

DINE' CITIZENS AGAINST RUINING OUR ENVIRONMENT\*  
SAN JUAN CITIZENS ALLIANCE\*  
ENVIRONMENTAL DEFENSE\*WESTERN RESOURCE ADVOCATES\*NATURAL  
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ENVIRONMENT COLORADO\*CLEAN AIR TASK FORCE\*  
GRAND CANYON TRUST

October 4, 2007

By email ([desertrockairpermit@epa.gov](mailto:desertrockairpermit@epa.gov) and  
Lapka.joseph@epa.gov) and Fed. Ex.

Joseph Lapka  
U.S. Environmental Protection Agency  
Region 9  
Air Permits Office (AIR-3)  
EPA Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

**RE: Comments on EPA's Proposed Construction Permit for Sithe Global Power to  
Construct the Desert Rock Energy Facility**

Dear Mr. Lapka:

We are writing to supplement the administrative record in this matter based on recent developments that directly relate to our previously submitted comments.<sup>1</sup> In our November 13, 2006 comments we expressed grave concerns about the estimated 13.7 million tons of carbon dioxide that the plant will emit to the air each year. We asserted that the proposed permit is deficient because it does not address emissions of carbon dioxide and other greenhouse gases. Specifically, we asserted that EPA is required to regulate carbon dioxide and other greenhouse gases as pollutants under the Clean Air Act, and that EPA had no lawful basis for declining to limit the plant's emissions of those pollutants. Comment 23, at 4-6<sup>2</sup>. We further asserted that even if EPA had a lawful basis to refuse to limit the plant's carbon dioxide emissions, it must consider the collateral environmental impacts of those emissions and the collateral costs of future regulation of those emissions in its BACT analysis. *Id.* 6-12. Numerous other members of the public also commented on the plant's greenhouse gas emissions. *See, egs.*, Comment Nos. 1 (City of Aspen), 8 (Interfaith Alliance for Environmental Stewardship), 60, 88, and 93.

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<sup>1</sup> We are emailing a copy of this letter only, without exhibits. Included in the package that we are submitting by Fed Ex are a hard copy of this letter and all exhibits, with the exception of attachments to Exhibit 11. Also, included in the Fed Ex package are a cd containing a copy of this letter and all exhibits. The letter and all exhibits with the exception of attachments to Exhibit 11 are in the folder entitled October 4 Comment Letter and Exhibits. Attachments to Exhibit 11 are located elsewhere on the cd.

<sup>2</sup> References to Comments in this letter are to the Comments at <http://www.epa.gov/region09/air/permit/desertrock/index.html#pub-comments>.

We write to advise you of two major, recent developments that directly relate to these issues and compel EPA to prevent or limit the plant's carbon dioxide emissions. First, the Intergovernmental Panel on Climate Change ("IPCC") has issued an authoritative series of summary reports on the "unequivocal" warming of the climate system resulting from increased atmospheric carbon dioxide concentrations primarily attributable to the burning of fossil fuels. Second, the United States Supreme Court in Massachusetts v. EPA, \_\_\_ U.S. \_\_\_, 127 S. Ct. 1438 (2007) squarely held that carbon dioxide is an "air pollutant" under the Clean Air Act. These developments require EPA to deny the proposed permit. If EPA proceeds to issue a final PSD permit, a best available control technology ("BACT") analysis for carbon dioxide must be conducted and BACT emission limitations for carbon dioxide must be included in the permit. Even if EPA could lawfully issue a final permit without BACT limitations for CO<sub>2</sub>, in light of recent events it would be arbitrary, capricious and unreasonable for the Agency to do so without reopening the permitting process and exercising its discretionary authority to specifically evaluate and address greenhouse gas emissions from the proposed Desert Rock Energy Facility.

We also write to advise you of information and analyses set forth in comments on the Bureau of Indian Affairs' Draft Environmental Impact Statement for the Desert Rock Energy Facility that are directly relevant to the PSD permitting issues now before EPA. EPA is required to consider all such information and analysis in its PSD permit proceedings and must either deny the proposed permit or make changes to the proposed permit compelled by such information and analyses.

Finally, we write to advise you of the Governor of New Mexico's recent request for consultation with the Navajo Nation on the Desert Rock Energy Facility. EPA should not issue a PSD permit for the facility before this consultation has been completed. Furthermore, EPA should consider any information and analyses developed in connection with the consultation in taking further action on the proposed PSD permit.

**I. EPA SHOULD DENY THE PROPOSED PERMIT BECAUSE IT DOES NOT ADDRESS THE CONTRIBUTION OF THE PLANT'S CARBON DIOXIDE EMISSIONS TO GLOBAL WARMING AND ITS IMPACTS DESCRIBED IN THE IPCC'S FOURTH ASSESSMENT REPORT.**

The Intergovernmental Panel on Climate Change ("IPCC") was established by the World Meteorological Organization ("WMO") and the United Nations Environment Programme ("UNEP") in 1988. The IPCC's mission is to comprehensively and objectively assess the scientific, technical and socio-economic information relevant to human-induced climate change, its potential impacts, and options for adaptation and mitigation. See <http://www.ipcc.ch/about/about.htm>. The IPCC completed its First Assessment Report in 1990, its Second Assessment Report in 1995, and its Third Assessment Report in 2001. Id. The IPCC is currently finalizing its Fourth Assessment Report, "Climate Change 2007." Id. In advance of public release of the finalized Fourth Assessment Report, the IPCC has recently released summaries of its three working groups that are contributing to the Fourth Assessment Report.

In February 2007, the IPCC released a summary of the contribution of Working Group I to its Fourth Assessment Report. Working Group I is responsible for assessing the scientific aspects of the climate system and climate change. <http://www.ipcc.ch/about/about.htm>. The

Working Group I Summary, a copy of which is attached as Exhibit 1, concludes, among other things:

- The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005;
- The atmospheric concentration of carbon dioxide in 2005 exceeds by far the natural range over the last 650,000 years;
- The primary source of the increased atmospheric concentration of carbon dioxide since the pre-industrial period results from fossil fuel use;
- There is at least a 9 out of 10 chance that the global average net effect of human activities since 1750 has been one of warming;
- 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;
- At continental, regional and ocean basin scales, numerous long term changes have been observed. These include changes in arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones;
- There is greater than a 90% likelihood that most of the observed increases in global average temperatures since the mid-20<sup>th</sup> century are due to the observed increases in anthropogenic greenhouse gas emissions;
- For the next two decades, warming of about 0.2 Degrees Celsius per decade is projected for a range of emission scenarios;
- There is greater than a 90% likelihood that hot extremes, heat waves and heavy precipitation events will continue to become more frequent; and
- Anthropogenic warming and sea level rise would continue for centuries due to the time scales associated with climate processes and feedbacks, even if greenhouse gas concentrations were to be stabilized.

In April 2007, the IPCC released a summary of the Contribution of Working Group II to its Fourth Assessment Report. Working Group II is responsible for assessing the vulnerability of socio-economic and natural systems to climate change, the consequences of climate change, and the options for adapting to it. <http://www.ipcc.ch/about/about.htm> The Working Group II Summary, a copy of which is attached as Exhibit 2, concludes, among other things:

- By mid-century, annual average river runoff and water availability are projected to decrease by 10-30% over some dry regions at mid-latitudes and in the dry tropics, some of which are presently water stressed areas;

- In the course of the century, water supplies stored in glaciers and snow cover are projected to decline, reducing water availability in regions supplied by meltwater from major mountain ranges, where more than one-sixth of the world population currently lives;
- 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-affected areas will likely increase in extent. Heavy precipitation events which are very likely to increase in frequency, will augment flood risk;
- Increases in the frequency of droughts and floods are projected to affect local crop production, especially in subsistence sectors at low latitudes;
- Poor communities can be especially vulnerable, in particular those concentrated in high-risk areas. They tend to have more limited adaptive capacities, and are more dependent on climate-sensitive resources such as local food and water supply;
- Disturbances from pests, disease and fire are projected to have increasing impacts on North American forests, with an extended period of high fire risk and large increases in area burned;
- In North America, major challenges are projected for crops that are near the warm end of their suitable range or depend on highly utilized water resources;
- The resilience of many ecosystems is likely to be exceeded this century by an unprecedented combination of climate change, associated disturbances (e.g., flooding, drought, wildfire, insects, ocean acidification), and other global change drivers (e.g., land use change, pollution, over-exploitation of resources);
- Approximately 20-30% of plant and animal species assessed so far are likely to be at increased risk of extinction if increases in global average temperatures exceed 1.5-2.5 Degrees Celsius;
- For increases in global average temperature exceeding 1.5-2.5 Degrees Celsius and in concomitant atmospheric carbon dioxide concentrations, 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;
- Projected climate change-related exposures are likely to affect the health status of millions of people, particularly those with low adaptive capacity; and
- Even the most stringent mitigation efforts cannot avoid further impacts of climate change in the next few decades, which make adaptation essential, particularly in addressing near-term impacts. Unmitigated climate would, in the long term, be likely to exceed the capacity of natural, managed and human systems to adapt.

