst life cycle for SCRs such as the ones at DREF is 2 to 3 years rather than 4 or 5 years. This would have established that the optimization period should have been no more than three and a half years. As NOx is a major contributor to fine particulate matter, and as EPA acknowledges that fine particulate matter leads to premature mortality, shortening the optimization period by a year or more is a life or death matter.

EPA's response to comments also said that there will be a public comment period on any application the permittee submits to adjust its NOx limit as a result of the NOx Optimization Plan. AR 120 at 63. However, the response to comments document is not legally binding and unfortunately, the permit does not say that there will be a public comment period. If given an opportunity to comment, Petitioners would have pointed out this source of potential confusion.

In sum, the NOx Optimization Plan is a controversial part of the permit that is flawed. Therefore, the permit must be remanded in order to allow the public the opportunity to comment on it.

**B. EPA Has No Lawful Authority to Delay Application of the NOx BACT Limit.**

In the alternative, instead of remanding the permit for a public comment period on the NOx Optimization Plan, the EAB could order it removed so that the emission limits currently in condition IX.E.4 would become immediately effective. However, the 408 lb/hour on a 24-hour block average would have to be added into this condition as explained above. The reason the Optimization Plan is illegal is EPA lacked authority to delay, potentially indefinitely, the imposition of BACT on the DREF. The Clean Air Act provides that a major source of air pollution may not commence construction after the source is subject to BACT. 42 U.S.C. § 7475(a)(4). Therefore, “EPA was not authorized to [do] . . . nothing more than promise to do tomorrow what the Act requires today.” Sierra Club v. EPA, 356 F.3d 296 (D.C. Cir. 2004). That is exactly what the NOx Optimization Plan does. It provides that the DREF does not have to meet its true BACT limit until at least 5 years after it begins emitting pollution.<sup>127</sup>

Worse yet, the delay for imposing DREF’s BACT limit may be indefinite as the permit is currently written. The post optimization period limits will likely never even apply because they do not apply if the permittee submits a timely application. See AR 122, Condition IX.E.5.c. There is no deadline for EPA to respond. EPA’s performance in taking over four years to issue this permit and then only doing so after being sued for violating a mandatory duty does not bode well for prospect of a quick resolution of the inevitable application from DREF to avoid having its actual BACT limits apply. In the case of the permit’s optimization condition, there is no mandatory duty for EPA to ever respond.

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<sup>127</sup> Apparently the EPA or DREF or both realized this approach was illegal because during a conversation when discussing the optimization approach, someone said that they “wants to think about EAB.” AR 90

EPA says in its response to comments that “Such optimization processes that ratchet NOx limits downward based on assessments that take place after permit issuance have been upheld in the past by the Environmental Appeals Board. See In re RockGen Energy Ctr., 8 E.A.D. 536, 554 (EAB 1999) and cases cited therein.” AR 120 at 63. To begin with, as explained above, the DREF NOx Optimization Plan does not “ratchet NOx limits downward” at least with regard to the 24 hour pounds per hour limit. Rather, it removes that limit completely. This is reason enough to remove this provision from the permit for RockGen and the other cases that do not reference permit provisions that automatically become less stringent. Furthermore, current information indicates that the post-optimization period emission limit of 0.0385 lb/MMBtu is actually BACT. See AR 88 at 1<sup>st</sup> page. Again, that was not the case in RockGen or the other cases. Finally, RockGen does not cite to any statutory or regulatory authority for this proposition which conflicts with the plain language of the statute as well as D.C. Circuit case law. The EAB does not have the authority to approve permit conditions that contradict statutory mandates.

#### **4. The SO<sub>2</sub> Limit for the Main Boiler Does Not Represent a Permissible BACT Limit<sup>128</sup>**

As with NOx, EPA did not conduct a proper BACT analysis for SO<sub>2</sub> from the main boilers prior to the end of the public comment period. Rather, EPA failed to consider actual wet Flue Gas Desulfurization (“FGD” or “Scrubber”) removal efficiency and the achievable emission rate at DREF even if one accepts as a given the sulfur content of the coal that DREF claims it will burn.

The permit provides SO<sub>2</sub> emission limits for the main boilers of the following:

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<sup>128</sup> This issue was raised in comments at AR 66 at 41- 44.

1. On or after the date of initial startup, the Permittee shall not discharge or cause the discharge of SO<sub>2</sub> into the atmosphere from each PC boiler in excess of the following amounts:

- a. 612 lb/hr, averaged over a 3-hour block period.
- b. 0.060 lb/MMBtu, averaged over a 24-hour block period.
- c. 378.5 lb/hr, averaged over a rolling 365-day period.

AR120.1 at 7. Again, it is not totally clear but it appears that the only limit that is meant to be a BACT limit is the 0.060 lb/MMBtu limit.

Prior to the end of the public comment period, EPA did not consider what is the maximum reduction of SO<sub>2</sub> achievable for the DREF considering environmental, economic and energy impacts. For example, EPA gave no consideration to a wet FGD that could remove 99% of the SO<sub>2</sub> rather than 98% or less. AR 46 at 14-19. Worse yet, although EPA admitted that wet FGDs can achieve 98%, it did not base its BACT analysis either before or even after the public comment period on 98% removal.

The Application indicates that the design fuel has 0.82% Sulfur (S) and a higher heating value of 8,910 Btu/lb. AR 12, May 2004 DREF PSD Permit Application, Table 2-2. Thus, the uncontrolled SO<sub>2</sub> content of the coal is:  $(0.82/8910)(20,000) = 1.84\text{lb/MMBtu}$ . The implicit control efficiency of the 0.060 lb/MMBtu emission limit in the permit is thus:  $100(1-.06/1.84) = 96.7\%$  based on Higher Heating Value. On the other hand, 98% removal would result in an emission limit of 0.0368 lb/MMBtu which is significantly lower than the permit limit of 0.060. EPA provides not explanation in the record for this discrepancy.

There was no examination or discussion of actual emission rates achieved in the permit application. AR 12 at 4-10 to 4-13. The Application (AR 12) and AAQIR (AR 46) report an SO<sub>2</sub> control range for wet scrubbing of 90% to 98%. AR 46 (AAQIR, Table 4); and AR 12 (May

2004 DREF PSD Permit Application, Table 4-2). However, neither indicates what levels of SO<sub>2</sub> control were evaluated for a wet scrubber at DREF, the uncontrolled SO<sub>2</sub> emission rate, the control efficiency that was ultimately determined to be achievable at DREF, and the basis for the BACT determination. This information was needed to evaluate whether the limits reflect the maximum degree of SO<sub>2</sub> reduction that can be achieved with a wet scrubber. Instead, the applicant simply compared its proposed BACT limit to other recently issued permits for coal-fired power plants to show that its SO<sub>2</sub> limit would be lower. In determining BACT for SO<sub>2</sub>, the emission limit must be based on the maximum degree of reduction that can be achieved, taking into account energy, environmental, and economic impacts. In the top-down BACT review process relied on by the EPA, the top level of control must be evaluated first. See NSR Manual, October 1990 Draft, at B.1., B.23-B.25. The record contains no evidence that the top level of control, 98%, was even evaluated.

Petitioners explained in their comments that the Application and AAQIR rely on permit limits for other power plants, thus short changing the BACT process. Many other sources of information, other than just permitted levels, must be consulted to determine BACT. See e.g., NSR Manual at B.11.

Petitioners provided detailed comments discussing removal efficiencies for wet FGD that were actually achieved, as well as what was achievable at DREF considering current technology. See e.g. AR 66 at 45 – 48. However, as with NO<sub>x</sub>, because EPA had not provided the factual and legal basis with its draft permit, Petitioners were forced to guess about the basis and lost their opportunity to specifically address any issues EPA would have raised had it done an actual BACT analysis prior to issuing the draft permit.

EPA's Response to Comments does not explain EPA's failure to conduct a BACT analysis based on the definition of BACT prior to the public comment period. Furthermore, EPA's Response to Comments contains numerous errors. For example, in its Response to Comments, EPA claims that:

The design of wet a FGD [sic] system and the resulting control efficiency depends on a variety of parameters, including the characteristics of the fuel, boiler operating data and tolerances, emission requirements (not only for SO<sub>2</sub> but also for particulate, dust, temperature, and waste water), limestone availability and quality, and economic factors.<sup>3</sup>

<sup>3</sup> See *Alstom Environmental Control Systems Wet FGD Design Criteria*, included as Attachment 2.

AR 120 at 47. However, Attachment 3 to AR 120 only supports half of EPA's claim.

Attachment 3 states, and Petitioners do not dispute, that there are various design parameters for wet FGD systems that include fuel characteristics, boiler operating data and tolerances. Those are design parameters, that is, parameters that one takes into consideration when designing a wet FGD. Alstom, a major air pollution control vendor, states in Attachment 3 to AR 120 that, "to ensure optimum, low-cost project solutions the ALSTOM design team works with customers to achieve a clear understanding of" various parameters. AR 120 at Attachment 3 (emphasis added). However, Attachment 3 to AR 120 does not say that these parameters limit the maximum achievable reductions by a wet FGD that is designed in accordance with the various parameters. Id. EPA offered no evidence at all to support this claim, which is false.

As to economic factors, Petitioners again agree that economic factors play a roll in what removal efficiency can be achieved with a wet FGD. However, in a BACT analysis, EPA has a long established process to conduct the analysis of economic factors. See e.g. EPA Air Pollution Control Cost Manual, Sixth Edition, EPA/452/B-02001. EPA failed to conduct any such analysis in this case so their rejection of a top control, that is 98% or 99% removal on the coal

that DREF has said it has chose to use, was arbitrary if it was based on economic factors, as EPA seems to imply.

EPA started to look at actual emission rates and what was achievable with regard to SO<sub>2</sub> after the public comment period had closed. See AR 113 pdf page 5 – 28. However, even in the response to comments, EPA slips back into the mistaken defense that BACT is set by looking at other recent BACT permits. EPA said: “EPA’s proposal requires the use of the technology that provides the greatest level of control and, on a lb/MMBtu basis, the required emission limit is lower than any other limit recently established for similar sources.” AR 120 at 45.

Petitioners explained that EPA had to consider 98% removal, which as explained above, would result in an emission limit of 0.0368 lb/MMBtu which is much lower than the 0.060 lb/MMBtu limit in the permit. The comment when on to explain that under EPA’s familiar 5 step BACT analysis, the only legitimate way to reject this admittedly technically feasible top option of 98% control is based on environmental, economic or energy impacts. AR 120 at 43, Comment [23]. As this analysis was not done, EPA’s rejection of the 98% control top choice was unjustified. EPA responded to this comment by saying that the top control technology, a wet scrubber was selected. AR 120 at 44. True enough but BACT is not a control technology, it is an emission limit based on the maximum amount of reduction. 42 U.S.C. 7479(3). For this reason, it is well established that when a control technology like a wet scrubber can perform over a wide range of removal efficiencies, the various removal efficiencies must be considered, including off course, the removal efficiency that represents the top control level. See e.g. NSR Manual at B.23. EPA’s response does not address at all its failure to consider what EPA itself had said was the top choice, that is 98% removal, much less the basis for rejecting this top choice

in favor of 96.7% removal efficiency. AR 120 at 44. See also AR 120 at 45 (basically same comment and same non-responsive answer from EPA).

In its response to comments, for the first time, EPA offers a variety of excuses of why they were not considering 99% removal as the top level removal efficiency for the SO<sub>2</sub> BACT analysis. See AR 120 at 46 – 53. Some of these excuses are logically inconsistent. EPA offers emission data rather than removal efficiency data to say that a certain type of wet FGD cannot achieve 99% removal without including a discussion of the input SO<sub>2</sub> level. This is ironic because EPA criticized Petitioners' comments for doing this. See AR 120 at 50. One excuse is based on a claim that while the wet FGD at an actual plant in Japan did just fine removing 99% of the SO<sub>2</sub>, the facility had some difficulties with a fan. AR 120 at 49 citing AR 120, attachment 6.<sup>129</sup> It turns out that the problem with the fan has been resolved. The problem is that there is nothing in the record to establish this fact because EPA did not begin its real BACT analysis, where it examined what is the maximum reduction achievable for SO<sub>2</sub> at DREF until after the public comment period. See AR 12, AR 46 (revised PSD permit application and AAQIR devoid of examination of what emission limit would apply if one considered the sulfur content of DREF's coal and the maximum control efficiency that a wet FGD can obtain on a long term basis).

EPA's response to comments contains other comments that shows for SO<sub>2</sub>, that EPA slipped back into its mistaken belief that BACT is determined by looking at other emission limits

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<sup>129</sup> EPA also falls back into its familiar refrain of relying on emission limits at other facilities, which again do not tell us what is the maximum reduction achievable, that is what is BACT according to the definition of BACT. See AR 120 at 51. Also, the emission limits that EPA cites to justify a weaker BACT limit for DREF from the Stuart Station in Ohio are not even BACT limits as Stuart Station currently claims that it is grandfathered out of PSD. See Sierra Club v. Dayton Power & Light, 04-cv-905 (S.D.Ohio)(citizen suit regarding NSR violations at Stuart Station).

in other permits. EPA states: “Also, as previously discussed, having the lowest emission rate on a heat input basis does not necessarily require achieving the highest control efficiency if the use of low-sulfur coal results in lower uncontrolled emissions to begin with.” AR 120 at 52-53. Thus, EPA is saying that if one source can get a lower emission rate with cleaner coal and a lower removal efficiency, then that is BACT so long as the emission limit lower than other sources emission limits based on higher removal efficiency and dirtier coal. This belief of BACT as an emission rate determined in relationship to the permitted emission limits from other sources has no relationship to the plain language of the definition of BACT or even to the agency’s well used NSR Manual.

Therefore, for the reasons explained above, the SO<sub>2</sub> BACT determination for the main boilers must be vacated and remanded back to EPA.

**VI. THE DESERT ROCK PSD PERMIT FAILS TO REQUIRE COMPLIANCE WITH BACT EMISSION LIMITATIONS DURING PERIODS OF STARTUP AND SHUTDOWN<sup>130</sup>**

The Desert Rock PSD permit illegally exempts periods of startup and shutdown from compliance with the emission limits from the boilers that are the result of a BACT analysis. More specifically, the Final Permit states: “Emissions from the PC boilers during startup and shutdown events shall not be subject to the emission limits in this permit which are specified in units of lb/MMBtu but shall be subject to all other limits and shall be included in the calculations of emission rates for demonstrating compliance with those limits.” AR 122, Final Permit, p. 15, provision N.3. However, the only emission rates examined by EPA in its BACT analysis were percent removal emissions rates (for which there are none in the final Desert Rock PSD permit) and lb/MMBtu emission rates (which were exempted from compliance during periods of startup

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<sup>130</sup> Petitioners raised this issue in their comments on the draft permit. AR 66 at pp. 47-50. EPA’s response to comments on this issue can be found at AR120, pp. 104-107.

and shutdown in the Desert Rock PSD permit). Thus, because the Final Desert Rock PSD Permit does not contain emission limits applicable to the main boilers during startup and shutdown that were the result of a BACT analysis, the permit must be remanded for EPA to conduct a BACT analysis on emission limits that apply during startup and shutdown.

**1. EPA's Development of BACT for DREF and Exemption of SSM from BACT-Level Emission Control Requirements.**

At the time it submitted its' PSD permit application, Sithe did not request an exemption from BACT emission limits during periods of startup and shutdown. More specifically, Sithe stated in its May 2004 permit application,

Start up and shutdown emissions have received much attention in the permitting of combustion turbines, since those sources may exhibit higher mass emissions during start up than during maximum operation. This is generally not the case for coal-fired boilers, which exhibit peak mass emission rates at maximum firing rate. Startup and shutdown procedures for the pulverized coal-fired boilers are designed to provide for equipment protection while minimizing emissions. Initial start up duration after an outage may be dictated by the need to gradually warm up refractory materials, metal surfaces, and the 750 MW steam turbine, and this is normally accomplished with start up fuel (such as oil), auxiliary steam (to help preheat steam-side components) and low load operation. . . The maximum number of startups is anticipated to be 60 per year, an average of 30 per boiler (4 cold, 10 warm and 16 hot). *Startup and shutdown operations do not result in any excess daily or annual emissions compared to normal continuous operation. Thus, Desert Rock Energy Facility does not request any additional limits (beyond maximum allowable mass emission limits) to govern operations during start up and shutdown.*

AR 12 at p. 5-1 (DREF's May 2004 DREF PSD Permit Application at 5-1)(emphasis added).

In July 2006, Region 9 issued its AAQIR at the time it issued its draft PSD permit for Desert Rock. AR 46. Region 9 did not provide any discussion or justification in its AAQIR for any proposed startup/shutdown exemptions or emission limits in the DREF proposed permit.<sup>131</sup> In fact,

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<sup>131</sup> Any decisions regarding allowances for facility performance during startup or shutdown that do not reflect continuous compliance with BACT limitations must be reflected in an "on-the-record determination." *In re Indeck-Elwood*, PSD Appeal 03-04, slip op at 69 (EAB, Sept. 26,

the AAQIR states, “the Facility’s startup and shutdown operations will not result in any excess daily or annual emissions compared to normal continuous operation.” AR 46 at p. 4.

In setting final emission limits for SO<sub>2</sub> and NO<sub>x</sub> in its BACT analysis for the boilers, EPA Region 9 examined only two criteria of various pollution removal technologies--the percent removal criteria (also known as the “control efficiency range”) and the typical emission rate criteria expressed in pounds of pollutant per heat input introduced into the boiler (“lbs/MMBtu”). *See*, AR 46, AAQIR, p. 8, Table 3 (for NO<sub>x</sub>) and p. 16, Table 4 (for SO<sub>2</sub>). In setting BACT emission rates for SO<sub>2</sub> and NO<sub>x</sub>, EPA Region 9 also examined the actual emission rates, again in lbs/MMBtu, of other recently issued PSD permits for electrical generating units. *See*, AR 46, AAQIR, p. 13 (Table for NO<sub>x</sub>) and pp. 18-19 (Table for SO<sub>2</sub>).

EPA’s BACT analysis for SO<sub>2</sub> and NO<sub>x</sub> did not analyze BACT emission rates expressed as pounds per hour (“lb/hr”). *See*, Id. Although not specifically explained in the record, presumably the lb/hr emission limits in the permit were included to ensure compliance with applicable requirements other than BACT such as protection of air quality related values, NAAQS, and increments. There is no evidence in the record, however, that the lb/hr emission rates in the final Desert Rock PSD permit were derived directly from the primary heat input BACT limits. Nor is there any evidence in the record that the lb/hr emission rates will ensure emissions that are no greater, based on each unit’s rated heat input capacity, than the primary, BACT-derived limits.

Thus, under EPA’s own BACT analysis for SO<sub>2</sub> and NO<sub>x</sub>, the only emission rates that could be characterized as “BACT” are “percent removal” emission limits and “lb/MMBtu” emission limits. In other words, there is no factual or legal support in this administrative record

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2006), 13 E.A.D. \_\_\_ (requiring an on-the-record determination of the infeasibility of measuring emissions in order to justify alternative “work practice” standards during startup and shutdown).

that emission limits expressed in pounds per hour (lbs/hour) can be considered as “BACT” limits for SO<sub>2</sub> and NO<sub>x</sub> emissions from the proposed Desert Rock boilers.

Unfortunately, the final Desert Rock PSD permit exempts DREF from compliance with all BACT emission limits during periods of startup and shutdown. More specifically, final PSD permit provision IX.N.3 of the permit states:

Emissions from the PC boilers during startup and shutdown events shall not be subject to the emission limits in this permit which are specified in units of lb/MMBtu but shall be subject to all other limits and shall be included in the calculations of emission rates for demonstrating compliance with those limits.

AR 122, Final Permit, p. 15, provision N.3.

The actual emission limits for SO<sub>2</sub> and NO<sub>x</sub> in the final permit are stated as follows:

- a. 612 lb/hr, averaged over a 3-hour block period.
- b. 0.060 lb/MMBtu, averaged over a 24-hour block period.
- c. 378.5 lb/hr, averaged over a rolling 365-day period.

AR 122, Final permit, p. 7, provision D.1.

As noted above, the only BACT emission limit for SO<sub>2</sub> (0.060 lb/MMBtu) does not apply during periods of startup and shutdown. Further, there is no percent removal requirement for SO<sub>2</sub> in the final permit at all.

With regard to NO<sub>x</sub>, the Final Permit provides that during the proposed “NO<sub>x</sub> optimization period” emission limits from the boiler shall be:

- a. 408 lb/hr, averaged over a 24-hour block period
- b. 0.060 lb/MMBtu, averaged over a 24-hour block period
- c. 0.05 lb/MMBtu, averaged over a rolling 365-day period
- d. 378.5 lb/hr, averaged over a rolling 365-day period.

AR 122, Final Permit, p. 8, provision E.3.

After NO<sub>x</sub> optimization period, the emission rates from the boiler are:

- a. 0.060 lb/MMBtu, averaged over a 24-hour block period
- b. 0.05 lb/MMBtu, averaged over a rolling 30-day period
- c. 340.5 lb/hr, averaged over a rolling 30-day period
- d. 0.0385 lb/MMBtu, averaged over a rolling 365-day period

e. 262.1 lb/hr, averaged over a rolling 365-day period.

AR 122, Final Permit, p. 9, provision E.4.

The final PSD permit also states: “Low NOx burners and a selective catalytic reduction (SCR) system for the control of NOx emissions from the PC boilers. During startup and shutdown events, the SCR system shall be operated in accordance with good engineering practice and the manufacturer’s recommendations for minimizing NOx and ammonia emissions to the extent practicable.” Final Permit, p. 4, provision B.2.a. This is obviously not a BACT limit because BACT is an emission limit. See 42 U.S.C. § 7479(3); 40 C.F.R. 52.21(b)(12).<sup>132</sup> This same provision does not exist specifically for SO<sub>2</sub>, PM, PM10, PM2.5, VOC, or CO.

As noted above, the only BACT emission limits for NOx (0.060 lb/MMBtu, 0.05 lb/MMBtu, and 0.0385 lb/MMBtu) does not apply during periods of startup and shutdown. Further, as with SO<sub>2</sub>, there is no percent removal requirement for NOx in the final permit.

As a result, during periods of startup and shutdown , the Final Permit exempts DREF from any obligation to comply with the only emission limits for SO<sub>2</sub> and NOx established pursuant to a BACT analysis. And the final permit contains no percent removal requirements for any criteria pollutant emissions, including SO<sub>2</sub> and NOx, applicable during normal operation or during startup, shutdown and malfunction periods.

In response to Petitioners’ comments on the agency’s failure to provide a justification for exempting DREF from otherwise applicable BACT emissions limitation during during startup and shutdown, EPA stated:

**Response:** BACT applies during all periods of operation including startup and shutdown. However, some types of emission units often can not meet steady-state BACT limits

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<sup>132</sup> Since no issue has been raised by EPA or DREF about the inability to apply a measurement methodology, no exemption to the requirement that BACT be an emission limit is applicable.

during these periods because the control equipment does not reduce emissions to the same degree as it does during normal operations. This is due to differences in the emission profile during transient operations compared to the emission profile during steady-state operation. Such differences include fluctuating emission rates and the temperature of the exhaust. Because of these difficulties, EPA originally proposed separate emission limits that would only apply during startup and shutdown periods. Upon further consideration, EPA does not believe that separate BACT limits for these periods are necessary. The PC boilers should be able to comply with the steady state lb/hr limits in the permit during startup and shutdown periods. However, because the emissions from the boilers are greater relative to the heat input during startup and shutdown periods, these events will not be included for purposes of demonstrating compliance with the limits specified in terms of lb/MMBtu. EPA has added a condition to this effect to Section IX.N and removed the separate emission limits. The steady state limits will apply at all times the emission units are in operation and EPA will continue to require that the CEMS operate during all startup and shutdown events.

AR 120 at p. 105.

**Response:** EPA agrees that condition IX.B.7 is generally not necessary and has removed it from the permit. However, as discussed in response to comment II.C.9.a, the SCR system will not function in the same way during startup and shutdown events that it will during steady state operations. For example, injection of ammonia into the system before it has reached the minimum temperature at which it becomes effective could result in excess emissions of unreacted ammonia. Therefore, EPA has added language to condition IX.B.1.a which states that during startup and shutdown events, the SCR system shall be operated in accordance with good engineering practices and the manufacturer's recommendations to minimize emissions of NO<sub>x</sub> and ammonia to the extent practicable.

AR 120 at pp. 105-106.

While these responses create the impression that EPA has performed a reasonable analysis of the ability to control emissions during startup and shutdown periods, upon closer scrutiny it is clear that the agency's analysis is both legally and factually defective. As discussed below, EPA has committed clear error because, (1) it did not provide a sufficiently specific technical justification why the Desert Rock boilers "can not meet steady-state SO<sub>2</sub> BACT limits during these periods" of startup and shutdown; (2) it did not provide a sufficiently specific technical justification why the Desert Rock boilers cannot meet steady-state NO<sub>x</sub> BACT limits

during periods of startup and shutdown; and (3) it did not respond to Petitioners' legal argument that the lb/hour emission limits have not been "justified as BACT limits" by Region 9 or DREF.

**2. The Clean Air Act Requires That New Sources Meet BACT At All Times, Including During Periods of Startup, Shutdown and Malfunction.**

BACT represents an emission limit, not a pollution reduction technology. See CAA § 169(3), 42 U.S.C. § 7479(3)("[BACT] means an emission limitation"). The obligation to comply with BACT – to achieve "the maximum degree of reduction of each pollutant . . . achievable for such facility through the application of production processes and available methods, systems, and techniques" – applies continuously whenever a facility is operating, including during periods of startup, shutdown and malfunction.<sup>133</sup> Id.; see also In re Tallmadge, PSD Appeal No. 02-12, slip op. at 24 (EAB, May 21, 2003) ("BACT requirements cannot be waived or otherwise ignored during periods of startup and shutdown."); In re Indeck Elwood, PSD Appeal 03-04, slip op. at 23 (EAB, Sept. 22, 2006), 13 E.A.D. \_\_; In re RockGen Energy Center, 8 E.A.D. 536, 553-55 (EAB 1999); *see also generally MDEQ v. Browner*, 230 F.3d 181, 183-86 (6th Cir. 2000) (affirming EPA rejection of Michigan CAA rules as not meeting CAA requirements because of improper exclusions from emission limits during startup/shutdown). As the Board has explained:

Important in this regard is the fact that BACT requirements cannot be waived or otherwise ignored during periods of startup and shutdown. EPA has issued three guidance documents over the years clearly expressing the Agency's long-standing position that automatic exemptions for excess emissions (i.e., emissions in excess of BACT or other permit limits) during startup and shutdown periods cannot be reconciled with the directives of the CAA. *See* Ex. 33, Memorandum from John B. Rasnic, Director, Stationary Source Compliance Division, Office of Air Quality Planning and Standards, U.S. EPA, to Linda M. Murphy, Director, Air, Pesticides, and Toxics Management

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<sup>133</sup> Indeed, Section 302(k) of the Clean Air Act expressly defines the term "emission limitation" as a limitation on emissions of air pollutants "on a continuous basis." Section 169(3) of the Clean Air Act, in turn, defines BACT as an "emission limitation." 42 U.S.C. § 7479(3). Accordingly, the Clean Air Act mandates that BACT continuously limit emissions of air pollutants.

Division, U.S. EPA Region I (Jan. 28, 1993) (“Rasnic Memo”); Memorandum from Kathleen M. Bennett, Assistant Administrator for Air, Noise, and Radiation, U.S. EPA, to Regional Administrators, Regions I-X (Feb. 15, 1983) (“1983 Bennett Memo”); Memorandum from Kathleen M. Bennett, Assistant Administrator for Air, Noise, and Radiation, U.S. EPA, to Regional Administrators, Regions I-X (Sept. 28, 1982) (“1982 Bennett Memo”). These guidance documents each express the notion that:

Startup and shutdown of process equipment are part of the normal operation of a source and should be accounted for in the planning, design, and implementation of operating procedures for the process and control equipment. Accordingly, it is reasonable to expect that careful and prudent planning and design will eliminate violations of emission limitations during such periods.<sup>134</sup>

In re Tallmadge, slip op. at 24-25.

In particular, the subsequent Rasnic memo states that PSD emission limits may not be waived because they “are established to protect increments and the national ambient air quality standards.” Ex. 33, at. 1. The memo goes on to state, “PSD permits cannot contain automatic exemptions which allow excess emissions during startup and shutdown.” Id. at p. 2.

Implementing this principle, the Board has recently explained that “because routine startup and shutdown of process equipment are considered part of the normal operation of a source . . . [e]xcess emissions (i.e., air emission that exceed any applicable emission limitation) that occur during these periods are generally not excused and are considered illegal.” In re Indeck-Elwood, PSD Appeal 03-04, slip op at 72-73, (EAB, Sept. 26, 2006), 13 E.A.D. \_\_\_. Thus, sources must be subject to emission limitations during startup and shutdown and such limitation must “be equivalent to BACT, and the permitting authority must provide a methodology for compliance.” Id. slip op at 74.

