BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re: Deseret Power Electric Cooperative	)	PSD Appeal 07-03
PSD Permit No. PSD-OU-0002-04.00	)	

MOTION OF NATIONAL PARKS CONSERVATION ASSOCIATION FOR LEAVE TO FILE A BRIEF AS *AMICUS CURIAE* IN SUPPORT OF PETITIONER

Pursuant to 40 C.F.R. §124.19 and the Environmental Appeals Board Practice Manual §III.D.7, National Parks Conservation Association (NPCA) respectfully moves the Environmental Appeals Board (EAB) for leave to file the accompanying brief as *amicus curiae* supporting the Sierra Club ("Petitioner"). NPCA seeks to support Petitioner in its assertion that EPA Region 8 erred in issuing the Prevention of Significant Deterioration Permit Number PSD-OR-0002-04.00 (Bonanza PSD permit) to Deseret Power Electric Cooperative on August 30, 2007 by failing to require a best available control technology (BACT) limit for control of carbon dioxide (CO2) emissions. For reasons stated by Petitioner and for the reasons stated below, NPCA respectfully requests the EAB remand the Bonanza PSD permit with instructions to complete a full analysis of BACT for reducing emissions of CO2, a greenhouse gas.

NPCA is a nonpartisan, nonprofit organization dedicated to protecting and enhancing America's National Park System for present and future generations. NPCA was established in 1919 and today has approximately 350,000 members who care deeply about the well being of our national parks. One of NPCA's priorities is to protect the health and heritage that defines our national parks from the damaging impacts of climate change.

NPCA's accompanying *amicus curiae* brief highlights some of the climate change impacts our national parks are currently experiencing, as well as impacts that are predicted to occur in the near future. As *amicus curiae*, NPCA supports the Petitioner's position that the Clean Air Act and recent jurisprudence require EPA Region 8 to issue BACT limits for CO2 emissions. We therefore respectfully request the EAB to review the enclosed *amicus* brief and to consider it when issuing a decision in this matter.

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NATIONAL PARKS CONSERVATION ASSOCIATION'S *AMICUS CURIAE* BRIEF IN SUPPORT OF PETITIONER

INTRODUCTION

By 2030, United States Geologic Survey scientists estimate that many of the glaciers in Montana's Glacier National Park will disappear due to increasing temperatures.[1] Increasing sea levels in Florida's Everglades National Park threaten the mangrove ecosystem that filters saltwater thereby preserving freshwater wetlands.[2] Rising temperatures and drought have driven bark beetles to higher elevations causing high mortality rates to the pinon pines in New Mexico's Bandelier National Monument. Rising temperatures are also killing whitebark pine trees in Yellowstone National Park; the dying of whitebark pine translates to reduced chances of grizzly bear survival because the bear population in Yellowstone relies heavily on whitebark pine seeds as a critical source of nutrition.[3] Warmer temperatures in Great Smoky Mountains National Park could increase ozone levels, further damaging critical tree and plant species.[4] Scientists have linked these and other changes occurring in our national parks directly to climate change.

The United States National Park System encompasses 391 natural, cultural and recreational areas covering more than 84 million acres in 49 States, the District of Columbia, American Samoa, Guam, Puerto Rico, Saipan, and the Virgin Islands and almost 12,000 kilometers of shorelines along the oceans and Great Lakes. Congress established the very first national park, Yellowstone, in 1872. Nearly 100 years ago, the Organic Act created the National Park Service and empowered it to "promote and regulate" existing and future parks and monuments. Since NPS was established, its work

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[1] National Park Service U.S. Department of Interior, "Climate Change in National Parks." Online at: www.nps.gov/pore/planyourvisit/upload/brochure_climatechangeinntionalparks.pdf.

[2] Id.

[3] Id.

[4] National Parks Conservation Association, "Unnatural Disaster: Global Warming and Our National Parks" (2007), Online at www.npca.org/globalwarming.

has included managing park resources, educating the public and preserving our national heritage. Now, faced with the existing and unfolding manifestations of climate change, the wellbeing of our national parks, and the wildlife within them, are in great peril.