On or about May 4, 2007, the IPCC released a summary of the contribution of Working Group III to its Fourth Assessment Report. Working Group III is responsible for assessing options for limiting greenhouse gas emissions and otherwise mitigating climate change. <http://www.ipcc.ch/about/about.htm> The Working Group III Summary, a copy of which is attached hereto as Exhibit 3, concludes, among other things:

- Global greenhouse gas (GHG) emissions have grown since preindustrial times, with an increase of 70% between 1970 and 2004;
- The largest growth in global GHG emissions between 1970 and 2004 has come from the energy supply sector (an increase of 145%);
- With current global climate change mitigation policies and related sustainable development practices, global GHG emissions will continue to grow over the next few decades;
- There is substantial economic potential for the mitigation of global GHG emissions over the coming decades, that could offset the projected growth of global emissions or reduce emissions below current levels;
- There are mitigation opportunities with net negative costs, in other words, for which the benefits such as reduced energy costs and reduced emissions of pollutants equal or exceed their costs to society, excluding the benefits of avoided climate change;
- Fuel switching from coal to gas, renewable heat and power (hydropower, solar, wind, geothermal and bioenergy), and early applications of carbon capture and storage (e.g. storage of removed carbon dioxide from natural gas) are key mitigation technologies and practices currently commercially available;
- Near-term health co-benefits from reduced air pollution as a result of actions to reduce GHG emissions can be substantial and may offset a substantial fraction of mitigation costs;
- It is often more cost-effective to invest in end-use energy efficiency improvement than in increasing energy supply to satisfy demand for energy services. Efficiency improvement has a positive effect on energy security, local and regional air pollution abatement and employment;
- Renewable energy generally has a positive effect on energy security, employment and on air quality; and
- In order to stabilize the concentrations of GHGs in the atmosphere, emissions would need to peak and decline thereafter.

EPA should consider the entire Fourth Assessment Report and make it part of the administrative record for the proposed permit.<sup>3</sup> The Report authoritatively documents the

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<sup>3</sup> The IPCC recently made the full reports of Working Groups I and II, and a “pre-copy edit version” of the full report of Working Group III available on-line at <http://www.ipcc.ch/>.

adverse environmental and socio-economic impacts of global warming at local, regional, national and global scales, and the primary role of the burning of fossil fuels, including coal, in causing global warming.

The serious harms attributable to global warming were also recently acknowledged by the United States Supreme Court. On April 2, 2007, the Supreme Court issued a seminal ruling on EPA's authority and obligations under the Clean Air Act to regulate greenhouse gas emissions. Massachusetts v. EPA, 127 S. Ct. 1438 (2007). In its decision, which is discussed more fully below, the Court resoundingly rejected the core claims upon which EPA has relied to avoid regulating global warming pollutants under the Clean Air Act's provisions addressing emissions from mobile sources.

In so doing, the Court, even without the benefit of the most recent IPCC Summary Reports, noted that the "[t]he harms associated with climate change are serious and well recognized." 127 S. Ct. at 1455. The Supreme Court also acknowledged "the enormity of the potential consequences associated with man-made climate change," and the contribution of carbon dioxide emissions to global warming. Id. at 1457 - 58<sup>4</sup>. As we noted in our November 13, 2006 comments (Comment 23, at 8), reducing carbon dioxide emissions, especially emissions from coal-fired power plants, is the single most important strategy to fight the adverse consequences of global warming. Because the proposed permit altogether fails to address the Desert Rock Energy Facility's carbon dioxide emissions, EPA should deny the proposed permit.

## **II. IF EPA PROCEEDS TO PROCESS THE PERMIT IT MUST CONDUCT A CASE SPECIFIC BACT ANALYSIS FOR CARBON DIOXIDE AND SIGNIFICANTLY REVISE THE PROPOSED PERMIT TO INCLUDE BACT EMISSION LIMITATIONS FOR CARBON DIOXIDE.**

If EPA proceeds to process the requested permit, it is clear following the Supreme Court's decision in Massachusetts v. EPA, 127 S. Ct. 1438 (2007), a copy of which is attached as Exhibit 4, that EPA must conduct a BACT analysis and set BACT emission limitations for carbon dioxide in any permit that it issues for the Desert Rock Energy Facility. In Massachusetts v. EPA, the Supreme Court squarely rejected the two primary rationales offered by EPA for refusing to regulate greenhouse gas emissions under the Clean Air Act's provisions addressing emissions from mobile sources—that EPA lacked legal authority under the CAA to regulate global warming pollutants, and that even if it had authority to regulate it could decline to regulate

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<sup>4</sup>As we discussed at length in our November 13, 2006 comments, many other entities have also recognized the potential for devastating consequences from global warming. A number of relevant reports, including the 2006 "Stern Report" are already included in the record. See Stern Review on the Economics of Climate Change, available at: [http://www.hm-treasury.gov.uk/Independent\\_Reviews/stern\\_review\\_economics\\_climate\\_change/sternreview\\_in dex.cfm](http://www.hm-treasury.gov.uk/Independent_Reviews/stern_review_economics_climate_change/sternreview_in dex.cfm). (incorporated by reference here). Moreover, EPA itself has acknowledged the tremendous potential for global warming-related harms, including direct heat-related effects, extreme weather events, climate-sensitive disease impacts, air quality effects, agricultural effects (and related impacts on nutrition), wildlife and habitat impacts, biodiversity impacts, impacts on marine life, economic effects, and social disruption (such as population displacement) (see <http://www.epa.gov/climatechange/effects/index.html> (last visited 9/05/07)). See also Section II.B.2.b.ii, below.

based entirely on non-statutory policy considerations. The Court held that EPA has authority to regulate emissions of greenhouse gases under the Act because greenhouse gases are pollutants under the Act, and that EPA must regulate greenhouse gas emissions if they endanger public health, welfare or the environment—which they undeniably do. Carbon dioxide is the most prevalent greenhouse gas contributing to global warming and its devastating environmental impacts. Because carbon dioxide is a “pollutant subject to regulation under [the Clean Air Act],” EPA must conduct a BACT analysis and include BACT emissions limitations in any permit that it issues for the Desert Rock Energy Facility.

**A. THE CAA REQUIRES A BACT ANALYSIS AND BACT EMISSION LIMITATIONS FOR EACH POLLUTANT SUBJECT TO REGULATION UNDER THE ACT EMITTED IN EXCESS OF SPECIFIED SIGNIFICANCE LEVELS.**

**1. BACT Requirements Apply to Each Pollutant Subject to Regulation Under the CAA Emitted In Excess of Specified Significance Levels.**

The federal Clean Air Act and Prevention of Significant Deterioration (“PSD”) Regulations<sup>5</sup> prohibit the construction of a new major stationary source of air pollutants at the Desert Rock site except in accordance with a PSD construction permit issued by EPA. Clean Air Act § 165(a), 42 U.S.C. § 7475(a); 40 C.F.R. § 52.21(a)(2)(iii). EPA must conduct a BACT analysis and include in the construction permit BACT emission limitations “for each pollutant subject to regulation under [the Clean Air Act]” for which emissions exceed specified significance levels. Clean Air Act, §§ 165(a), 169, 42 U.S.C. §§ 7475(a), 7479; 40 C.F.R. §§ 52.21(b)(1), (b)(2), (b)(12), (b)(50), (j)(2)). The federal PSD Regulations provide that “[a] new major stationary source shall apply best available control technology for each regulated NSR pollutant that it would have the potential to emit in significant amounts.” 40 C.F.R. § 52.21(j)(1)(emphasis added). Section 52.21(b)(50) defines “regulated NSR pollutant” as including “any pollutant . . . subject to regulation under the Act.” Specifically, the regulation provides:

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

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<sup>5</sup> Pursuant to 40 C.F.R. § 52.1634(b), the provisions of the federal PSD regulations set forth at 40 C.F.R. § 52.21(b) – (w) are applicable to sources on land in New Mexico under the control of Indian governing bodies, such as the Navajo Reservation where the Desert Rock Energy Facility is to be located.

- (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.

40 C.F.R. § 52.21(b)(50)(emphasis added). Section 52.21(b)(12), which defines BACT, also makes clear that BACT requirements apply to all air pollutants subject to regulation under the Clean Air Act. The regulation states:

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.

40 C.F.R. § 52.21(b)(12)(emphasis added); see also 42 U.S.C. 7479(3).

**2. Pollutants Subject to Regulation Under the CAA Include Both Currently Regulated Pollutants and Pollutants for Which EPA and the States Possess But Have Not Yet Exercised Authority to Regulate.**

Notably, emissions of a pollutant need not be limited by existing emissions regulations for the pollutant to be “subject to” regulation under the Clean Air Act. “Subject to regulation” means “capable of being regulated” and is not limited to pollutants that are “currently regulated.” The plain meaning of Section 165(a)(4) of the Clean Air Act’s mandate that BACT applies to “each pollutant subject to regulation under [the Clean Air Act]” extends not only to air pollutants for which the Act itself or EPA or the States by regulation have imposed requirements, but also to air pollutants for which EPA and the States possess but have not exercised authority to impose such requirements.

While the plain, unambiguous language of the statute is dispositive, EPA’s PSD regulations cited above echo the mandate of Section 165(c)(4). The regulations provide that BACT applies not only to air pollutants for which there are national ambient air quality standards under Section 109 of the Act, standards of performance for new sources under Section 111 of the Act, or standards under or established by Title VI of the Act (relating to acid deposition control), but also to “[a]ny pollutant that is otherwise subject to regulation under the Act.” 40 C.F.R. § 52.21(b)(50).