Moreover, the Board has held that even where the permitting authority can demonstrate that less stringent “secondary limits” are appropriate (which it has not done here), such limits “must be, nonetheless, justified as BACT.” Id. slip op at 71 n.100 (noting that the permitting

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<sup>134</sup> Rasnic Memo at 2; 1983 Bennett Memo at 1; 1982 Bennett Memo at 3.

authority must determine “that compliance with the permit’s BACT and other emission limits cannot be achieved during startup and shutdown *despite best efforts*” before establishing alternative limits, and even then such limits “must be . . . justified as BACT”) quoting *In re Tallmadge Generating Station*, PSD Appeal No. 02-12, at 28 (EAB, May 21, 2003). In order to justify an alternative limit as BACT, the permitting authority must affirmatively demonstrate, for each pollutant, that the limit reflects “the maximum degree of reduction . . . achievable for such facility through the application of production processes and available method, systems, and techniques.” 42 U.S.C. § 7479(3). That is, any alternative “secondary” limit, like those adopted by EPA in this instance, must be derived as the product of a *valid BACT analysis*.

In this instance, EPA has included exemptions in the permit for the DREF that apply during startup or shutdown, and that provide for alternative “secondary” limitations in lieu of the limitations specifically selected as BACT for periods of normal operations. Because it has failed to specifically justify those alternative permit conditions as consistent with BACT, it must either remove them or perform the necessary analysis to demonstrate that they are adequate and provide an opportunity for additional public review and comment.

**3. EPA Has Failed to Show That the Startup-Shutdown Provisions in DREF’s Final Permit Meet the Requirements of BACT.**

EPA committed clear error in issuing the final PSD permit because the administrative record does not provide a specific technical justification for why the Desert Rock boilers should be exempt from the lb/MMBtu emission limits during periods of startup and shutdown. As discussed above, EPA includes a qualitative discussion in the record, in which it claims, without analysis, that “the SCR system will not function in the same way during startup and shutdown events that it will during steady state operations” and therefore the facility cannot meet the otherwise applicable BACT limits during these periods. First, EPA’s relevant responses to

comment on startup-shutdown emission limits, which have been reproduced in full above, are entirely inadequate to demonstrate that DREF in fact cannot meet the otherwise applicable lb/MMBTU BACT limits. See RTC at 104-105. In fact, EPA merely asserts that SCR system “will not function the same way” during startup and shutdown, without indicating with any specificity how it *will* function, what specific significance any functional difference will have on the capacity for DREF to control regulated PSD pollutants, within what range of performance it will be capable of operating during startup/shutdown, whether its performance during startup/shutdown will be uniform or will change during different phases of startup/shutdown, etc.<sup>135</sup> Without more, EPA’s basic premise is unsound, and its rationale cannot be relied up to justify a deviation from the otherwise applicable BACT limits.

Second, even if EPA had adequately demonstrated that the SCR system were not capable of achieving the otherwise applicable BACT level emissions performance during startup/shutdown, EPA has failed to demonstrate that the alternative emission limits that it has selected represent BACT (the “maximum degree of reduction . . . achievable”) for each pollutant for startup/shutdown periods. EPA does no more than automatically default to lb/hr emission limitations that were not derived as a part of the BACT analysis and that have not otherwise been demonstrated as reflecting BACT for either periods of normal operation or during

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<sup>135</sup> In fact, the final PSD permit record does not provide a specific technical justification for why the Desert Rock boilers should be exempt from the lb/MMBtu emission limits during periods of startup and shutdown. EPA vague and unsupported assertion that the SCR system “could result in excess emissions of unreacted ammonia,” AR 120 at p. 105, does not come close to providing the level of detailed analysis necessary for the public to understand the specific rationale for EPA’s action, or for the Board to engage in a meaningful review of the agency’s decision. This vague statement does not provide or reference any quantitative analysis, or attempt to estimate in any way what level of performance “available methods, systems, and techniques” are capable of achieving. Moreover, as to SO<sub>2</sub>, there is absolutely no support in the administrative record – even of a qualitative nature – for the need to exempt the Desert Rock boilers from compliance with the SO<sub>2</sub> BACT limits during startup and shutdown. Accordingly, these permit provisions constitute clear error and must be remanded.

startup/shutdown events.<sup>136</sup> As a result, EPA responses to comments regarding the adequacy of the emission limits applicable during startup/shutdown events are inadequate,<sup>137</sup> and the emission limits associated with startup/shutdown events are unlawful.

Accordingly, the final Desert Rock PSD permit is clearly legally erroneous and must be remanded to EPA for further analysis and additional public notice and comment proceedings..

**VII. THE PERMIT SHOULD BE REMANDED BECAUSE DREF HAS FAILED TO DEMONSTRATE THAT THE OZONE NAAQS WIL NOT BE VIOLATED, NOR HAS EPA CONDUCTED AND ADEQUATE OZONE IMPACT ANALYSIS.**

DREF has failed to show that it will not cause a violation of the ozone NAAQS or have a significant adverse impact on air quality, and so the permit must be remanded so that EPA may correct these deficiencies. EPA's air quality impacts analysis for ozone was inadequate and deeply flawed. Despite admitting numerous problems with the modeling relied upon for the ozone analysis, EPA provided neither a reasoned response to comments nor sufficient explanation why additional ozone modeling was not required to remedy these deficiencies. Furthermore, ozone monitoring data from San Juan County reinforce Petitioners' concerns about the flaws in the modeling relied upon by Desert Rock and EPA and demonstrate that the model significantly under-predicted actual ozone levels. EPA committed legal error in not adequately responding to significant comments and failing to ensure a proper ozone impacts analysis was

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<sup>136</sup> While the EAB has upheld so-called "secondary BACT limits" in the past (In re Prairie State Generating Co., PSD Appeal 05-05, slip op. 117 (EAB, Aug. 24, 2006), 13 E.A.D. \_\_\_), the EAB did so only where the permitting authority demonstrated that the "BACT limits were derived directly from the primary heat input BACT limits and do not authorize emissions greater than the primary limits would allow at the units' rated heat input capacity." *Id.* EPA has made no such assertion or demonstration here. There is no evidence in the record that the lb/hr limits in the final Desert Rock PSD permit are proper secondary BACT limits, or that the lb/hr limits for DREG "were derived directly from the primary heat input BACT limits and do not authorize emissions greater than the primary limits would allow at the units' rated heat input capacity."

<sup>137</sup> In particular Region 9 has not responded to Petitioners' legal argument that the lb/hour emission limits have not been "justified as BACT limits."

completed. Indeed, the concerns Petitioners have repeatedly expressed about high ozone levels in the region have not been addressed by EPA, particularly in light of observations indicating that the Four Corners area is on the verge of nonattainment with the 8-hour ozone NAAQS. Thus EPA also made factual error in assuming the NAAQS would not be violated by the proposed facility, and EPA's determination based on the modeling was clearly erroneous. The Board should remand the permit so that EPA and Desert Rock may 1) correct the serious deficiencies with the ozone modeling relied upon for the air quality impacts analysis and 2) make the affirmative demonstration required that the Desert Rock facility will not cause or contribute to violation of the 8-hour ozone NAAQS, in light of current monitoring data.

**1. An Ozone Impacts Analysis Is Required Under Clean Air Act Section 165(a) and Its Implementing Regulations.**

EPA's response to comments about ozone impacts analysis do not clearly state what standard was applied to the proposed Desert Rock facility, yet implies that either no analysis is required for ozone or that something less is required for ozone than for other air quality impacts. EPA points to three factors that justify not requiring ozone modeling for PSD: 1) there is no approved model for assessing ozone impacts of a single source; 2) ozone formation occurs on a regional scale due to interactions of pollutants from multiple sources; and 3) EPA has not established a PSD increment for ozone. Response to Comments II.E.4, at 124. None of these factors excuse EPA from requiring an analysis of ozone impacts.

The Clean Air Act requires analysis of "*any* air quality impacts projected for the area as a result of growth associated with such facility." 42 U.S.C. § 7475(a)(6) (emphasis added). The PSD regulations interpreting this provision clearly require an air quality impact analysis for ozone for a facility such as Desert Rock, with a potential to emit 3,325 tons per year of NO<sub>x</sub> and 166 tpy of VOCs. For ozone, analysis is required when there is a significant emissions increase

for NO<sub>x</sub> or VOCs of 40 tpy or more. *See* 40 C.F.R. §§ 52.21(b)(2)(ii), (23)(i), (m)(1). Although *de minimis* air quality levels are set for some pollutants, for ozone “any net emissions increase of 100 tons per year or more of volatile organic compounds or nitrogen oxides subject to PSD would be required to perform an ambient impact analysis, including the gathering of air quality data.” 40 C.F.R. § 52.21(i)(5)(i) n.1; *see also In re Masonite Corp.*, 5 E.A.D. 551, 576 (1994). Because the Desert Rock facility was proposed with the potential to emit in excess of 100 tpy of both VOCs and NO<sub>x</sub>, EPA should have required a full air quality impacts analysis for ozone. The factors EPA cites cannot excuse EPA and Desert Rock from this clear requirement of the PSD program, and each is discussed in more detail below.

**2. Discredited Scheffe Lookup Tables Cannot Satisfy the Requirement for an Ozone Impacts Analysis.**

EPA asserts that Scheffe lookup tables were used to assess ozone impacts from the Desert Rock facility, and that the tables predict an impact of 17 parts per billion (ppb) to be compared to the 1-hour ozone standard of 120 ppb. Response to Comments II.E.4, at 124. Scheffe lookup tables have been discredited, however, and cannot meet the legal requirements for an analysis of ozone impacts under the PSD program. The Scheffe method was deemed inadequate in 1989, shortly after it was developed, and in light of the improvement of ozone modeling since that time, even the developer of the method states that the approach “would be even less adequate today.” Ex. 34. Given advancements in modeling science, the use of Scheffe tables to predict the ozone impact of the Desert Rock facility does not satisfy the obligation under the Clean Air Act and the PSD regulations to conduct a full analysis of ozone impacts from the proposed facility. Furthermore, DREF did not purport to rely on Scheffe tables in its application, and EPA did not mention these until its response to comments. Thus Scheffe tables cannot be relied upon

to satisfy the requirement for ozone impacts analysis because the use of a substituted model was not subject to notice and comment. *See* 40 C.F.R. § 52.21(1)(2).

**3. Flawed Ozone Modeling Prepared for the Four Corners Region Does Not Satisfy the Requirement for Ozone Impacts Analysis of the Desert Rock Facility.**

After objecting to the feasibility of conducting an analysis of ozone impacts and pointing to the discredited Scheffe method, EPA ultimately falls back upon ozone modeling conducted for the Early Action Compact and prepared by the New Mexico Environment Department in 2004. Response to Comments II.E.4, at 124. Petitioners submitted extensive comments questioning the validity of that modeling and its use beyond its intended purpose, which did not include assessing the ozone impacts of the proposed Desert Rock facility. (AR 57, Comment No. 1011, Milford Affidavit at 1-10, Ex. 49; Tran Affidavit at 9-11). Given the serious flaws identified in the modeling, combined with monitoring data showing that the region is on the cusp of violating the revised 8-hour ozone NAAQS, EPA did not meet its burden to produce an adequate analysis of the serious ozone impacts DREF would cause or contribute to.

**A. EPA Did Not Respond Meaningfully to Comments Which Identified Serious Problems with EAC Modeling.**

Petitioners identified several serious issues with the EAC modeling questioning the propriety of using that modeling to assess the ozone impacts of the proposed Desert Rock facility. Specifically, Petitioners raised the following serious objections: 1) emissions used in the EAC modeling differed greatly from those in the Desert Rock application (AR 57, Comment No. 1011, Tran Affidavit at 9-10); 2) the project location used in the modeling was 28 km off and the stack height and other parameters were significantly discrepant (AR 57, Comment No. 1011, Tran Affidavit at 10-11); 3) the abbreviated model run used to test sensitivities, and relied upon to assess ozone impacts from Desert Rock, was limited to a short and non-representative

period of time (AR 57, Comment No. 1011, Milford Affidavit at 5); 4) the winds on days considered during the brief episode modeled do not reflect days when ozone impacts from Desert Rock are expected to be most important (AR 57, Comment No. 1011, Milford Affidavit at 5-6); 5) the model's performance on the day of peak observed ozone is inadequate, an even greater concern given the short time period of the sensitivity analysis relied upon by EPA (AR 57, Comment No. 1011, Milford Affidavit at 6); and 6) the modeled impacts of additional power plants in the region are large in comparison to other controllable emissions, and the Ozone Source Apportionment Technology used in the modeling is highly misleading in its treatment of biogenic VOCs (AR 57, Comment No. 1011, Milford Affidavit at 9).

EPA did not respond adequately to any of these comments, and indeed did not respond at all to some of the significant comments made by Petitioners. Under the Administrative Procedure Act, final EPA action must meet the "arbitrary and capricious" standard, which requires a reasoned response to all significant comments. *See* 5 U.S.C. § 706(2)(A); *see also In re Knauf Fiber Glass*, 8 E.A.D. 121, 131 (1999) (agency decisions in permitting proceedings "must be adequately explained and justified"); *Alaska Dep't of Envtl. Conservation v. EPA*, 540 U.S. 461, 496-97 (2004) (stating that review of agency action is under the arbitrary and capricious standard of the APA unless a specific statute says otherwise); *Sierra Club v. EPA*, 499 F.3d 653, 656 (7th Cir. 2007) (applying arbitrary and capricious standard to review of permitting decision and looking to whether EPA action was unreasonable). Here EPA has not adequately addressed significant comments calling into question the validity of modeling used to assess the ozone impacts of the Desert Rock facility. Instead EPA simply recognized "some input errors" in the modeling yet stated it "does not believe that these problems affect the central conclusions of the modeling, which is that the potential addition of two power plants to the area would have a

minimal effect on 8-hr ozone concentrations.” Response to Comments II.E.4, at 125. For the error in NO<sub>x</sub> emissions, which were modeled at half the potential to emit for DREF, EPA simply said that doubling the maximum increase of 2 ppb and combining with the overall modeled maximum (69 ppb + 4 ppb = 73 ppb) would not cause of violation of the 75 ppb 8-hour ozone NAAQS. EPA did not provide any explanation for its conclusion that a potential increase of 4 ppb (or even 2 ppb) is “minimal.” In sharp contrast, when adopting the NO<sub>x</sub> SIP Call and the Clean Air Interstate Rule, EPA used a contribution threshold of 2 ppb, *see* 70 Fed. Reg. 25,162, 25,190 (May 12, 2005), and that was to measure the unacceptable impact of entire states to nonattainment problems, not just a single source. EPA’s assertion here that a 4 ppb impact is “minimal” is thus troubling and certainly lacking an adequate explanation. Such a large increase in ozone levels, particularly in an area on the verge of violating the ozone NAAQS, merits a much more rigorous ozone impacts analysis. Since monitoring data disproves EPA’s assumption that the NAAQS would not be violated by a 4 ppb increase in ozone, EPA is left with no reasoned explanation of why a 2 – 4 ppb increase in ozone levels is not significant. EPA’s response to comments on the ozone issue falls short of reasoned decisionmaking in this context and constitutes clear legal error.

For the concerns about the limited period of the modeling that did not cover a representative period, EPA simply stated, without support, that it is “acceptable to allow the selection of high-ozone periods, or episodes” and that “[m]odeling data are generally available only for limited periods.” *Id.* at 125-26. EPA did not address at all the comments about the model’s performance during the limited period covered, nor did it address concerns about inappropriate apportionment of ozone to biogenic VOC emissions rather than controllable human-made sources of NO<sub>x</sub> such as Desert Rock. Indeed ozone monitoring data received by

EPA on an hourly basis (discussed more fully in below) reinforce the concerns expressed by Petitioners about the model performance, since actual ozone levels significantly exceed the modeled ozone maximum relied upon by EPA. And by failing to even respond to the significant comments about in appropriate apportionment of ozone to biogenic VOC sources, EPA committed clear legal error that calls into question the ultimate determinations – that DREF could cause an increase of 2 – 4 ppb, that such an increase is minimal, and that DREF would not cause a violation of the NAAQS.

The numerous flaws with the modeling call into serious question the use of the EAC modeling for the purpose of conducting an ozone impacts analysis for Desert Rock under the PSD program. EPA's attempt to avoid these problems by characterizing the modeling "as illustrative of the magnitude of impacts from a large power plant, rather than as a precise estimate of DREF's impacts" is unavailing. Response to Comments II.E.4, at 125. The Clean Air Act requires not an estimate of the magnitude of impacts from some generic large power plant, but rather a demonstration "that emissions from construction or operation of *such facility*" will not cause or contribute to violation of the NAAQS as well as analysis of the impacts "projected for the area as a result of growth associated with *such facility*". 42 U.S.C. § 7475(a)(3), (6) (emphasis added). In the NO<sub>x</sub> or SO<sub>2</sub> context, EPA could not get away with modeling emissions rates at one half of the potential to emit, and the same error in the ozone context is a very serious flaw. EPA's failure to adequately respond to significant comments questioning the adequacy of the EAC modeling for analyzing the ozone impacts from the Desert Rock facility constitutes clear error and justifies a remand in this case. EPA must adequately respond to significant comments, fully and appropriately assess the ozone impacts from Desert

Rock, and ensure that the permit applicant has demonstrated that the facility will not cause a violation of the 8-hour ozone NAAQS.

**4. Observed Ozone Levels Refutes Modeled Estimates and Indicate that DREF Will Cause or Contribute to Violation of the 8-hour Ozone NAAQS.**

The inadequacy of EPA's response to comments on the ozone impacts analysis is further illustrated by the conflict between the modeled ozone predictions and actual ozone concentrations observed at monitors in San Juan County, New Mexico. Ozone monitors, particularly the Navajo Lake monitor, have recorded significantly higher ozone levels than predicted in the model. (AR 62, 6-17-08 Supp. Comments of Petitioners, at 12, Attachment "2008.xls"). In both 2006 and 2007, the Navajo Lake monitor recorded fourth-highest maximum ozone concentrations of 79 ppb,<sup>138</sup> as compared to the maximum ozone predicted in the model of 69 ppb. The state of New Mexico also expressed concerns about elevated ozone levels in the Four Corners region that would be exacerbated by DREF. (AR 67, Comment Letter 13, at 2-3). The discrepancy between observed and modeled ozone levels emphasizes Petitioners' concerns about the poor model performance raised during the comment period, for which EPA did not provide an adequate response. (AR 57, Comment No. 1011, Milford Affidavit at 6). Furthermore, 2008 observed data from Navajo Lake shows that the region is on the cusp of violating the 75 ppb NAAQS for 8-hour ozone levels.<sup>139</sup> Petitioners expressed concerns about

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<sup>138</sup> Ozone data is transmitted hourly from states such as New Mexico to EPA. The data is eventually available on EPA's Air Quality Data site. Although 2008 data has not been completely updated on EPA's site, 2006 and 2007 data show a 4<sup>th</sup> highest maximum of 79 ppb for the Navajo Lake Monitor. <http://www.epa.gov/oar/data/geosel.html>.

<sup>139</sup> The 2008 ozone data included as an attachment to the June 17, 2008 comments from Petitioners is also available on New Mexico's website at <http://air.state.nm.us/>. With a 4<sup>th</sup> highest maximum of 69 ppb, the 3-year average used to determine compliance with the 8-hour ozone NAAQS is 75.667 ppb, which truncates to 75 ppb. Any additional ozone in the area would thus push the region into nonattainment status with the new 8-hour ozone standard of 75 ppb.

high ozone levels in the region throughout the process, and specifically noted that 2008 monitoring values would bring the region to the brink of nonattainment. (AR 62 at 12, Attachment “2008.xls”). This most recent monitoring data was submitted by Petitioners as soon as it was ascertainable, and EPA was aware of this data when it made its decision to issue the permit for Desert Rock.

While EPA may use modeling to assess the ozone impacts for a PSD facility, it is inappropriate to rely solely on modeling which in this instance suffers from numerous flaws and which is contradicted by real-world monitoring data. In light of the serious flaws identified during public comment, which EPA did not adequately address, it is incumbent upon EPA to validate the model results using monitoring data. Because the monitoring data conflicts with the model, EPA cannot rely on a modeled ozone maximum that significantly under-predicts actual ozone values. *See, e.g.*, 43 Fed. Reg. 26,380, 26,382 (June 19, 1978) (“EPA does not intend that there be no ‘real world’ checks on the accuracy of modeling.”); *Ohio v. EPA*, 798 F.2d 880 (6th Cir. 1986) (courts are to conduct a “searching review” of the modeling procedures used); *PPG Industries, Inc. v. Costle*, 630 F.2d 462 (6th Cir. 1980) (monitored data are relevant when they tend to show predictions are unreliable); *Wisconsin Electric Power Co. v. Costle*, 715 F.2d 323, 330 (7th Cir. 1983) (predictions unsupportable where monitoring data conflict with modeling data).

Here the monitoring data shows that San Juan County is on the verge of violating the 8-hour ozone NAAQS, and thus the permit applicant has not demonstrated that the Desert Rock facility will not push the region over the edge and into nonattainment status. EPA acknowledges in its response to comments that even its flawed modeling predicts an impact of 2 – 4 ppb. Response to Comments II.E.4, at 125; Response to Late-Filed Comments 4, at 7. An increase of

only 1 ppb would be sufficient to cause nonattainment when the baseline is correctly set at 75 ppb instead of 69 ppb. Thus, the permit should be remanded to EPA so that the monitoring data can be taken into account in the ozone impact analysis. The permit may only be issued if it can be demonstrated that the Desert Rock facility will not cause or contribute to a violation of the NAAQS in an area where ozone levels are already abutting the 8-hour ozone standard. EPA committed clear factual error when it determined that DREF would not cause or contribute to a violation of the ozone NAAQS, since EPA did not take into account the critical data from the Navajo Lake monitor.

**5. Available Techniques for Modeling Single-Source Ozone Impacts Should Be Used to Assess the Ozone Impacts of the Desert Rock Facility.**

Although in the past EPA has denied review of permits due to failure to perform a modeling analysis, determinations of the adequacy of the ozone impacts analysis “must necessarily be solidly grounded on the record of the case and, consequently, may not be applicable in subsequent permit proceedings if the Agency has in the intervening time developed additional methods or techniques for analyzing the particular pollutant.” *In re Prairie State Generating Co.*, 13 E.A.D. \_\_\_, Slip op. at 130 (2006). For DREF, the availability of monitoring data that conflicts with the modeling data relied upon for the ozone impacts analysis raises serious issues about the use of that modeling to adequately assess ozone impacts. Furthermore, while the 8-hour ozone NAAQS is a relatively new standard and modeling was not required in past permit proceedings, advances in modeling now enable EPA to predict the 8-hour ozone impacts from a single source such as DREF. Because better modeling options are available to EPA, they should be utilized in this permit proceeding to address the conflict between the flawed EAC modeling and 2006-2008 monitoring data.

EPA Guidance for modeling PSD impacts admittedly does not dictate any particular outcome, yet it does express a preference for the best possible monitoring available and reasonable under the circumstances. *See* 40 C.F.R. pt. 51, app. W § 5.2.1(c) (noting that the choice of methods “depends on the nature of the source and its emissions”); *see also id.* at § 3.2.1(a) (“Selection of the best techniques for each individual air quality analysis is always encouraged.”). For DREF, the use of CAMx to model ozone impacts is appropriate but the problems identified with the modeling runs relied upon to assess the ozone impacts, and EPA’s failure to meaningfully address those problems, means that a separate modeling exercise to assess the impacts of the Desert Rock facility is necessary and appropriate in this case. As has been noted by EPA staff, in presentations given while the Desert Rock permit was pending before EPA, there have been several recent instances where modeling has been performed to assess the impacts of a single source. For example, several areas (including Oklahoma, Missouri, San Antonio, and Dallas-Fort Worth) have done “point source impact regional modeling” to assess the impacts of a small number of sources or a single county on ozone NAAQS attainment issues. *See* Ex. 35, 9. (listing areas that have previously conducted point source ozone modeling). The same methods could be applied to Desert Rock, enabling EPA to correct the serious deficiencies in the ozone modeling that was conducted and to take account of the discrepancies between earlier modeling data and actual ozone levels recorded at monitoring sites. In this way, EPA could meet the requirements of Section 165(a) of the Clean Air Act to ensure that the ozone NAAQS will not be violated due to Desert Rock and that adequate ozone impacts analysis can be completed. The permit should be remanded, in light of observed ozone levels and flaws in the previous modeling, so that EPA and Desert Rock can make the necessary demonstration that the new facility would not cause a violation of the ozone NAAQS.

**IX. THE EPA COMMITTED CLEAR LEGAL ERROR BY ISSUING THE FINAL DESERT ROCK PSD PERMIT WITHOUT COMPLYING WITH THE REQUIREMENTS OF CAA SECTION 165(A) FOR PM<sub>2.5</sub>.<sup>140</sup>**

**1. National Ambient Air Quality Standards (“NAAQS”) for PM<sub>2.5</sub>**

The Clean Air Act requires EPA to promulgate national ambient air quality standards (“NAAQS”) for harmful air pollutants, 42 U.S.C. § 7409. EPA has promulgated two different NAAQS for particulate matter—particulate matter smaller than 10 micrometers in size (“PM<sub>10</sub>”) and particulate matter smaller than 2.5 micrometers in size (“PM<sub>2.5</sub>”). “Particulate matter” is a generic term for a large class of pollutants that includes liquid droplets and solids that are emitted from a variety of stationary and mobile sources. 49 Fed. Reg. 10,410 (Mar. 20, 1984).

EPA has found that PM<sub>10</sub> and PM<sub>2.5</sub> have different sources and formation processes, are chemically distinct, and disperse in the atmosphere in different ways. 70 Fed. Reg. 65,992; 71 Fed. Reg. 2,625; 72 Fed. Reg. 20,599. PM<sub>2.5</sub> is mainly produced by combustion and by atmospheric reactions of various gaseous pollutants. 71 Fed. Reg. 2,625. Major sources of PM<sub>2.5</sub> include motor vehicles, power plants, and industrial facilities. *Id.* PM<sub>2.5</sub> particles can remain suspended in the atmosphere for days to weeks and can be transported thousands of kilometers. *Id.* On the other hand, PM<sub>10</sub> generally result from mechanical processes that crush or grind larger particles or the resuspension of dust. *Id.* Because of their larger size, these PM<sub>10</sub> particles are generally deposited closer to the source than PM<sub>2.5</sub>. *Id.* Different techniques and technologies are more effective at controlling PM<sub>2.5</sub> than controlling PM<sub>10</sub>. 72 Fed. Reg.

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<sup>140</sup> This issue was raised by Petitioners in their November 13, 2006 comments on EPA’s draft PSD permit for Desert Rock. *See*, Exhibit 5 to Petitioners’ Petition for Review filed August 13, 2008 at p. 59. *See also*, AR 66 at p. 59.

20,589. The difference between PM<sub>2.5</sub> and PM<sub>10</sub> is further evidenced by the fact that different areas of the country are designated as violating the national standards for PM<sub>2.5</sub> and PM<sub>10</sub>.<sup>141</sup>

In 1987 the EPA adopted standards for PM<sub>10</sub>. 52 Fed. Reg. 24,634 (July 1, 1987). The EPA adopted a 24-hour PM<sub>10</sub> ambient air quality standard of 150 g/m<sup>3</sup> and an annual PM<sub>10</sub> standard of 50 g/m<sup>3</sup>.<sup>142</sup> Id.

In 1997, spurred by a lawsuit and court order, EPA recognized that PM<sub>2.5</sub> posed a health risk above and beyond that posed by PM<sub>10</sub>. 62 Fed. Reg. 38,655-57 (Jul. 18, 1997); see also American Lung Ass'n v. Browner, 884 F.Supp. 345, 349 (D. Ariz. 1994).<sup>143</sup> Even in areas where the PM<sub>10</sub> standard was being met, the public (especially sensitive populations, including the elderly, children, and asthmatics) was still suffering serious health effects—including increased mortality, aggravation of respiratory and cardiovascular disease, and increased hospital emissions—as a result of PM emissions. 62 Fed. Reg. 38,655-56. To protect the public health, in 1997 EPA promulgated separate NAAQS for PM<sub>2.5</sub> setting both an annual standard (15 micrograms/cubic meter) and a 24-hour standard (65 micrograms/cubic meter). See 62 Fed. Reg. 38667 (July 18, 1997). These PM<sub>2.5</sub> NAAQS became effective on September 16, 1997. Id. Even under the 1997 PM<sub>2.5</sub> NAAQS, however, the science showed that “thousands of premature deaths” and “substantial numbers of incidences of hospital admissions, emergency room visits, aggravation of asthma and other respiratory symptoms, and increased cardiac-related risk” would occur nationally. 71 Fed. Reg. 2,643 (Jan. 17, 2006). New scientific studies confirmed the threat

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<sup>141</sup> Between the 39 areas in the country that are currently designated as nonattainment for PM<sub>2.5</sub> and the 47 listed as violating the PM<sub>10</sub> NAAQS, there are only 4 areas that violate both standards. *Compare* [www.epa.gov/oar/oaqps/greenbk/qnc.html](http://www.epa.gov/oar/oaqps/greenbk/qnc.html) (listing PM<sub>2.5</sub> nonattainment areas) *with* [www.epa.gov/oar/oaqps/greenbk/pnc.html](http://www.epa.gov/oar/oaqps/greenbk/pnc.html) (listing PM<sub>10</sub> nonattainment areas).

<sup>142</sup> The annual standard was revoked in 2006.