The National Park Service protects our national parks within their boundaries but cannot control external threats such as climate change. Regulating new sources of greenhouse gas emissions responsible for climate change is the distinct responsibility of the Environmental Protection Agency (EPA), a responsibility carved out by the Clean Air Act (CAA) and recognized in *Massachusetts v. EPA;* a responsibility which must be executed to ensure the protection and enjoyment of our national parks.

The CAA Prevention of Significant Deterioration ("PSD") program includes a number of provisions designed "to preserve, protect, and enhance the air quality in national parks [and] national wilderness areas." CAA §160(2). Of relevance here is CAA §165(a)(4), which requires that a PSD permit must include a best available control technology (BACT) limit for "each pollutant subject to regulation under this chapter emitted from or which results from" a facility. Statutes, regulations and jurisprudence make clear that carbon dioxide is a pollutant subject to regulation under the CAA. Accordingly, we reject the EPA's assertion that it lacks authority to address greenhouse gas emissions under the CAA's PSD program, especially for large new sources of CO_2 like coal-fired power plants.

DISCUSSION

A. Climate Change Impacts to National Parks

A growing and compelling body of scientific evidence indicates that rising atmospheric concentrations of human caused greenhouse gases are pushing the earth towards a dangerous tipping point in the climate system, beyond which a number of severe ecological impacts will become unavoidable.[5] The average global temperature is rising, seasons are changing, glaciers and snow packs are vanishing, arctic sea ice is thinning and retreating, sea levels are rising, the ocean is becoming more acidic, and droughts, heat waves, floods, and intense hurricanes have all increased in a number of locations.[6]

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[5] Testimony of James E. Hansen, Director, National Aeronautics and Space Administration Goddard Institute for Space Studies before the U.S. House of Representatives Select Committee on Energy Independence and Climate change, April 26, 2007.

[6] IPCC. 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)] Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA; Parmesan, C. 2006. Ecological and Evolutionary Responses to Recent Climate Change. Annu. Rev. Ecol. Evol. Syst. 2006. 37:637–69; Thompson, L.G., E. Mosley-Thompson, M.E. Davis, K.A. Henderson, H.H. Brecher, V.S. Zagorodnov, T.A. Mashiotta, P-N. Lin, V.N. Mikhalenko, D.R. Hardy, and J. Beer. 2002. Kilimanjaro ice core records: Evidence of Holocene climate change in tropical Africa. Science298, 589-593; Burke, J. 2007. Snow's no-show in the Alps. The Observer, December 3. Accessed February 4, 2007 at http://travel.guardian.co.uk/article/2006/dec/03/france.theobserver.skiing; Hall MHP and DB Fagre. 2003.

In our national parks these ecologic impacts are felt by animal and plant species that die off or relocate as they are unable to adapt quickly enough to these changes, by the trees and shrubs unable to withstand extreme fire and drought, and by the animals, plants and people who will suffer the effects of increased ozone pollution in our parks.

These observations make manifest the already felt impacts of climate change in America's national parks. Approximately 40% of carbon dioxide emissions- the principal human created greenhouse gas responsible climate change in the United States- comes from coal-fired power plants.[7] In light of these tipping points, the prospect of potentially dozens of new conventional coal-fired power plants, approved without any consideration of their CO_2 emissions, poses a clear danger to climate stability and correspondingly to our national parks.

Below, we discuss a number of significant effects greenhouse gas emissions and climate change have on America's national parks. We then highlight the affirmative duty of Federal Land Managers (FLM) to protect national parks and the need for a PSD permit to contain BACT limits for CO2 in order to enable FLMs to fulfill their legal obligation.

1. Climate Change Impacts to National Park Waters and Coastlines

The National Park Service manages approximately 12,000 kilometers of shorelines along the oceans and Great Lakes. Scientists have observed climate changes as they are reflected in glacial melting, increased sea temperature, rising sea level and reduced water levels in the Great Lakes. As water bodies are adversely impacted by climate change so to is the life they support, coasts they protect, and people who admire their natural beauty.