Further, EPA has recognized the general principle that “[t]echnically, a pollutant is considered regulated once it is *subject to regulation* under the Act. A pollutant *need not be specifically regulated* by a [section 111](#) or [112](#) standard to be considered regulated. (See [61 FR 38250, 38309](#), July 23, 1996.)” See RULES and REGULATIONS, ENVIRONMENTAL

PROTECTION AGENCY, 40 CFR Part 70, Change to Definition of Major Source Tuesday, 66 Fed. Reg. 59161 (Nov. 27, 2001) (emphasis added).<sup>6</sup>

EPA has also previously interpreted the phrase “subject to” in the context of the Resource Conservation and Recovery Act (RCRA) and Clean Water Act as meaning “should” be regulated, as opposed to currently regulated:

RCRA section 1004(27) excludes from the definition of solid waste “solid or dissolved materials in ... industrial discharges which are point sources subject to permits under [section 402 of the Clean Water Act].” For the purposes of the RCRA program, EPA has consistently interpreted the language “point sources *subject to permits* under [section 402 of the Clean Water Act]” to mean point sources that *should have* a NPDES permit in place, whether in fact they do or not. Under EPA’s interpretation of the “subject to” language, a facility that should, but does not, have the proper NPDES permit is in violation of the CWA, not RCRA.

Memo from Michael Shapiro and Lisa Friedman (OGC) to Waste Management Division Directors, Interpretation of Industrial Wastewater Discharge Exclusion from the Definition of Solid Waste at 2, (Feb. 17, 1995) (emphasis added).<sup>7</sup>

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<sup>6</sup> Indeed, this principle only makes sense. For example, section 112(b)(1) of the Act specifically lists more than 180 chemicals which it defines as “hazardous air pollutants” from stationary sources for purposes of section 112. However, whether or not EPA ever adopts any stationary source rule with actual emission limitations for an individual hazardous chemical, all of these chemicals are “subject to regulation” under the Act. The hazardous air pollutants listed in Section 112(b)(1), are, however, expressly excluded from prevention of significant deterioration requirements, including BACT emissions limitations, by Section 112(b)(6). Section 112(b)(6) provides that “[t]he provisions of part C of this subchapter (prevention of significant deterioration) shall not apply to pollutants under this section.” The fact that Congress specifically exempted these pollutants from prevention of significant deterioration requirements, while not exempting carbon dioxide or other greenhouse gases is yet another indication that carbon dioxide is subject to Prevention of Significant Deterioration requirements, including BACT emission limitations. Congress clearly recognized that any substance or matter emitted into the air that effects “weather” or “climate” is a pollutant subject to regulation under the Act (see Sections 302(g), (h), 111(b)(1)(A), 202(a)(1)), yet did not exempt such substances or matter (including carbon dioxide) from the CAA’s prevention of significant deterioration requirements. In the wake of the Supreme Court’s recent decision, CO<sub>2</sub> must be understood as “subject to regulation.”

<sup>7</sup> The EPA memo is available at:

[http://yosemite.epa.gov/osw/rcra.nsf/ea6e50dc6214725285256bf00063269d/C8FA9634A91B9FE08525670F006BF1ED/\\$file/11895.pdf](http://yosemite.epa.gov/osw/rcra.nsf/ea6e50dc6214725285256bf00063269d/C8FA9634A91B9FE08525670F006BF1ED/$file/11895.pdf) (last visited July 6, 2007).

**3. The Required BACT Analysis and Emission Limitations Must Be Based on a Case Specific Review of Relevant Energy, Environmental and Economic Considerations.**

The BACT analysis that EPA must conduct for each pollutant subject to regulation under the Clean Air Act, and emitted in excess of the relevant significance level, must include a case specific review of relevant energy, environmental and economic considerations that is informed by detailed information submitted by the applicant. See 42 U.S.C. § 7479(3); 40 C.F.R. 52.21(b)(12), (n). Based on its BACT analysis, EPA must set emission limitations in its permit. See 42 U.S.C. § 7479(3) (BACT means “an emission limitation”); 40 C.F.R. 52.21(b)(12)(same).

**B. CARBON DIOXIDE IS A POLLUTANT SUBJECT TO REGULATION UNDER THE CAA FOR WHICH EPA MUST CONDUCT A BACT ANALYSIS AND ESTABLISH BACT EMISSION LIMITATIONS.**

The plain language of the CAA, EPA’s regulations, the Supreme Court’s decision in Massachusetts v. EPA, and a recent executive order make clear that CO<sub>2</sub> is a pollutant “subject to regulation” under the CAA.

**1. Carbon Dioxide is a “Pollutant.”**

Section 302(g) of the Clean Air Act defines “air pollutant” expansively to include “any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or otherwise enters into the ambient air.” 42 U.S.C. § 7602(g)(emphasis added). In Massachusetts v. EPA, 127 S. Ct. 1438 (2007), the Supreme Court held that carbon dioxide and other greenhouse gases are air pollutants as defined in § 302(g), 42 U.S.C. § 7602(g). The Court based its holding on the “unambiguous” language of the definition. Id. at 1460. Specifically, the Court held:

The Clean Air Act’s sweeping definition of “air pollutant” includes “any air pollution agent or combination of such agents, including any physical, chemical . . . substance or matter which is emitted into or otherwise enters the ambient air . . . .” §7602(g) (emphasis added). On its face, the definition embraces all airborne compounds of whatever stripe, and underscores that intent through the repeated use of the word “any”. . . Carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons are without a doubt “physical [and] chemical . . . substance[s] which [are] emitted into . . . the ambient air.” The statute is unambiguous.

127 U.S. at 1460 (footnotes omitted). Thus, the Court in Massachusetts v. EPA dispensed with any uncertainty whether carbon dioxide is an “air pollutant” under the Clean Air Act.<sup>8</sup>

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<sup>8</sup> EPA’s then general counsel, Jonathan Z. Cannon, opined in 1998 that carbon dioxide is within the Clean Air Act’s definition of “air pollutant” and that EPA has the authority to regulate carbon dioxide. More recently, however, EPA had advanced an interpretation that is contrary to the plain language of Section 302(g), an interpretation that the court in Massachusetts v. EPA rejected.

## 2. Carbon Dioxide is Subject to Regulation Under the CAA.

As it happens, carbon dioxide is an “air pollutant” that is not only “subject” to regulation under the Act, but is currently regulated under the Act.

- a. Carbon Dioxide is Currently Regulated Under Section 821 of the Clean Air Act Amendments of 1990.

Section 821 of the Clean Air Act Amendments of 1990 required EPA to promulgate, within 18 months after enactment of the Amendments, regulations to require certain sources, including coal-fired electric generating stations, to monitor carbon dioxide emissions and report monitoring data to EPA. 42 U.S.C. § 7651k note. In 1993, EPA promulgated such regulations, which are set forth at 40 C.F.R. Part 75. The regulations generally require monitoring of carbon dioxide emissions through installation, certification, operation and maintenance of a continuous emission monitoring system or an alternative method (40 C.F.R. §§ 75.1(b), 75.10(a)(3)); preparation and maintenance of a monitoring plan (40 C.F.R. § 75.33); maintenance of certain records (40 C.F.R. § 75.57); and reporting of certain information to EPA, including electronic quarterly reports of carbon dioxide emissions data (40 C.F.R. §§ 75.60 – 64). Section 75.5, 40 C.F.R., prohibits operation of an affected source in the absence of compliance with the substantive requirements of Part 75, and provides that a violation of any requirement of Part 75 is a violation of the Clean Air Act. Given this regulatory scheme and the Supreme Court’s determination that EPA is authorized to regulate CO<sub>2</sub> as a “pollutant” under the Act, the status of CO<sub>2</sub> is absolutely unambiguous – it is a CAA regulated pollutant.

- b. Carbon Dioxide is Also Subject to Regulation Under Sections 111 and 202 of the CAA.

In addition, to being currently regulated under Section 821 of the 1990 Clean Air Act Amendments, carbon dioxide is also subject to regulation under a number of the Clean Air Act’s other provisions, including Sections 111 and 202.

- i. Sections 111 and 202 of the CAA Require EPA to Promulgate Regulations Limiting Emissions of Pollutants from New Stationary Sources and Motor Vehicles.

Section 111 of the Act 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 air pollution “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).<sup>9</sup> In

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<sup>9</sup> The Massachusetts v. EPA case specifically involved a challenge to EPA’s failure to prescribe regulations on carbon dioxide emissions from motor vehicles under Section 202 of the Clean Air Act. The Court held that EPA has the authority to issue such regulations, and rejected the excuses advanced by EPA for failing to do so. 127 S. Ct. at 1459-63. A challenge to EPA’s failure to establish emission limits for carbon dioxide emissions from power plants under Section 111 of the Clean Air Act is pending before the United States Court of Appeals for the District of

Massachusetts v. EPA, the Court held that if EPA makes an endangerment finding for a pollutant, it must regulate emissions of the pollutant from new motor vehicles. 127 S. Ct. at 1462. The same analysis applies with equal force to Section 111.

- ii. EPA Must Regulate Carbon Dioxide Emissions Under Sections 111 and 202 Because Such Emissions May Reasonably Be Anticipated to Endanger the Public Health and Welfare.

EPA is not only authorized to regulate carbon dioxide emissions under Sections 202 and 111, but is required to do so because there is no question that emissions of carbon dioxide from motor vehicles, power plants and other sources “may reasonably be anticipated to endanger the public health and welfare.”<sup>10</sup> As an initial matter, 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.<sup>11</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

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Columbia Circuit. State of New York, et al. v. EPA, No. 06-1322. EPA refused to establish such emission limits solely on the ground that EPA lacked the authority to regulate carbon dioxide under the Clean Air Act. Based on Massachusetts v. EPA, petitioners, on May 2, 2007, asked the Court of Appeals to vacate EPA’s determination that it lacks authority to regulate carbon dioxide emissions under Section 111, and to remand the matter to EPA for further proceedings consistent with the Massachusetts v. EPA decision.