<sup>143</sup> These “fine particulates” include: sulfate (SO<sub>4</sub>); nitrate (NO<sub>3</sub>); ammonium; elemental carbon and other organic compounds; and inorganic material, including metals, dust, and other trace elements. 70 Fed. Reg. 65,984, 65,988 (Nov. 1, 2005).

posed even by short-term exposure to PM<sub>2.5</sub>, including premature mortality and increased respiratory problems. Id. at 2,627. Studies also provided new evidence linking short-term exposure to cardiovascular problems, and long-term exposure to death from heart attacks and lung cancer. Id.; see also id. at 2627-49 (discussing extensive scientific literature documenting health problems cause by PM<sub>2.5</sub> exposure). Therefore, in 2006, once again spurred in part by a lawsuit, EPA revised the 24-hour NAAQS for PM<sub>2.5</sub>, cutting the original 1997 NAAQS nearly in half. 71 Fed. Reg. 61,144 (Oct. 17, 2006) (changing the 24-hour PM<sub>2.5</sub> standard from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup>); see also American Lung Ass'n v. Whitman, No. 1:03cv00778 (D.D.C. 2003).<sup>144</sup> EPA did not change the annual standard of 15 µg/m<sup>3</sup>. Id.

Monitoring of ambient PM<sub>2.5</sub> concentrations is distinct from PM<sub>10</sub> and is well established. In fact, New Mexico has a monitoring station near Farmington that monitors PM<sub>2.5</sub> in the ambient air. The Farmington monitoring station is approximately 25 kilometers from the proposed Desert Rock coal plant.<sup>145</sup> There are also distinct methods available for modeling PM<sub>2.5</sub>, including ISC and AERMOD. 40 C.F.R. § 51, App. W 5.1 (e), (h), 5.2.2.1; Id. § 52.21(l); 70 Fed. Reg. 68,234-35. There are methods available for measuring PM<sub>2.5</sub> emissions, including Conditional Test Method (“CTM”) 39, CTM 40, and Method 202. 70 Fed. Reg. 66,050; Id. at 66,051-52. Finally, there are distinct technologies for control of PM<sub>2.5</sub> emissions that are available and in use, including Teflon coated bags, scrubbers, wet electro-static precipitators (“ESPs”), and fabric filter devices.

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<sup>144</sup> The studies also showed that there was no specific threshold below which there would be no PM-related health effects. 70 Fed. Reg. 65,988. Accordingly, EPA recognized that emissions reductions below the 1997 standards would provide additional health benefits.

<sup>145</sup> See:  
<http://iaspub.epa.gov/airsdata/adaqs.monvals?geotype=st&geocode=NM&geoinfo=st%7ENM%7ENew+Mexico&pol=PM25&year=2008&fld=monid&fld=siteid&fld=address&fld=city&fld=county&fld=stabbr&fld=regn&rpp=25>.

## 2. PSD Permits and Compliance with PM<sub>2.5</sub> NAAQS

To ensure compliance with the NAAQS, Congress requires new source review (“NSR”) permits for the construction or modification of major stationary sources of air pollution. See, 42 U.S.C. §§ 7410(a)(2)(C), 7475, and 7503. More specifically, Section 165(a) of the CAA states,

“[n]o major emitting facility ***on which construction is commenced after August 7, 1977***, may be constructed in any area to which this part applies unless- (1) a permit has been issued for such proposed facility in accordance with this part setting forth emission limitations for such facility which conform to the requirements of this part; (2) the proposed permit has been subject to a review in accordance with this section, the required analysis has been conducted in accordance with the regulations promulgated by the Administrator, and a public hearing has been held...on the air quality impact of such source...; (3) the owner or operator of such facility demonstrates, as required pursuant to section 7410(j) of this title, that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of ***any*** (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year, (B) ***national ambient air quality standard in any air quality control region***...; (4) the proposed facility is subject to the best available control technology ***for each pollutant subject to regulation*** under this chapter emitted from, or which results from, such facility; (5) the provisions subsection (d) of this section with respect to protection of class I areas have been complied with for such facility...; (7) the person who owns or operates, or proposes to own or operate, a major emitting facility for which a permit is required under this part agrees to conduct monitoring as may be necessary to determine the effect which emissions from any such facility may have, or is having, on air quality in any such area which may be affected by emissions from such source...”

42 U.S.C. §7475(a) (emphasis added).

As noted above, in areas that already meet the NAAQS (“attainment areas”), the permit program – typically referred to as prevention of significant deterioration (“PSD”) program – must ensure that the construction or expansion of polluting sources does not contribute to a violation of standards anywhere, or interfere with an area’s ability to maintain clean air. See, id. § 7470. Section 165(a)(3) of the CAA expressly bars issuance of a PSD permit unless the owner or operator of the source demonstrates that “emissions from construction or operation of that facility *will not cause, or contribute to, air pollution in excess of any ... national ambient air*

*quality standard.*” 42 U.S.C. § 7475(a)(3) (emphasis added). Compliance with the NAAQS is the centerpiece of the Act. H. Rep. 101-490, 101<sup>st</sup> Cong. 2d Sess. 145 (1990) (attaining and maintaining the NAAQS is the “cornerstone” of the Act).

### **3. EPA’s Final Rule “Waiving” PM<sub>2.5</sub> PSD Requirements Under CAA<sup>146</sup>**

Despite the unique and dangerous health threats presented by PM<sub>2.5</sub>, on May 16, 2008 EPA adopted final regulations, without public notice or comment, to *waive* the PSD requirement to demonstrate compliance with PM<sub>2.5</sub> NAAQS at coal-fired power plants and set corresponding BACT emission limits for PM<sub>2.5</sub>. 73 Fed. Reg. 28321 (May 16, 2008). More specifically, EPA’s final rule waives compliance with the PM<sub>2.5</sub> standards and related requirements in states and tribal lands where EPA, rather than the state, is the permitting authority. *Id.* The PM<sub>2.5</sub> waiver applies to major stationary sources that submitted PSD permit applications before July 15, 2008 where the application was “consistent with EPA recommendations to use PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub>” and EPA subsequently determines that:

the application as submitted was complete with respect to the PM<sub>2.5</sub> requirements then in effect as interpreted in the EPA memorandum entitled “Interim Implementation of New Source Review Requirements for PM<sub>2.5</sub>” (October 23, 1997).

73 Fed. Reg. 28340. Thus, this new final rule allows the PSD permitting of major new power plants and factories that can or will contribute to violations of federal health standards for PM<sub>2.5</sub>.

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<sup>146</sup> Because this final rule became effective on July 15, 2008, just 16 days prior to issuance of the final PSD permit for Desert Rock on July 31, 2008. Petitioners could not have commented on such rule during the public comment period on the draft PSD permit for Desert Rock. The new rule raises “substantial new questions concerning a permit” as contemplated by 40 C.F.R. § 124.14(a)(1)(b). Moreover, because the final rule was not effective until 16 days prior to the issuance of the Desert Rock PSD permit, EPA’s reliance on the final rule could not have been reasonably ascertainable by the close of the public comment period on the draft PSD permit. *See* 40 C.F.R. § 124.13. *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 249 (EAB 1999). The final rule is “substantial” because it contradicts the clear language of Section 165(a) of the Clean Air Act specifically requiring an analysis for compliance with the PM<sub>2.5</sub>. *In re NE Hub Partners*, 7 E.A.D. 561, 585 (EAB 1998). Accordingly, it is appropriate to raise issues related to the final rule at this time.

These final regulations had an effective date of July 15, 2008—just 16 days before Region 9 issued its final PSD permit for the proposed Desert Rock coal plant. This waiver provision in the final rule had *not* been proposed at the time EPA Region 9 issued its draft PSD permit to Desert Rock in July 2006.<sup>147</sup> See 70 Fed. Reg. 66044. On July 15, 2008, Natural Resources Defense Council and Sierra Club appealed this final rule in a federal court of appeal.<sup>148</sup>

In a recently filed brief opposing a stay of the final rule, EPA states “the adequacy of using PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> is subject to case-by-case evaluation in the review of individual permits.” Exhibit 36, at 17. As noted herein, Region 9 has not conducted a case-by-case evaluation of the adequacy of using PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> in its issuance of the Desert Rock PSD permit.

#### **4. EPA’s final PSD permit for DREF and Compliance with CAA Section 165(a)**

EPA Region 9 issued the draft PSD permit for the proposed Desert Rock coal plant in July 2006. EPA issued the final PSD permit on July 31, 2008. Neither the draft PSD permit nor the final PSD permit contains: (1) any analysis of whether PM<sub>2.5</sub> emissions from the Desert Rock coal plant will cause a violation of the PM<sub>2.5</sub> NAAQS; (2) any case-by-case technical demonstration proving that compliance with the PM<sub>10</sub> NAAQS is a scientifically adequate

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<sup>147</sup> EPA’s November 1, 2005 *proposed* PM<sub>2.5</sub> rulemaking, which necessarily preceded EPA’s final rule, made no mention of exempting any sources from the PSD PM<sub>2.5</sub> permitting requirements, let alone codifying the 1997 guidance memorandum allowing the use of PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> permitting (hereinafter referred to as the “Seitz Memo” or the “PM<sub>10</sub> surrogate policy” which is located in the administrative record at AR 120.30). Thus, the EPA failed to issue public notice, or accept public comment, on the “waiver” provision or codification of the “Seitz Memo” in the final rule. EPA had previously said that the PM<sub>10</sub> surrogate policy of the Seitz Memo “do[es] not bind State and local governments and the public as a matter of law.” AR 120.30 at p. 2. The final rule for the first time converts this illegal, unadopted policy into a binding regulation.

<sup>148</sup> Natural Resources Defense Council v. U.S. EPA, No. 08-1250, U.S. Court of Appeals, D.C. Circuit. On August 18, 2008, NRDC filed a motion to stay the effectiveness of the final rule in that case.

surrogate for compliance with the PM<sub>2.5</sub> NAAQS; or (3) any BACT analysis or BACT emission limit for PM<sub>2.5</sub>. The draft permit also fails to assess the impacts of PM<sub>2.5</sub> emission on Class I areas and fails to contain monitoring requirements for PM<sub>2.5</sub> emissions from DREF.

On July 31, 2008, EPA responded to Petitioners' comments on the draft PSD permit by stating:

On May 8, 2008, EPA issued final rules governing the implementation of the NSR program for PM<sub>2.5</sub>. This rule finalizes several NSR program requirements for sources that emit PM<sub>2.5</sub> and other pollutants that contribute to PM<sub>2.5</sub>. Consistent with 40 CFR 52.21(i)(1)(x), wherein EPA grandfathered sources or modifications with pending permit applications based on PM from the PM<sub>10</sub> requirements established in 1987, EPA will now allow sources or modifications who submitted applications in accordance with the PM<sub>10</sub> surrogate policy to remain subject to that policy for purposes of permitting if EPA or its delegate reviewing authority determined that the application was complete prior to May 8, 2008. EPA determined that Sithe's permit application was complete on May 21, 2004 and we are thus continuing to apply the PM<sub>10</sub> surrogate policy for this project.

AR 120 at pp. 76-77.

In summary, there is no factual dispute that in issuing the DREF PSD permit Region 9 has failed: 1) to specifically analyze DREF's emissions for compliance with the PM<sub>2.5</sub> NAAQS; 2) to conduct a case-by-case analysis to determine whether compliance with the PM<sub>10</sub> NAAQS is a scientifically sound surrogate for compliance with the PM<sub>2.5</sub> NAAQS; 3) set a specific PM<sub>2.5</sub> emission limit based on BACT; 4) specifically assess the impacts of PM<sub>2.5</sub> emission on Class I areas; and, 5) include specific monitoring requirements for PM<sub>2.5</sub> emissions from DREF. As will be proven below, these deficiencies require the EAB to remand the final PSD permit to Region 9 to show actual compliance with the PM<sub>2.5</sub> NAAQS and other permitting requirements.

#### **5. EPA's Failure to Specifically Address PM<sub>2.5</sub> in the DREF Permit is Unlawful**

##### **A. The CAA Does Not Allow EPA to Exempt Sources from Compliance with PM<sub>2.5</sub> Requirements Based on the Date of Permit Application.**

Section 165(a) of the CAA prohibits the construction of major emitting facilities that do not comply with the applicable permitting requirements – including the requirement to show compliance with “*any*” NAAQS – where “construction is commenced after the date of the enactment of this part . . . .” 42 U.S.C § 7475(a). Region 9’s exemption from the PM<sub>2.5</sub> NAAQS requirements for the DREF PSD permit violates this plain language of the CAA because it excuses DREF’s compliance based on an arbitrary cutoff date for submission of a complete permit application without showing compliance with the PM<sub>2.5</sub> NAAQS and related requirements. Section 165(a)(3) of the CAA makes no provision for a transition period during which noncompliance with standards is allowed—certainly nothing that would allow a source to ignore a NAAQS promulgated over 10 years ago. The requirement that permit applicants demonstrate they will not cause or contribute to a PM<sub>2.5</sub> NAAQS violation is not in any way contingent.

Region 9 offers no statutory authority for applying a grandfathering exception for Desert Rock. To the contrary, in section 168(b), Congress specifically allowed for the grandfathering of only those sources on which “construction had commenced” before the enactment of the 1977 Clean Air Act Amendments. See 42 U.S.C. § 7478(b). Sources that merely had complete applications were not entitled to similar treatment and were required to revise those applications to comply with the new statutory requirements. EPA’s new exemption for sources that have not yet commenced construction is thus flatly contrary to the statute. See New York v. EPA, 413 F.3d 3, 41 (D.C. Cir. 2005) (“Absent clear congressional delegation... EPA lacks authority to create an exemption from New Source Review by administrative rule.”).

**B. *EPA Cannot Waive Compliance with PM<sub>2.5</sub> Requirements by Relying on PM<sub>10</sub> Compliance as a Substitute.***

For both grandfathered permit applications and all new permits issued in states that have not revised their SIP-approved PSD programs, EPA will allow PM<sub>10</sub> to be used as a “surrogate” for PM<sub>2.5</sub> in accordance with the 1997 Seitz Memo. See 73 Fed. Reg. at 28340-42. The Seitz Memo provides in relevant part:

[S]ources should continue to meet PSD and NSR program requirements for controlling PM<sub>10</sub> emissions . . . and for analyzing impacts on PM<sub>10</sub> air quality. Meeting these measures in the interim will serve as a surrogate approach for reducing PM<sub>2.5</sub> emissions and protecting air quality.

AR 120.30 at p. 2 (Seitz Memo at 2). EPA’s adoption and continued use of this policy is completely unlawful and arbitrary.

**i. The Use of PM<sub>10</sub> as a Surrogate Violates the Clean Air Act Requirements Governing the Permitting of PM<sub>2.5</sub> Sources.**

First, the use of PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> violates CAA section 165(a)(3) because it exempts major sources of PM<sub>2.5</sub> from permitting requirements. See 42 U.S.C. § 7475(a)(3); *see also id.* § 7479 (defining major emitting facility based on emissions of “any pollutant”).

Second, the use of PM<sub>10</sub> as a surrogate violates section 165(a)(3)’s mandate for a demonstration a facility’s emissions will not cause or contribute to air pollution in excess of “any” NAAQS. See 42 U.S.C. § 7475(a)(3); see also New York v. EPA, 443 F.3d 880, 885 (D.C. Cir. 2006) (rejecting another attempt by EPA to read out the word “any”). The PM<sub>10</sub> surrogate policy plainly excuses evaluation of PM<sub>2.5</sub> air quality impacts, providing instead that sources need only analyze “impacts on PM<sub>10</sub> air quality.” AR 120.30 at 2.

Third, the use of PM<sub>10</sub> as a surrogate also violates the requirement of section 165(a)(4) that “the proposed facility is subject to the best available control technology for *each* pollutant subject to regulation.” See 42 U.S.C. § 7475(a)(4) (emphasis added). PM<sub>2.5</sub> is undeniably a “regulated pollutant” that is separate and distinct from PM<sub>10</sub>. See 40 C.F.R. §§ 50.6 and 50.7.

EPA has recognized that the best controls for PM<sub>10</sub> do not necessarily represent the best controls for PM<sub>2.5</sub>. See, e.g., 70 Fed. Reg. at 66051 (noting that controls on filterable particles have resulted in uncontrolled condensables becoming a larger fraction of PM<sub>2.5</sub>); 73 Fed. Reg. at 28335 (noting that changing control device operating temperature could improve condensable PM<sub>2.5</sub> emission reductions). Yet the Seitz Memo illegally provides that sources need only meet requirements for “controlling PM<sub>10</sub>.” AR 120.30 at 2.

Fourth, modeling using PM<sub>10</sub> as a surrogate fails to satisfy the Class I protection requirement and the air quality impact analysis vis-à-vis PM<sub>2.5</sub> concentrations as required by sections 165(a)(5) and (6). See 42 U.S.C. § 7475(a)(5) and (6). The Seitz Memo itself recognizes that the modeling required to analyze PM<sub>2.5</sub> air quality impacts is not the same as the modeling used to evaluate PM<sub>10</sub>. See AR 120.30 at 1-2 (explaining that new modeling was being developed to include precursors and secondary fine particle formation); see also 70 Fed. Reg. at 65992 (explaining that PM<sub>2.5</sub> and PM<sub>10</sub> are associated with “distinctly different source types and formation processes”); 65997-98 (describing differences in transport). The PM<sub>10</sub> surrogate policy openly flouts the statutory requirement to model the PM<sub>2.5</sub> air quality impacts of proposed sources such as Desert Rock.

Petitioners found two EAB decisions discussing using PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub>—In re BP Cherry Point, 12 E.A.D. 209 (EAB 2005) and In re Prairie State Generating Company, PSD Appeal No. 05-05 (EAB, August 24, 2006), 13 E.A.D. \_\_\_. These cases are distinguishable from the Desert Rock case presently before the EAB.

In the Cherry Point, the EAB upheld the use of PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> because the permitting authority assumed all of the PM emissions from the facility were PM<sub>10</sub>, and that all of the PM<sub>10</sub> emissions from the facility were PM<sub>2.5</sub>. In Cherry Point, the EAB thus found that

compliance with the PM<sub>2.5</sub> NAAQS was in fact analyzed, that compliance was proven, and that the permitting authority's surrogate approach likely overestimated the actual emission of PM<sub>2.5</sub> and thus was protective of human health. In other words, the permitting authority modeled PM<sub>10</sub> levels and compared those levels to the PM<sub>2.5</sub> NAAQS.

The Cherry Point case is readily distinguishable from the Desert Rock case because Region 9 did not follow the same methodology used in Cherry Point. Here EPA did not in fact conduct an analysis to determine whether emissions from Desert Rock would comply with the PM<sub>2.5</sub> NAAQS, did not assume all PM<sub>10</sub> was PM<sub>2.5</sub>, and thus did not employ the same safeguards found in Cherry Point. Instead, Region 9 simply relied on the "surrogate" policy and failed to conduct any PM<sub>2.5</sub> case-by-case specific analysis.

In the Prairie State case, the EAB found that the permitting agency "went beyond the surrogate approach and provided additional reasons why it concluded that the Facility would not cause or contribute to a violation of ...the... PM<sub>2.5</sub> NAAQS." Prairie State, 2006 EPA App. LEXIS 38 at \*245. The Desert Rock case is distinguishable because for the final Desert Rock PSD permit Region 9 did not go beyond the surrogate approach to demonstrate compliance with the PM<sub>2.5</sub> NAAQS. As such, there is no additional support in the record that modeling PM<sub>10</sub> emissions and comparing those results only to the PM<sub>10</sub> NAAQS will serve as an accurate surrogate for compliance with the PM<sub>2.5</sub> NAAQS. As noted above, there are existing methods to monitor and model PM<sub>2.5</sub> emissions. Such methods should have been used to specifically model PM<sub>2.5</sub> emissions from Desert Rock.

Here, EPA seeks to substitute, wholesale, compliance with the PM<sub>10</sub> NAAQS for compliance with the PM<sub>2.5</sub> NAAQS, despite the fact that the pollutants form differently, behave differently, and are controlled differently. Additionally, EPA seeks to treat compliance with the

PM<sub>10</sub> NAAQS as compliance with the PM<sub>2.5</sub> NAAQS, even though EPA explicitly adopted the PM<sub>2.5</sub> NAAQS to address health impacts not protected by the PM<sub>10</sub> NAAQS, and even though the NAAQS for PM<sub>10</sub> includes only a short-term standard (no annual standard), while the NAAQS for PM<sub>2.5</sub> includes both a short-term and an annual standard. Thus, the amazing proposition that EPA offers is that it can substitute a 24-hour NAAQS for PM<sub>10</sub> of 150 µg/m<sup>3</sup>, for compliance with PM<sub>2.5</sub> NAAQS of 35 µg/m<sup>3</sup> on a 24-hour average and 15 µg/m<sup>3</sup> on an annual average.<sup>149</sup> This proposition is facially untenable.

Significantly, in this instance both the Desert Rock permit itself, and the rulemaking upon which it relies, are the subject of legal challenge – before the EAB and in federal court – based on whether the plain language of the CAA allows the EPA to use PM<sub>10</sub> compliance as a surrogate for PM<sub>2.5</sub> compliance, when a NAAQS has specifically been established for PM<sub>2.5</sub> and the nature of the pollutants differ significantly.

The Board should rule here that, as implemented in this instance, this approach is impermissible. If it does not, and the “surrogate” policy upon which the final rule relies is struck down by the federal courts as inconsistent with the plain language of the CAA, it will be necessary for EAB to remand the final Desert Rock PSD permit for a PM<sub>2.5</sub> compliance analysis. As such, Petitioners request that the EAB either remand the permit back to EPA for an adequate demonstration of PM<sub>2.5</sub> compliance, or in the alternative stay issuance of the Final Permit for DREF and retain jurisdiction over this permit appeal until final resolution of the pending case, NRDC v. EPA, No. 08-1250 (Ct. App. D.C. Cir.), and any appeals.

**ii. There is no Rational Basis for Using PM<sub>10</sub> as a Surrogate for PM<sub>2.5</sub>.**

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<sup>149</sup> Available on EPA’s website at: <http://www.epa.gov/oar/particlepollution/standards.html>.

Even if EPA could, as a legal matter, avoid the obligation to require specific analysis of potential impacts on PM<sub>2.5</sub> NAAQS compliance, Region 9 has provided no technical justification here for how PM<sub>10</sub> can meaningfully serve as a surrogate for PM<sub>2.5</sub>. Absent a rational basis in the administrative record for claiming that PM<sub>10</sub> is in fact an accurate surrogate for PM<sub>2.5</sub> in connection with issuance of the DREF PSD permit, the Board must remand the permit to EPA.

In fact, EPA adopted the PM<sub>2.5</sub> NAAQS precisely because PM<sub>10</sub> was not an adequate indicator of the sources, formation, transport, or health effects of fine particles. See, e.g., 62 Fed. Reg. at 38667. As noted above, the areas violating the PM<sub>2.5</sub> and PM<sub>10</sub> NAAQS are not even the same. Thus, compliance with the PM<sub>10</sub> standard is no proof at all of compliance with the PM<sub>2.5</sub> standard. The absurdity of EPA's surrogate policy is illustrated by the fact that EPA itself refuses to apply it in PM<sub>2.5</sub> nonattainment areas "because of a State's obligations to expedite attainment" of the PM<sub>2.5</sub> standard. 73 Fed. Reg. at 28342.

EPA has acknowledged that PM<sub>10</sub> is not an accurate surrogate for purposes of quantifying PM<sub>2.5</sub> emissions, analyzing the air quality impacts of PM<sub>2.5</sub>, or evaluating the control of PM<sub>2.5</sub>. See, e.g. 70 Fed. Reg. at 66044 (noting that PM<sub>10</sub> measurements miss condensable PM<sub>2.5</sub> emissions); id. at 65997-98 (noting different behavior of particles in the atmosphere); 73 Fed. Reg. at 28335 (describing different controls for PM<sub>2.5</sub> and PM<sub>10</sub>). Given these admissions, there is no possible claim that permits issued using PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> will comply with the Clean Air Act. There is simply no basis for concluding that a permitting analysis that shows PM<sub>10</sub> impacts will be below the PM<sub>10</sub> NAAQS tells us anything about whether the source will cause or contribute to violations of the PM<sub>2.5</sub> NAAQS.

EPA has failed even to show, as a technical matter, that control of PM<sub>10</sub> emissions is an adequate surrogate for control of PM<sub>2.5</sub> emissions. The D.C. Circuit has spoken, in the context of

the section 112 program, to the demonstration required under the CAA to show that control of one pollutant may serve as a surrogate for control of another. In particular, the court has explained that a regulator may not arbitrarily identify a surrogate without specifically linking the surrogate with *each pollutant* that it is intended to represent. See *Mossville Env'tl Action Now v. EPA*, 370 F.3d 1232, 1243 (D.C. Cir. 2004).<sup>150</sup> In fact, surrogates are appropriate *only* where they meet certain criteria intended to ensure that they will actually serve to demonstrate appropriate control of all represented pollutants. In particular, the D.C. Circuit has explained that the use of surrogates is permissible only if it is scientifically reasonable. See *National Lime Ass'n v. EPA*, 233 F.3d 625, 637 (D.C. Cir. 2000). At minimum, to rely on a surrogate, the regulator must demonstrate that the surrogate and the class of pollutants it represents are “invariably present” together in the emissions; that the applicable control technology “indiscriminately captures” both the surrogate and the represented pollutants; and that these controls are the “*only means* by which facilities ‘achieve’ reductions” in the target pollutants. See *Sierra Club v. EPA*, 353 F.3d 976, 984 (D.C. Cir. 2004) (citing *National Lime* at 233 F.3d at 639) (emphasis added) (addressing EPA’s use of PM as a surrogate for metal hazardous air pollutant (“HAP”)). If a target pollutant and its proposed surrogate do not behave identically with respect to controllability, then the surrogate approach is impermissible. While the court’s analyses in these cases focused on HAP, the very same principles must be applied to any attempt to use control of one pollutant as a surrogate for control of another for purposes of complying

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<sup>150</sup> The Court in *Mossville* rejected EPA’s reliance on vinyl chloride as a surrogate for all HAP from PVC production facilities, ruling unambiguously that EPA was required to “establish a correlation between the surrogate and the HAP” and that to do so the agency was affirmatively required to identify each HAP that the facility would emit, and directly link each such HAP with the chosen surrogate. 370 F.3d at 1243. It was fatally insufficient for EPA to simply assert without detailed, HAP-specific analysis that vinyl chloride was an appropriate surrogate for all HAP.

with the CAA. Here, EPA has made no demonstration whatever that control of PM<sub>10</sub> will ensure equivalent control of PM<sub>2.5</sub>. To the contrary, EPA has acknowledged that such these pollutants will involve different control strategies. See, e.g., 73 Fed. Reg. at 28335 (noting that changing control device temperature could improve condensable PM<sub>2.5</sub> reductions).

In summary, Region 9 has committed clear error by failing to comply with the mandatory requirements of Section 165(a) of the CAA because they failed to: 1) specifically demonstrate that emissions from DREF would not cause or contribute to a violation of the PM<sub>2.5</sub> NAAQS; 2) failed to set a specific emission limit for PM<sub>2.5</sub> based on BACT; 3) specifically assess the impacts of PM<sub>2.5</sub> emission on Class I areas; and, 4) include specific monitoring requirements for PM<sub>2.5</sub> emissions from DREF. Petitioners request that the EAB enter the following relief on this claim: 1) remand the final PSD permit to Region 9 to correct the illegalities noted above; and/or 2) stay issuance of the final DREF permit and retain jurisdiction over this permit appeal until final resolution of NRDC v. EPA, 08-1250 (Ct. App. D.C. Cir.) including any appeals.

**IX. EPA COMMITTED CLEAR ERROR BY REJECTING THE FLM'S ADVERSE IMPACT DETERMINATIONS, FAILING TO REQUIRE A CUMULATIVE VISIBILITY IMPACT ANALYSIS, AND BY MAKING FACTUALLY UNSUPPORTED FINDINGS REGARDING IMPACTS TO VISIBILITY.**<sup>151</sup>

During the public comment period on the draft PSD permit for Desert Rock, the National Park Service ("NPS") and the U.S. Forest Service ("USFS") both found that emissions from DREF may cause adverse impacts to visibility in Class I areas, such as Mesa Verde National Park and the Weminuche Wilderness area. In response, Region 9 arbitrarily rejected these adverse impact determinations. Moreover, at the time of the issuance of the draft PSD permit,

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<sup>151</sup> Petitioners submitted comments on these issues during the public comment period on the draft PSD permit. See, AR 66 at pp. 70-78. See also, Ex. 41, at 11 (October 5, 2006 Khanh Tran report found at EPA's administrative record at folder "ltr\_23\_attachments.zip" file name "AMI PSD Report").

Region 9 relied on an unsigned and undisclosed “mitigation agreement” with Desert Rock that purported to offset these adverse impacts. Region 9 and DREF have completely failed to prove, by air quality modeling or other evidence, that the purported offsets outlined in the mitigation agreement would, in fact, eliminate the adverse impacts to visibility and regional haze caused by the DREF emissions. In light of these deficiencies, Region 9’s issuance of a final PSD permit constitutes clear error. As such, Petitioners request that the EAB remand the Desert Rock permit back to Region 9 to correct the significant deficiencies outlined herein.

**1. Visibility Considerations in the Permit Proceeding.**

**A. The NPS’s findings of adverse impacts to visibility.**

The National Park Service (“NPS”) is the federal land manager for 8 mandatory Class I areas within 300 km of the proposed plant site: Mesa Verde, Petrified Forest, Grand Canyon, Arches, Bandelier, Black Canyon, Canyonlands, and Capitol Reef. The NPS has the authority to make determinations regarding whether a new source of pollution may cause adverse impacts to visibility at these 8 mandatory Class I areas. 42 U.S.C. § 7475(d)(2)(B).