A quarter of the world's mountain glaciers could disappear by 2050 due to climate change.[8] In the western national parks alone, glacial retreat and disappearance is well documented. In Glacier National Park in Montana only 26 of the 38 glaciers present just forty years ago still exist today. These remaining 26 glaciers are expected to vanish by 2030. Sixty percent of North Cascades National Park in Washington is covered by 318 glaciers. In the last 50 years, the total mass of the park's glaciers has been reduced by 80

Modeled Climate-Induced Glacier Change in Glacier National Park, 1850–2100, BioScience 53:131–140; and Raven, J., K. Caldeira, H. Elderfield, O. Hoegh-Guldberg, P. Liss, U. Riebesell, J. Shepherd, C. Turley, and Coauthors, 2005: Ocean acidification due to increasing atmospheric carbon dioxide. Policy document 12/05, The Royal Society The Clyvedon Press Ltd, Cardiff, UK, 68pp. [Global; Ocean acidification] as cited in National Parks Conservation Association, "Unnatural Disaster: Global Warming and our National Parks" (2007).

[7] U.S. Environmental Protection Agency, "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005," April 2007. Based on calculation of CO2 emissions from tables 3-1 and 3-3.

[8] Union of Concerned Scientists, "Climate change," http://www.uscusa.org/global_warming/science/early-warming-signs-of-global-warming-glaciers-melting.html; B. Redeker, "Glacial Retreat," September 2, 2003, G4, http://www.g4rv.com/techtvvault/features/45427/Glacial_Retreat.html as cited in Rocky Mountain Institute (RMI), "Loosing Ground, Western National Parks Endangered by Climate Disruption' (July 2006) at 4.

percent.[9] In California's Yosemite National Park, six glaciers lost between 31 and 78 percent of their mass during the last century.[10] As glaciers are lost, water runoff that feeds freshwater stream flow is reduced, degrading the aquatic ecosystem.

Computer models predict climate change will also cause sea levels to rise 48 centimeters by 2100. In the past century sea levels rose only approximately 18 centimeters.[11] Sea level rise can cause coastal erosion, saltwater intrusion into groundwater aquifers, inundation of wetlands and estuaries, and damage to park structures, including irreplaceable cultural and historic treasures.[12] Gulf Islands National Seashore in Mississippi, for example, is in danger of inundation from the sea because it is almost entirely a low-lying barrier island located on a low regional coastal slope.[13] Recent storms have caused major damage to historic forts within the Seashore.[14] Some studies show that warmer water and raised levels of salinity are likely to increase dangerous oyster diseases in the Chesapeake Bay, undermining years of Bay restoration efforts.[15] There are over 50 national park units within the Chesapeake Bay watershed.

Climate change will also result in warmer stream temperatures, such as those predicted in the cold, rapid streams of Shenandoah National Park in Virginia and Great Smoky Mountains National Park in North Carolina and Tennessee. Rising stream temperatures, in addition to changes in the stream flow, could spell disaster for trout. In fact, temperature increases are expected to decimate 80-90 percent of the trout habitat in Virginia and North Carolina, killing 37 percent of the trout population within this century.[16]

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[9] D. Granshaw, "Glacier Change in North Cascades National Park Complex, Washington State, U.S.A, 1957-1998" (master's thesis, Portland State University, 2001), 2 as cited in RMI 2006.

[10] H. Basagic, Portland State University, Twentieth Century Glacier Change in the Sierra Nevada, California, http://web.pdx.edu/~basagic/snglac.html as cited in RMI at 5.

[11] Intergovermental Panel on Climate Change, 2001 as cited in United States Geological Survey, "Vulnerability of U.S. National Parks to Sea-Level Rise and Coastal Change" (September 2002).

[12] Id.

[13] Id.

[14] National Parks Conservation Association, "Turning Point" (2006), Online at www.npca.org/turningpoint/Full-Report.pdf.

[15] Barron, E. 2001. Potential consequences of climate variability and change for the northeastern United States. Chapter 4 in: National Assessment Synthesis Team. Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change. Report for the US Global Change Research Program, Cambridge University Press, Cambridge UK, 620pp; Cook, T, Follia, M, Klinck, J, Ford, S, and J. Miller. 1998. The Relationship Between Increasing Sea-surface Temperature and the Northward Spread of Perkinsus marinus (Dermo) Disease Epizootics in Oysters. Estuarine, Coastal and Shelf Science(1998) 46:587–597; and Ewart, JW and SE Ford. 1993. History and Impact of MSX and Dermo Diseases on Oyster Stocks In the Northeast Region. Northeastern Regional Aquaculture Center Fact Sheet Number 200 as cited in NPCA 2007.