<sup>10</sup> In Green Mountain Plymouth Dodge Jeep v. Crombie, the United States District Court for the District of Vermont, relying on Massachusetts v. EPA, stressed the importance of controlling emissions of greenhouse gasees, even where the sources at issue make only a relatively small contribution to the very large global problems presented by global warming. Case Nos. 2:05-cv-320 and 304, slip op. at 46-47, 93-94 and 234 (September 12, 2007). The court rejected an automobile industry challenge to Vermont regulations establishing greenhouse gas emission standards for automobiles.

<sup>11</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”).

(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 (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.

While the precautionary nature of the Clean Air Act creates a low threshold for findings relating to the negative consequences of air pollution, here there is ample evidence that global climate change is endangering and will continue to endanger public health and welfare. Evidence of dramatic changes in Earth’s climatic system abounds. Changes in climatically sensitive indicators support the inference that the average temperature in the Northern Hemisphere over the last half-century is likely higher than at any time in the previous 1,300 years, while ice core records indicate that the polar regions have not experienced an extended period of temperatures significantly warmer than today’s in about 125,000 years. IPCC Working Group I Summary, Ex. 1, at 9. Meanwhile, the IPCC reports “numerous long-term changes in climate” observed at “continental, regional and ocean basin scales,” including “changes in arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones.” Id. at 7. As demonstrated below, such changes will have pronounced adverse impacts on public health and welfare.

#### a. Public Health Impacts

Global climate change is expected to have significant impacts on human health in numerous ways, including increased heat-related mortalities, the spread of infectious disease vectors, greater air and water pollution, an increase in malnutrition, and greater casualties from fires, storms, and floods. EPA has already recognized that climate plays a significant role in public health:

Throughout the world, the prevalence of some diseases and other threats to human health depend largely on local climate. Extreme temperatures can directly lead to loss of life, while climate-related disturbances in ecological systems, such as changes in the range of infective parasites, can indirectly impact the incidence of serious infectious diseases. In addition, warm temperatures can increase air and water pollution, which in turn harm human health.

EPA, Climate Change, Health and Environmental Effects [hereinafter EPA Report].<sup>12</sup> Given the ample evidence linking climate change to adverse public health impacts, there is no rational basis for EPA to conclude that climate change could not be reasonably anticipated to endanger public health.

Perhaps the most direct impact of climate change on human health will occur through increased heat-related mortalities. Heat waves already pose a serious threat to public health, and

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<sup>12</sup> Available at <http://www.epa.gov/climatechange/effects/index.html> (last updated Apr. 6, 2007).

climate change is predicted to increase the magnitude, frequency, and duration of heat waves in the United States. See IPCC Working Group II Summary, Ex. 2, at 10-11. Thus, the U.S. Department of State's, U.S. Climate Action Report 2002, indicated that rising temperatures will likely produce dramatic increases in summer heat index values in the Northeast, Southeast, and Midwest. U.S. Department of State, U.S. Climate Action Report 2002 at 110. (2002) [hereinafter CAR 2002]. By the end of the century, cities such as Hartford and Philadelphia could average nearly 30 days with high temperatures above 100°F each year. Peter C. Frumhoff, et al., Confronting Climate Change in the U.S. Northeast: Science, Impacts, and Solutions at x (July 2007) [hereinafter Northeast Report].<sup>13</sup> Segments of the population that are particularly vulnerable, such as those with heart problems, asthma, the elderly and very young, and the homeless, are especially at risk to extreme heat. EPA Report.

Climate change is also expected to play a role in worsening air quality problems that already impact human health. For example, EPA has recognized that the higher temperatures that result from climate change may result in increased concentrations of ground-level ozone. EPA Report. Breathing ozone can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion, and repeated exposure can lead to bronchitis, emphysema, asthma, and permanent scarring of lung tissue. EPA, Ground-Level Ozone: Health and Environment (2007).<sup>14</sup> Moreover, climate change may also indirectly affect the concentration of PM in the air by increasing sources such as wildfires and dust from dry soils. EPA Report. Exposure to such particles can affect both the lungs and heart and has been linked to a variety of problems, including increased respiratory symptoms such as irritation of the airways, coughing or difficulty breathing, decreased lung function, aggravated asthma, development of chronic bronchitis, irregular heartbeat, nonfatal heart attacks, and premature death in people with heart or lung disease. EPA, Particulate Matter: Health and Environment (2007).<sup>15</sup> As with other forms of air pollution, certain vulnerable segments of the population, such as children with asthma and the elderly, are the most likely to be affected. Id.

Climate change is also expected to increase the risk from certain infectious diseases, especially vector-borne diseases spread by mosquitoes or other insects. EPA Report. Thus, vector-borne diseases like malaria and dengue fever may expand their ranges in the United States. Id. Moreover, hotter, longer, and drier summers punctuated by heavy rainstorms may also create more favorable conditions for outbreaks of West Nile Virus in the Northeast. Northeast Report at xi.

Climate change's role in increasing the frequency and severity of extreme weather events, such as hurricanes, droughts, and floods, may also adversely impact public health. For example, in delta regions, coastal areas, and small islands, sea level rise is anticipated to threaten human populations by exacerbating flooding and increasing the size of storm surges. Ex. 2, at 8-11. The Atlantic coast of the Southeast is likely to see such effects and suffer the loss of important buffers against storm damage. CAR 2002 at 110. In Appalachia, the increase in intense rainfall events is likely to result in more dangerous flash floods. Id. Meanwhile, warming in the West is projected to decrease mountain snowpack and cause more winter

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<sup>13</sup> Available at [http://www.climatechoices.org/ne/resources\\_ne/nereport.html](http://www.climatechoices.org/ne/resources_ne/nereport.html) (last visited Aug. 27, 2007)

<sup>14</sup> Available at <http://www.epa.gov/air/ozonepollution/health.html> (last visited Aug. 26, 2007).

<sup>15</sup> Available at <http://www.epa.gov/air/particlepollution/health.html> (last visited Aug. 26, 2007)

flooding with reduced summer flows. Ex. 2, at 10. Finally, rising sea levels are expected to increase the salinity of surface and ground water through salt water intrusion, threatening drinking water supplies in places like New York City, Philadelphia, southern Florida, and California's Central Valley. EPA Report.

#### b. Public Welfare Impacts

The Clean Air Act provides a broad definition of "welfare," that encompasses a host of environmental ills:

All language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.

42 U.S.C. § 7602(h). Of particular importance here, "welfare" refers to "effects on . . . weather . . . and climate." Thus, the most basic effect of global climate change – that the Earth's average mean temperature will increase – is directly implicated as an effect on public welfare under the Act. As discussed above, global climate change is already resulting in well documented impacts on climate and weather, including air and ocean temperature increases, widespread melting of snow and ice, changes in precipitation amounts and wind patterns, and more frequent extreme weather events such as hurricanes, heat waves, floods, and droughts. Ex. 1, at 5-9. However, aside from direct impacts on weather and climate, there are numerous other ways in which global climate change may be reasonably anticipated to endanger public welfare.

In its recent assessment of the impacts of climate change, the IPCC concluded that "[o]bservational evidence from all continents and most oceans shows that many natural systems are being affected by regional climate changes, particularly temperature increases." Ex. 2, at 1. In the U.S., the impacts vary by region, but climate change will have significant consequences for ecosystems in many areas. For example, CAR 2002 reports that each of the following are likely climate change outcomes: (1) water quantity and quality in the Great Lakes will decrease; (2) prairie potholes, an important migratory bird habitat in the Great Plains, will become drier; (3) river temperatures in the Northwest will increase, placing additional stress on migrating fish; and (4) melting of sea ice and permafrost in Alaska will harm ecosystems and infrastructure.<sup>16</sup> CAR 2002 at 110. Climate change is also likely to pose problems for many forested areas in the U.S. by extending and increasing the intensity of fire seasons and fostering insect outbreaks. EPA Report.

Some habitats that are already imperiled by other forces will be particularly susceptible to damage from climate change. For example, sea level rise driven by climate change will contribute to the loss of coastal wetlands. Ex. 2, at 3. In addition to their role in protecting against floods and storm surges, such wetlands provide habitat for many species, enable recreational opportunities, and play a key role in both nutrient uptake and the economy of

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<sup>16</sup> This is especially true for species like the polar bear, which is evolutionarily adapted to life on the sea ice and spends only short periods on land. See 72 Fed. Reg. 1064 (Jan. 9, 2007)(Proposed Rule to List the Polar Bear as Threatened Under the Endangered Species Act).

the surrounding area. EPA Report. However, because they are generally located within a few feet of sea level, coastal marshes and swamps are particularly vulnerable to rising sea levels. *Id.* Thus, sea level rise could eliminate up to 22% of the world's coastal wetlands by the end of this century. *Id.* EPA has estimated that a two foot rise in sea level, a figure that is within range of the IPCC's modeling for sea level rise during the 21<sup>st</sup> Century, could eliminate between 17 and 43 percent of U.S. wetlands. *See id.*; Ex. 1, at 13, Table SPM.3.

Moreover, changes in the Earth's climate are already having an impact on marine and freshwater biological systems. For example, the ranges of algae, plankton, and fish have shifted in many water bodies in response to changes in water temperature, ice cover, oxygen content, salinity, and circulation. Ex. 2, at 2. However, corals are particularly vulnerable to thermal stress and have a limited ability to adapt to changes in their ecosystem. *Id.* at 6. Thus, the IPCC projects that an increase in sea surface temperature of approximately 1 to 3°C (1.8-5.4°F) will result in widespread coral mortality. *Id.*<sup>17</sup> Finally, the increasing absorption of CO<sub>2</sub> has already decreased ocean pH by 0.1 units on average, *id.* at 2, and the IPCC predicts that further acidification will have negative impacts on corals and other shell forming organisms. *Id.* at 6.