On July 6, 2004, NPS sent a letter to EPA taking issue with Region 9’s prior determination that Sithe’s PSD permit application was “complete.” NPS noted, *inter alia*, that the permit application was deficient because Sithe had not conducted a cumulative visibility impact analysis. AR 15 at p. 2; see also, AR 18 at p. 4 (NPS September 14, 2004 letter to EPA). A cumulative visibility impact analysis should be performed when the new source causes a 5% change in extinction in visibility. Id. Sithe’s visibility analysis showed a greater than 5% extinction in visibility at all 15 Class I areas analyzed. Id. In its letter, NPS noted that the EAB had recognized the requirement of a cumulative visibility analysis by stating:

Petitioners are correct that under EPA rules, in determining whether a proposed source will cause an adverse impact on visibility, the cumulative visibility impacts of the

pending PSD applicant and all PSD-permitted sources, including those not yet constructed, must be assessed against background visibility conditions. *In the Matter Old Dominion Electric Cooperative Permit Application*, PSD Appeal No. 91-39 (1992 EPA App. LEXIS 37; 3 E.A.D. 779).

Id. On October 26, 2006, NPS provided formal comments on the draft PSD permit. AR 120.8.

These comments are supported by extensive data and analytical analysis. The NPS specifically stated:

Over the past two years, the NPS has worked closely with representatives of Sithe, the U.S. EPA, the U.S. Forest Service, Dine Power Authority, and Navajo EPA to ensure that potential impacts of the proposed Desert Rock Energy Facility on air quality and related values were carefully analyzed. ***When it became apparent that emissions from the facility could adversely impact visibility in several NPS Class I areas***, Sithe suggested mitigation measures that were intended to produce a net environmental improvement, notwithstanding construction and operation of the Desert Rock Energy Facility.

AR 120.8 at p. 2. The Park Service also stated in that same letter:

The NPS has reviewed the PSD application and prepared preliminary technical findings with respect to the proposed project. ***Relevant portions of the document state that the proposed project may lead to adverse impacts to Class I areas*** in the absence of conditions and measures designed to mitigate these impacts.

See, AR 120.8 at p. 2 (emphasis added). The NPS also specifically concluded:

- “Sithe’s cumulative analyses of increment consumption and visibility impacts are incomplete and underestimate impacts” and,
- “Desert Rock’s impacts on visibility and deposition exceed NPS significance thresholds and fall into the range of impacts for which adverse impact findings have been made in other cases (Longview Power in West Virginia and Greene Energy in Pennsylvania).”

See, AR 120.8 at p. 48. More specifically the NPS found:

Desert Rock is predicted to cause significant impacts upon visibility in eight of the nine Class I areas within 300 km, as well as in 16 of 18 Class II parks in that area. Four Class I parks would experience a combined total of eight days over the three-year modeling period with changes in extinction greater than 10%, while eight Class II parks would also experience changes in extinction greater than 10%. Even though Desert Rock is not subject to the BART requirements for much older plants, if it were, under the EPA's impact criteria, its impacts at Mesa Verde would be considered a significant contribution to visibility impairment there.

AR 120.8 at p. 47. In addition, NPS found the following:

Sithe's visibility modeling using the FLAG approach predicts that Desert Rock could exceed 5% change in extinction at Arches, Aztec Ruins, Bandelier, Black Canyon, Canyonlands, Capitol Reef, Chaco Culture, Currecanti, El Malpais, Glen Canyon, Grand Canyon, Hovenweep, Hubbell Trading Post, Mesa Verde, Petrified Forest, Yucca House, and Zuni-Cibola. Visibility modeling also predicts that there would be a greater than 10% change in extinction at the Canyonlands, Capitol Reef, Mesa Verde and Petrified Forest Class I areas, as well as the Canyon de Chelly, Chaco Culture, El Malpais, Glen Canyon, Hovenweep, Navajo, Yucca House, and Zuni-Cibola Class II areas. Summing the number of days over 10% change in extinction across all Class I areas affected, there are eight days in three years in which the 10% change in extinction threshold could be exceeded at NPS Class I areas due to this project. Mesa Verde is the most-impacted single park, with four days in which the 10% change in extinction threshold could be exceeded.

Id. at p. 43.

Sithe attempted to avoid the consequences of NPS's modeling results by suggesting what the NPS called "deviations" from the first-level screening procedure. The NPS rejected Sithe's suggestions as "arbitrary adjustments." See, AR 120.8 at App. 8.

At EPA's suggestion, Sithe then conducted modeling pursuant to EPA's BART guidance. That modeling predicted that the facility would lead to a 5% change in extinction on 27 days at Mesa Verde over a three-year period. Id. The NPS then suggested to Sithe that it perform modeling "to assess the effects of local terrain and aqueous phase conversion of pollutants," but Sithe rejected this suggestion, so the NPS did this modeling itself. Id. This modeling indicated a potential for airflow into Grand Canyon National Park following stagnation events, "resulting in significant visibility impacts." Id. at App. 8-9. Meanwhile, Sithe performed some special "time period" modeling, and while it showed lower maximum visibility impacts at 5 Class I areas during one period and 15 Class I areas during another period, it also showed a 15% change in extinction at Bandelier National Monument. Id. at App. 9.

The above referenced NPS comment letters were submitted prior to the November 13, 2006 close of public comment on the draft PSD permit. After the comment period closed, the NPS sent a memorandum to the Bureau of Indian Affairs commenting on the Draft

Environmental Impact Statement for the Desert Rock project. In this memorandum, the NPS reiterated its adverse impact finding:

***Our PSD analysis, including review of the Regional Haze modeling results in Table K-33 essentially determined that the facility may cause an adverse impact on visibility in the absence of mitigation measures.*** The discussion on p. K-32 concludes that the “project's impacts to visibility and regional haze are very minimal with only a marginally noticeable impact at Mesa Verde.” The Federal Land Manager, under the Clean Air Act, has responsibility to determine what constitutes an adverse impact in the context of new sources. ***The conclusion on p. K-32 is not consistent with the determination of the Federal Land Manager.***

As we indicate in our PSD comments, ***and to address our adverse impact concerns***, Sithe proposed a package of mutually acceptable mitigation measures. Most noteworthy is Sithe's commitment to obtain emission reductions (sulfur dioxide and/or nitrogen oxides) within the region that will mitigate their contribution to regional visibility impairment. We expect this mitigation agreement to be enforceable.

See, Ex. 38<sup>152</sup> (Memorandum from Snyder, NPS, to Yazzie, BIA (August 6, 2007) (emphasis added)).

#### **B. The U.S. Forest Service's finding of adverse impacts to visibility**

On April 25, 2005, the USFS submitted comments to EPA on the draft PSD permit concurring with NPS's previous concerns about potential impacts caused by DREF. AR 26. The April 25, 2005 USFS letter found that Sithe's visibility impacts analysis was deficient, *inter alia*, “due to the lack of a cumulative impact analysis for effects on visibility.” *Id.* On September 8, 2006, the USFS submitted an additional comment letter to EPA, clarifying its April 26, 2005 letter, by stating, “[b]ased on the information provided to us by Sithe, the USDA-FS does find that the predicted impacts [of DREF] would be adverse.” Ex. 39 (found in the administrative record at file “ltr\_23\_attachments” file “USFS letter 9-8-2006.pdf”).

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<sup>152</sup> Petitioners have been unable to locate this document in the administrative record. However, its relevance and authenticity is evident from a review of the document. Petitioners request that the EAB admit this document as part of the administrative record in this matter.

Despite these comments from NPS and USFS, Region 9 never required Sithe to conduct a cumulative visibility analysis. Instead, after issuing the final PSD permit, EPA responded to comments by stating:

EPA disagrees with the commenter's claim that a cumulative visibility analysis was needed. There is no regulatory requirement for such an analysis. Such an analysis is anticipated by Federal Land Managers' Air Quality Related Values Workgroup (FLAG) for some cases in which visibility extinction impacts exceed 10%, to aid in FLM determination of whether the project could have an adverse visibility impact. Partly in consideration of the mitigation package agreed to by Sithe, the FLMs did not require a cumulative visibility analysis in their assessment of whether the impact was adverse.

AR 120 at p. 146, response to comment 22.

In summary, every modeling exercise has shown that DREF will produce adverse impacts on visibility. Moreover, EPA has never provided an analytical or narrative explanation regarding: (1) how the "mitigation agreement" will ensure that adverse impacts will not result from operation of DREF; and, (2) why the "mitigation agreement" obviates the need for a cumulative visibility analysis.

### **C. The Mitigation Agreement**

At the time the draft PSD permit was issued, Region 9 and DREF attempted to offset these adverse visibility impacts by proposing a "mitigation agreement." AR 41. This "mitigation agreement" was not signed, was not made enforceable into the draft PSD permit, and was not made part of the administration record during public comment on the draft PSD permit.<sup>153</sup>

Since the NPS's adverse impact determination was made contingent on adoption of an effective mitigation plan, review of the mitigation plan is critical to determine whether

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<sup>153</sup> Petitioners obtained a copy of the draft mitigation agreement during the public comment period.

implementation of the mitigation plan will in fact eliminate the adverse impact to visibility resulting from DREF's emissions. The draft mitigation agreement was ultimately signed as a *Memorandum of Understanding: Between the Navajo Nation Environmental Protection Agency and Desert Rock Energy Company, LLC, to develop an enforceable Voluntary Air Emissions Reduction Plan*, (AR-81), and contains an Exhibit A, "Sulfur Dioxide Mitigation." This Exhibit has now been made part of the final permit (Condition D.3), and it provides for two options. Under Option A, the applicant is supposed to develop or cause to be developed a capital investment project or projects that will result in real emission reductions at another coal-fired facility located within 300 km of the plant site. Under Option B, the applicant must obtain and retire up to \$3 million of acid rain allowances from facilities that are located within 300 km of the plant site. The vintage year of these allowances must correspond to the same year being mitigated, and the allowance acquisition must equal Desert Rock's SO<sub>2</sub> emissions for that year. Under Option B, however, nothing prevents the allowance sellers from purchasing allowances from outside the area or from a different vintage year to cover their own obligations. Consequently, the end result of the mitigation plan under Option B could be no net reduction in SO<sub>2</sub> in the area.

#### **D. Regional Haze**

Sithe provided an update to its Class I modeling in March of 2006. DREF Class I Modeling Supplement (March 2006). AR-38. This analysis was done to evaluate the regional haze benefits of emissions reductions planned at the Four Corners and San Juan power plants. Id. at 1-1. Based on this analysis, Sithe concluded "the operation of the proposed DREF will not adversely affect compliance with the goals of the Regional Haze Rule in the early part of the rule's implementation." Id. at 5-1. It appears that EPA may have relied on this modeling to

justify its proposed issuance of the DREF permit in spite of the adverse impact on visibility claimed by the NPS and USFS. Specifically, EPA stated in its AAQIR “[t]his modeling showed that visibility would improve in the area regardless of the emissions from the proposed Facility.” AR 46 at 45.

The March 2006 Class I modeling only considers the impacts of DREF and the Four Corners and San Juan power plants on meeting regional haze goals in the region’s Class I areas. However, there are numerous other existing sources that are impacting visibility at the region’s Class I areas. Further, there are numerous new sources of emissions that will impact the ability of the region’s Class I areas to meet regional haze goals in the future, including several new coal-fired power plant units planned in the region and air emissions sources associated with significant oil, gas and coal bed methane development planned for the region. In the BLM’s Farmington Field Office Area alone, the BLM has projected an increase in NO<sub>x</sub> emissions of over 62,000 tons per year within 20 years from compressor engines associated with gas development authorized under the Farmington RMP. See, Ex. 40 (Farmington RMP, Volume 1, Chapter 1 at p. Summary-6 (found at administrative record at folder “ltr\_23\_attachments” file “Volume 1, Chapter 1.pdf”). Thus, the March 2006 Class I analysis did not examine all existing and future emissions sources that impact regional haze in the region’s Class I areas.

The administrative record is also silent on whether EPA complied with the regulatory requirements to show that permitting of Desert Rock would not interfere with both durable long-term compliance with the anti-degradation requirement and the glidepath or “rate of progress” necessary to achieve natural visibility conditions by the year 2064. This demonstration of compliance is required for Mesa Verde National Park and the other numerous mandatory Class I

areas in the region affected by the additional visibility-impairing pollution discharged from Desert Rock. The administrative record does not establish that EPA's regional haze analysis included a comprehensive assessment of emissions and require identification of "all anthropogenic sources of visibility impairment considered by the State in developing its long-term strategy. The State should consider major and minor stationary sources, mobile sources, and area sources." 40 C.F.R. § 51.308(d)(3)(iv). Further, the rules require evaluation of "[t]he anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy." 40 C.F.R. § 51.308(d)(3)(v)(G). It does not appear from the administrative record that EPA has carried out its own regulatory mandates under the regional haze program in proposing to approve the Desert Rock power plant.

Sithe's March 2006 modeling is also silent on whether regional haze goals will be met beyond the year 2010 and, given all the growth in visibility-impairing emissions expected in the region, an evaluation of such progress in meeting regional haze goals is very important.

Moreover, Petitioners have identified deficiencies in March 2006 modeling methodologies, which are discussed in the October 5, 2006 Tran report. Ex. 41, and NPS's comments discussed above. As a result of these flaws in the modeling, Sithe's March 2006 Class I modeling update may have underestimated regional haze impacts at the Class I areas modeled (and thus overstated the benefit of the San Juan and Four Corners emission reductions when considered in conjunction with the DREF emissions). AR 37-38, 11-13.

## **2. EPA's Obligations Under the Act**

**A. Visibility Protection under CAA Section 165.**

Section 165(d)(2)(C)(ii) and (iii) of the CAA provides:

(ii) In any case where the Federal Land Manager demonstrates to the satisfaction of the State that the emissions from such facility will have an adverse impact on the air quality-related values (including visibility) of such lands, notwithstanding the fact that the change in air quality resulting from emissions from such facility will not cause or contribute to concentrations which exceed the maximum allowable increases for a class I area, a permit shall not be issued.

(iii) In any case where the owner or operator of such facility demonstrates to the satisfaction of the Federal Land Manager, and the Federal Land Manager so certifies, that the emissions from such facility will have no adverse impact on the air quality-related values of such lands (including visibility), notwithstanding the fact that the change in air quality resulting from emissions from such facility will cause or contribute to concentrations which exceed the maximum allowable increases for class I areas, the State may issue a permit.

42 U.S.C. § 7475(d)(2)(C)(ii) and (iii).

The applicable regulations, 40 C.F.R. § 52.21(p)(2) and (3) state:

(3) Visibility analysis. The Administrator shall consider any analysis performed by the Federal land manager, provided within 30 days of the notification required by paragraph (p)(1) of this section, that shows that a proposed new major stationary source or major modification may have an adverse impact on visibility in any Federal Class I area. Where the Administrator finds that such an analysis does not demonstrate to the satisfaction of the Administrator that an adverse impact on visibility will result in the Federal Class I area, the Administrator must, in the notice of public hearing on the permit application, either explain his decision or give notice as to where the explanation can be obtained.

(4) Denial -- impact on air quality related values. The Federal Land Manager of any such lands may demonstrate to the Administrator that the emissions from a proposed source or modification would have an adverse impact on the air quality-related values (including visibility) of those lands, notwithstanding that the change in air quality resulting from emissions from such source or modification would not cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Administrator concurs with such demonstration, then he shall not issue the permit.

The CAA implementing regulations clarify that the FLMs need not prove with absolute certainty that a proposed source *will* adversely impact visibility in a Class I area. Instead, the FLM need only show that a proposed source *may* have such impact.

Together, these regulatory and statutory provisions provide the following:

(1) if emissions from the proposed plant will cause an exceedance of a Class I increment, then if the applicant can demonstrate to the federal land manager that the facility will have no adverse impact on visibility, and if the federal land manager agrees, then the permit can be issued; or

(2) if emissions from the proposed plant will *not* cause an exceedance of a Class I increment, but the federal land manager demonstrates to EPA that the proposed source will have an adverse visibility impact on visibility, then EPA must not issue the permit.

EPA also has an obligation under Section 165 to perform cumulative visibility assessments that evaluate the potential visibility impairment to be caused by the new source in combination with existing sources. EPA has long required that in carrying out section 165(d) of the PSD program the evaluation of visibility impacts from a new source includes the cumulative evaluation of the combination of sources on visibility conditions at mandatory class I areas:

Environmental groups and private citizens expressed the need for a policy on reviewing cumulative impacts from new sources. Rapid industrial growth is expected near some of the Class I areas. These commenters are concerned that any one source would not cause significant impairment, but the combination of sources may adversely affect air quality related values (including visibility). This would occur if the permitting authority only review the potential impacts of a new source on prevailing visibility conditions, without regard to the impacts of permitted sources not yet completed. \* \* \*

In assessing a proposed source's impact on visibility, the reviewing authority must necessarily review that impact in the context of existing background visibility. This point does not seem debatable. The question raised by the commenters focuses on whether previously permitted sources that have not yet been constructed are part of the existing background. The EPA concludes that such sources are part of existing background. In other situations, EPA has always regarded permitted sources as part of existing background. For instance, in assessing impacts on the national ambient air quality standards, permit applicants must account for the air quality impacts of permitted, as well as constructed, sources. This treatment should be the same for visibility assessment. The EPA does not believe that a change in the proposed language for new source review is necessary to effect this implementation.

See 50 Fed. Reg. 28,544, 28,548 (July 12, 1985).

The obligation to conduct cumulative visibility assessments has been confirmed by the EAB. In re Old Dominion Electric Cooperative, 3 E.A.D. 779 (EAB 1992).

## **B. Regional Haze**

In addition to protecting visibility under Section 165, the CAA also contains a provision to prevent and remedy national regional haze that can contribute to visibility impairment. In Section 169A of the CAA, Congress declared a national goal of preventing “any future, and the remedying of any existing, impairment of visibility in mandatory Class I areas”. 42 U.S.C. §7491(a). EPA and the States must make “reasonable progress” in addressing new and existing visibility impairment. Id. § 7491(b)(2). The EPA implementing regulations require that EPA must “ensure that the source’s emissions will be consistent with making reasonable progress toward the national visibility goal referred to in 51.300(a).” 40 C.F.R. § 51.307. This duty applies to EPA when it is acting in the shoes of the tribe as the permitting agency. As EPA itself has found: “In such cases, all of the rights and duties that would otherwise fall to the State [or Tribe] accrue instead to EPA.” 56 Fed. Reg. 50,172, 50,173 (Oct. 3, 1991).

The haze rules “must provide for an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period.” 40 C.F.R. § 51.308(d)(1). EPA may not approve a permit for a new source that will add extensive visibility-impairing emissions that adversely impact visual air quality at numerous mandatory Class I areas. EPA must show that the “reasonable progress goal” for these areas will be protected.

Moreover, EPA may not disregard its own regulatory prohibition on visibility degradation for the least impaired days. It must be adhered to. When EPA adopted the anti-degradation

requirement it explained “this approach is consistent with the national goal in that it is designed to prevent future impairment, a fundamental concept of section 169A of the CAA.” 64 Fed. Reg. at 35,733 (July 1, 1999).

The regional haze program requires a “long-term strategy” and that compliance with the reasonable progress goal requiring an improvement in visibility involves a careful examination of the “rate of progress needed to attain natural visibility conditions by the year 2064.” See 40 C.F.R. § 51.308(d)(1). EPA’s regulations explain that the determination of this “rate of progress” or evaluation of the glidepath is an essential element of complying with the regional haze reasonable progress goals and that EPA must:

Analyze and determine the rate of progress needed to attain natural visibility conditions by the year 2064. To calculate this rate of progress, the State must compare baseline visibility conditions to natural visibility conditions in the mandatory Federal Class I area and determine the uniform rate of visibility improvement (measured in deciviews) that would need to be maintained during each implementation period in order to attain natural visibility conditions by 2064. In establishing the reasonable progress goal, the State must consider the uniform rate of improvement in visibility and the emission reduction measures needed to achieve it for the period covered by the implementation plan.

40 C.F.R. § 51.308(d)(1)(B).

EPA’s regulations are clear in requiring a comprehensive assessment of emissions and require identification of “all anthropogenic sources of visibility impairment considered by the State in developing its long-term strategy. The State should consider major and minor stationary sources, mobile sources, and area sources.” 40 C.F.R. § 51.308(d)(3)(iv). Further, the rules require evaluation of “[t]he anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy.” 40 C.F.R. § 51.308(d)(3)(v)(G). Thus, EPA must demonstrate that the haze-impairing emissions from Desert Rock will comply with EPA’s “core requirements” to protect mandatory Class I areas from regional haze. 40 C.F.R. § 51.308(d).

### **3. EPA Failed to Meet Its Statutory Obligations With Respect to Desert Rock**

As proven below, Region 9 committed clear error in issuing the final PSD permit for Desert Rock because: (1) it wrongfully rejected the FLMs' adverse impact determination; (2) it failed to require a cumulative visibility analysis as requested from both FLMs; (3) it failed to disclose to the public the mitigation agreement during public comment on the draft PSD permit; (4) it failed to provide an analytical or narrative explanation of how the mitigation agreement in fact eliminates the adverse impacts to visibility and obviates the need for a cumulative visibility impact analysis; and, 5) the regional haze analysis relied upon by Region 9 in issuing the final PSD permit is significantly flawed.

#### **A. Region 9's rejection of the FLMs' adverse impact determination was clear error**

As early as 2004, the NPS and USFS notified Region 9 and DREF that DREF may adversely impact visibility in Class I areas. The NPS provided Region 9 with an extensive analysis supporting their finding of adverse impact. AR 120.8.

In response, Region 9 simply claimed that NPS and USFS failed to make a "showing" of an adverse impact determination. For example, in response to comments on the draft PSD permit, Region 9 stated, "Federal Land Manager for a Class I area can make a showing that a source has an adverse impact on Air Quality Related Values, despite the absence of Class I increment violations. No such showing has been made for DREF." AR 120 at p. 127 (response to comment #5). Region 9 further states, "[t]he limited information provided by the FLMs does not demonstrate to the satisfaction of Region 9 that this project will have an adverse impact on visibility in nearby Class I areas. The explanation provided in our AAQIR remains valid and is not contradicted by any other analysis in the record." AR 120 at p. 143 (response to comment

20). Worse yet, Region 9 actually concluded that “DREF will not cause or contribute NAAQS or PSD increment violations, and will not have an adverse impact of Air Quality Related Values at any Class I Area.” AR 120 at p. 138 (response to comment 15).

However, this finding is difficult to reconcile with EPA’s finding in its AAQIR which states, “[f]or Class I areas, Sithe's modeling showed that the emissions from the Facility could potentially have an impact on an Air Quality Related Value (AQRV). Specifically, Sithe's modeling indicated that the Facility's emissions would result in greater than 5% extinction of visibility on at least 1 day at 11 of the surrounding 15 Class I areas.” AR 46 at p. 38. So the EPA’s AAQIR actually confirms the findings of the FLMs—namely, that emissions from Desert Rock may adversely impact visibility in Class I areas.

Region 9’s attempt to dismiss the FLM’s findings of adverse impact is arbitrary and capricious. The facts reveal that the FLMs made adequate adverse impact determinations, the determinations were timely, and that the determinations were supported by data and modeling. As such, Region 9 committed clear error by rejecting the FLM’s adverse impact determinations.

**B. Region 9’s failure to require a cumulative visibility assessment was clear error.**

As noted above, both NPS and USFS informed Region 9 that Sithe needed to perform a cumulative visibility assessment. Region 9 rejected this request. Region 9’s AAQIR is silent as to the FLM’s request for a cumulative visibility analysis. Instead, in its response to comments on the draft PSD permit, Region 9 summarily states,

EPA disagrees with the commenter’s claim that a cumulative visibility analysis was needed. There is no regulatory requirement for such an analysis. Such an analysis is anticipated by Federal Land Managers’ Air Quality Related Values Workgroup (FLAG) for some cases in which visibility extinction impacts exceed 10%, to aid in FLM determination of whether the project could have an adverse visibility impact. Partly in consideration of the mitigation package agreed to by Sithe, the FLMs did not require a cumulative visibility analysis in their assessment of whether the impact was adverse.

AR 120 at p. 146 (response to comment 22).

Region 9's failure to require a cumulative visibility analysis constitutes clear error. First, Region 9 failed to incorporate the correct criteria for triggering a cumulative visibility analysis. In its response to comments, EPA states that the trigger for such an analysis is whether "visibility extinction impacts exceed 10%." *Id.* To the contrary, Region 9 had previously been informed by NPS and USFS that a cumulative visibility assessment is required if visibility extinction impacts exceed "5%". *See*, AR 15 at p. 2; *see also*, AR 18 at p. 4. However, even if the triggering event is 10% extinction, the FLMs have found that Desert Rock's emissions will cause visibility extinction at greater than 10% in Class I areas. AR 120.8 at p. 47. So, regardless of which trigger is used, a cumulative visibility assessment was required before issuing the final PSD permit for Desert Rock. *In re Old Dominion Electric Cooperative*, 3 E.A.D. 779 (EAB 1992). Region 9's failure to require such an assessment constitutes clear error.

**C. EPA's failure to disclose the mitigation agreement during public comment was clear error.**

Region 9 relies heavily on the "mitigation agreement" in finding that Desert Rock will not cause adverse impact to visibility. AR 46 at p. 45. However, during public comment on the draft PSD permit, EPA also failed to include the mitigation strategy as an enforceable provision of the draft permit. AR 46 at 38. Indeed, the mitigation strategy was not even made available to the public, and is not listed as part of the administrative record for the proposed DREF PSD permit. AR 66 at p. 77. EPA's failure to make all relevant information available during the public comment period constitutes clear error. Petitioners request that the EAB remand the final PSD permit for public comment.

**D. Region 9 has failed to provide evidentiary support for its findings that the mitigation agreement remedies the adverse impacts to visibility and obviates the need for a cumulative visibility assessment.**

Region 9 relies on the mitigation agreement in concluding that any adverse impacts to visibility will be mitigated and that a cumulative visibility assessment is unnecessary. AR 46 at p. 45 and AR 120 at p. 146 (response to comment 22). Unfortunately, Region 9 fails to provide any analytical or narrative support in the administrative record that would buttress these findings. As such, Region 9 has committed clear error by reaching significant findings without evidentiary support in the record.

**i. There is no support in the administrative record that the mitigation agreement will in fact offset adverse impact to visibility.**

In response to comments on the adverse impact determinations, Region 9 has stated, “Sithe has agreed to perform additional mitigation that will more than offset any potential contribution to visibility impairment.” AR 46 at p. 45. However, there is no data, analysis, or narrative statement in the administrative record proving that implementation of the mitigation will in fact offset the adverse impact on visibility caused by emissions from DREF.

Under the mitigation agreement, it is possible that not even one pound of SO<sub>2</sub> or NO<sub>x</sub> emissions will actually be reduced. AR 81. Specifically, Option B provides that Sithe shall obtain and retire “mitigation allowances” from one or more power plants within 300 km of the plant site. The first bullet of Option B specifies that the annual number of “mitigation allowances” Sithe will need will equal its actual annual SO<sub>2</sub> emissions. The second bullet states that the “mitigation allowances” are acid rain allowances from sources within 300 km of the plant site. The bullet also provides that Sithe need only spend \$3 million on “mitigation

allowances.” The bullet also provides that with FLM approval, Sithe can substitute physical emission reductions from sources not subject to the acid rain program. The third bullet provides that the mitigation allowances must be from the year that is being mitigated, and specifies the methodology by which the purchased allowances are to be retired. The final bullet provides compliance reporting requirements for Sithe.

Option B of the mitigation agreement only applies to Sithe. Thus, although Sithe is required to obtain and retire acid rain allowances from nearby sources for the relevant year, absolutely nothing would prevent the sellers of those allowances from obtaining out-of-area allowances to cover any acid rain obligations it may have. AR-81. If the sellers sold out-of-area allowances, there would be no real reduction of visibility causing emissions within 300km of DREF. Thus, the allowance acquisition required by Option B could entail nothing more than a paper exercise with no real benefit to visibility.

Furthermore, even if the mitigation plan will lead to real reductions in annual emissions within the plan’s 300 km radius, the modeling performed by Park Service does not match the terms of the mitigation plan. The “offset modeling” described in the Park Service’s comment letter, 2006 NPS Letter, at App. 9-10, assumed reduced 24-hour emission rates at the San Juan and Four Corners facilities. The mitigation plan does not require reduced emissions solely from San Juan and Four Corners nor does it require reduced daily emission rates. Instead, the mitigation agreement only requires (to the extent it produces any real reductions at all) reduced annual emissions. Thus, there is no evidence based on modeling that the mitigation agreement will in fact offset the visibility impairment produced from DREF’s emissions.

- ii. There is no support in the administrative record regarding why the mitigation agreement obviates the need for a cumulative visibility analysis**

Further, Region 9 has also found that, “[p]artly in consideration of the mitigation package agreed to by Sithe, the FLMs did not require a cumulative visibility analysis in their assessment of whether the impact was adverse”. AR 120 at p. 146 (response to comment 22). Again, there is no data, analysis, or narrative statement in the administrative record supporting how the mitigation agreement obviates the need for a cumulative visibility assessment. Region 9’s unsupported findings must be rejected. See In re Knauf Fiber Glass, GmbH, 8 E.A.D. 121, at 175 (“Unfortunately, there are no details regarding Region IX's determination in the administrative record. As such, we cannot judge the adequacy of the Region’s analysis”).