[16] Flebbe PA, Roghair, LD, and JL Bruggink. 2006. Spatial Modeling to Project Southern Appalachian Trout Distribution in a Warmer Climate. Transactions of the American Fisheries Society 135:1371–1382 ; see also IPCC 2007 as cited in NPCA 2007.

More severe and more frequent storms are linked to climate change. An increase in extreme rainfall will lead to increased floods which flush young trout downstream, killing many and forcing survivors to compete with other species.[17]

As sea surface temperature has risen over the past century, hurricanes have become more intense.[18] In recent years, hurricanes Katrina and Wilma caused widespread destruction at Everglades National Park and Gulf Islands National Seashore.[19] One location devastated by Katrina and Wilma is a main entrance to the Everglades, called Flamingo. Flamingo provides the only overnight accommodations in the park and storm surges from the hurricanes damaged or destroyed a visitor center, lodge, restaurant and cabins located there.

2. Climate Change Impacts to National Park Lands

The most recent report by the United Nations International Panel on Climate Change (IPCC) confirms that the frequency and duration of heat waves across the U.S. has increased over the last 50 years as a result of climate change. In national parks around the country, increasingly extreme heat events correspond to an increase in the frequency and duration of wildfires and earlier melting of snow pack.[20]

Since 1987, western wildfires have become four times more frequent than during the fifteen years prior, are 78 days longer and take five times as long to control.[21] Without limits to greenhouse gas emissions by 2100 the occurrence of large wildfires may increase by more than 50 percent.[22] The cost of fighting fires in national parks will correspondingly increase. In addition to wildfires, droughts, flooding and pest infestations exacerbated by climate change further threaten healthy forests.

The mountains are also suffering from rising global temperature. Snow packs that coat mountaintops are diminishing. Snow packs are melting 30 days earlier than a half century ago.[23] Snow packs are diminishing due to rising temperatures and an increase in precipitation falling as rain instead of snow. Park visitors also rely on snow packs for

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[17] See supra note 4, NPCA 2007.

[18] Trenberth, K. E. and Shea, D. J. 2006. Atlantic hurricanes and natural variability in 2005. Geophys. Res. Lett 33 as cited in NPCA 2007.

[19] See supra note 4, NPCA 2007 at 18

[20] Id.

[21] Westerling, A and B Bryant. 2006. Climate Change And Wildfire In And Around California: Fire Modeling And Loss Modeling. Report for California Air Resources Board, available online at http://www.climatechange.ca.gov/biennial_reports/2006report/index.html as cited in NPCA 2007

[22] Id.

[23] Stewart, IT, Cayan, DR, and MD Dettinger. 2005. Changes toward Earlier Streamflow Timing across Western North America. J. Climate 18:1136-1155 as cited in NPCA 2007.

skiing and snowshoeing. If greenhouse gases are not reduced, 70-90 percent of snowpack in the Sierra Nevada and Cascade Mountains could vanish by the end of the century.[24]

Increased rain in the west may also increase flooding. In May 2005 a rainstorm closed trails, campgrounds and roads at Yosemite National Park. In November 2006, more than 18 inches of rain fell in 36 hours, overwhelming streams and creeks running through Mount Rainier National Park. The flooding destroyed sections of road, requiring it be closed for six months. Rebuilding the road is estimated to cost upwards of $36 million. The Mount Rainier flood also destroyed trails and campgrounds, broke utility lines and filled water reservoirs with mud and debris. [25]

Climate change may make it more difficult for trees to survive impacts from acid rain and contribute to the transport and growth of invasive species already destroying forests in the Appalachian region.[26] The combination of acid rain and climate change has been taking a toll on one of the largest old-growth deciduous forests located in the Great Smokey Mountains. Climate change is also contributing to the decline of various species of tree including the Shenandoah's Eastern hemlocks, which provide shade to trout streams, and Fraser fir trees in Appalachia.[27]