The welfare impacts of climate change are not limited to impacts on natural systems. For example, climate change will also adversely affect agriculture. EPA has recognized that, "[a]griculture is highly sensitive to climate variability and weather extremes, such as droughts, floods and severe storms," and that climate change can adversely affect crop yields in regions where summer heat already limits production, increase the likelihood of severe droughts, and increase the rate of evaporation of moisture from topsoil. EPA Report. Moreover, the increase in heavy precipitation events to which climate change contributes is projected to lead to increased soil erosion. Ex. 2, at 14.

Global warming's far reaching and grave public health and welfare impacts, which are in large part attributable to carbon dioxide emissions from power plants, automobiles and other sources, compel EPA to exercise its authority under Sections 111 and 202 of the Clean Air Act to regulate carbon dioxide emissions. Carbon dioxide is "subject to regulation under the Clean Air Act."

- c. The President's Recent Executive Order Confirms EPA's Authority to Regulate Carbon Dioxide Emissions and Directs EPA to Exercise That Authority.

If there were any doubt that carbon dioxide is subject to regulation under the Clean Air Act following Massachusetts v. EPA, 127 S. Ct. at 1459-63, the President's May 14, 2007 Executive Order laid that to rest.<sup>18</sup> The Executive Order reconfirms that EPA can regulate greenhouse gases, including carbon dioxide, from motor vehicles, nonroad vehicles and nonroad

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<sup>17</sup> The National Marine Fisheries Service has found that shallow reef habitats are especially vulnerable to increases in global air and sea temperatures due to coral bleaching. 71 Fed. Reg. 26,852, 26,858 (May 9, 2006)(Final Rule to List Elkhorn (*Acropora palmata*) and Staghorn (*A. cervicornis*) Corals as Threatened Under the Endangered Species Act).

<sup>18</sup> The Executive Order is available at [www.whitehouse.gov/news/releases/200705/200705142.html](http://www.whitehouse.gov/news/releases/200705/200705142.html).

engines under the Clean Air Act. It then directs EPA to coordinate with other federal agencies in undertaking precisely such regulatory action. The President's action indicates clearly that even the Chief Executive is of the opinion that carbon dioxide is a "pollutant" and must be further regulated under the Clean Air Act.<sup>19</sup>

For all of the above reasons, carbon dioxide is an air pollutant subject to regulation under the Clean Air Act for which EPA must comply with BACT requirements.<sup>20</sup>

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<sup>19</sup> Indeed, in other contexts EPA has specifically acknowledged that the impact of global warming pollutants is an important consideration for potential new sources. *See* Letter from EPA Region 8 to Charles Richmond, Forest Supervisor Gunnison National Forest (June 1, 2007), attached as Ex. 5. This letter relates to an Environmental Impact Statement regarding a proposal to drill 168 methane drainage wells at the West Elk Mine in Gunnison County, CO. In this letter, the Deputy Regional Administrator explains:

The draft EIS does not present information on the amount of methane that is expected to be released from the proposed action . . . As indicated on EPA's website, methane is a greenhouse gas that remains in the atmosphere for approximately 9-15 years and is over 20 time more effective in trapping heat in the atmosphere than carbon dioxide (CO<sub>2</sub>) over a 100-year period. Methane's relatively short atmospheric lifetime, coupled with its potency as a greenhouse gas, makes it a candidate for mitigation global warming over the near-term (i.e., next 25 years or so). . . . Given the project's release of significant quantities of methane, there is an important economic and environmental opportunity here to capture and utilize the methane resource. . . . [W]e recommend that the final EIS analyze measures for capturing all or part of the methane to be vented from the mine. . . . Methane capture and reuse is a reasonable alternative to the proposal of venting the methane to the atmosphere, and thus, we recommend that it be analyzed. . . . EPA believes that the information in the DEIS is insufficient and the missing information and analyses are substantial issues which must be resolved and disclosed in the Final Environmental Impact Statement.

<sup>20</sup> While the issue of EPA's obligation to establish CO<sub>2</sub> limits in connection with PSD permits is currently before the Environmental Appeals Board (In re Christian County Generation, PSD Appeal 07-001), and EPA has recently addressed this issue in connection with a PSD permit for a 110MW waste coal plant in Utah (see <http://www.epa.gov/region8/air/permitting/deseret.html> (Response to Comments)), EPA's arguments to date for not addressing CO<sub>2</sub> in the context of BACT are far from compelling. While not entirely clear, EPA appears to offer two main arguments for its failure to regulate CO<sub>2</sub>. First EPA argues that it is well established that "subject to regulation" means subject to existing regulations that actually limit emissions (this argument is simply false – EPA has never expressed this opinion in the past, in fact is it contrary to prior Agency statements and flies in the face of both the statute and the regulations). Second, EPA appears to argue that CO<sub>2</sub> is not even a "pollutant" until EPA takes action to regulate it (this again impermissibly turns the analysis on its head).

**C. EPA MUST CONDUCT A BACT ANALYSIS AND SET BACT EMISISON LIMITATIONS IN ANY PERMIT THAT IT ISSUES FOR THE DESERT ROCK ENERGY FACILITY.**

EPA cannot lawfully issue a permit for the Desert Rock Energy Facility until it conducts a BACT analysis for the proposed plant's carbon dioxide emissions and, based on the BACT analysis, proposes BACT emission limitations for those carbon dioxide emissions. It is undisputed that the proposed Desert Rock Energy Facility is subject to BACT requirements for a number of air pollutants for which emissions will exceed specified significance levels. The significance level, which triggers the obligation for a BACT emission limitation for any NSR pollutant that is not listed in the table at 40 C.F.R. § 52.21(b)(23)(i), is "any net emission increase." 40 C.F.R. § 52.21(b)(23)(ii). There is no significance level for CO<sub>2</sub> listed in the table at 40 C.F.R. § 52.21(b)(23)(i). Thus, the obligation to adopt a BACT emission limitation for CO<sub>2</sub> is triggered by *any increase* in emissions of CO<sub>2</sub>. 42 U.S.C. §§ 7475(a)(1), (4), 7479(3); 40 C.F.R. § 52.21(j)(2); 40 C.F.R. § 52.21(b)(23)(ii). There is no dispute that the Desert Rock Energy Project would emit significant quantities of CO<sub>2</sub>; in fact, the facility is expected to emit almost 14 million tons of CO<sub>2</sub> for each year of operation (totaling some 700 millions tons over its 50-year operational life). The Desert Rock Energy Facility must comply with BACT requirements for carbon dioxide.

Contrary to EPA's boasts in this case that "the emission limits required by EPA's proposed permit for the Desert Rock power plant . . . are some of the most stringent in the country and would set a new level of performance for coal-fired plants in the United States,"<sup>21</sup> the proposed permit does not contain a BACT emission limitation for carbon dioxide. EPA has not conducted a BACT analysis for carbon dioxide. EPA has made no effort to identify or evaluate available "production processes or available methods, systems and techniques," for control of carbon dioxide emissions. See 40 C.F.R. § 52.21(b)(12).

The required BACT analysis for carbon dioxide should consider, among other things, use of cleaner fuels and available, demonstrated Integrated Gasification Combined Cycle coal combustion technology, for the reasons described in our November 13, 2006 comments (PP. 12-38). While it is not sufficient to simply select an emission limitation used elsewhere without conducting the required analysis, EPA's BACT analysis may also be informed by the carbon dioxide emission limitations that states have placed on new coal-fired power plants. California and Washington have both adopted carbon dioxide emission limitations of 1100 pounds per MW-hr. Montana recently adopted a minimum sequestration mandate, providing that new coal plants must capture and sequester a minimum of 50% of the carbon dioxide produced.

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<sup>21</sup> Press Release, July 19, 2006

<http://yosemite.epa.gov/opa/admpress.nsf/9e50770d29adb32685257018004d06fd/f21cb782482e8379852571b000772708!OpenDocument>

The table below summarizes the carbon dioxide emission standards and limits adopted by other western states.

**Table 1: Western State Carbon Dioxide Emission Limitations (as of July 2007)**

<b>STATE LAW</b>	<b>STANDARD</b>	<b>APPLICABILITY</b>	<b>EFFECTIVE DATE</b>
State of Montana, HB 0025, signed into law by Gov. Schweitzer on May 14, 2007	Mandate for the facility to capture and sequester a minimum of 50% of the carbon dioxide produced.	Applies to new electric generating units “primarily fueled by coal.”	January 1, 2007
State of Washington, SB 6001, signed into law by Gov. Gregoire on May 3, 2007	The lower of 1100 pounds of greenhouse gases per megawatt-hour or the average available GHG emission output of new combined cycle natural gas thermal electric generation turbines commercially available and offered for sale.	Triggered upon long-term financial commitments: (1) new ownership interest or upgrade to baseline power plant, or (2) new/renewed contract with a term or five years or more.	Standard takes effect on July 1, 2008
State of California, SB 1368, signed into law by Governor Schwarzenegger on Sept. 29, 2006	Greenhouse gas emissions performance standard shall be established by administrative agency at a rate that is no higher than the rate of emissions of greenhouse gases for combined-cycle natural gas baseload generation; CPUC recently established 1100 pounds of CO2 per MW-hour as the operative standard	Applies to long-term contracts for baseload power of five years or longer	CPUC rules for IOUs take effect February 1, 2007

EPA’s failure to conduct a searching BACT analysis and establish emission limitations for carbon dioxide must be rectified before EPA may lawfully issue a PSD construction permit for the Desert Rock Energy Facility. It appears that Sithe Global Power has not provided EPA as part of its permit application relevant information sufficient to allow EPA to conduct the required BACT analysis. See November 13, 2006 Comments 17 & n.46, 23-24. If EPA does not categorically deny the requested permit at this time, EPA should request Sithe to provide it with

all information necessary to conduct a BACT analysis, conduct the BACT analysis, and issue a revised proposed permit containing the required carbon dioxide emission limitations. Further, the public must be provided notice and an opportunity to comment and request a hearing on the revised proposed permit.