**E. The regional haze assessment relied on by Region 9 in issuing the final PSD permit is significantly flawed.**

For the reasons outlined below, Region 9 committed clear error by relying upon a significantly flawed regional haze assessment in issuing the final PSD permit for Desert Rock.

First, Region 9 never provided its own review and opinion on whether the construction of DREF would be consistent with visibility new source review requirements. Instead, Region 9 stated without further discussion of its own review “EPA has concluded that construction and operation of the proposed Facility is consistent with the requirements for visibility improvement under the Regional Haze rule.” AR 46 at 45. This lack of analysis prevents the Petitioners and the EAB from assessing the accuracy of this finding.

As noted above, Sithe’s March 2006 Class I modeling is also significantly flawed. First, the March 2006 Class I modeling only considers the impacts of DREF and the Four Corners and San Juan power plants on meeting regional haze goals in the region’s Class I areas and fails to consider the numerous other existing sources that are impacting visibility at the region’s Class I areas, such as several new coal-fired power plant units

planned in the region and increases in NO<sub>x</sub> emissions of over 62,000 tons per year within 20 years from compressor engines associated with gas development authorized under the Farmington RMP. Thus, the March 2006 Class I analysis cannot be relied upon to demonstrate anything with respect to the area meeting regional haze goals without looking at the big picture of all existing and future emissions sources that impact regional haze in the region's Class I areas. 40 CFR § 51.308(d)(3)(iv).

Sithe's March 2006 modeling also fails to analyze whether there will be "an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period." 40 C.F.R. §51.308(d)(1). The modeling also fails to demonstrate that emissions from Desert Rock will be consistent with the "rate of progress needed to attain natural visibility conditions by the year 2064." See 40 C.F.R. §51.308(d)(1). EPA's regulations explain that the determination of this "rate of progress" or evaluation of the glidepath is an essential element of complying with the regional haze reasonable progress goals and that EPA must:

Analyze and determine the rate of progress needed to attain natural visibility conditions by the year 2064. To calculate this rate of progress, the State must compare baseline visibility conditions to natural visibility conditions in the mandatory Federal Class I area and determine the uniform rate of visibility improvement (measured in deciviews) that would need to be maintained during each implementation period in order to attain natural visibility conditions by 2064. In establishing the reasonable progress goal, the State must consider the uniform rate of improvement in visibility and the emission reduction measures needed to achieve it for the period covered by the implementation plan.

40 C.F.R. § 51.308(d)(1)(B). From a review of the administrative record, it does not appear that these requirements have been complied with.

Sithe's March 2006 modeling is also silent on whether regional haze goals will be met beyond the year 2010 and, given all the growth in visibility-impairing emissions

expected in the region, such progress in meeting regional haze goals seems very unlikely. Finally, the modeling deficiencies identified by Tran have not been addressed.

In summary, for the reasons stated herein, the final PSD permit should be remanded to EPA to address the significant deficiencies associated with the visibility and regional haze assessments.

**X. THE DESERT ROCK PSD PERMIT MUST BE REMANDED TO EPA FOR PROPER DETERMINATION OF POTENTIAL CONTRIBUTIONS TO VIOLATIONS OF SULFUR DIOXIDE INCREMENTS AND ADDITIONAL PUBLIC NOTICE AND OPPORTUNITY FOR COMMENT<sup>154</sup>**

As a revision to the original Desert Rock PSD permit application, Sithe submitted updated cumulative Class I and II SO<sub>2</sub> PSD increment analyses in January and June 2006. AR 37 and AR 43. Region 9 issued its draft PSD permit for Desert Rock in July 2006. See AR 54 (draft PSD permit) and AR 46 (AAQIR). In its AAQIR, EPA proposed to find that Sithe followed appropriate modeling procedures and applicable guidance in determining that Desert Rock would not cause or contribute to violation of the PSD increments. AR 46 at 35. After evaluating the draft PSD permit and AAQIR, Petitioners provided comments from technical experts Vicki Stamper and Khanh Tran identifying significant deficiencies with Region 9's SO<sub>2</sub> increment analysis. See, AR 66 at 66-70, Ex. 46.<sup>155</sup> For example, Petitioners commented that EPA failed to include certain sources of pollution in its SO<sub>2</sub> increment analysis and, for the sources included, Region 9 used incorrect emission rates. See AR 120 at p. 131-3 (comments 9 and 10 and responses to those comments). EPA issued its final PSD permit on July 31, 2008. In

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<sup>154</sup> Petitioners submitted comments on this issue in their November 13, 2006 comment letter. See, AR 66 at pp. 66-70.

<sup>155</sup> See also November 9, 2006 expert report of Vicki Stamper and November 9, 2006 expert report of Khanh Tran, attached hereto, respectively, as Exhibits B and C to Affidavit of Victoria R. Stamper, Ex. 42 hereto.

its response to comments, Region 9 agreed with Petitioners that the SO<sub>2</sub> increment analysis was improperly conducted. Id. More specifically, Region 9 stated:

EPA agrees that SO<sub>2</sub> increment expansion for Cameo Station was not properly documented. In addition, the emission rates and stack parameters used in the modeling do not appear to match those in the supporting documentation, which relied on data supplied by the Colorado Department of Public Health and Environment. Accordingly, EPA re-examined the source data, corrected the emissions and stack parameters, and incorporated these into CALPUFF modeling.

AR 120 at 131. Region 9 also agreed with Petitioners' comments that "baseline emissions for the San Juan Generating Station (SJGS) may have been overestimated." Id. at 132.

After receiving public comment on the draft PSD permit, EPA modeled 12 new SO<sub>2</sub> increment scenarios. See, AR 120 at pp. 133-134. Region 9 did not consult with Petitioners when conducting these 12 new modeling scenarios nor were Petitioners provided an opportunity to comment on the new increment modeling before the issuance of the final PSD permit on July 31, 2008. Exhibit 42 hereto, Stamper Affidavit, p. 4, ¶ 10. Region 9 did not prepare a modeling report describing the methodology and data relied upon in generating these 12 new modeling scenarios. Id. at p. 4, ¶ 11. Thus, it has been virtually impossible for Petitioners' experts to fully understand and evaluate the increment-affecting emissions modeled for each scenario or verify the accuracy of Region 9's newly produced SO<sub>2</sub> increment analysis.

As discussed below, Region 9's final PSD permit must be remanded because: (1) Region 9 has not responded to significant comments regarding existing deficiencies with the SO<sub>2</sub> increment modeling; (2) the administrative record is deficient because it fails to adequately explain the methodology and data used in generating the 12 new SO<sub>2</sub> increment modeling scenarios; and (3) Region 9's new SO<sub>2</sub> increment analysis should be subject to public notice and comment prior to issuance of a final PSD permit for Desert Rock, especially given that Region 9 has found Sithe's SO<sub>2</sub> increment analyses in error.

## 1. The CAA Requires a Valid SO<sub>2</sub> Increment Analysis for Any PSD Permit

Section 165(a)(3) of the CAA states, “No major emitting facility...may be constructed in any area...unless- (3) the owner or operator of such facility demonstrates, as required pursuant to section 7410(j) of this title, that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year...” 42 U.S.C. §7475(a)(3). The CAA refers to this concept as the PSD “increment.” 42 U.S.C. §7473. PSD increments are the maximum allowable increases in pollutant concentrations permissible under the CAA in any NAAQS attainment or unclassifiable area. See 42 U.S.C. §7473(b); 40 C.F.R. § 52.21(c) The PSD regulations likewise state that emissions from a proposed new or modified source may not cause or contribute to a violation of the PSD increments. 40 C.F.R. § 52.21(k)(2).

“Compliance with this requirement is demonstrated through the air quality analysis.” In re: Knauf Fiber Glass, 8 E.A.D. 121, 148 (EAB 1999). “An air quality analysis provides predictions of pollutant concentrations in ambient air by modeling the impacts of new emissions from a proposed source.” Id. A PSD increment is the maximum allowable *increase* in pollutant concentration over a baseline concentration. See 40 C.F.R. § 52.21(c); In re Indeck Elwood, LLC, PSD Appeal 03-04, slip op. at 9 (EAB, Sept. 22, 2006), 13 E.A.D. \_\_ (citing NSR Manual at C.3). The PSD increment concept was designed to accommodate economic growth and increased pollution associated with such growth while placing limits on new pollution. Significant deterioration of air quality is prevented if the amount of new pollution from the proposed source, in conjunction with pollution from certain existing sources, is less than the amount permitted by the PSD increment. “If, after taking into account emissions from a proposed

source and emissions from certain existing sources, the modeled ambient air concentration of a pollutant is below the NAAQS, and the increase in concentration for that pollutant is less than the applicable PSD increment, the permit applicant has successfully demonstrated compliance. NSR Manual at C.51.” Knauf, 8 E.A.D. at 148-49.

## **2. EPA’s Analysis of SO<sub>2</sub> Increments Is Flawed.**

Before EPA may issue the PSD permit authorizing construction of the Desert Rock facility, it must be adequately demonstrated that the Desert Rock facility will not cause or contribute to a violation of the PSD increments in any area. 40 C.F.R. §52.21(k)(2). Petitioners submitted two expert reports as part of its comments on Site’s SO<sub>2</sub> increment analysis supporting the draft PSD permit. See, Exhibit B to Stamper Affidavit and Exhibit C to Stamper Affidavit (Ex. 42, hereto).

There are numerous sources in the region that contribute to SO<sub>2</sub> concentrations in the area that will also be impacted by Desert Rock. The San Juan Generating Station (SJGS) and the Four Corners Power Plant (FCPP) are the largest sources of SO<sub>2</sub> emissions of all of the sources included in the SO<sub>2</sub> increment inventory for the DREF modeling.<sup>156</sup> Further, the SJGS and the FCPP are also close to Mesa Verde National Park in Colorado – both are within 30 miles (50 kilometers) of Mesa Verde National Park with the SJGS being closer to this Class I area.<sup>157</sup>

In accordance with the definition of “baseline concentration,” for sources in existence prior to the applicable baseline date, changes in actual emissions affect the amount of available PSD increment. The PSD regulations set out two baseline dates: the “major source baseline

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<sup>156</sup> See Appendix A (“Cumulative SO<sub>2</sub> and PM<sub>10</sub> Inventories”) to the June 2006 Desert Rock Energy Facility Application for Prevention of Significant Deterioration Permit – Class II Area Modeling Update. AR 43.1 Appendix A.

<sup>157</sup> See Figures 2-3 and 4-1 of the January 2006 Desert Rock Energy Facility Application for Prevention of Significant Deterioration Permit – Class I Area Modeling Update. AR37 at p. 2-3 and p. 4-3.

date” and the “minor source baseline date” both of which are defined on a pollutant-specific basis. The “major source baseline date” for SO<sub>2</sub> is defined in the Clean Air Act as January 6, 1975. 42 U.S.C. §7479(4) (definition of “baseline concentration”). Actual emissions from any major stationary source upon which construction commenced after the major source baseline date affect the amount of available increment. 40 C.F.R. §52.21(b)(13)(ii)(a).

Construction was commenced on Units 3 and 4 of the SJGS after January 6, 1975, and thus all of the SO<sub>2</sub> emissions from these two units consume the available SO<sub>2</sub> increment. No party disputes this.

Unit 2 of the SJGS and all of the five units of the FCPP were in existence as of the major source baseline date. Construction commenced on Unit 1 of the SJGS before the major source baseline date but it was not in operation until December 1976, after the SO<sub>2</sub> major source baseline date. Exhibit B to Stamper Affidavit at pp. 9-10, Enclosure 4 to Stamper Report attached hereto as Exhibit 42. Thus it was necessary to determine emissions of these units that contributed to the “baseline concentration” for comparison with current and future emissions at these units, to determine the amount of SO<sub>2</sub> increment-affecting emissions at each unit.

As discussed in the Stamper Report, there were known issues with attainment of the SO<sub>2</sub> NAAQS in the area around SJGS and the FCPP since at least 1972. Exhibit B to Stamper Affidavit at p. 7. In fact, in 1973, the EPA promulgated a Federal Implementation Plan (FIP) that required 70% SO<sub>2</sub> removal at all of the FCPP units and at SJGS Units 1 and 2 by July 31, 1974. Exhibit B to Stamper Affidavit at 7; see also 38 Fed.Reg. 7554-57 (Mar. 23, 1973). However, the owners of the FCPP appealed the FIP, and the compliance deadline for the FIP was put off until July 31, 1977. Exhibit B to Stamper Affidavit at 7; see also 39 Fed. Reg. 10582-85 (Mar. 21, 1974). Subsequent to EPA’s 1974 FIP, the state of New Mexico began working on a

state regulation to address SO<sub>2</sub> emission control requirements at FCPP and SJGS and, after appeals by the owners of both the SJGS and the FCPP, ultimately adopted requirements in New Mexico regulation 602 that were approved by EPA in 1981 as sufficient to provide for attainment of the SO<sub>2</sub> NAAQS. Exhibit B to Stamper Affidavit at 8; see also 46 Fed.Reg. 43152-4 (Aug. 27, 1981) and 40 C.F.R. § 52.1640(c)(22).

It is important to note that, while it appears that the owners of the FCPP delayed installation and operation of SO<sub>2</sub> controls while it litigated state and federal SO<sub>2</sub> control requirements, the owners of the SJGS planned as early as 1972 to install SO<sub>2</sub> controls at Units 1 and 2 and, in fact, did install and operate SO<sub>2</sub> controls at the existing SJGS Units 1 and 2 prior to EPA's 1981 approval of the New Mexico SO<sub>2</sub> SIP. Exhibit B to Stamper Affidavit at 9-11; Enclosures 2, 3, 4, and 10 of Stamper Report attached hereto as part of Ex. 42. Indeed, evidence put forth by Petitioners' expert also indicates that construction "commenced"<sup>158</sup> on the SO<sub>2</sub> controls at SJGS Units 1 and 2 before the SO<sub>2</sub> major source baseline date of January 6, 1975. Exhibit B to Stamper Affidavit at 10, Enclosures 5 and 10 of Stamper Report attached hereto as part of Ex. 42.

This history is important because, in its original PSD permit application, Sithe attempted to consider all of the SO<sub>2</sub> emission reductions due to the installation of SO<sub>2</sub> controls at SJGS Units 1 and 2 and at the FCPP units to expand the available SO<sub>2</sub> increment in its cumulative increment analysis for Desert Rock. However, had these power plant units come into compliance with the SO<sub>2</sub> emission reductions in a timely manner, the emission reductions would have been achieved before the major source baseline date and those reductions would be unavailable for increment expansion.

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<sup>158</sup> As the term "commence" is defined at 40 C.F.R. §52.21(b)(9).

More importantly, emission reductions undertaken to bring an area into compliance with the NAAQS cannot expand the available PSD increment. This is because the amount of available increment is limited by the NAAQS. 42 U.S.C. §7473(b)(4). If SO<sub>2</sub> concentrations in the region were inflated by emissions from these power plants that were considered to be causing or contributing to SO<sub>2</sub> NAAQS violations, then the SO<sub>2</sub> emission reductions made to bring the area into compliance cannot also be used to expand the available PSD increment as this would be entirely inconsistent with the mandates of the Clean Air Act. EPA and Sithe do not dispute this. Accordingly, Sithe updated its modeling analyses in January 2006 and, in theory, Sithe was not claiming increment expansion credit for those SO<sub>2</sub> emission reductions at SJGS and FCPP which were required to meet the NAAQS. However, in actuality, Sithe's SO<sub>2</sub> increment analyses improperly took increment expansion credit for those emission reductions at SJGS Units 1 and 2 and at the FCPP units that went beyond what was shown to be necessary to meet the short-term average SO<sub>2</sub> NAAQS in the 1981 New Mexico SO<sub>2</sub> SIP. Exhibit B to Stamper Affidavit at 14-22.

Further, in determining baseline emissions of FCPP and SJGS, Sithe focused solely on the level of control necessary to meet the SO<sub>2</sub> NAAQS as baseline emissions for the FCPP units and Units 1 and 2 of the SJGS, ignoring the statutory and regulatory definition of "baseline concentration" in determining whether emission reductions beyond those that occurred or that were otherwise required at the time of the baseline concentration expanded the available increment. Exhibit B to Stamper Affidavit at 9-14.

In addition, Sithe determined increment-affecting emissions for FCPP and SJGS based on current or projected emissions for the FCPP and SJGS units in a manner that is inconsistent with EPA's longstanding policy on how increment consumption by existing sources is to be

accounted for in the context of evaluating whether a new PSD source would cause or contribute to a violation of the PSD increments in any area. Exhibit B to Stamper Affidavit at 26-32.

The Stamper report took issue with several of the assumptions made by Sithe in its cumulative SO<sub>2</sub> increment analysis. These issues are especially relevant to the Class I areas that could be affected by the Desert Rock facility, since Class I areas are only allowed a very small amount of degradation in air quality under the Clean Air Act. Mesa Verde National Park in Colorado is the closest Class I area to DREF and is less than 100 kilometers away. Khanh Tran's remodeling of Desert Rock also addressed deficiencies found in Sithe's baseline SO<sub>2</sub> emission inventory for the San Juan Generating Station (SJGS) in the cumulative Class I SO<sub>2</sub> increment analysis. The November 9, 2006 Tran report showed that violations of the 3-hour and 24-hour average SO<sub>2</sub> increment would occur at Mesa Verde National Park if the deficiencies were corrected. Exhibit C to Stamper Affidavit at p. 4 (Table 1).

Moreover, the National Park Service also submitted numerous comments critical of the SO<sub>2</sub> increment analysis supporting the draft PSD permit. More specifically, on September 15, 2006, the NPS determined that "Sithe's cumulative analyses of increment consumption and visibility impacts are incomplete and underestimate impacts." Exhibit 37 (NPS letter, Sept. 15, 2006).<sup>159</sup> On October 26, 2006, NPS provided additional formal comments on the draft PSD permit. AR 120.8. The NPS comments largely mirror those made by Petitioners' experts. For example, the NPS's October 26, 2006 comments state:

"Sithe included emission reductions at Four Corners and San Juan power plants that may not be valid;"

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<sup>159</sup> This document appears to have been inadvertently omitted from the administrative record. It is evident from a review of the document that it is relevant and authentic and thus should be either made part of the administrative record or accepted as such by EAB.

“Sithe also modeled emission rates at other increment affecting sources that were too low”

“[Sithe] did not properly consider the respective Minor Source Baseline Dates for each Class I area, and omitted other sources that are likely to have affected increment.”

AR 120.8 at pp. 42-43. The NPS’s October 26, 2006 comment letter concludes by noting “while our concerns regarding the adequacy of the cumulative increment analysis have been documented in prior correspondence with EPA, they have not been completely addressed.” Id.

In a purported attempt to respond to some of NPS’s and Petitioners’ comments on these issues, EPA undertook twelve new modeling scenarios for the Desert Rock PSD permit. AR 120 at pp. 133-34 (EPA’s Response to Comments). As discussed, EPA utterly failed to address relevant statutory and regulatory requirements in determining the increment-affecting emissions of the SJGS and the FCPP, perpetuating the same legal and technical errors discussed in Petitioners’ comments on the draft Desert Rock permit including in the Stamper Report. These legal and technical errors warrant a remand of the Desert Rock PSD permit back to EPA for proper legal and technical analysis, including additional notice and opportunity for public comment, to assess whether Desert Rock will meet the requirements of 40 C.F.R. §52.21(k)(2). In addition, EPA’s revised modeling conducted after issuance of the draft permit cannot be relied upon to justify issuance of the Desert Rock PSD permit unless EPA both prepares a modeling report (describing in detail the methodology employed and data relied upon in generating is new modeling scenarios), and provides public notice and opportunity for full review and comment on the assumptions and underlying evidence that support the 12 new scenarios modeled.

### **3. EPA’s SO<sub>2</sub> Increment Modeling Is Fatally Flawed and Must Be Remanded**

**A. Region 9 failed to correct significant deficiencies in its SO<sub>2</sub> increment modeling and Region 9 failed to respond to important public comments noting such significant deficiencies**

As demonstrated below, the final PSD permit for Desert Rock should be remanded because the administrative record fails to show that Region 9 corrected Sithe's deficient SO<sub>2</sub> increment modeling and failed to respond to important public comments noting significant deficiencies with the modeling.

In determining baseline emissions for the SJGS Units 1 and 2 and for the FCPP, Sithe focused solely on determining the level of control that was ultimately approved as necessary to meet the SO<sub>2</sub> NAAQS. In doing so, Sithe ignored the underlying statutory and regulatory definitions of "baseline concentration." Petitioners commented and provided documentation regarding several deficiencies in Sithe's approach of simply assuming any emission reductions at SJGS Units 1 and 2 and at FCPP beyond that deemed necessary in 1981 to attain the SO<sub>2</sub> NAAQS can expand the available increment, rather than also conducting a review to determine the emissions of these sources at the time of the applicable baseline date.

Specifically, Petitioners commented that:

- Since 1972, there were federal and state requirements in effect that required SO<sub>2</sub> emission reductions at SJGS and FCPP. Exhibit B to Stamper Affidavit at pp. 6-8.
- SJGS Unit 1 was subject to an enforceable construction permit requirement back in 1973 to reduce SO<sub>2</sub> by 79.2%. Exhibit B to Stamper Affidavit at p. 9; and Exhibit 42 hereto (Enclosure 3 to Stamper report).

- A 1973 Certificate of Registration for SJGS Unit 2 indicated that it would install pollution controls of 79% SO<sub>2</sub> control. Exhibit B to Stamper Affidavit at p. at 10; (Enclosure 2 to Stamper Report) (included as part of Ex. 42).
- While it appears that both SJGS Units 1 and 2 operated for a short time without operating SO<sub>2</sub> controls, there is evidence that construction commenced on the SO<sub>2</sub> controls at these units prior to the SO<sub>2</sub> major source baseline date of January 6, 1975. Exhibit B to Stamper Affidavit at p. 10, Enclosures 5 and 10, attached as part of Ex. 42 hereto.

Petitioners' expert found that the allowable emissions of Units 1 and 2 of the SJGS, as in effect at the time of the applicable minor source baseline date, need to be considered part of the baseline emissions for at least the Colorado and Arizona Class I areas because construction commenced on the SJGS units (i.e., construction of the SO<sub>2</sub> controls) prior to the major source baseline date but the modified units were not in operation until after the applicable minor source baseline dates in affected areas of Colorado and Arizona. Exhibit B to Stamper Affidavit at p. 10. Petitioners' expert also found that the allowable emissions of Units 1 and 2 should have been considered part of the baseline emissions for SJGS Units 1 and 2 because the units were operating out of compliance with permitted SO<sub>2</sub> emission requirements and with the Federally approved SIP that was in effect at the time the applicable minor source baseline dates were triggered in Colorado and Arizona. Exhibit B to Stamper Affidavit at pp. 10-11 .

These issues are significant because SJGS Units 1 and 2 were subject to emission reduction requirements that were more stringent than what was ultimately approved by EPA as part of the New Mexico SO<sub>2</sub> SIP. The most stringent SO<sub>2</sub> emission limitations that applied under the 1981 New Mexico SO<sub>2</sub> SIP were as follows:

- SJGS Unit 1: 0.65 lb/MMBtu, which reflects 61.6% removal from average sulfur coal.<sup>160</sup> Exhibit B to Stamper Affidavit at p. 18.
- SJGS Unit 2: 72% SO<sub>2</sub> removal. Enclosure 13 to Stamper Report, at 2-2 (attached as part of Ex. 42). This equates to a SO<sub>2</sub> emission rate of 0.4 lb/MMBtu.<sup>161</sup>

Under the SIP in effect at the time of the Colorado and Arizona SO<sub>2</sub> minor source baseline dates, both of which were triggered in October 1977,<sup>162</sup> SJGS Units 1 and 2 were subject to allowable emission limitations that were more stringent than what was ultimately adopted to meet the SO<sub>2</sub> NAAQS. Specifically, as new coal burning equipment, SJGS Unit 1 was subject to a SO<sub>2</sub> emission limit of 0.34 lb/MMBtu. Exhibit 42 hereto (Enclosure 11 to Stamper Report, Condition 602.A. of the June 1978 version of New Mexico Rule 602). This limit reflected 79.9% control of SO<sub>2</sub> from average sulfur coal, which was relatively consistent with the enforceable construction permit issued for SJGS Unit 1 which required 79% SO<sub>2</sub> control. SJGS Unit 2 was subject to an SO<sub>2</sub> emission limit of 0.53 lb/MMBtu. Id. The compliance provisions for these requirements show that compliance was to be determined on an hourly, or at longest, daily average. Id. While the requirements applicable to SJGS Unit 2 are less stringent than the 72% removal requirement that was relied upon to show attainment of the SO<sub>2</sub> NAAQS, the 0.53 lb/MMBtu limit appears to have applied on a much shorter averaging

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<sup>160</sup> New Mexico initially imposed an emission limit of 0.55 lb/MMBtu for SJGS Units 1, 3, and 4, but then changed its regulation to allow SJGS Units 1, 3 and 4 to emit SO<sub>2</sub> up to 0.65 lb/MMBtu. As discussed in Exhibit B to Stamper Affidavit at p. 18. The State had indicated that the SO<sub>2</sub> limit of 0.55 lb/MMBtu reflected 67.5% SO<sub>2</sub> removal for average sulfur coal. See Exhibit \_\_ at p. 2-2 (Enclosure 13 to Stamper Report). Thus, the 0.65 lb/MMBtu limit then would reflect 61.6% SO<sub>2</sub> control.

<sup>161</sup> See Exhibit B to Stamper Affidavit at p. 17.

<sup>162</sup> See Exhibit B to Stamper Affidavit at p. 4 .

time than the 72% removal requirement which applied on a 30-day averaging basis. Exhibit B to Stamper Affidavit at p. 11 and p. 15.

NPS has expressed many of these same concerns about deficiencies with Region 9's SO<sub>2</sub> increment analysis. AR 120.8 at pp. 42-43.

At a minimum, Region 9 should have taken these allowable emission rates that applied at the time of the applicable minor source baseline dates into account when determining emissions reflecting the performance of SJGS Units 1 and 2 at the time of the applicable minor source baseline date. As discussed in EPA's August 7, 1980 PSD rulemaking, for sources with source-specific allowable emission limits in the SIP, such as for the San Juan power plant, it should be assumed that the source's actual emissions equal the source's allowable emissions.<sup>163</sup> EPA's rationale for this position included that it "maintains the integrity of the PSD and NSR systems and the SIP process."<sup>164</sup>

In addition to the allowable emission requirements that applied to SJGS Units 1 and 2 at the time of the Colorado and Arizona minor source baseline dates, Petitioners also put forth evidence to indicate that SJGS Units 1 and 2 were actually achieving lower SO<sub>2</sub> emission levels at the time of the applicable New Mexico and Utah SO<sub>2</sub> minor source baseline dates which were triggered in 1981 and 1979, respectively. Exhibit B to Stamper Affidavit at p. 4. Specifically, Petitioners put forth evidence showing that the owners of the SJGS, Public Service Company of New Mexico, intended to operate the SO<sub>2</sub> controls at SJGS Units 1 and 2 to meet 90% SO<sub>2</sub> Control. Exhibit B to Stamper Affidavit at p. 12, and Enclosures 4 and 7 to Stamper Report) and that, in 1980, SJGS Units 1 and 2 were emitting SO<sub>2</sub> at a rate of 0.148 lb/MMBtu and 0.149 lb/MMBtu on an annual average basis, respectively. Exhibit B to Stamper Affidavit at pp. 12-13.

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<sup>163</sup> 45 Fed.Reg. 52718 (August 7, 1980).

<sup>164</sup> Id.

These emission rates correlate with a 90% SO<sub>2</sub> removal rate. Id. Region 9 should have taken this information into account as well in determining the contributions of SO<sub>2</sub> from SJGS Units 1 and 2 to baseline SO<sub>2</sub> concentrations. However, there is no evidence in the administrative record that this information was considered in Region 9's SO<sub>2</sub> increment analysis.

EPA also failed to respond to these comments. Yet, EPA agreed that “the baseline concentration is defined in terms of actual emissions at the time of the minor source baseline date; allowable emissions are used as a surrogate for sources permitted but not yet operating, or sources lacking sufficient operating history to establish an actual emissions rate.” AR 120 at p. 132. This is correct; accordingly, EPA should have specifically considered the available evidence regarding the actual emissions at the time of the applicable minor source baseline date. And if operational history at that time was lacking or the operational history indicated a lack of compliance with allowable emission limits that applied at the time, EPA should have used allowable emissions that applied at the time of the applicable minor source baseline date as a surrogates for actual emissions. See 40 C.F.R. §§52.21(b)(13), (b)(14)(ii); 42 U.S.C. § 7479(4); 45 Fed.Reg. 52717-9 (Aug. 7, 1980).