3. Climate Change Impacts to National Park Wildlife

Wildlife is struggling to survive disease, rapid habitat changes, and diminished food supply brought on by new climate change patterns. For example, the caribou of Alaska's Gates of the Arctic National Park and Preserve and Denali National Park and Preserve have experienced increased parasite infestation, which decreases survival rates for mothers and their young.[28] Caribou habitat is also being destroyed. One of the primary areas caribou inhabit during the winter is old, lichen-rich spruce forests, which are being

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[24] Cayan, D, Luers, AL, Hanemann, M, Franco, G, and B Croes, 2006. Scenarios Of Climate Change In California: An Overview. Report for California Air Resources Board, available online at http://www.climatechange.ca.gov/biennial_reports/2006report/index.html; Leung, LR, Qian, Y, Bian, X, Washington, WM, Han, J, and JO Roads. 2004. Mid-Century Ensemble Regional Climate Change Scenarios For The Western United States. Climatic Change 62:75–113 as cited in NPCA 2007.

[25] Blumenthal, L. 2007. Possible Rainier price: $100 million. The Olympian, March 28 as cited in NPCA 2007.

[26] Webster, KL, Cree, IF, Nicholas, NS, and H. Van Miegroet. 2004. Exploring interactions between pollutant emissions and climatic variability in growth of red spruce Peine, JD and CW Berish. 1999. Climate Change: Potential Effects in the Southern Appalachians. In: JD Peine, (Ed). Ecosystem Management for Sustainability. Baton Rouge; CRC Press; and Malcolm, J.R and A Markham. 1997. Climate change threats to the National Parks and protected areas of the United States and Canada. World Wildlife Fund.as cited in NPCA 2007.

[27] See supra note 4, NPCA 2007 at 12-13.

[28] Bachelet, D, J Lenihan, R Neilson, R Drapek, and T Kittel. 2005. Simulating the response of natural ecosystems and their fire regimes to climatic variability in Alaska. Can. J. For. Res. 35: 2244-2257; Rupp, TS, Olson, M, Adams, LG, Dale, BW, Joly, K, Henkelman, J, Collins, WB, and AM Starfield. 2006. Simulating the influences of various fire regimes on caribou winter habitat. Ecological Applications 16(5):1730-1743 as cited in NPCA 2007 at 21-22/

destroyed by wildfires. And 90 percent of the tundra ecosystem, upon which the caribou rely as an important nutritional source, may disappear by the end of the century due to warming temperatures.[29]

The salmon in Alaska are also facing multiple challenges. In the Yukon-Charley Rivers National Preserve salmon are being infested by a parasite common in warmer waters but new to Alaskan salmon. The parasite either kills infected fish or damages their reproductive systems. The parasite's arrival to Alaskan waters is linked to warming water temperatures.[30] By 2050, the oceans may be too warm to support wild salmon living around Wrangell-St. Elias National Park and Preserve and Glacier Bay and Katmai National Parks.[31]

Caribou and salmon are but two of the many species suffering from climate change. If carbon dioxide levels double from average 1961-1990 levels, which could occur by 2100, then one study predicts that conditions in Great Smoky Mountains National Park would become unsuitable for red squirrels, southern red-black voles, and northern flying squirrels.[32] If no action is taken to limit the rate of sea level rise, studies show that Biscayne Bay could lose 79% of its tidal flats habitat 54% of its salt marsh within a century. These losses put fish species such as bonefish, yellowtail, snapper and tarpon at risk.[33]

Climate change may also devastate coral reefs within Biscayne National Park in Florida. Coral reefs not only filter toxins and nutrients from the water, they also provide a vital habitat for numerous animal and plant species. The only barrier reef system in the United States extends between Biscayne Bay and Dry Tortugas National Parks. The reef is at risk due to rising seas, warmer water temperatures (which cause bleaching), disease, and more intense hurricanes that may devastate the coastline and make it more vulnerable to storm-generated waves.[34]

4. Climate Change Impacts to National Park Cultural and Historical Sites

Cultural and historical sites protected by national parks are also at risk from climate change. Sites in coastal regions are most at risk from the impacts of warmer temperatures, rising sea levels, stronger storms and larger more frequently floods. In 1989, Hurricane Hugo flooded Fort Sumter, where the civil war began. In 2003, Hurricane Isabel flooded

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[29] Id.