For these reasons and for the reasons described in the comments previously submitted by the undersigned and others, EPA should deny the requested PSD construction permit for the Desert Rock Energy Facility. Alternatively, EPA must conduct a BACT analysis for carbon dioxide, revise the proposed permit to include a carbon dioxide emission limitation selected through the BACT analysis, and provide public notice and an opportunity to comment and request a hearing on the revised proposed permit.

### **III. EVEN IF EPA IS NOT OBLIGATED TO ESTABLISH EMISSION LIMITATIONS FOR CO<sub>2</sub> IT SHOULD CONDUCT A ROBUST ALTERNATIVES ANALYSIS REGARDING CO<sub>2</sub> IMPACTS**

EPA's Office of Air and Radiation, Office of General Counsel, and the Environmental Appeals Board have expressed the opinion that permitting authorities (including EPA when it acts as the permitting authority) have broad discretion to consider alternatives, conduct or require analyses, and impose permit conditions to address issues under CAA section 165(a)(2) beyond the required BACT analysis. See *In re Prairies State*, PSD Appeal 05-05, 12 E.A.D. \_\_ (Aug. 24, 2006); *In re Knauf Fiber Glass*, 8 E.A.D. 1212, (EAB 1999); *In re Hillman Power*, 10 E.A.D. 673, 692 (EAB 2002).<sup>22</sup> In this case, given the Supreme Court's decision, the latest IPCC reports, the President's Executive Order which will result in imminent further regulation of CO<sub>2</sub> (undeniably making it "subject to regulation" even under EPA's twisted reading of the Act), Congressional efforts to establish global warming legislation, EPA's recognition of "the importance of addressing the global challenge of climate change,"<sup>23</sup> and the Agency's "diligent" work to "develop an overall strategy for addressing the emissions of CO<sub>2</sub> and other [greenhouse gases],"<sup>24</sup> it would be an astoundingly negligent policy decision for EPA to ignore possible options and alternatives that might eliminate or mitigate the impacts of a huge new source of CO<sub>2</sub>. Accordingly, even assuming that EPA could lawfully issue a PSD permit for the proposed Desert Rock plant without establishing a BACT limit for CO<sub>2</sub>, EPA has a duty to responsibly exercise its broad discretion under CAA section 165(a)(2) to consider all alternatives and options available to address the greenhouse gas emissions from the proposed Facility. Indeed, this authority gives EPA an important opportunity to implement stop-gap measures to help evaluate and address CO<sub>2</sub> and other greenhouse gases on a case-by-case basis as other policy, regulatory,

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<sup>22</sup> This discretion even extends to requiring specific additional BACT analysis. In *Knauf*, the Board explained that although "[s]ubstitution of a gas-fired power plant for a planned coal-fired plant would amount to redefining the source . . . redefinition of the source is not always prohibited. This is a matter for the *permitting authority's discretion*. *The permitting authority may require consideration of alternative production processes in the BACT analysis when appropriate*. See NSR Manual at B.13-B.14; *Old Dominion*, 3 E.A.D. at 793 (permit issuer has discretion "to consider clean fuels other than those proposed by the permit applicant.")" *Knauf*, 8 E.A.D. at 136 (emphasis added).

<sup>23</sup> See Deseret Response to Comment Document at 5, available at <http://www.epa.gov/region8/air/permitting/deseret.html>.

<sup>24</sup> *Id.*

and legislative efforts mature. The alternative approach followed by EPA in issuing the proposed permit for Desert Rock is a “head-in-the-sand” approach that will allow the problem to worsen unnecessarily without specific scrutiny or deliberation.<sup>25</sup>

**A. EPA HAS THE AUTHORITY TO CONSIDER CO<sub>2</sub> EMISSIONS AND ESTABLISH APPROPRIATE PERMIT CONDITIONS.**

Regardless of whether CO<sub>2</sub> is currently a pollutant subject to regulation under the Act, EPA as the permitting authority for Desert Rock has the authority to require evaluation of CO<sub>2</sub> emissions and establish appropriate permit conditions or otherwise address these emissions. Permitting authorities may exercise broad discretion under BACT requirements and CAA § 165(a)(2) to consider alternatives. See In re Prairies State, PSD Appeal 05-05, 12 E.A.D. \_\_\_ (Aug. 24, 2006); In re Knauf Fiber Glass, 8 E.A.D. 1212 (EAB 1999); In re Hillman Power, 10 E.A.D. 673, 692 (EAB 2002). EAB has consistently held that states have broad discretion to consider various options (even under EPA’s interpretation of the Act before Massachusetts v. EPA), including, among other things, broad discretion to independently evaluate options and alternatives, and to adopt conditions or requirements that they deem appropriate. For example, the Board has held that a permitting authority may require “redefinition of the source,” including requiring or restricting certain fuels. Hillman Power, 10 E.A.D. at 692.

While EPA does not believe that Section 165 “include[s] a comparable requirement to that contained in section 173(a)(5) of the CAA [nonattainment NSR], which requires that New Source Review in non-attainment areas include an analysis of alternative sites, sizes, production processes, and environmental control techniques to demonstrate that the benefits of the source outweigh its costs,” the agency has recognized that “a PSD permitting authority still has an obligation under section 165(a)(2) to consider and respond to relevant public comments on alternatives to the source,” and that a “PSD permitting authority *has discretion under the Clean Air Act to modify the PSD permit based on comments raising alternatives* or other appropriate considerations.” Brief of the EPA Office of Air and Radiation and Region V, In re Prairie State, PSD Appeal 05-05, 12 E.A.D. \_\_\_ (EAB, Aug. 24, 2006). Moreover, the EAB has made clear that a permitting authority has discretion to modify a permit based on consideration of “alternatives” whether or not the issues are raised by commenters:

Indeed, the permit issuer is not required to wait until an “alternative” is suggested in the public comments before the permit issuer may exercise the discretion to consider the alternative. Instead, the permit issuer *may identify an alternative on its own*. This interpretation of the authority conferred by CAA section 165(a)(2)’s reference to “alternatives” is consistent with the Agency’s longstanding policy that, . . . “this is an aspect of the PSD permitting process in which *states have the discretion to engage in a broader analysis if they so desire*.”

See In re Prairies State, PSD Appeal 05-05 (Aug. 24, 2006) (quoting the NSR Workshop Manual at B.13).<sup>26</sup>

<sup>25</sup> In addition to being, so obviously, reprehensible policy, a decision not to exercise its discretion here would be arbitrary, capricious and unreasonable.

<sup>26</sup> One version of the NSR Workshop Manual is available at: <http://www.epa.gov/Region7/programs/artd/air/nsr/nsrmemos/1990wman.pdf>.

In fact, under this authority, a permitting authority can engage in a wide ranging exploration of options, including fuel switching, and other generation and non-generation alternatives. Under this authority EPA clearly has the discretion to require specific evaluation and control of CO<sub>2</sub> emissions, and/or to require other action to mitigate potential global warming impacts. Failure to do so is a material breach of the Agency's obligations to the people of the Navajo Nation, the State of New Mexico and the United States.

**B. THERE ARE STEPS THAT CAN BE TAKEN TO REDUCE THE GLOBAL WARMING IMPACT OF THE DESERT ROCK ENERGY FACILITY.**

EPA could require any number of possible actions to address the CO<sub>2</sub> footprint of the proposed Desert Rock Energy Facility. Options include requiring specific energy efficiency, conservation or demand-side-management activities to reduce energy consumption, requiring development of renewable energy sources, requiring a change to a less CO<sub>2</sub>-intensive fuel (like natural gas or biomass co-firing), requiring construction of a smaller source, imposing limits on hours of operation, requiring the capture and sequestration of CO<sub>2</sub>, requiring construction of a more efficient facility, requiring the purchase of CO<sub>2</sub> offsets, or some combination of these approaches or others. Indeed, in its comments on the proposed Draft Environmental Impact Statement for White Pine Energy Station near Ely, Nevada, EPA Region 9 recently recommended that “carbon capture and sequestration and other means of capture and storage of carbon” be evaluated as a means of mitigating emissions from the proposed coal plant. See, EPA comments on White Pine DEIS at p. 14 attached hereto as Ex. 6. Thus, EPA agrees that control technology for reducing emissions of CO<sub>2</sub> should be evaluated at new coal plants. Additionally, EPA may also consider a no-build option under CAA § 165(a)(2), which gives EPA the authority to deny a PSD permit based on policy considerations related to CO<sub>2</sub>.<sup>27</sup>

The consideration of such options should be subject to a process of public discussion. Therefore, EPA should conduct a searching alternatives analysis and make that analysis available to the public for comment and input. To date, there has been no specific assessment of measures, alternatives, or options to address greenhouse gas emissions at the proposed Desert Rock plant.

Under no circumstance should EPA issue a final permit for the Desert Rock facility prior to its development of “an overall strategy for addressing the emissions of CO<sub>2</sub> and other [greenhouse gases] under the Clean Air Act,” and without itself conducting a thorough CO<sub>2</sub>-related alternatives analysis, identifying all available options for addressing the proposed plant's

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<sup>27</sup> The Board has said:

We are unable to reconcile the view that consideration of need for a facility is outside the scope of section 165(a)(2) of the Clean Air Act with the text of the statute and prior decisions. The 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). See *In re EcoEléctrica, LP*, 7 E.A.D. 56, 74 (EAB 1997)

global warming impacts, and adopting appropriate permit conditions or other requirements or restrictions. Indeed, the best course of action is for EPA to decline to approve major new CO<sub>2</sub> sources like Desert Rock<sup>28</sup> until an “overall policy” is in place – otherwise EPA dangerously puts the cart before the horse.