EPA also did not respond at all to the fact that the Class I and Class II areas addressed in the cumulative SO<sub>2</sub> increment analysis for DREF are in four states with at least 4 different SO<sub>2</sub> minor source baseline dates. Exhibit B to Stamper Affidavit at p. 4. The only evidence in the record for the Desert Rock permit, which was offered by Petitioners as discussed above and in the Stamper Report, is that SJGS Units 1 and 2 had lower allowable and/or lower actual SO<sub>2</sub> emissions levels at the time of the applicable SO<sub>2</sub> minor source baseline dates than what was ultimately required to attain the SO<sub>2</sub> NAAQS in the New Mexico SIP (which, as discussed above, is what formed the basis of Sithe's determination of baseline emissions for SJGS Units 1

and 2). Thus, Sithe's determination of the emissions from SJGS Units 1 and 2 reflected in the baseline concentration is not consistent with statutory and regulatory requirements regarding baseline concentration, and EPA provided absolutely no justification for departing from statutory and regulatory requirements in proposing to concur with Sithe's determination of the SO<sub>2</sub> emissions of SJGS Units 1 and 2 that were reflected in the baseline concentrations.

Therefore, Sithe's SO<sub>2</sub> increment consumption analysis is based on flawed and illegal emissions assumptions for SJGS Units 1 and 2. In addition, Region 9's twelve new modeling scenarios (which do not purport to address Petitioners' comments regarding what SJGS and FCPP were emitting at the time of the applicable minor source baseline dates) are also based on flawed and illegal assumptions for the emissions reflected in baseline concentrations for SJGS Units 1 and 2. Consequently, Region 9 has failed to correct the deficiencies in the Desert Rock SO<sub>2</sub> increment analysis and has failed to respond to significant comments submitted by Petitioners regarding the SO<sub>2</sub> increment analysis. As such, the Desert Rock permit must be remanded to EPA to provide response to these comments and for a proper SO<sub>2</sub> increment analysis.

**B. EPA must re-issue its new SO<sub>2</sub> increment modeling, which differs significantly from Sithe's increment modeling for public notice and comment**

Since all parties agree that increment expansion credit cannot be granted for emission reductions that were necessary to attain the NAAQS, it is imperative that EPA accurately determine the emission levels at FCPP and SJGS necessary to provide for attainment of the primary and secondary SO<sub>2</sub> NAAQS. To determine these emission levels, Sithe initially relied on a general discussion in EPA's 1981 Federal Register notice in which EPA approved the New Mexico State Implementation Plan requirements in New Mexico regulation 602 as sufficient to attain the SO<sub>2</sub> NAAQS. Petitioners' experts raised several deficiencies regarding Sithe's

determination of the emissions necessary to attain the NAAQS, and NPS raised similar concerns (AR 120.8 at pp. 42-43). EPA agreed with at least one of the petitioners' comments – that the level of SO<sub>2</sub> emissions considered to reflect baseline emissions at SJGS Units 1 and 2 by Sithe may have been overestimated. AR 120 at p. 132.

In an apparent attempt to address at least some of NPS's and Petitioners' comments regarding the SJGS, Region 9 modeled six scenarios with two different values for future emissions, for a total of twelve modeling runs subsequent to proposing issuance of the DREF PSD permit. AR 120 at pp. 133-134. Because Region 9 agreed with Petitioners that Sithe overestimated the SO<sub>2</sub> emission rates reflecting baseline emissions at SJGS Units 1 and 2, Region 9 is clearly relying at least some of these new modeling scenarios to justify issuance of the PSD permit for Desert Rock pursuant to 40 C.F.R. §52.21(k)(2). EPA's modeling analyses appear to do much more than simply address Petitioners' issue regarding baseline emissions for SJGS. See Stamper Affidavit, attached hereto as Exhibit 42, at p. 7 ¶ 15 (“...EPA made significant changes to Sithe's January 2006 Class I SO<sub>2</sub> increment modeling which EPA relied upon in 2006 when it proposed the Desert Rock PSD Permit for public notice and comment.”). EPA's new modeling also now takes into account future SO<sub>2</sub> emissions from SJGS associated with a recent Consent Decree, and future SO<sub>2</sub> emissions from FCPP associated with a recently promulgated FIP, which Sithe's cumulative SO<sub>2</sub> increment modeling did not address.<sup>165</sup> AR 120 at p. 134.

In connection with this new modeling analysis EPA should have provided the public with an opportunity to review and comment on the agency's analysis and conclusion, especially

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<sup>165</sup> Sithe's SO<sub>2</sub> Class I increment affecting emission inventory was, in general, based on actual emissions from 2003-2004 for existing sources. AR 37, Appendix A (Appendix A to Appendix A of January 2006 Class I Area Modeling Update).

because EPA is now relying on these modeling analyses rather than Sithe's January and June 2006 modeling analyses to justify issuance of the Desert Rock PSD permit.<sup>166</sup> Indeed, one of the mandates of the PSD program is "to assure that any decision to permit increased air pollution in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decisionmaking process." 42 U.S.C. §7470(5). Petitioners have not been provided an opportunity to review and comment on these new modeling scenarios. Exhibit 42 at p. 4, ¶10 (Stamper Affidavit). EPA's new modeling scenarios became public only at the time it issued the final PSD permit on July 31, 2008. Moreover, EPA has failed to provide a modeling report, or other narrative description, of the specific analyses, methodologies and data relied upon in generating these 12 new modeling scenarios. Exhibit 42 at p. 4, ¶11 (Stamper Affidavit). Without such an explanation, it is virtually impossible to determine with clarity the how EPA employed the new data and analysis in connection with the 12 new modeling scenarios to reach the conclusion it did.

**4. Region 9 Illegally Relied upon Significant Impact Levels (SILs) in Reviewing the Class I PSD Increment Analyses<sup>167</sup>**

To obtain a PSD permit, the CAA requires a permit applicant to demonstrate that the proposed source will not cause or contribute to a violation of the Class I PSD increments. It is not sufficient to meet this obligation simply to show emissions from the proposed source will

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<sup>166</sup> EPA has acknowledged that Sithe made errors in its cumulative SO<sub>2</sub> increment analyses, so EPA clearly is no longer relying on Sithe's SO<sub>2</sub> increment analyses based on public comments received. AR 120 at 131-2. And EPA purportedly conducted its 12 new modeling scenarios in response to comment received. AR 120 at 133-4. Thus, it follows that if EPA has agreed Sithe's cumulative SO<sub>2</sub> modeling is flawed, EPA must be relying on its new 12 modeling scenarios to demonstrate that the Desert Rock facility will not cause or contribute to a violation of the PSD increments.

<sup>167</sup> Petitioners submitted comments on this issue in their November 13, 2006 comment letter. See, AR 66 at pp. 64-65.

alone will not have impacts that exceed significant impact levels. Nonetheless, Sithe attempts to rely on just such an analysis in this case. No federal regulation allows for an exemption from the PSD requirement to show that the proposed source will not cause *or contribute* to a violation of the Class I PSD increments based on an “insignificant” ambient impact. Such an approach could result in Sithe overlooking significant PSD increment impacts in areas where the Desert Rock facility’s impact alone may be insignificant, but where cumulative impacts might result in a violation. Indeed, there is sufficient reason to believe that increment violations have been overlooked by Sithe in some Class I areas in this permit proceeding. See, AR 66 at p. 65.

While it proposed use of Class I significant impact levels in July of 1996, 61 Fed.Reg. 38338 (July 23, 1996), EPA never finalized promulgation of those significant impact levels despite having promulgated many other aspects of its July 1996 proposed prevention of significant deterioration rulemaking.<sup>168</sup> Until significant impact levels for Class I increment analyses are promulgated by EPA, *any* impact in a Class I area by DREF must trigger a cumulative PSD increment analysis. In response to comments, Region 9 admits that “[t]hese proposed Class I SILs were never finalized.” AR 120 at p. 127. Region 9 then goes on to state, “[h]owever, in practice, EPA and the Federal Land Managers overseeing Class I Areas have used the proposed SILs as a baseline for comparison, and as one component of a determination on whether an impact is significant.” Id. However, Region 9 cannot simply claim that its reliance on unpromulgated SILs somehow make them lawful.

Not only are Class I SILs not authorized by any federal regulation, such SILs are inherently illegal in light of the mandates of the Clean Air Act for Class I areas and PSD increment protection. The Act’s PSD program creates a protective regulatory framework

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<sup>168</sup> See 67 Fed. Reg. 80186 (Dec. 31, 2002).

designed to guarantee the achievement of the PSD program’s objectives. Congress codified strict levels of “maximum allowable increases over baseline concentrations” (i.e., increments) for SO<sub>2</sub> and particulate matter that could not be exceeded in any Class I area.<sup>169</sup> 42 U.S.C. § 7473(b)(1). Moreover, Congress directed that “. . .each implementation plan shall contain measures assuring that maximum allowable increases over baseline concentrations of, and maximum allowable concentrations of, such pollutant *shall not be exceeded.*”<sup>170</sup> 42 U.S.C. § 7473(a) (emphasis added).

The primary mechanism to ensure the PSD increments are not exceeded is the requirement that a proposed PSD source or modification must demonstrate that its emissions “will not cause or contribute” to a violation of these benchmarks. See 42 U.S.C. § 7475(a)(3)(A); see also 42 U.S.C. § 7475(d)(2)(C). The statutory language is uncompromising in that it plainly provides that “no major emitting facility” may be constructed unless it meets this requirement and, further, that emissions from the facility may not “cause *or contribute*” to an exceedance of an increment “for *any* pollutant in *any* area.” See 42 U.S.C. § 7475(a); see also Massachusetts v. EPA, 549 U.S. 497, 127 S.Ct 1438 1460 and n.25 (2007) (holding that the “repeated use of the word ‘any’” demonstrated that the statutory language was “sweeping” in its protective reach). Congress directed that this demonstration must be made and that maximum allowable increases and concentrations must not be exceeded, SILs are plainly incompatible with the statutory language and Congressional intent.

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<sup>169</sup> Pursuant to 42 U.S.C. § 7476, EPA adopted PSD increments for NO<sub>2</sub> at 40 C.F.R. §52.21(c) in 1988.

<sup>170</sup> The “maximum allowable increases over baseline concentration” are the PSD increments, specified in the CAA for SO<sub>2</sub> and particulate matter in 42 U.S.C. § 7473(b). The “maximum allowable concentrations” are the primary and secondary national ambient air quality standards. See 42 U.S.C. § 7473(b)(4).

National parks and wilderness areas exceeding a certain size threshold that existed on the date of enactment of the 1977 Clean Air Act Amendments (August 7, 1977) were designated by Congress as mandatory “Class I areas” which designation could not be changed.<sup>171</sup> Such national parks and wilderness areas are to receive the most stringent protection from degradation of air quality under the PSD program. One of the central mandates of the PSD program is:

*. . .to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historical value.*

42 U.S.C. § 7470(2) (emphasis added). The italicized words in the above quote from the Clean Air Act show clear Congressional intent that Class I areas were to receive the utmost protection from deterioration of air quality under the PSD program. EPA must satisfy this mandate in any action it undertakes that could impact air quality in Class I areas.

In its July 23, 1996 proposal to adopt SILs, EPA cited to Alabama Power Co. v. Costle as providing authority for EPA’s proposed Class I SILs. In particular, EPA states that “Administrative agencies may exempt ‘truly de minimis’ situations from a statutory command ‘when the burdens of regulation yield a gain of trivial or no value.’” 61 Fed. Reg. 38,292 (citing Alabama Power Co. v. Costle, 636 F.2d 323, 360-61 (D.C.Cir. 1979)). However, EPA ignored the Court’s continuation of this discussion, in which it stated:

That implied authority [to exclude truly de minimis situations] is not available for a situation *where the regulatory function does provide benefits, in the sense of furthering the regulatory objectives*, but the agency concludes the acknowledged benefits are exceeded by the costs. For such a situation any implied authority to make cost-benefit decisions must be based not on a general doctrine but on a fair reading of the specific statute, its aims and legislative history.

Alabama Power, 636 F.2d at 361 (emphasis added).

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<sup>171</sup> 42 U.S.C. § 7472.

As discussed above, the statutory mandate of the PSD program relative to Class I areas is to require increment analysis for Class I area in order to “preserve, protect, and enhance” the air quality in these areas. Thus, if a proposed PSD source would contribute to an increment violation in a Class I area and, with reliance on the SILs, a permitting authority could authorize construction of the source, then its actions would not preserve or protect the air quality in the Class I area, much less enhance the air quality in the Class I area. Clearly, this situation would not be considered truly de minimis “where the burden of regulation yields a gain of trivial or no value.” EPA Region 8 agreed that use of SILs in such a situation would not be de minimis, in stating in an April 12, 2002 letter to the North Dakota Department of Health that the use of significant impact levels to allow a PSD permit to be issued in the case of a Class I area showing increment violations is not consistent with the intent of the Clean Air Act’s PSD program. See, Exhibit \_\_ hereto (found as file “EPA Comments ND PSD Rule.pdf” in “ltr\_23\_attachments” folder of administrative record). However, in many areas, increment violations are not discovered until a cumulative increment analysis is conducted as part of a PSD permit application. Thus, in order to be consistent with Class I area protection mandates, all new or modified major sources that may affect a Class I area must be required to conduct an analysis of whether the new or modified source would cause or contribute to a violation of any increment in any Class I area regardless of the significance of its impact on that area.

Petitioners’ comments establish that Desert Rock emissions may contribute to cumulative Class I increment violations, such as violations of NO<sub>2</sub> increments at Mesa Verde National Park, and existing SO<sub>2</sub> increment violations at Capitol Reef National Park and at Mesa Verde National Park. See, AR 66 at p. 65. These findings have not been adequately rebutted by Region 9. Thus, not only is Region 9’s reliance on Class I SILs illegal, it is also factually unsupported

given the real possibility for increment violations at Class I areas that will be actually affected by the Desert Rock facility. As such, Petitioners request that the final PSD permit be remanded to Region 9 to address these deficiencies by requiring an adequate demonstration that the proposed Desert Rock facility will not cause or contribute to a violation of any PSD increment in any potentially affected Class I area.

**XI. EPA FAILED TO MEANINGFULLY RESPOND TO COMMENTS REGARDING ENVIRONMENTAL JUSTICE AND FAILED TO ACTUALLY ASSESS IMPACTS ON EJ COMMUNITIES**

Low-income communities and communities of color (“EJ communities”) often bear a disproportionate share of industrialization’s harmful byproducts, such as resource contamination and resource extraction.<sup>172</sup> Seeking to mitigate the federal government’s contribution to these disparities, President Clinton in 1994 signed Executive Order 12898: “Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations”. Exec. Order No. 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994) (“EO”). The EO recognized that Environmental Justice cannot be achieved in our nation unless federal agencies develop

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<sup>172</sup> As the comments explain “the EJ movement addresses a statistical fact: people who live, work, and play in America’s most polluted environments are most often people of color and the poor.” AR 66 at 86. (citing U.S. General Accounting Office, *Siting Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities*, June 1983; United Church of Christ, Commission for Racial Justice, *Toxic Wastes and Race in the United States: A National Report on the Racial and Socioeconomic Characteristics of Communities with Hazardous Waste Sites*, 1987, pp. xiii, 13-21 (“UCC Report”); Benjamin A. Goldman and Laura Fitton, *Toxic Wastes and Race Revisited: An Update of the 1987 Report on the Racial and Socioeconomic Characteristics of Communities with Hazardous Waste Sites* (Center for Policy Alternatives and the United Church of Christ, Commission for Racial Justice, 1994), pp. 2-4; Luke W. Cole and Sheila R. Foster, *From the Ground Up: Environmental Racism and the Rise of Environmental Justice Movement* (New York University Press, 2001), pp. 54-55, 167-83; Barry Hill, Director, Office of Environmental Justice, U.S. EPA, testimony before the U.S. Commission on Civil Rights, hearing, Washington, D.C., February 8, 2002, official transcript, p. 48).

meaningful programs, policies, and activities specifically targeted to ensure that low-income communities and communities of color do not continue to bear a disproportionate share of the environmental burden in the United States. EO at §§ 1-101, 3-3, and 4-401.

Because of these serious inequities, the EO sought to establish policies that could rectify the long history of environmental injustices in environmental decisionmaking. The EO creates requirements on federal agencies in at least three ways. At the outset, federal agencies are required to identify the impacts of their actions on the health and environmental quality of EJ communities. After identifying the EJ impacts, federal agencies are required to address, to the extent possible, the impacts of their actions on the health and environmental quality of EJ communities. Finally, federal agencies are required to include EJ communities in the decision-making process. In response to the Executive Order, many agencies created internally-applicable environmental justice directives and mandates. The EPA issued an environmental justice strategy in 1995; however, that strategy does not specifically address how the broad goals of the EO are to be implemented in the context of PSD permitting.<sup>173</sup> Accordingly, this Board's determination is directly controlled by the language of the EO and prior EAB decisions interpreting that language. As discussed below, EPA's failure to fulfill its Environmental Justice responsibilities represents a violation of the EO. Additionally, EPA's failure to respond to certain issues raised regarding Environmental Justice justifies remand based on the requirements of PSD permitting in general.

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<sup>173</sup> As EPA explains in the RTC, "In April 1998, EPA issued a guidance document entitled 'Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses - April 1998,' which is based on guidance . . . received from the Council on Environmental Quality entitled, 'Environmental Justice Guidance under the National Environmental Policy Act - December 10, 1997.'" RTC at 160. EPA also indicates that it has provided the Bureau of Indian Affairs with the comments filed in this permit proceeding regarding Environmental Justice concerns. *Id.*

## 1. EPA Has Not Complied In General With Its Obligations Under the Environmental Justice Executive Order

Rather than perform *any* actual analysis of the potential adverse impacts on EJ communities, EPA instead offers up a *one sentence* answer to all Environmental Justice concerns.<sup>174</sup> In particular, EPA makes the following statement of belief, as its only substantive assertion in response to concerns about the quality of its Environmental Justice assessment: “EPA believes that, as demonstrated by our modeling of the DREF’s emissions, there will be no exceedances of any of the National Ambient Air Quality Standards, which are indicators of healthful air.” RTC at 163-64.<sup>175</sup> EPA then does no more than cross reference sections of the RTC addressing air quality analysis and cumulative effects (neither of which ever mention Environmental Justice). Accordingly, EPA reads its Environmental Justice obligations under the

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<sup>174</sup> Almost the *entire* nearly two-page response to commenters’ detailed concerns about the failure of EPA to perform any actual assessment of Environmental Justice are nothing more than a recitation of the EJ Executive Order, a discussion of EPA’s definition of Environmental Justice, and a discussion of steps EPA took to solicit comments from EJ communities (which it then unreasonably disregarded). See RTC at 162-63 (explaining among other things that “EPA defines environmental justice (EJ) as the fair treatment . . . of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies”).

<sup>175</sup> Notably, before providing its one sentence response to commenters concerns about the Environmental Justice review, EPA explains its understanding of “fair treatment:”

to mean that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal environmental programs and policies. Furthermore, as discussed above, the EO requires that EPA identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their activities on minority populations and low-income populations. EPA defines disproportionately high and adverse effects or impacts to mean an adverse effect or impact that: 1) is predominately borne by any segment of the population, including, for example, a minority population and/or a low-income population; or (2) will be suffered by a minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect or impact that will be suffered by a nonminority population and/or non-low-income population

RTC at 163.

Executive Order as adding *nothing at all* to its obligations under the Act – in effect, rendering any Environmental Justice assessment an empty exercise.

Nor has the Applicant performed any analysis of Environmental Justice impacts. While the record contains a document entitled “Additional Impacts: Environmental Justice Assessment,” dated July 12, 2006, this document contains nothing but very general factual information (such as demographic data), and some brief discussion of the types of issue that should be addressed in an Environmental Justice analysis (without actually performing any such analysis). AR \_\_.<sup>176</sup>

The inescapable result of EPA’s construction of its “obligations” under the EJ Executive Order in this case is the amazing proposition that the agency can approve a new 1500 MW coal fired power plant in the heart of an EJ community without performing a *single* assessment specifically targeting Environmental Justice concerns or otherwise examining the extent to which approval of the project will further exacerbate disproportionate distribution of environmental impacts. The Executive Order could hardly be read to have less meaning.

In Knauf Fiber Glass, addressing concerns raised by Petitioners that the EPA Region 9 had failed to perform an assessment of potential impacts on a nearby EJ community, the Board concluded that:

there are no details regarding Region IX’s determination in the administrative record. As such, we cannot judge the adequacy of the Region’s analysis. See In re EcoEléctrica, L.P., PSD Appeal Nos. 96-8 & 96-13, slip op. at 16-17 (EAB, Apr. 8, 1997), 7 E.A.D. – (describing environmental justice analysis performed by Region in light of claim of low-income communities proximate to proposed facility). At a minimum, the petitioner’s comment invoking the Executive Order deserves a more complete response than the cursory denial that is currently in the record. If an environmental justice issue is unlikely in the context of this proposed project, we need to know the basis for that conclusion. Therefore, we are including this issue as part of our remand order. AQMD should obtain

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<sup>176</sup> Petitioners note that this “assessment” shows that the population in most of the “local area of influence” is more than 95% “American Indian.” Id. at 9-10.

the Region's environmental justice determination and make it available during the remand process.

In re Knauf Fiber Glass, GmbH, 8 E.A.D. 121, 175 (EAB 1999). In this instance, EPA has again provided *no details* regarding its assessment of Environmental Justice concerns, except to say, in effect, that compliance with the NAAQS-related PSD obligations *necessarily* obviates any need for a specific Environmental Justice assessment.

To uphold this permit in light of the agency's failure to perform any Environmental Justice assessment, the Board would need to conclude either (1) that there are no potential adverse impacts *of any kind* in the local area of influence associated with the issuance of this permit, including, impacts associated with emission of both NAAQS- and non-NAAQS PSD pollutants, as well as impacts associated with non-PSD air pollutants, and other collateral environmental impacts; or (2) that as to any adverse impacts that might exist, EPA has *no authority whatsoever* to take any action in the context of this PSD permit that might mitigate or eliminate such impacts.<sup>177</sup> Based on the record before the Board, both of these propositions must be rejected. Moreover, while EPA has established NAAQS for only six pollutants (NO<sub>x</sub>, SO<sub>2</sub>, ozone, PM, lead, and CO), Desert Rock's PSD permit also regulates opacity (Permit at 12), H<sub>2</sub>SO<sub>4</sub> (Permit at 13), and Fluorides (Permit at 14), thus EPA sole response, that the facility's emissions will not cause NAAQS violations (even if this were true), can not appropriately be the

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<sup>177</sup> This includes discretionary authority to take action not necessarily required under PSD. In re AES Puerto Rico, L.P., 8 E.A.D. 324, 351 (EAB 1999), *aff'd sub nom Sur Contra La Contaminación v. EPA*, 202 F.3d 443 (1st Cir. 2000) (permit conditions not required by PSD regulations but within EPA's discretion were found to be an indication of its efforts to address EJ issues).

end of the analysis.<sup>178</sup> At minimum, EPA must address potential Environmental Justice concerns related to *all PSD-regulated pollutants*.<sup>179</sup>

In fact, however, as discussed elsewhere in this brief, there are significant concerns regarding both NAAQS and non-NAAQS PSD pollutants, as well as significant potential collateral environmental effects (such as impacts on soil and vegetation, threatened and endangered species, water resources and water quality, generation of contaminated coal combustion waste, disturbance of ceremonial and cultural rituals, burial grounds and historic sites). See AR 66 at 88. As a result, this permit decision can not stand simply on EPA's bald assertion that no meaningful Environmental Justice assessment is necessary because "EPA believes that . . . there will be no exceedances of any of the National Ambient Air Quality Standards, which are indicators of healthful air." RTC at 163-64. The agency's affirmative obligations under the Executive Order demand more.

Because EPA's stated rationale for not conducting a more searching Environmental Justice assessment represents a finding of fact or conclusion of law that is clearly erroneous, the Board should remand the final permit, with instructions for EPA to meet its stated Environmental Justice obligations, and perform an assessment adequate to demonstrate whether or not its action will have any "disproportionately high and adverse human health or environmental effects . . . on minority populations and low-income populations."<sup>180</sup> RTC at 163. Moreover, the Board should

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<sup>178</sup> Additionally, levels of pollutants below the NAAQS can still have significant Environmental Justice-related adverse consequences – consider for example potential impacts on soil, vegetation and species related to pollutant levels below the NAAQS. See Indeck Elwood, slip op. at 43-45.

<sup>179</sup> In this regard, EPA does not even live up to its own assessment of its Environmental Justice obligations as described in the RTC. RTC at 162-63.

<sup>180</sup> Also, Region 9's failure to honor either the letter or the spirit of the EJ Executive Order or EPA's own EJ guidance independently reflects an exercise of discretion or an important policy consideration that warrants Board review.

direct EPA to allow the public, especially the affected EJ community, an opportunity to comment on the agency's full Environmental Justice assessment.

## **2. EPA Inadequately Responds, or Never Meaningfully Responds, to Specific Issues Regarding Environmental Justice**

In addition to EPA's generalized failure to satisfy its Environmental Justice obligations, the agency also failed to adequately respond to several specific EJ community comments. In connection with this permitting decision, literally hundreds of comments on the Draft Permit specifically raised concerns regarding potential impacts on EJ communities.<sup>181</sup> Among the issues raised, as EPA indicates in its general summary of Environmental Justice comments, were "1) mercury and fish consumption, 2) inadequate public health services on tribal lands, 3) cumulative effects, 4) whether or not the EJ Executive Order was being met, 5) impacts on grazing lands, 6) the need for a health assessment associated with the permitting of the facility, 7) impacts on jobs, 8) impacts on burial/ceremonial/cultural rituals, and 9) access to water." RTC at 155.<sup>182</sup> We address the adequacy of EPA's responses to several particular issues below.

### **A. Environmental Justice Concerns Regarding Impacts on Agriculture and Pastoral Communities.**

Environmental Justice comments also raised the concerns about harm to communities with a pastoral lifestyle as a result of adverse air-quality impact on vegetation used for grazing. For example, once comment explains: "I object to subjecting the land to more air pollution which will have severe repercussions on the agriculture and pastoral lifestyle on which local residents' income rely." AR 69, Comment 112. In response, EPA states:

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<sup>181</sup> As EPA states: "During the comment period on the PSD permit, we received over 750 separate comments regarding EJ and related issues." RTC at 155.

<sup>182</sup> EPA's summary of Environmental Justice issues is followed in the RTC by a table identifying each comment letter that raises Environmental Justice concerns. We note with regard to this table, that it takes up nearly 5 pages of the EPA's 10 page response to the more than 750 Environmental Justice comments. See RTC p. 155-166.

Comments regarding the impacts of air quality on vegetation are addressed in response II.E.28. Additionally, EPA will ensure that the Bureau of Indian Affairs is informed of this concern and we encourage the commenters to raise it through the NEPA process and work with the Navajo Tribal government and BIA. Additional information is found at Section 4.6 and Section 4.13 of the DEIS

RTC at 164. Thus, in response to these Environmental Justice concerns, EPA relies entirely on its soils and vegetation analysis.<sup>183</sup> That analysis, however, is manifestly inadequate.

In response to the Draft Permit, commenters observed that neither Sithe nor EPA had ever prepared a comprehensive inventory of soils and vegetation in the vicinity of the proposed Desert Rock plant.<sup>184</sup> Moreover, as the comment points out, there was never any legally adequate assessment of potential impacts on soils and vegetation:

[T]he CAA imposes an independent obligation to evaluate the impacts of a proposed project on soil and vegetation in the area. See CAA § 165(e)(3)(B), 40 C.F.R. § 52.21(o). This long-standing requirement of the PSD program includes an obligation to perform a site-specific inventory of soils and vegetation, before the issuance of a draft permit. Such analysis must consider the variety of soils and vegetation in the area, the possibility of adverse impacts on soils and vegetation for PSD-regulated pollutants (including the possibility of adverse impacts at ambient concentrations that are lower than the applicable NAAQS, the impact of PSD pollutants – like fluoride – for which there is no NAAQS, and impacts from concentrations of pollutants that are lower than generalized screening levels), the possibility of adverse impact from non-PSD regulated pollutants, and the potential for any other site-specific environmental effects. See In re Indeck-Elwood, PSD Appeal 03-04, slip op at 31-52 (EAB Sept. 27, 2006).

As a result, EPA is obligated to perform (or require of Sithe) an analysis that *specifically inventories the various soils and plant life* in the vicinity of the proposed facility (including but not limited to threatened or endangered species). The analysis must then determine whether such soils or vegetation will be adversely affected by any of the plant's emissions. At least, such analysis must include the full range of PSD pollutants

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<sup>183</sup> EPA's reference to the separate NEPA cannot be understood as a substantive response to the commenters' concerns.

<sup>184</sup> As the comments explained: "While Appendix 8 of DREF's permit application may be viewed as providing an inventory of certain endangered or threatened plant species, it does not even purport to inventory all local plant species, or even all "significant" or "potentially sensitive" local vegetation. Moreover, it fails entirely to evaluate whether or which of the identified species might be adversely affected by emission from the proposed facility." AR 66 at 83 and n.163.

(including fluoride), as well as any relevant non-PSD pollutants (including sulfuric acid mist, mercury, beryllium, etc.)