[30] Kocan, R, Hershberger, P, and J Winton. 2004. Ichthyophoniasis: an emerging disease of Chinook salmon in the Yukon River. Journal of Aquatic Animal Health16:58-72 as cited in NPCA 2007 at 22.

[31] Id.

[32] Burns, CE, Johnston, KM, and OJ Schmitz. 2003. Global climate change and mammalian species diversity in U.S. national parks. PNAS 100(20): 11474-11477 as cited in NPCA 2007.

[33] National Wildlife Federation & Florida Wildlife Federation. 2006. An Unfavorable Tide: Global Warming, Coastal Habitats and Sportfishing in Florida. http://www.nwf.org/nwfwebadmin/binary Vault/An_Unfavorable_Tide_Report.pdf as cited in NPCA 2007 at 18.

[34] See supra note 4, NPCA 2007 at 17.

Historic Jamestown National Historic Site, washing away entire archeological sites, damaging the visitor center and museum to the degree that they were condemned, and soaking one million artifacts, which were rescued by Park Service employees. In 2004, Hurricane Ivan threatened over 300,000 artifacts from Fort Pickens museum in Gulf Island National Seashore, which were also fortunately rescued by NPS staff.[35] In 2005, Hurricane Katrina destroyed historic ruins, sandblasted cannons and damaged brickwork in Dry Tortugas National Park.[36]

The entire mid-Atlantic coast is at risk from sea level rise due to its gentle coastal slope, delicate sandy shores and gradually sinking land.[37] Many cultural parks are located within this region, including Fort Raleigh National Historic Site, Cape Hatteras National Seashore, and Wright Brothers National Memorial. The Gulf Island National Seashore, popular in part for the Civil War-era Fort Massachusetts, is yet another area in jeopardy because of high rates of erosion, the low-sloping coastal plain, and the low-lying barrier island morphology.[38]

Rising sea levels also threaten to immerse petroglyphys located near Cape Alava in Olympic National Park in Washington. Scientists are only beginning to ascertain how America's cultural and historical relics may be lost should additional impacts of climate change be realized.

5. Climate Change Impacts to National Park Air

Climate change will undermine efforts to improve air quality as rising temperatures accelerate ozone formation during summer months. A recent study published in the journal Climatic Change projects that across 50 U.S. cities, the number of unsafe air days – days when ozone levels exceed the U.S. Environmental Protection Agency's 8-hour air quality standard – will increase by 68 percent.[39] National Parks such as Sequoia and Kings Canyon, Joshua Tree and Yosemite each have ozone levels higher than allowed by EPA health standards.[40] In fact, there are 150 national park units located in areas that fail to meet the 8-hour ozone and other national air quality standards.[41] As temperature

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[35] Dvorak, P. 2005. Park Service Team Set to Rescue Years of Artifacts Washington Post, Thursday September 1, A19 as cited in NPCA 2007 p. 31.

[36] Heritage Emergency National Task Force. 2005. Hurricanes 2005: National Park Service Status Report http://www.heritagepreservation.org/PROGRAMS/KatrinaNPS.HTM as cited in NPCA 2007 p 31.

[37] Thieler, ER and ES Hammar-Klose. 1999. National Assessment of Coastal Vulnerability to Sea-Level Rise: Preliminary Results for the U.S. Atlantic Coast. U.S. Geological Survey Open-File Report 99-593 as cited in NPCA 32.

[38] See supra note 9.

[39] Bell M, Goldberg R, Hogrefe C, et al. *Climate change, ambient ozone, and health in 50 US cities.* 82 CLIMATIC CHANGE 61 (2007).

[40] See supra note 4, NPCA 2007 at 28.