**IV. THE COMMENTS OF EPA, NMED AND OTHERS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE DESERT ROCK ENERGY FACILITY COMPEL EPA TO REOPEN THE PERMIT PROCEEDINGS AND DENY OR MODIFY THE PROPOSED PERMIT.**

**A. EPA’S MANDATORY DUTY TO COORDINATE THE PSD PERMITTING PROCEEDINGS WITH NATIONAL ENVIRONMENTAL POLCY ACT PROCEEDINGS REQUIRES EPA TO CONSIDER INFORMATION AND ANALYSES DEVELOPED IN CONNECTION WITH THE ENVIRONMENTAL IMPACT STATEMENT, INCLUDING THE COMMENTS OF EPA, NMED, AND OTHERS.**

In our initial comments, we asserted that EPA must coordinate its PSD permit review with the Bureau of Indian Affairs’ required development of an environmental impact statement (“EIS”) for the Desert Rock Energy Facility under the National Environmental Policy Act, and EPA’s review of and comment on the EIS under Section 309 of the CAA. Comment 23, at 93. Section 52.21(s), 40 C.F.R., specifically requires EPA to coordinate its proceedings on a proposed PSD permit for a facility with both the development of an EIS for the facility, and with EPA’s own review of and comments on the EIS under Section 309<sup>29</sup> “to the maximum extent feasible and reasonable.” Section 52.21(s), 40 C.F.R., 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 conducted with the broad environmental reviews under that Act and under section 309 to the maximum extent feasible and reasonable.

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<sup>28</sup> In fact, as a “merchant” plant the need for Desert Rock has never even been established – it is little more than a “power prospecting” project, that threatens to compromise U.S. efforts to affirmatively deal with climate change. There is no ready market of consumers waiting for the power that Desert Rock would produce, and there has been little if any scrutiny of the appropriateness of this project from an energy planning perspective (or of alternative measures – such as energy efficiency projects – that might reduce or eliminate the need for the power to the extent it even exists).

<sup>29</sup> Section 309 of the Clean Air Act requires EPA to “review and comment in writing on the environmental impact of any matter related to duties and responsibilities granted pursuant to this chapter [The CAA] or other provisions of the authority of the Administrator, contained in any . . . newly authorized Federal projects for construction” or other major federal agency action requiring an environmental impact statement.

There do not appear to be any circumstances that render full coordination of the PSD permitting and NEPA proceedings for the Desert Rock Energy Facility unfeasible or unreasonable. As we noted in our initial comment letter, EPA, should have, but has failed to conduct its PSD proceedings in parallel with the Bureau of Indian Affairs' development of an EIS for the facility. Comment 23, at 93. In view of the numerous deficiencies in the proposed PSD permit pointed out in the public comments, EPA must reopen the PSD permitting proceedings.<sup>30</sup> When it does so, the comment period on the draft Environmental Impact statement should also be reopened so that the two sets of proceedings can proceed in parallel.

At a minimum, EPA must consider in the PSD proceedings all information and analyses developed in connection with the EIS that are relevant to the proposed PSD permit, including the comments submitted by EPA on the DEIS under CAA Section 309, and the comments submitted by the New Mexico Environment Department ("NMED") and others. EPA, NMED, and others have submitted comments on the DEIS that point to a number of glaring deficiencies in the analyses supporting and the terms of the proposed PSD permit. It would be arbitrary, capricious, and a violation of EPA's mandatory coordination duty, to fail to consider and to take any action with respect to the PSD permit compelled by those comments, or other information or analyses developed in connection with the EIS.

**B. THE COMMENTS OF EPA, NMED AND OTHERS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT REQUIRE EPA TO DENY OR SUBSTANTIALLY MODIFY THE PROPOSED PSD PERMIT.**

**1. EPA's Comments on the DEIS Require Further Modeling and Analysis of PM-10 Emissions.**

EPA cannot issue a PSD permit unless the permit applicant demonstrates that emissions from construction or operation of the facility will not cause or contribute to violation of any national ambient air quality standard ("NAAQS"). CAA § 165(a)(3), 42 U.S.C. § 7475(a)(3). In our initial comments, we asserted that the modeling that Sithe relies on to show that the facility will not cause or contribute to violation of the NAAQS for PM-10 is flawed for a number of reasons. Comment 23, at 57-58. Specifically, we asserted that the modeling failed to model PM-10 emissions from all nearby sources, including the Four Corners Power Plant, and relied on incorrect background concentrations. *Id.* In its comments on the DEIS, a copy of which are attached as Exhibit 8, EPA is highly critical of Sithe's PM-10 modeling—the very modeling submitted by Sithe in support of its PSD permit application. EPA notes that the modeling is based on PM-10 emissions of 1,100 tons per year from the Desert Rock plant site, and does not include emissions attributable to employees commuting to and from their jobs on paved and unpaved roads, which the DEIS estimates will result in peak PM-10 emissions of more than 14,300 tons per year during construction, and more than 6,100 tons per year during operation. Ex. 8, at 4-6. EPA notes that even these higher figures that Sithe failed to model are based on

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<sup>30</sup> We note that EPA, in response to a request to extend the public comment period on the proposed PSD permit, stated that "when the draft EIS for the Desert Rock Energy Facility is released, EPA will consider any requests to reopen the public comment period if we have not yet issued our Response to Comments and reached a final PSD permit decision." Ex. 7. EPA thereby acknowledged that information relevant to the proposed PSD permit may be developed in connection with the DEIS.

questionable assumptions that 75% of employees would rely on ridesharing and that 80% of travel would be on paved roads. *Id.* EPA recommends substantiation and/or mitigation measures to ensure that these assumptions are realized, and modeling of the PM-10 emissions from employee commuting travel to determine compliance with the NAAQS.

Particulate matter emissions from other sources in the area are already causing serious health problems for local residents. In its comments on the DEIS, EPA notes that a study by the United States Geological Survey determined that due to atmospheric thermal inversions and existing sources of particulate matter, residents of Shiprock are more than five times as likely to seek assistance for respiratory ailments from the local Indian Health Services Clinic as residents of other nearby communities.<sup>31</sup> *Ex. 8*, at 7-8.

If EPA proceeds to process the proposed PSD permit for the Desert Rock Energy Facility, EPA must require additional modeling and analysis of PM-10 emissions that address the deficiencies identified by EPA in its comments on the DEIS, as well as the deficiencies identified in comments on the proposed PSD permit. EPA may not issue the permit if such modeling and analysis indicate that the facility will cause or contribute to violation of the PM-10 NAAQS.

## **2. NMED's Comments on the DEIS Require Modeling of PM 2.5 Emissions.**

In our initial comments, we asserted that EPA has failed to require Sithe to model PM 2.5 emissions to ensure that the facility's emissions of PM 2.5 will not cause or contribute to violations of the NAAQS for PM 2.5. *Comment No. 23*, at 55. Instead, EPA treated PM-10 as a surrogate for PM 2.5. *Id.* Even if this were permissible, which it is not, the PM-10 modeling and analysis is flawed for the reasons discussed above, and, therefore, the assessment of PM 2.5 emissions that relies on the assessment of PM-10 emissions as a surrogate is also flawed.

In its comments on the DEIS, NMED asserts that “[t]he PM 2.5 emissions that would be directly and indirectly emitted by the proposed power plant should be modeled to determine if the proposed plant's emissions will meet federal and state ambient air quality standards.” *Ex. 9*, at 2. The State bases this statement on the fact that PM 2.5 emissions would comprise approximately 78 percent of the plant's PM-10 emissions, and on the significant health problems and impacts to visibility attributable to small particles. *Id.* NMED notes that “[e]xposure to particle pollution is linked to a variety of significant health problems, ranging from aggravated asthma to premature death in people with heart and lung disease.” *Id.* The State also notes that “[p]article pollution is the main cause of visibility impairment in the nation's cities and national parks.” *Id.*

If EPA proceeds to process the proposed PSD permit for the Desert Rock Energy Facility, it must require modeling and analysis of PM 2.5 emissions. If the modeling and analysis shows that the facility will cause or contribute to violation of the NAAQS for PM 2.5, EPA cannot issue the permit.

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<sup>31</sup> A fact sheet is available at [http://pubs.usgs.gov/fs/2006/3094/fs2006-3094\\_eng.pdf](http://pubs.usgs.gov/fs/2006/3094/fs2006-3094_eng.pdf).