AR 66 at 80 (in total this comment includes 5 pages of discussion about EPA's failure to perform an adequate soils and vegetation analysis).<sup>185</sup>

Despite the serious criticisms of its soils and vegetation analysis, EPA provides virtually no response at all to the RTC. EPA's response in its entirety is as follows:

EPA disagrees that the additional impacts analysis was inadequate. Site's additional impacts analysis relied on "A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils, and Animals", EPA 450/2-81-078, December 12, 1980 (included as Attachment 34). Table 3.1 of this guidance document lists for various pollutants screening concentrations, representing minimum concentrations at which adverse growth effects or tissue injury were reported in the scientific literature. While dated, this document is the only guidance currently available for conducting additional impacts assessments. EPA believes that Site's additional impact analysis was adequate and meets regulatory requirements"

In addition, EPA notes that some of these impacts will be assessed in the Environmental Impact Statement (EIS) being prepared for the DREF. A more comprehensive assessment of the impact on soils, vegetation, and animal life, including the effects on livestock grazing, is underway as part of a biological assessment required under the Endangered Species Act (ESA), and for the Environmental Impact Statement (EIS). Since the PSD regulations do not contain regulatory thresholds for the additional impacts analysis, the latter's main purpose is informational. EPA believes that informational purpose is served by the biological assessment and EIS. EPA notes that the final PSD permit contains a condition delaying permit effectiveness (and thus prohibiting any project construction) until completion of the ESA process and also allowing for amendment of the permit terms or application as appropriate to address the consultation's findings

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<sup>185</sup> Among other things the comments pointed out that:

[f]irst, reference simply to the NAAQS and PSD increments as evidence that proposed major source will not harm soils or vegetation would essentially write the soils and vegetation analysis out of the Act – making it an unnecessary redundancy. . . . Secondly, EPA may not blindly rely on the 1980 [*Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils, and Animal*]. For example, the NSR Manual specifically recognizes that “there are sensitive species which may be harmed by long term exposure to low concentrations of pollutants for which there are no NAAQS” and that under certain circumstances soil and vegetation analysis “has to go beyond a simple screening.”

AR 66 at 80 (citing Indeck-Elwood, slip op. at 38). Moreover, the comments noted that “the requirement to evaluate impacts on soil and vegetation apply not only to the coal-fired steam boilers but to all sources at the proposed plant, individually and in the aggregate.” Id.

RTC at 150. Thus, without meaningful explanation, the agency's response is essentially that it disagrees with the Board's conclusion in Indeck Elwood that the 1980 Screening Procedure is not categorically sufficient to support a soils and vegetation analysis, and that it believes, in any event, that it can defer any meaningful analysis of impacts on soils and vegetation to another regulatory process entirely (either the NEPA or ESA analysis, or both), despite a separate and distinct CAA obligation to assess these impacts as a part of the PSD permitting process.

EPA's response on this point, in addition to being wrong, fails the test of providing an adequate response to the detailed comments regarding the inadequacy of the analysis supporting the Draft Permit. Compare RTC at 150-51 to AR 66 178-183.<sup>186</sup> Among many other issues, this response fails to explain how an analysis in another regulatory process, to be completed after the final PSD permit has been issued, can possibly meet the statutory and regulatory obligation to provide the relevant analysis in advance of the public hearing on the PSD permit. See Indeck-Elwood, slip op at 42-43 (explaining that the soils and vegetation component of the PSD requirements "contemplates a comparative analysis of some kind between the existing baseline conditions of soils and vegetation at the site and in the potentially affected area, and the effects of the emissions on such baseline conditions" that "*shall be available at the time of the public hearing on the application for such permit*").

Because the responses regarding soils and vegetation in general are facially inadequate, they also cannot serve as an answer to the comments on the Environmental Justice implications of the project for pastoral and agricultural communities. For example, without a detailed inventory of soils and vegetation in the record, EPA cannot begin to even evaluate what soil

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<sup>186</sup> Additionally, EPA fails to even identify the comments from the EJ Community among the comments that it is responding to in addressing the soils and vegetation issues.

types or species of vegetation in particular local communities rely upon, nonetheless demonstrate that the range of emissions from the proposed Desert Rock facility, in combination with all other sources of emissions in the region, will not have an adverse impact.<sup>187</sup> As a result, EPA's response to this Environmental Justice issue must be rejected, and the Permit must be remanded for a meaningful assessment and response.

**B. Environmental Justice Concerns Regarding Mercury and Water Resource Consumption**

In response to comments raising concerns about mercury emissions from Desert Rock entering the environment in the vicinity of the plant, where many residents consume fish caught in local waterways, EPA's entire response was as follows:

EPA recognizes the importance of protecting the public from unhealthy levels of mercury in fish, particularly with respect to communities that practice subsistence fishing. However, as discussed in Section II.B.4, mercury is regulated under regulations that are separate from those governing issuance of the PSD permit. Although this may be an environmental justice issue, EPA does not have the authority to add permit terms in a PSD permit to regulate mercury emissions. Additional information on the mercury deposition issue can found in the EIS prepared under NEPA.

RTC at 161. In Section II.B.4 (referenced by EPA), the agency acknowledges that HAP, including mercury, are now subject case-by-case MACT under section 112(g). However, in response to both the Environmental Justice-related mercury concerns, and the more general mercury-related issues addressed at Section II.B.4 of the RTC, EPA fails entirely to acknowledge that it has not only the authority but the *obligation* under BACT to consider the collateral environmental impacts of its BACT decisions, including HAP-related impacts such as mercury emissions.

The agency's narrow reading of the scope of the comments is unreasonable. When presented with general comments raising serious Environmental Justice concerns related to the

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<sup>187</sup> As indicated in the comments, this would include the vegetation upon which domesticated animals graze.

addition of mercury to the environment from a facility subject to PSD permitting, it is arbitrary for the agency, in electing to take no action in response, to point to one manner in which the agency believes that its discretion is constrained while not even acknowledging a different avenue of regulatory authority through which it might consider, and perhaps address, the very concerns that the commenters raise.<sup>188</sup> Without any EPA discussion or response regarding the potential to address mercury-related concerns as a collateral environmental impact in the BACT analysis the record is incomplete and the Board is left with an incomplete picture of whether EPA has acted reasonably or not.<sup>189</sup> As discussed already, other technology options such as IGCC (and perhaps CFB and ultra-supercritical pulverized coal combustion as well) could achieve significantly better mercury emissions performance.<sup>190</sup>

In the RTC EPA similarly dismisses Environmental Justice-related concerns about the proposed plant's potential impact on available water resources. EPA's entire response to these comments consist of two sentences: "This concern is outside the scope of the PSD program. However, these issues are discussed at length in the DEIS at sections 2.4.3, 3.2.4, 4.2.1 and 4.2.2, and 5.1.3 and 5.2." RTC at 166 (again deferring substantive analysis that should play a role in the CAA decisionmaking process to another proceeding that will not play out until the PSD

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<sup>188</sup> In fact, these are precisely the types of impacts that EPA says it has "historically interpreted the phrase 'environmental impacts' to focus on" in the context of its obligation to consider "collateral environmental impacts." RTC at 30.

<sup>189</sup> Moreover, this issue provides yet another illustration of why it is so important for EPA to perform the case-by-case MACT analysis (which will specifically address mercury control options) in conjunction with its PSD permit decision. Were EPA to require or perform this kind of "holistic" analysis, it would allow the agency to consider collectively the full range of technologies and control measures that would allow for compliance with both MACT and PSD, and give the agency the ability to select the suite of controls for PSD that both comply with applicable regulatory limits and provide the maximum collateral environmental benefits.

<sup>190</sup> As commenters noted "One perversion created by EPA's interpretation of the Act with respect to "redefining the source" is the ability for EPA to avoid any up-front obligation to perform a comparative evaluation of mandatory factors such as collateral environmental impact." AR 66 at 79, n.152.

permit has been finalized). This response is facially inadequate. Not only should the depletion of water resources, and associated Environmental Justice considerations, be the subject of a collateral impact assessment (to ensure that that suite of technologies and control measures is optimized to require as little water as possible),<sup>191</sup> it is also presented by commenters as a justification for a “no build” alternative, and for deferring *any* decision on the PSD permit until a full environmental and Environmental Justice assessment has been completed.<sup>192</sup> EPA arbitrarily fails to address these issues.

**C. Environmental Justice Concerns Regarding the Implications of Public Health Services and Physical Infrastructure.**

Commenters also raised the very real issue of inadequate public health services on Tribal Land, where the brunt of the health-related burdens from the proposed facility will be felt. In response, EPA states:

This issue is beyond the scope of consideration for the PSD permit, however it is addressed in Chapter 3 and Chapter 4 of the NEPA Draft Environmental Impact Statement. We have shared the concern with the Bureau of Indian Affairs, and suggest that the commenters raise their concern with Indian Health Service, the Navajo Tribal government, and the Bureau of Indian Affairs.

RTC at 161. This response, however, entirely misses the point of the comment.

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<sup>191</sup> For example, the record shows that IGCC would use substantially less water than a pulverized coal boiler. AR 66 at 33.

<sup>192</sup> In its Prairie State decision, the Board recognized that “[t]he statutory text’s plain meaning does not lend itself to excluding public comments that request consideration of the “no build” alternative to address air quality concerns. Moreover, the Board’s and Administrator’s prior decisions would appear to recognize that consideration of “need” is an appropriate topic under section 165(a)(2).” In re Prairie State Generating Station, PSD Appeal No. 05-05, slip op. at 42 (EAB, Aug. 24, 2006), 13 E.A.D. \_\_\_ (citing In re EcoEléctrica, LP, 7 E.A.D. 56, 74 (EAB 1997)). While in Prairie State the Board held that a permitting authority was not obligated to engage in a protracted discussion or analysis of alternatives (including the no-build alternative) in response to generalized comments, EPA must be required to appropriately acknowledge the issue raised by commenters and provide *some* reasoned justification for its decision to proceed with issuing a permit anyway. Failure to do so leaves the record incomplete and denies the decisionmaker of a proper understanding of the nature of the comments.

Local residents’ observations about the inadequacy of health care resources and physical infrastructure (such as road) on Navajo Tribal Land were specifically intended to convey the concern that *any* air-related health impacts (such respiratory distress caused by exposure to PM emissions or ground level ozone) would have unusually severe adverse consequences because of the unavailability of health care (especially emergency).<sup>193</sup> Thus, according to commenters, pollutant increases in this region would be associated with more serious health outcomes than EPA might otherwise anticipate for a project of this nature. On this basis, commenters effectively requested that EPA select a “no build” alternative to the proposed plant, or at minimum refrain from making any final decision on the Draft Permit until the full range of Environmental Justice-related concerns are addressed.<sup>194</sup> EPA, however, altogether failed to address this issue and, as we discuss below, issued the permit prior to BIA’s completion of an environmental impact statement, in which a no-build alternative is being considered. Because EPA’s response fails entirely to address the point being raised by the comments, the permit must be remanded.

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<sup>193</sup> See, eg., AR 69, Comments 105, 108, 110, 114, 153, 167, 362. One comment states: “Given that unpaved roads and weak infrastructure means sure death in time of respiratory failure—adding particulates to the air, which increase the likelihood of respiratory failure is tantamount to murder.”). AR 69, Comment 108. While obviously passionate, comments like these raise legitimate Environmental Justice considerations and are deserving of a meaningful response – they received none.

<sup>194</sup> See generally comments listed in EPA’s table at RTC 156-60 (almost uniformly expressing a clear opposition “to the proposed Desert Rock Power Plant” based on Environmental Justice concern); See AR 69, Comment 137 (categorically opposing approval of the Desert Rock plant based on disproportionately severe health impacts). Commenters were not, as EPA suggest, asking EPA to solve the regions chronic problems of inadequate health care and poor physical infrastructure. As discussed above, EPA has ample authority to consider such issues, and must provide a reasoned justification for its decision to reject comments, and that justification must bear some relation to the comments themselves.

## **XII. EPA'S ISSUANCE OF THE DREF PERMIT PRIOR TO INITIATION AND COMPLETION OF CONSULTATION UNDER SECTION 7 OF THE ENDANGERED SPECIES ACT IS CLEARLY ERRONEOUS**

### **1. The DREF Will Adversely Affect Plant and Animal Species**

In addition to the potential impacts and concerns for human health from Desert Rock, Desert Rock air pollutants will affect plant and animal species. In the immediate area of the Desert Rock project, the Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and the Mancos milkvetch (*Astragalus humillimus*), are all listed as endangered under the Endangered Species Act ("ESA"), 16 U.S.C. 1533 et seq., meaning these species have been determined to be in danger of extinction.<sup>195</sup> Also in the immediate area of the Desert rock project is the threatened Mesa Verde cactus (*Sclerocactus mesae-verdae*). Critical habitat has been designated for the Colorado pikeminnow and the razorback sucker, including the San Juan River and tributary streams and area wetlands and ponds.

The United States Fish and Wildlife Service, as described in a letter and attachment dated January 7, 2008 (AR 94)<sup>196</sup> has determined that emissions of air pollutants from DREF will have

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<sup>195</sup> Further, on May 14, 2008 while the Desert Rock PSD permit was pending, the U.S. Department of Interior listed polar bears as a threatened species under the ESA, due to the decline in Arctic sea ice attributable in part to global warming (which in turn is attributable in part to man-made carbon dioxide in the atmosphere. 73 Fed. Reg. 28212 et seq. See also letter dated June 17, 2008, originally submitted on the Desert Rock Draft Environmental Impact Statement ("DEIS") and attachments thereto, also submitted in the PSD permitting matter. AR 62. Another example of listed species where global warming and carbon dioxide acidification of oceans is identified as causes of the species' decline are two corals, the elkhorn coral (*Acropora palmata*) and the staghorn coral (*Acropora cervicornis*), listed as threatened on May 9, 2006, 71 Fed. Reg. 25, 852, 26857-59.

<sup>196</sup> FWS sent this letter in response to a Biological Assessment and request for concurrence in a "not likely to adversely affect" determination by the Bureau of Indian Affairs. FWS considered the BA inadequate and that consultation has therefore not been initiated. Id.

an effect on listed species. See AR 94, Att. A at 6-12, AR 57.11 at 49-68.<sup>197</sup> For example, the FWS points out that the Colorado pikeminnow and the razorback sucker already suffer from high levels of mercury contamination and that increased mercury emissions from the Desert Rock facility will likely adversely affect that situation.<sup>198</sup> AR 94, Att. A at 13, 14; see also AR 57.11 at 59-60. Adverse effects to fish species from mercury include death, reduced reproductive success, impaired growth and development and behavioral abnormalities. See AR 94, Att. A at 13; AR 57.11 at 56. Petitioners' comments also pointed out that fish in the area are already so contaminated with mercury, public health authorities have issued fish consumption advisories. AR 66 at 51 (and materials cited therein). There are significant cumulative effects from the very large number of coal plant in the four corners area to all area species from mercury and other air pollutants, including increasing contamination of area reservoirs and rivers. AR 57.11 at 55, 57. Finally, mercury can accumulate to very high levels in plant tissues, potentially harming the plants, but also contributing to the chain of bioaccumulation in the environment. AR 57.11 at 56.

Similarly, the FWS letter, Attachment A, notes that most samples of water, fish, and other invertebrates from the mainstem of the San Juan River (razorback sucker habitat) showed elevated levels of selenium. AR 94, Att. A at 13; AR 57.11 at 59. Selenium contamination, especially in conjunction with mercury, contributes to increased mortality, reduced growth and reproductive failures in fish. AR 57.11 at 59. Selenium contamination tends to accumulate in slower backwaters, areas where the Colorado pikeminnow and razorback sucker breed. Id. The Recovery Plans prepared by FWS for the Colorado pikeminnow and the razorback sucker

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<sup>197</sup> FWS states: "The Service believes that the appropriate determination for these species is 'may affect, likely to adversely affect.'" AR 94 at 1.

<sup>198</sup> The increase in pollutants as a result of the Desert Rock project must be considered against the baseline of two other existing coal-fired power plants, also emitting large amounts of the same pollutants. AR 94; see also 50 C.F.R. § 402.40 (discussed below).

identify selenium as a possible factor contributing to the species' continued declines. Id. Selenium emissions in the area will increase as a result of the Desert Rock project. As pointed out in the FWS letter, "the baseline [for selenium] that include both NIIP (5.12 ug/g) and the proposed project (5.17 ug/g) does [exceed the threshold of concern] and poses a substantial reproductive failure risk to the razorback sucker." AR 94, Att. A at 14. (emphasis added.)

Perhaps the most significant Desert Rock pollutant emission, currently wholly uncontrolled in the PSD permit, is CO<sub>2</sub>. Desert Rock will emit 12.7 million tons of CO<sub>2</sub> per year over its 50-year lifetime. AR 94; AR 57.11; AR 66. The petitioners and FWS emphasize this very large increase in CO<sub>2</sub> from Desert Rock, pointing out that Desert Rock's emissions alone represent a 32% increase in the entire state of New Mexico's emissions from coal fired electric generating utilities.<sup>199</sup> This large increase in global warming pollutants must be contrasted with the scientific consensus of the United Nations' Intergovernmental Panel on Climate Change ("IPCC") representing the best minds in climate science. The IPCC's Fourth Assessment and Report, issued while the Desert Rock PSD permit was pending, recommends that sharp reductions of CO<sub>2</sub>—80% from current levels—must occur if the world is to avoid the very worst effects of global warming. AR 57.1 - 57.3. New Mexico, as part of its efforts with the Western Climate Initiative, has recommended that New Mexico decrease its CO<sub>2</sub> emissions down to 75% of 2000 levels by the year 2050. AR 105. The sharp reductions of CO<sub>2</sub> necessary to avoid extremely adverse impacts to the planet and species affected by global warming, emphasizes the severity and magnitude of adding 32% more CO<sub>2</sub> to New Mexico's current emissions---essentially 110% in the wrong direction.

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<sup>199</sup> FWS further note that the 12.7 million tons per year is not the entirety of CO<sub>2</sub> emissions from Desert Rock as that figure does not account for the additional emissions from necessary motor vehicle traffic and operation of heavy machinery. Therefore, the actual emissions attributable to the project as a whole will be higher. AR 94, Att. A at 16.

The Desert Rock increase in CO<sub>2</sub> pollution is likely to have an adverse effect on the listed species. Global warming from the increased and increasing CO<sub>2</sub> in the atmosphere is causing and is expected to cause, among other things, increased temperatures in the region, reduced snowpack and earlier spring runoff, changes in precipitation amounts, times and patterns, and increased evaporation and evapotranspiration further resulting in a decline in runoff. AR 94, Att. A at 16-17 and 57.11 at 51-52. Correspondingly, stream flows and temperatures will be affected with flows possibly greatly reduced and temperatures increased. FWS states that “it is very likely in the near future there will be insufficient water available to meet all of the demands.” AR 94, Att. A at 18 and 57.11 at 53. FWS identifies the stream flow and temperature changes as likely to adversely effect the Colorado pikeminnow and the razorback sucker. AR 94, Att. A at 17-18.<sup>200</sup> Petitioners similarly provided evidence of increasing temperatures, more frequent and more severe droughts, and altered hydrographs adversely affecting the Colorado pikeminnow and razorback sucker as a result of global warming. AR 57.11 at 53. This is particularly true because these effects will be in addition to the current baseline of extremely stressed conditions for the Colorado pikeminnow and the razorback sucker. Id. Petitioners also noted that increased drought will add to the extremely precarious position of the Mancos milkvetch and Mesa Verde cactus. Id. Finally, the increase in CO<sub>2</sub>, in the opposite direction of what is needed, will clearly contribute to the adverse effects currently being recorded in the Arctic, the continued threat to the listed polar bears and to increased warming and acidification of the oceans with adverse effects to listed corals. AR 57.11 at 51.<sup>201</sup>

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<sup>200</sup> These effects on stream flow and temperature will be in addition to probable adverse effects on the Colorado pikeminnow and the razorback sucker from the additional groundwater use by Desert Rock. See AR 94, Att. A at 2.

<sup>201</sup> Indirect effects from the Desert Rock facility will also impact listed species. For example, FWS points out that transmission lines for the facility traverse southwestern willow flycatcher

Against this backdrop of yet another new large coal-fired emitter of mercury, selenium, acid rain-causing SO<sub>2</sub> and global-warming-causing CO<sub>2</sub> pollution, and against the FWS's finding of likely significant impacts to species already stressed to the point of endangered status, EPA has failed to consult with the FWS and assess impacts to listed species. EPA's failures in this regard are contrary to its obligations under both the Clean Air Act and the Endangered Species Act. Based upon the arguments set forth below, Petitioners request the EAB to immediately remand the PSD permit with direction to the agency to complete its obligations under §§ 165 and 169 of the Clean Air Act, to complete consultation under § 7 of the Endangered Species Act, and to make the materials associated with the completed consultation process a part of the record for the permit decision before Region 9 issues re-issues any final permit.

**2. The CAA Requires EPA to Consider Larger Environmental Impacts, Including to Species and Soils**

When Congress's intent is clear, the courts, not the agency, are charged with the basic responsibility for statutory interpretation. A contrary agency interpretation is entitled to no deference. And as the Supreme Court emphasized in Tennessee Valley Authority v. Hill, 437 U.S. 153, 173 (1978) ("one would be hard pressed to find a statutory provision whose terms were any plainer than those in § 7 of the [ESA].").

**A. The CAA Requires EPA To Analyze Soils And Vegetation And Impacts To Them From Desert Rock Prior To Public Participation In The PSD Permit.**

EPA's assessment of air emissions associated with a PSD permit is not to be artificially constrained nor narrowly focused on the ends of the stacks in the facility. Rather, the Clean Air

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habitat and/or habitat that may be suitable as critical habitat and that such potential adverse impacts must be considered. Desert Rock will also be a large increase in water use in an area where water shortages are expected in the near future.

Act (“CAA”) requires EPA to, among other things, analyze soils and vegetation at the site of, and in the area potentially affected by, Desert Rock for each pollutant that will be emitted by Desert Rock and relative to the size and nature of the facility and the degree of continuous emission reduction which could be achieved by Desert Rock. CAA § 165(e)(3)(B); 42 U.S.C. § 7475(e)(3)(B). See also, 40 C.F.R. § 52.21(o). In particular, sensitive species are to receive special attention, especially those that are listed as threatened or endangered under the Endangered Species Act (although the requirement applies to all species, not just those that are listed under the ESA.) Id. The soil and vegetative effects analysis must be detailed and specific and necessarily *preceded* by an inventory of the soils and plants in the area to be affected. In re Indeck-Elwood, L.L.C., 13 E.A.D.\_\_\_\_, slip op. at 43-51 (EAB, Sept. 27, 2006) (citing to NSR Manual at D.4).

The CAA further requires that the soils and vegetation inventory and analysis, and any PSD permit decisions based thereon, shall be completed prior to, and shall be available for, the public notice and hearing on the PSD permit. CAA § 165 (a)(2); 42 U.S.C. § 7475(a)(2). See also Indeck-Elwood, slip op. at 51. Finally, failure to make the inventory, analysis, and permit decisions based upon them, available to the public during the comment period cannot be cured with after-the-fact permit conditions. Id.

**B. EPA Did Not Prepare The Required Soils And Vegetation Inventory And Analysis For The Desert Rock PSD Permit.**

Despite the clear requirements of the statutes, EPA’s own guidance, and the specific direction of the EAB in the Indeck-Elwood case, EPA ignored its obligations in this case and has made no attempt to comply with the requirement to inventory and assess impacts to soil and vegetation in the area potentially affected by Desert Rock. EPA’s response to the assertion in Petitioners’ comments that EPA failed to conduct soils and vegetative inventory and analysis,

wrongly conflates and confuses the §165(e)(3) requirement with ESA consultation and therefore gives no explanation for the lack of inventory and analysis. See RTC at 169. EPA simply responds that the BIA is the “lead agency” on consultation and that any such soils and vegetative analysis will be done when BIA completes its work. Id. EPA essentially admits that the inventory and analysis has not yet been done, much less made available for public comment.

This leaves EPA, and importantly the public, with no understanding of how the increased Desert Rock pollutants, whether mercury, selenium, sulfur dioxide, or CO<sub>2</sub>, will impact the area, including threatened and endangered plant species such as the Mesa Verde cactus and Mancos milkvetch. Further, it must be presumed that the lack of analysis by EPA means there are no protections against adverse impacts on endangered plant species (or any other plant species) in the permit itself as emissions limitations in the permit are not informed by an understanding of soil and vegetative impacts.

EPA’s failures in this regard are total and in direct contravention of the requirements set forth by the EAB in Indeck-Elwood. Petitioners request the EAB to remand the Desert Rock permit with directions to EPA to perform the inventory and analysis of soil and vegetation potentially affected by the Desert Rock facility as required by § 165(e)(3)(B), 42 U.S.C. § 7475(e)(3)(B), and that the results of such inventory and analysis, together with any attendant permit changes (or reasons why such analysis does not necessitate permit changes) be made available at public hearing.

**C. EPA Has an Obligation to Ensure, in Consultation with FWS, that Issuing the Desert Rock PSD Permit Will Not Jeopardize ESA-Listed Species or Their Critical Habitat**

While EPA appears to agree that consultation under § 7 of the ESA is required in this case, EPA has refused to engage in consultation on the Desert Rock PSD permit. EPA has

instead chosen to issue the permit without initiating consultation, claiming that the BIA will take care of the problem and that permit conditions cure the failure to consult. EPA's position violates the basic requirements of § 7 and its excuses are not supported by the ESA or case law interpreting it. EPA must consult on the permit and it must complete such consultation *prior* to issuing the PSD Permit.

**i. The ESA Provides Comprehensive Protections To Species Including As To The Activities Of Federal Agencies.**

The Endangered Species Act is the “most comprehensive legislation for the preservation of endangered species ever enacted by a nation,” Tennessee Valley Authority v. Hill, 437 U.S. 153, 180 (1978), and as such was intended to halt and reverse species' extinction, regardless of cost. Id. at 184. To accomplish Congress' goal to give endangered species priority even over missions of federal agencies, id. at 185, the ESA includes both substantive and procedural requirements and safeguards.

Section 7(a)(2), 16 U.S.C. § 1536(a)(2), is a critical component of those requirements and safeguards. Under its provisions, EPA must ensure that the Desert Rock permit, as issued, is not likely to jeopardize a listed species, nor adversely modify its critical habitat. 16 U.S.C. § 1536(a)(2). An action jeopardizes a listed species if it directly or indirectly reduces the likelihood of both survival and recovery of the species in the wild by reducing the reproduction, numbers, or distribution of that species. 50 C.F.R. § 402.02; see also Sierra Club v. Marsh, 816 F.2d 1376, 1386 (9<sup>th</sup> Cir. 1987); Washington Toxics Coalition v. Environmental Protection Agency, 413 F.3d 1024, 1035 (9<sup>th</sup> Cir. 2005).

As an integral part of ensuring species are protected and that federal agencies meet their substantive obligations, the ESA sets forth procedural steps for agencies to follow. Federal agencies are required to consult with designated wildlife agencies, in this case the FWS, on the

impacts of issuing a PSD permit to a large coal power plant on a listed species or critical habitat. 16 U.S.C. § 1536(a)(2). The formal consultation process must commence when a federal agency determines that a proposed federal action “may affect listed species or critical habitat.” 50 C.F.R. § 402.14(a). The threshold for such a determination is exceedingly low. “May affect” means “[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character, triggers the formal consultation requirement . . . .” 51 Fed. Reg. 19,926, 19,949 (June 3, 1986); ESA Section 7 Consultation Handbook (Mar. 1998) at xvi (excerpts attached as Ex. 52). Consultation is complete when FWS issues a “biological opinion” that determines if the action is likely to jeopardize the species. Analysis of potential jeopardy must include review of all direct and indirect impacts and they must be added to the environmental baseline. 50 C.F.R. § 402.02; see also Pacific Coast Fed’n of Fisherman’s Assoc., Inc. v. National Marine Fisheries Service, 265 F.3d 1028, 1036 (9<sup>th</sup> Cir. 2001); National Wildlife Federation v. Norton, 332 F.Supp.2d 170, 178-79 (D.D.C. 2004); National Wildlife Federation v. National Marine Fisheries Service, 524 F.3d 917, 930 (9<sup>th</sup> Cir. 2008) (“[E]ven where baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy by causing additional harm.”); National Wildlife Federation v. Coleman, 529 F.2d 359, 373 (5<sup>th</sup> Cir. 1976). If jeopardy is found, the biological opinion may specify alternatives that will avoid jeopardy while still allowing the agency to proceed with the action. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(g)(5)-(6); (h)(3); (i)(1)-(2).

Against this backdrop of clear direction to ensure species and critical habitat are not jeopardized, and clear procedural requirements to serve that end, EPA has in this case ignored the law, ignored the direction of courts, and even ignored the strong cautions and suggestions of this Board. EPA issued the Desert Rock PSD permit on July 31, 2008 without having initiated

(or obviously, completed) consultation under § 7(a) of the ESA. As set forth in more detail below, Petitioners request that this Board remand the permit as invalid for such violations and direct EPA to initiate and complete consultation pursuant to § 7(a) of the ESA.

**ii. EPA Was Required To Consult With FWS On The PSD Permit Prior To Its Issuance.**

There is no dispute that the PSD permit may affect listed species and their habitat. The ESA consultation process is triggered whenever a federal action “may affect” a listed species. Consistent with the EAB’s ruling in the Indeck-Elwood case, EPA agrees and admits that it must consult with the FWS on the issuance of the Desert Rock PSD permit. AR 47 (July 27, 2006 letter from EPA to Sithe Global Power L.L.C) (“EPA has determined that this project triggers Section 7 of the Endangered Species Act (ESA), 16 U.S.C. § 1536 and its implementing regulations at 50 C.F.R. Part 402.”). After describing the consultation process requirements, EPA’s July 27, 2006 letter also provides that EPA will not proceed with permit issuance until conclusion of consultation, review of FWS’s Biological Opinion, and EPA’s determination that issuance of the permit will be consistent with ESA requirements. Id. Finally, the letter provides that EPA is turning to the Bureau of Indian Affairs to serve as the “lead agency” for § 7 consultation as the BIA is required to consult on the Desert Rock project’s use of Navajo lands. Id.