[41] See supra note 14, NPCA 2006.

and stagnant air conditions increase, particulate matter and ozone will be trapped closer to the ground where it will increase the danger to park visitors.[42]

Warmer summers and drought will make forest fires more common. Forest fires bring unhealthful particulate pollution into many national parks. If forest fires increase as predicted, smoke and dust particles will compound poor air quality reducing the number of days park visitors can safely breathe the air.[43]

B. The Environmental Protection Agency is Required to Regulate Carbon Dioxide Emissions

The U.S. has already recognized the necessity of stabilizing greenhouse gas concentrations in the atmosphere "at a level that would prevent dangerous anthropogenic interference with the climate system." [44] It is widely recognized that to achieve this goal we must limit climate change to 2°C to prevent runaway positive feedbacks and avoid the worst impacts of climate disruption.[45] In turn, to achieve this target, the rise in global greenhouse gas emissions must cease within ten years, and we must reduce such emission (on an annual basis) to at least 50 percent below 2000 levels by mid-century, such that atmospheric concentrations do not exceed 450 parts per million (ppm).[46] Effectively, the U.S., which has contributed disproportionally to cumulative global greenhouse gas emissions,[47] must reduce its emissions to at least 80 percent below 2000 levels by 2050.

The documented impacts of climate change on the parks and the likely implications for the future of our park system demand that EPA take every reasonably available action to immediately reduce greenhouse gas emissions. Such action should clearly include the

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[42] Cayan, D, Luers, AL, Hanemann, M, Franco, G, and B Croes, 2006. Scenarios Of Climate Change In California: An Overview. Report for California Air Resources Board, available online at http://www.climatechange.ca.gov/biennial_reports/2006report/index.html as cited in NPCA 2007 at 29.

[43] See supra note 4, NPCA 2007 at 28

[44] United Nations Framework Convention on Climate Change (UNFCCC). 1992. Online at: http://unfccc.int/resource/docs/convkp/conveng.pdf.

[45] International Climate Change Task Force (ICCT). 2005. Meeting the climate challenge. Online at: http://www.ippr.org/publicationsandreports/publication.asp?id=246.

[46] IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Metz B, Davidson OR, Bosch PR, Dave R, Meyer LA (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

[47] Baumert KA, Herzog T, and Pershing J. Chapter 6, Cumulative emissions, in Navigating the Numbers: Greenhouse Gas Data and International Climate Policy. World Resources Institute, 2005. Online at: http://www.wri.org/climate/pubs_description.cfm?pid=4093.

considerations implicated by a BACT analysis, including accessible, applicable and economically feasible measures for reducing emissions of CO2. As articulated below, we believe there are compelling reasons to require the consideration of emissions of greenhouse gases, including CO_2, in the PSD permitting process. EPA has simply failed, in the context of this permit decision and in any prior actions, to provide a valid justification for declining to evaluate available measures for reducing CO_2 emissions in the BACT process (this is especially clear in light of the recent Supreme Court decision in *Massachusetts v. EPA*).

Thus, even if EPA had discretion to interpret the Act as it did (which as the Petitioner points out they likely did not), in light of the important implications for our national parks, EPA's interpretation of the Act was unreasonable and unjustifiable. Moreover, that decision was made without providing the public with the ability to examine and comment on the full range of factors that informed the Agency's determination, thereby depriving the Agency itself of valuable public input.

Despite the clear role of the U.S. in creating the current climate crisis, there has been no concrete federal action to reduce domestic greenhouse gas emissions. As advocates seeking to protect the national parks system for present and future generations we find this inaction unacceptable. Given EPA's clear authority to adopt meaningful regulatory strategies to address greenhouse gas emissions, its failure to do reflects an unreasonable abdication of its statutory responsibilities.

1. CO2 is a Regulated Pollutant Under the Clean Air Act

Carbon dioxide is a pollutant under Section 302(g) of the Clean Air Act. 42 U.S.C. §7602(g). Carbon dioxide has been regulated under the CAA since 1993, when EPA adopted regulations implementing Section 821 that require monitoring, recordkeeping and reporting of CO_2 emissions by certain covered sources. *See* 42 U.S.C. § 7651k note; Pub. L. 101-549; 104 Stat. 2699; 40 C.F.R. § 75.1 *et seq.* The U.S. Supreme Court confirmed that CO2 is a pollutant under the CAA when it handed down *Massachusetts v. EPA*, 127 S.Ct. 1438, holding that "greenhouse gases fit well within the Clean Air Act's capacious definition of 'air pollutant.'" Id. at 1462. Because CO2 is a pollutant under the CAA, EPA can and must regulate its emissions.