### **3. EPA's and NMED's Comments on the DEIS Require Analysis of Impacts to Ozone Levels.**

In our initial comments, we asserted that EPA has failed to require an analysis of the impacts of the Desert Rock Energy Facility on already high ozone levels in the area. Ex. 23, at 52-54 and accompanying expert reports of Khanh Tran and Jana Milford. Despite the fact that the facility has the potential to emit 3,491 tons per year of the ozone precursors nitrogen oxides and volatile organic compounds, EPA did not require Sithe to conduct modeling and analysis to determine whether the facility will cause or contribute to violation of the 8-hour NAAQS for ozone. Instead, EPA has permitted Sithe to rely on inadequate, flawed, and now outdated modeling conducted by NMED in connection with efforts to address high ozone levels in the Farmington, New Mexico area. Ozone levels in the Farmington area have been bumping up against the current ozone NAAQS for years even without Desert Rock's massive anticipated emissions of ozone precursors. In its comments on the DEIS, EPA takes issue with the DEIS' astonishing and unsupportable conclusion that "plant emissions of 3,325 tpy of nitrogen oxides (NOx) and 166 tpy of volatile organic compounds (VOCs) would not cause or contribute to significant ozone formation in the region." Ex. 8, at 7 (citations omitted). EPA notes that the conclusion, which appears to be based on the analysis relied on in support of the proposed PSD permit, does not consider emissions from vehicles estimated at 199 tpy of VOCs and 1,314 tpy of NOx. Id. NMED is also critical of the DEIS' assessment of the plant's impacts to ozone levels. Ex. 9, at 1-2. NMED notes that the DEIS reports an incorrectly high value for the ozone NAAQS. The effect of this error is that the DEIS reports ozone concentrations recorded in Shiprock as falling below the standard, when in fact, they exceed the standard. See Ex. 9, at 2 and DEIS at 3-10.

High ozone levels are already having serious adverse effects on the health of area residents. A recent New Mexico Department of Health Study concludes that asthma-related emergency room visits in San Juan County, New Mexico, increase when the area's ozone concentrations are high. Myers, Orrin, et al., The Association between Ambient Air Quality Ozone Levels and Medical Visits for Asthma in San Juan County (August 2007), attached as Ex. 10.

If EPA proceeds to process the proposed PSD permit for the Desert Rock Energy Facility, it must require modeling and analysis of the project's impacts to ozone levels in the area. If the modeling and analysis shows that the project will cause or contribute to violation of the ozone NAAQS, EPA cannot issue the permit.

### **4. The State's Comments on the DEIS Require A Full Accounting for Oil and Gas Emissions.**

In our initial comments, we asserted that the analysis conducted in support of the proposed permit fails in a number of ways to account for the very significant emissions of nitrogen oxides and other pollutants from the extensive and increasing oil and gas operations in the area. We asserted that these emissions must be fully accounted for not only in cumulative PSD NO2 increment consumption analysis (Comment 23, at 58-63), but also in regional haze modeling. Id. at 74-78. In its comments on the DEIS, NMED repeatedly notes that the DEIS "consistently minimizes oil and gas source emissions." NMED's comments are not surprising given that the DEIS relies in large part on the flawed analyses conducted for the proposed PSD

permit. NMED notes that emissions from oil and gas sources must be considered when analyzing potential ozone and visibility impacts. Ex. 9, at 2-4. According to NMED, recent estimates indicate that area oil and gas sources emit an estimated 35,000 tons of NO<sub>x</sub> and 100,000 tons of VOCs each year, and that new oil and gas sources are expected to come on line over the next 20 years. Ex. 9, at 2, 4. “Modeling and impact assessments are incomplete without accounting for these existing and new sources.” *Id.* at 2, 5. If EPA proceeds to process the proposed permit for the Desert Rock Energy Facility it must require Sithe to incorporate into its modeling and analyses in support of the proposed PSD permit all of the emissions from the area’s extensive oil and gas operations. If the modeling shows violation of an applicable increment consumption level or other requirement, EPA cannot issue the proposed permit.

**5. EPA’s and the State’s Comments on the DEIS Require Limitations on the Facility’s Emissions of Mercury and Other Hazardous Air Pollutants.**

In our initial comments, we asserted that the proposed PSD permit fails to include any emissions limitation for mercury, and that the facility will emit mercury in excess of the Navajo Nation’s cap for mercury emissions. Comment 23, at 50-52. We noted that fish consumption advisories due to mercury contamination are already in effect in a number of area waters, and that EPA must require state-of-the-art controls that achieve mercury removal of up to 90%. *Id.* Although Sithe has proposed, subject to certain conditions, to reduce mercury emissions by 80%, this proposal is set forth in a mitigation agreement that is not included in the proposed permit, and, therefore, would not be enforceable by citizens as part of the permit.

In its comments on the DEIS, EPA questions how the vague provisions of the mitigation agreement would result in attainment of the promised 80% reduction in mercury emissions. EPA notes that “[i]t is not clear how the air mitigation agreement will apply if the 80% mercury removal is not achievable using the control technologies in the air permit application [which do not include carbon injection], nor is it clear whether the not-to-exceed cost of \$ 13,000/lb mercury removal applies if carbon injection is being used to achieve the minimum 80% removal.” Ex. 8, at 6.

In its comments on the DEIS, NMED encourages the use of activated carbon injection to obtain mercury removal of 90% or more. Ex. 9, at 3. NMED also notes that other hazardous air pollutants emitted from the Desert Rock Energy Facility “have the potential to cause serious health effects and adverse environmental and ecological effects.” NMED notes that this is a “serious concern” given the area’s existing power plants that are a major source of hazardous air pollutants. The impacts of mercury and other hazardous air pollutants have been documented and are well-known to EPA. The comments of Dine Care and others on the DEIS discuss at length the devastating impacts of mercury to humans, wildlife and plants. Ex. 11, at 55-63. EPA cannot lawfully issue a PSD permit for the Desert Rock Energy Facility without minimizing the emissions of mercury and other hazardous air pollutants.

**6. Other comments on the DEIS, Including the Comments Submitted by Dine Care, Require Additional Analysis In Connection With the PSD Permit, Including Compliance With the Endangered Species Act.**

We reiterate that given its mandatory duty to coordinate its PSD permit proceedings with BIA's development of the EIS, EPA must consider in its proceedings on the proposed PSD permit all information and analysis developed in connection with the EIS that relate to the proposed PSD permit, including all relevant comments submitted on the DEIS. It is not the undersigned's responsibility to bring specific points raised in the comments on the DEIS to the attention of EPA for consideration in connection with the proposed PSD permit. Rather, it is EPA's duty to consider any pertinent comments. We further note that BIA has extended the comment deadline until October 9, 2007, so all comments on the DEIS relevant to the PSD permit cannot be identified at this time. Nevertheless, in addition to the comments of EPA and NMED on the DEIS described above, we specifically submit the comments of Dine Care et al. on the DEIS, attached as Exhibit 11, for consideration in connection with the proposed PSD permit. We note that portions of these comments are directly relevant to, among other things, EPA's failure in its consideration of the proposed PSD permit to limit PM 2.5 emissions (Ex. 11, at 22); limit mercury emissions (*id.*, at 23); limit carbon dioxide emissions and consider alternatives to dirty pulverized coal technology (*id.*, at 31 -41, 44- 49, 72-78); assess fugitive dust from coal combustion waste (*id.*, at 86-88); address environmental justice requirements (*id.*, at 17-28); and comply with the Endangered Species Act (*id.*, at 49-68).

While these comments speak for themselves, we feel compelled to further discuss EPA's failure to comply with the Endangered Species Act. We asserted in our initial comments on the proposed PSD permit that EPA is responsible for complying with the Endangered Species Act before approving a PSD permit for the Desert Rock Energy Facility. Comment 23, at 83-85. Rather than conduct the consultation required by Section 7 of the Act, EPA has indicated that it will rely on the consultation conducted by BIA in connection with the EIS. *Id.* Even assuming that EPA could lawfully dispense with the consultation requirements and rely on BIA's consultation, which it cannot, BIA's consultation is flawed for the reasons set forth in our comments on the DEIS. Ex. 11, at 49-68. If EPA proceeds to process the proposed PSD permit for the Desert Rock Energy Facility it must first conduct the consultation required by Section 7 of the Endangered Species Act.

**V. EPA MUST CONSIDER ANY INFORMATION OR ANALYSES PRESENTED IN CONNECTION WITH THE STATE OF NEW MEXICO'S CONSULTATION WITH THE NAVAJO NATION ON THE PROPOSED DESERT ROCK ENERGY FACILITY.**

One of the Desert Rock Energy Facility's proponents is the Dine Power Authority, an enterprise of the Navajo Nation. On August 20, 2007, the Governor of New Mexico requested formal government- to- government consultation between the State of New Mexico and the Navajo Nation regarding the proposed Desert Rock Energy Facility. Ex. 12. The request was made pursuant to a Statement of Policy and Process between the State of New Mexico and the Navajo Nation that allows either sovereign to request consultation with the other to discuss matters of concern before implementation of final action. *Id.* (emphasis added). The Desert Rock Energy Facility is of special concern to the State, which has undertaken efforts to reduce

emissions of greenhouse gases. Carbon dioxide emissions from Desert Rock would make it difficult to meet Governor Richardson's greenhouse gas reduction goals. Ex. 9, at 4.

Under no circumstances should EPA issue a final PSD permit for the Desert Rock Energy Facility before the requested consultation between the State of New Mexico and the Navajo Nation is completed. Further, if EPA proceeds to process the proposed permit for the Desert Rock Energy Facility, it must consider any information, analyses or alternatives<sup>32</sup> developed in connection with the consultation

### **CONCLUSION**

For these reasons, and for the reasons stated in our initial comments, EPA should deny the proposed PSD permit for the Desert Rock Energy Facility. If EPA proceeds to process the proposed permit, it should reopen and supplement the administrative record, make significant changes to the proposed permit to address its numerous deficiencies, and request public notice and comment on the modified proposed permit.

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<sup>32</sup> NMED in its comments on the DEIS noted: "If the Desert Rock Energy Facility employed Integrated Gasification Combined Cycle Technology, CO<sub>2</sub> emissions (as well as emissions of other pollutants such as mercury) would be minimized. The conventional coal combustion technology being used at Desert Rock makes CO<sub>2</sub> capture and storage (control) less feasible technically and economically. Ex. 9, at 4.

Sincerely,

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