EPA also echoed this Board’s instructions in the Indeck-Elwood case and admitted the need for § 7 consultation in its response to public comments. On page 170 of the response to comments, EPA states that § 7 consultation on PSD permits should be done prior to permit issuance. AR 120 at 170. Unfortunately, with the response to comments EPA acted completely contrary to its prior admissions and issued the Desert Rock PSD permit. EPA has not initiated §

7 consultation on the Desert Rock PSD permit and admits in the response to comments that it has not. AR 120.

Given this Board's clear direction and stated preference to EPA in the Indeck-Elwood case, EPA has no excuse and cannot articulate a reason for its utter failure to engage in § 7 consultation as required by the ESA. EPA's proffered excuses all must fail as inconsistent with the clear requirements of the ESA and attendant case law and inconsistent with the facts of this case.

#### **4. EPA's Failure to Consult is Unlawful and Compels a Remand of the Final Permit**

##### **A. EPA's Claim That BIA Is The "Lead" Agency For Consultation Does Not Cure The ESA Violations.**

EPA's response to comments wrongly suggests that EPA's failure to consult is adequately addressed by EPA handing over the consultation obligations to the BIA as the "lead" agency. EPA's response is an incorrect reading of the lead agency provisions. The lead agency regulation, 50 C.F.R. § 402.07 provides:

When a particular action involves more than one Federal agency, the consultation and conference responsibilities may be fulfilled through a lead agency. Factors relevant in determining an appropriate lead agency include the time sequence in which the agencies would become involved, the magnitude of their respective involvement, and their relative expertise with respect to the environmental effects of the action. . .

(emphasis added). The agency action in question is issuance of the PSD permit. The BIA is not involved in the PSD permit action.<sup>202</sup> Responsibility and involvement in the PSD permit lies solely with EPA. Therefore, EPA's shunting of responsibility to the BIA is an inappropriate abuse of the lead agency regulation.

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<sup>202</sup> BIA is not responsible for any aspect of issuing the DREF PSD permit, and the record is devoid of any evidence that BIA played any role whatsoever in shaping the terms of the final permit.

Moreover, even if, by a stretch of imagination, BIA may be considered “involved” in the PSD permit, the factors set forth in the regulation would still dictate that EPA is the proper agency to consult on the PSD permit. EPA’s actions on the PSD permit are first in time, the magnitude of its involvement in the PSD permit far outweighs BIA’s involvement (which is minimal if any at all), and EPA clearly is the agency with expertise in terms of air pollutants and global warming. EPA’s argument that the BIA is ‘taking care of it’ when it comes to endangered species consultation, makes no sense in light of the plain language of the lead agency regulation.<sup>203</sup>

**B. EPA’s Violations of § 7(a) Cannot Be Excused Through § 7(d).**

**i. The plain language of §§ 7(a) and (d) prohibit issuance of the PSD permit**

EPA’s statements that the PSD permit could be issued in violation of § 7(a) by operation of § 7(d) misapplies case law and the clear language of § 7(d). EPA appears to think that it can violate the consultation requirements of § 7(a) by placing some conditions language in the permit about construction being stayed pending consultation and allowing EPA to reopen the PSD permit, at its option, at some later date. This is simply wrong under the law. Section 7’s procedural requirements dictate that agency actions that may affect listed species or critical habitat may not progress at all unless and until the agency assures, through completion of the consultation process, that the proposed action is not likely to cause jeopardy. 16 U.S.C. §

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<sup>203</sup> In fact, the FWS January 2008 letter makes abundantly clear that the BIA is doing a poor job of initiating consultation even with specific guidance and questions from FWS. FWS’s January 2008 letter pointedly disagrees with the BIA’s conclusions with FWS finding that there are likely adverse effects to the Mancos milkvetch, the Colorado pikeminnow, the razorback sucker and the southwestern willow flycatcher. AR 94 at 1.

1536(a); 50 C.F.R. §§ 402.14; 402.13. See also, Connor v. Burford, 848 F.2d 1441, 1452 (9<sup>th</sup> Cir. 1988).

The law is clear that agency action absolutely cannot proceed if consultation has not been initiated and a biological opinion completed. Section 7(d) actually provides added safeguards against an agency attempting to creep a project along such as advancing funding or breaking a project into pieces and allowing some “related” pieces to proceed. Section 7(d) does not serve as an “out” for an agency while consultation is pending. In issuing the PSD permit, the action upon which EPA has authority, on July 31, 2008, EPA violated these requirements.

**ii. Courts have consistently found § 7(d) provides added procedural protections, not an excuse for noncompliance.**

Courts have repeatedly found that strict compliance with the ESA’s procedural obligations is critical to the substantive protections afforded by the ESA, because only through full consultation can effects on listed species from agency actions be fully evaluated and adverse effects avoided.

[T]he strict substantive provisions of the ESA justify *more* stringent enforcement of its procedural requirements, because the procedural requirements are designed to ensure compliance with the substantive provisions. . . . If a project is allowed to proceed without substantial compliance with those procedural requirements, there can be no assurance that a violation of the ESA’s substantive provisions will not result. The latter is, of course impermissible.

Thomas v. Peterson, 753 F.2d 754, 764 (9<sup>th</sup> Cir. 1985) (emphasis in original); see also, PCFFA v. U.S. Bureau of Reclamation, 138 F. Supp.2d 1228, 1248-50 (N.D. Cal. 2001); Greenpeace v. NMFS, 106 F. Supp.2d 1066, 1073 (W.D. Wash. 2000) (“Greenpeace II”); Pacific Rivers Council v. Thomas, 30 F.3d 1050, 1056-57 (9<sup>th</sup> Cir. 1994) (enjoining logging, grazing, and road-

building activities for failure to reinitiate consultation on forest plans upon listing of salmon species).<sup>204</sup>

In Pacific Rivers Council v. Thomas, the court rejected claims that proceeding with agency action is acceptable as long as the agency believes the action will not result in an “irretrievable and irreversible commitment of resources:”

We have previously made it clear that § 7(d) [16 U.S.C. § 1537(d)] does not serve as a basis for *any* governmental action unless and until consultation has been initiated. In *Connor*...[w]e rejected the Fish and Wildlife Service’s suggestion that projects it unilaterally determined were not irreversible and irretrievable commitments of resources could go forward even though it had not obtained an adequate biological opinion as required by § 7(a)(2).

Pacific Rivers Council v. Thomas, 30 F.3d at 1056 (citing Connor v. Burford, 848 F.2d at 1455).

Section 7(d) is truly meant to ensure the status quo during the consultation process, not to give some “out” for parts of a project. *Id.* See also, Pacific Coast Federation of Fishermen’s Associations v. U.S. Bureau of Reclamation, 138 F. Supp.2d 1228, 1242 and 1245 (N.D.Cal. 2001), Pacific Coast Federation of Fishermen’s Associations, 138 F.Supp.2d at 1245-46 (where court notes that initiation of so-called “informal consultation” does not trigger § 7(d) or allow agency action to proceed under claim of no irreversible or irretrievable commitment of resources), and *Greenpeace*, 106 F.Supp.2d at 1074, fn.5 (“section 7(d) does not amend section 7(a) to read that a comprehensive biological opinion is not required before initiation of agency action so long as there is no irreversible or irretrievable commitment of resources.”) (citing Connor v. Burford). Thus, the Ninth Circuit has made clear that § 7(d) of the ESA does not

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<sup>204</sup> The EAB has also earlier cautioned that consultation under section 7 of the ESA should in the ordinary course conclude prior to issuance of a final PSD permit. Indeck-Elwood, slip op. at p. 110 and 111. As set forth in more detail below, petitioners argue that the Desert Rock case presents the opportunity for the EAB to revisit and more firmly apply the requirements of the ESA and attendant case law to clearly require that consultation be completed prior to permit issuance consistent with the Court of Appeals’ decisions.

amend § 7(a) to read that a biological opinion is not required before the initiation of agency action as long as there is no irretrievable and irreversible commitment of resources. Rather, the § 7(d) language provides additional protections to ensure that agencies do not try to whittle away at a project while consultation is proceeding, thereby moving a project toward inevitability and inflexibility to the detriment of species protection.

**iii. Section 7(d) does not apply because EPA violated § 7(a) by issuing the PSD permit prior to initiation of consultation.**

EPA knows that consultation on the PSD permit has not been initiated in this case. EPA issued the PSD permit on July 31, 2008. BIA had requested initiation of consultation,<sup>205</sup> but FWS informed BIA that it would not initiate consultation for the Desert Rock project until FWS received information previously requested from BIA or an explanation why the information cannot be made available. AR 94. Because § 7(a) has been violated, § 7(d) is not even at issue.

Even if BIA is the “lead” on the PSD permit<sup>206</sup> and even if consultation was considered to have commenced prior to July 31, 2008, the permit should not have been issued before completion of the process. Again, once consultation is commenced, the agency must not move forward and alter the ability to protect the species, including limiting options or causing a situation where the agency or project proponent will be reluctant or unable to change. 16 U.S.C. § 1536(d). See also Connor, 848 F.2d at 1455; Houston, 146 F.3d at 1128. Consultation is complete only upon issuance of a Biological Opinion. There is no Biological Opinion relative to the Desert Rock PSD permit. If EPA actually believes the BIA has initiated consultation, EPA

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<sup>205</sup> Judging from the correspondence in the record between FWS and the BIA, it is not clear that BIA thinks it is the “lead” agency on the PSD permit. The PSD permit is not mentioned.

<sup>206</sup> As recognized by EPA in its earlier correspondence to Sithe, the PSD permit is the action upon which EPA has the obligation to consult. The PSD permit is not some minor side event related to the coal plant.

can take no further action on the PSD permit until consultation is complete with a biological opinion.

**C. EPA Cannot “Save” Its Noncompliance With Contingency Language In The PSD Permit.**

EPA, in apparent recognition of its failure to properly consult on the PSD permit, makes a last-ditch attempt to fix the violation with tepid contingency language in the permit forestalling construction until consultation is done and allowing EPA to reopen the permit after consultation should EPA so choose. EPA cannot cure or excuse its failure to comply with the requirements of § 7(a) by attempting to include some kind of a saving or contingency language as part of the agency action. See e.g., Connor, 848 F.2d at 1457-58 (where court notes that Threatened and Endangered Species stipulations within the terms of leases did not excuse § 7(a) failures and did not save agency action).

First, EPA misapplies § 7(d) when it suggests that issuing the PSD permit does not violate the ESA because resources will not be committed due to contingency language in the PSD permit preventing construction until consultation is complete. The commitment of resources referenced in § 7(d) is not just the commitment by the project proponent, but also, the commitment of permitting resources by the agency:

After initiation of consultation required under subsection (a)(2) of this section, the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources with respect to the agency action...

15 U.S.C. § 1536(d) (emphasis added). EPA committed those resources in the investment of staff and time in the issuance of the permit.

Second, EPA irretrievably and irreversibly committed those resources by issuing the PSD permit. In a case directly on point, the court in Natural Resources Defense Council v. Houston,

146 F.2d 1118, 1127-28 (9<sup>th</sup> Cir. 1998), firmly admonished the Bureau of Reclamation for entering into water contracts in violation of § 7(d) and found that savings clauses in the contract allowing amendment post-consultation, *did not* excuse the violation. “We do not think that an agency should be permitted to skirt the procedural requirements of § 7(d) by including such a catchall savings clause in *illegally executed* contracts.” Houston, 146 F.3d at 1128 (emphasis added). The rationale behind a strict reading of §§ 7(a) and (d) in this regard is that by even entering into contracts or permits, agencies have often foreclosed or limited options and introduced inflexibility into their decision-making. Id.

The contingency in the Desert Rock PSD permit provides only that the permit may be reopened. It does not specify what may be changed, how, or when, it does not provide that the permit may be revoked, and it is unclear under what circumstances EPA would choose to reopen the permit. As in the Houston case and as was the case with funds for the Tellico dam in the TVA case, the illegally-issued PSD permit can, and probably has, sped the project along, limited options, and decreased flexibility for protecting species. Allowing an agency to escape compliance in the manner attempted here by EPA, would stray from the strict compliance with procedural requirements dictated by the statute and the case law. It would open a door to habitual agency noncompliance and a practice of “catch us if you can” where only if members of the public identify and contest the misbehavior will the agency go back and conduct a proper consultation, albeit still after the fact, having made an initial commitment to the originally-desired course of action.<sup>207</sup>

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<sup>207</sup> On this point, petitioners suggest the need for the EAB to revisit and clarify portions of the Indeck-Elwood opinion, especially in light of EPA’s actions and arguments in this case. Despite suggestions in dicta in Indeck-Elwood, it cannot possibly be the law that issuance of the PSD permit is not considered an irretrievable and irreversible commitment of resources as long as the permit is appealed. This suggests that the failure to consult is somehow saved or excused if the

Issuing a final permit with limits and requirements necessarily means that EPA will be less willing to make modifications, particularly if they are significant (which is likely the case for such a large, polluting project) that may be necessary to protect endangered or threatened species and their habitat. Without consultation (and without the similar obligations under the CAA to assess soil and vegetation impacts and weigh impacts from various BACT options on species), it is impossible to tell what options may have been needed to protect species. Further, EPA's piecemeal approach avoiding some obligations and delaying others will result in shutting the public out of participation in important components of the PSD permit.

Finally, EPA's haphazard and casual approach to its ESA and CAA obligations to protect species and the broader environment, is a complete waste of the EAB and public's time. It makes no sense for the EAB to decide PSD permitting issues of enormous importance to our energy and environmental future only to have to start over if and when EPA reopens the permit post-consultation. In fact, the very magnitude of "starting over" suggest that EPA has taken the irretrievable and irreversible steps forbidden in the ESA as it is highly likely EPA and the permittee will strongly resist reopening the PSD permit to make any significant change at all.

Petitioners strongly urge the EAB to reject EPA's violation of the ESA and to remand the permit immediately with directions for the agency to comply with clear obligations of CAA § 165 and ESA § 7 as discussed above.

**XIII. EPA'S FAILURE TO COORDINATE WITH THE ONGOING PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT FOR DREF IS CLEARLY ERRONEOUS.**

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public challenges the permit, but conversely, the violation of the consultation provisions occurs if there is no appeal of the permit—a violation that cannot then be addressed with a permit challenge. This circular reasoning simply makes no sense as evidenced by EPA's misuse here of the EAB's earlier comments on this point, and continued abuse of this important statutory safeguard. Indeck-Elwood should be overturned on this point or narrowly confined to its facts.

The Board should remand this matter because EPA failed to coordinate the PSD permit proceedings with the ongoing NEPA proceedings that must be completed before construction of DFRF may commence, and with EPA's Section 309 review, as required by 40 C.F.R. § 52.21(s). In their comments, Petitioners observe that EPA has violated § 52.21(s), both by failing to conduct the permit proceedings in parallel with the NEPA proceedings, and by failing to consider in the permit proceedings information and analyses developed in connection with the EIS that are relevant to the proposed permit, including EPA's own comments on the EIS submitted under Section 309. (AR 66, Ex. 5, at 99; AR 57, Ex. 6 at 2, 23-28).

Section 52.21(s), 40 C.F.R. requires EPA to coordinate provides:

*(s) Environmental impact statements.*

Whenever any proposed source or modification is subject to action by a Federal Agency which might necessitate preparation of an environmental impact statement pursuant to the National Environmental Policy Act (42 U.S.C. § 4321), review by the Administrator conducted pursuant to this section shall be coordinated with the broad environmental reviews under that Act and under section 309 to the maximum extent feasible and reasonable.

(Emphasis added).

The Bureau of Indian Affairs must prepare an environmental impact statement for DREF before construction of the plant may begin because BIA must approve a lease for the facility. Ex. \_\_\_\_, at ES-1 – ES-2. BIA is serving as the lead agency on the EIS and EPA is a cooperating agency. Id. The EIS must include a detailed statement on the environmental impacts of and alternatives to DREF. See 42 U.S.C. § 4332(2)(C). As the EIS is being developed for the proposed 1500MW DREF coal-fired power plant itself, the EIS must necessarily consider numerous issues of direct relevance to the PSD permit.<sup>208</sup> For example, the EIS must assess

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<sup>208</sup>EPA actions under the Clean Air Act are exempt from compliance with NEPA's environmental impact statement requirement. 15 U.S.C. § 793(c). However, the statute does not

impacts of DREF's air emissions, impacts attributable to DREF's use of water resources, and impacts of disposal of DREF's coal combustion wastes in the Navajo Mine, including impacts to ground, surface water, soils, plant and animal species. In addition, the EIS must assess alternatives to the proposed power plant, including a no action alternative. It appears that the NEPA proceedings purport to address, most, if not, all of these issues. See Ex. \_\_; AR 57.8, Comment Letter 1011, Ex. 8.<sup>209</sup>

BIA issued a notice of intent to prepare an EIS on November 10, 2004 (Ex., at 1-12). BIA held public scoping meetings in December 2004 and March 2005. During scoping “[a]ir quality, global warming, and other global atmospheric effects of burning fossil fuels stood out as the issues of greatest concern. Ex. 44, at 1-12. BIA issued a draft environmental impact statement on May 11, 2007, and solicited public comment on the DEIS for 60 days. Ex. 44. The DEIS evaluates the proposed 1500 MW coal plant, and two alternatives, a much smaller 550 MW coal plant, and a no action alternative under which the project would not be built. Ex. 44, at

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exempt EPA from other obligations under NEPA and the Council on Environmental Quality's NEPA implementing regulations, including obligations to:

(1) “integrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively. 40 C.F.R. §1500.2(c), 1501.2; and (2) “study, develop and describe appropriate alternatives to recommended courses of action.” 40 C.F.R. § 1500.2(e), 1501.1. Further agencies preparing an EIS (and here EPA is a cooperating agency on the DEIS for DREF), are required to “to the fullest extent possible” to prepare a DEIS “concurrently with and integrated with environmental impact analyses and required surveys and studies” required by the Fish and Wildlife Coordination Act, the Endangered Species Act, “and other environmental review laws and executive orders.” This includes the PSD provisions of the Clean Air Act.<sup>209</sup> Petitioners do not admit that the DEIS has analyzed all required issues or that the DEIS' analysis is legally sufficient, and have submitted comments on the DEIS pointing out numerous deficiencies. AR 57.11.

2-1 – 2-2. The DEIS also purports to address the alleged need for the electricity that would be generated by the DEIS and other economic considerations. Ex. 44, at 1-6 – 1-11.<sup>210</sup>

While these analyses are clearly warranted, they can not serve as an excuse for EPA to shirk its very specific responsibilities under the CAA associated with the issuance of a PSD permit. Indeed, EPA has so fragmented the CAA review for the DREF that it has fundamentally undermined several basic objectives of the statutory program. The deferred analyses that have rendered this permit proceeding structurally unsound include assessment of environmental justice concerns (including impacts to public health in local Navajo communities, impacts to soil, vegetation, species, and assessment of collateral environmental impacts associated with solid waste, water use and water quality); assessment of impact on threatened and endangered plant and animal species; and meaningful consideration of alternatives to the proposed project (including consideration of need and a no-build alternative).<sup>211</sup>

Due to the multiple corrosive effects on the integrity of the PSD permitting process in this instance, Petitioners believe that EPA committed clear error by failing to coordinate the PSD permit proceedings with the NEPA review process. By failing to conduct its PSD proceedings in parallel with the NEPA proceedings, by failing to obtain from BIA and consider in the PSD proceedings (including the public comment process) relevant information generated through the

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<sup>210</sup> Petitioners dispute legal sufficiency of the analyses of need in the DEIS. See AR 57.11 (noting that it does not account for other proposed power plants in the Region, including the 1,590MW White Pine, and 2100 MW Nevada Power Plant’s in Nevada, and Sithe’s proposed 750MW Toquop plant in Utah); Comment Letter 1011, Ex. 11, at 30-31.

<sup>211</sup> The Board has previously held that need is an appropriate topic for consideration under Section 165(a)(2), and that state permitting authorities have the option of not approving proposed facilities, and that, among other things, “an evaluation of relative public need for competing increment uses is an appropriate basis for” a state PSD permitting decision. In re Prairie State Generating Company, slip op. at 42.

NEPA process, and by approving the PSD permit before the NEPA process is completed, EPA has fatally compromised DREF's PSD permit.

Adequate coordination would be fully consistent with the Act as well as with Board precedent. Although the Board declined to require such coordination in both Hadson Power and Prairie State Generating Company, the facts presented in those cases did not compel coordination as they do here. See generally, In re Prairie State Generating Company, PSD Appeal No. 05-05 (August 24, 2006), 13 E.A.D. \_\_\_\_; In re Hadson Power, 4 E.A.D. 258 (EAB 1992). In Hadson Power, the Board declined to require the state permitting agency to defer consideration of its PSD permit until the National Park Service completed NEPA review of an easement for a park because the NEPA review was irrelevant to the proposed coal-fired power plant for which the PSD permit was sought. Id. at 300 & n. 62. The easement originally was relevant to the permit proceeding only in that it pertained to a proposed "coal conveyance" across the park. Id. at 299-300. However, the permittee abandoned its plans for the coal conveyance and elected to have coal delivered by truck instead. Id. The Board held that the permittee's "decision to abandon the plans for coal conveyance across Glen Maury Park eliminates any need to await completion of the NPS NEPA review." Id. at 300. In Prairie State, the Board stated that "a state agency exercising delegated authority has sufficiently coordinated when the agency concludes that any NEPA review does not pertain to the portions of the facility subject to PSD regulation." Slip Op. at 163 (citing Hadson Power, 4 E.A.D. at 229-30). The Board found that "the record does not show that there is any NEPA review pending or that any potential NEPA reviews cover any aspect of the proposed Facility that is subject to PSD regulation." Slip Op. at 163.

In contrast, the NEPA proceedings for DREF are for the "source" for which the PSD permit is sought. The plain language of Section 52.21(s) therefore requires coordination "to the

maximum extent feasible and reasonable.” Moreover, as discussed at length in this brief, there are multiple, significant overlapping issues, that would be best resolved through a coordinated process.

In its Response to Comments, EPA states that “as in Hadson, Region 9 has obtained all necessary information for issuing the PSD permit through the permitting process.” This assertion, however, is demonstrably erroneous. EPA further states that it “did all that it believes is necessary through (1) serving as a cooperative agency for the preparation of the EIS;<sup>212</sup> (2) providing BIA “extensive technical information” from its review of the project;<sup>213</sup> and (3) providing “BIA with copies of the public comments on the proposed PSD permit, and contact information for persons who have expressed interest in the proposed DREF.”<sup>214</sup> The measures, however, have proven insufficient, as the record for the PSD permit proceeding, remains incomplete in some significant ways (as discussed throughout this brief).

EPA does not dispute that it had a mandatory duty to coordinate “to the maximum extent feasible and reasonable.” But EPA wrongfully seeks to turn the issue on its head, alleging that “there is no need to delay issuing this PSD permit.” There clearly is a need to delay the PSD permit given the number and importance of the issues that have been deferred to NEPA (and

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<sup>212</sup> The record does not indicate what EPA did as a cooperating agency. EPA did use its authority under Section 309, to provide comments on the DEIS. AR 57.8, Comment Letter 1011, Ex. 8.

<sup>213</sup> The record for the PSD permit proceeding does not reflect what information EPA provided for consideration in the NEPA proceedings other than how EPA used its Section 309 authority. In any case that is not the relevant issue here.

<sup>214</sup> EPA’s statement that it provided the comments it received on the PSD permit to BIA is an acknowledgment that EPA should have obtained from BIA the comments BIA received on the DEIS. Petitioners specifically requested that EPA obtain and consider all relevant information generated both through the NEPA proceedings and through the State of New Mexico’s consultation with the Navajos and the record indicates that EPA did not do so.

other proceedings).<sup>215</sup> In any case, EPA does not contend, and offers no information suggesting, that meaningful coordination would not be feasible. In short, in the absence of an otherwise internally complete analysis, EPA's failure to more closely coordinate the PSD and NEPA processes is clearly erroneous.

Though EPA has not raised it as a basis for not coordinating, the record contains selected documents regarding a lawsuit filed by DREF alleging that EPA failed to comply with Section 165(c), which states that “[a]ny completed permit application under [Section 110] for a major facility in any area to which this part applies shall be granted or denied one year after the date of filing of such completed application.” AR 98 (Complaint), AR 113 (Consent Decree).<sup>216</sup> DREC alleges that EPA notified “the permit applicant by letter dated May 21, 2004, that the permit application was complete,” and that therefore EPA, under Section 165(c), “should have issued the permit for the project no later than May 21, 2005.”<sup>217</sup> AR 98, Complaint ¶¶ 2-3. It seems

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<sup>215</sup> These deferrals of course also include issues nominally unrelated to the NEPA process, such consideration of the interaction between MACT and PSD, although still necessary for a full and accurate environmental review.

<sup>216</sup> Petitioners note that EPA's inclusion of select documents from this case, that it never references in its response to comments or otherwise relies on in its permit decision, including the Consent Decree which is included in a folder labeled “emails” (AR 113), is inappropriate and highly prejudicial to Petitioners. Accordingly, the Board should either strike these materials from the record, or permit supplementation of the record with the related Exhibits attached herein (Exs. 45, 47, 53-57).

<sup>217</sup> EPA did provide Sithe's predecessor, a May 21, 2004 letter advising that the application is “administratively complete.” AR 14. However, the application clearly did not contain all necessary information. Both the Forest Service and NMED advised EPA that the application was not complete and lacked specific necessary information. AR 15, 18, 19, 26. Sithe and its predecessor provided EPA numerous volumes of information subsequent to the May 21, 2004 letter, some of which are clearly identified as supplemental application materials. See, e.g., AR 27 (May 3, 2005 Report Comparing IGCC to DREF), 34 (September 2005 Energy Project Design Comparison to IGCC and Circulating Fluidized Bed Construction), AR 37-38.1 (March 2006 Class I Area Modeling Update), AR 43-43.1 (Class II Area Modeling Update), AR 77 (July 12, 2006 Environmental Justice Analysis). As we discuss above, additional material to support the proposed permit, including modeling runs were submitted even *after* the public comment period had closed.

clear that this allegation was chiefly intended to brow-beat the agency to issue the permit before required analyses could be completed. Nonetheless, the agency proceeded to issue the permit, without ever responding to Petitioners proof that of the permit application's deficiencies.

More fundamentally, however, it is clear at this stage, that the permit application was not complete in 2004, and perhaps is still not complete (given the absence of any information about HAP emissions and related control technology expectations, the absence of any inventory of soils and vegetation, the absence of any analysis of measure to reduce CO<sub>2</sub> emissions, and the absence of any meaningful Environmental Justice analysis).<sup>218</sup> In fact, the resolution to this manufactured problem is simple, the agency should (and in Petitioners' view must) either retract the completeness finding, or deny the permit and require the applicant to re-file and try again to make the application complete (and thereby re-set the clock once the application is truly complete).<sup>219</sup> In the future, the agency would do well, to ensure before making a completeness finding that an applicant has in fact provided the full range of information required by the Act and necessary as a practical matter to take action on the permit application. In any event, EPA cannot lawfully avoid its mandatory duty to perform all required analyses by issuing a premature completeness determination and then railroading the process for fear of running afoul of the statutory time constraint.

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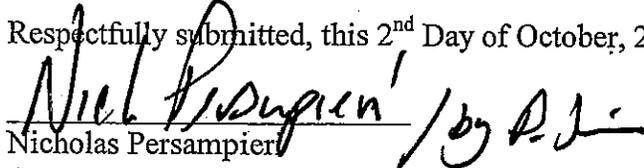
<sup>218</sup> Consistent with this view, Petitioners repeatedly advised EPA of deficiencies in the materials submitted in support of the application and specifically asked EPA to withdraw its prior qualified completeness determination. Ex. \_\_\_.

<sup>219</sup> This is, in effect, how EPA typically manages petitions for HAP delisting under section 112(b). See 64 FR 38668 (July 19, 1999) (completeness determination for methanol delisting petition).

## **CONCLUSION**

For these reasons, Petitioners respectfully request that the Board remand the permit to Region 9 with instructions to undertake additional proceedings to address each of the shortcomings described above.

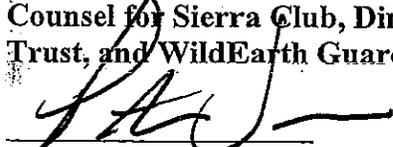
Respectfully submitted, this 2<sup>nd</sup> Day of October, 2008:

  
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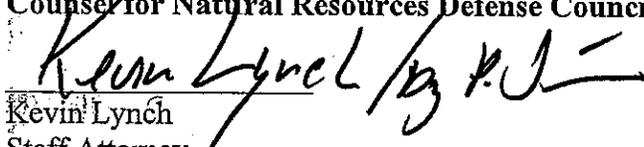
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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on October 2, 2008 he/she caused a copy of

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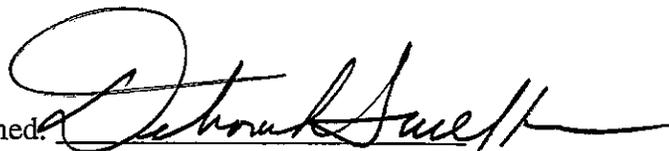
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