2. The Clean Air Act Requires BACT Limits for Regulated Pollutants

In section 821 of the Clean Air Act Congress ordered EPA "to promulgate regulations" requiring that hundreds of facilities covered by Title IV monitor and report their CO_2 emissions. Section 165(a)(4) of the Clean Air Act requires BACT "for each pollutant subject to regulation under this chapter emitted from . . . such facility." 42 U.S.C. § 7475(a)(4). EPA repeated this language in its implementing regulations: BACT is required for "any pollutant that otherwise is subject to regulation under the Act." 40 C.F.R. § 52.21(b)(50)(iv). The combined effect of CAA Sections 821 and 165 mandates that BACT limits be established for emissions of CO2.

3. BACT Emission Limitations are Critical to Enable Federal Land Manger to Accurately Assess New and Modified Source Impacts on National Parks

The PSD program includes a number of provisions designed "to preserve, protect, and enhance the air quality in national parks [and] national wilderness areas." CAA §160(2). A PSD permit applicant must establish that emissions from a proposed facility "will not cause, or contribute to, air pollution in excess of any... maximum allowable increase... for any pollutant." CAA§165 (a)(3). In addition, the CAA gives FLMs an "affirmative responsibility to protect" the air quality-related values (AQRVs) of Class 1 Areas, CAA §165(d)(2)(B). There are 48 national parks with Class I status under the Clean Air Act.

In order to ensure that the FLMs can fulfill these legal responsibilities, air permitting agencies are required to provide FLMs with written notice of a proposed PSD permit if emissions from the proposed source may affect a Class 1 Area. CAA 165(d)(2)(A). Such written notice must include "all information relevant to the permit application," 40 C.F.R. 51.307(a)(1); *see also* 40 C.F.R. 52.21 (p)(1) & (3); 40 C.F.R. 51.166(p). Such relevant information should consist of the complete permit application, BACT analyses and staff determinations, AQRV and Class I increment modeling analyses, and associated modeling files and emission inventories. The agency must provide the information to the FLM within 30 days of receipt and at least 60 days prior to any public hearing. 40 C.F.R. 51.307(a)(1).

The air permitting agency must consider the FLM's comments regarding the impacts of a proposed air pollution source on a Class I area, and may deny a PSD permit if the agency and FLM concur that the source will have an adverse impact on air quality in such Area. 40 C.F.R. 52.21(p)(4); O.A.C. 3745-31-19(C). If the agency disagrees with an FLM's adverse impact finding, the agency must explain its reasons for rejecting the FLM's finding. 40 C.F.R. 51.307(a)(3). Such explanation must be provided in the notice of public hearing, *id.*, so that the public has the opportunity to comment on the findings of the FLM and the agency.

In order for the FLM to accurately determine whether a proposed source will have an adverse impact on a protected area and allow the FLM to fulfill its duty to protect Class 1 areas, it is imperative that the FLM is provided with accurate, complete and consistent PSD applications, that include a BACT emission limit "for each pollutant subject to regulation under this chapter emitted from, or which results from" the facility (CAA §165 (a)(4)). The proposed emissions limits for each pollutant allow the FLM to project impacts a new source may have upon a Class I area, understand how those impacts will affect the health of a park and determine whether the source will have an adverse impact on the park.

The CAA's focus on resource protection is not limited to Class I areas. Congress designated all other "clean" air regions of the country "Class II." In fact, most of the units of the National Park System are "Class II" areas. The CAA designed both Class I and Class II designations as a floor, below which air quality cannot sink. Class II areas include national monuments, national primitive areas, national preserves, national

recreation areas, national wild and scenic rivers, national wildlife refuges, national lakeshores and seashores, as well as national parks and wilderness areas. Class II areas are protected by absolute ceilings on additional pollution over base-line concentrations. As part of the PSD permit application, new and modified sources with the potential to affect a Class II area must analyze their impacts on the area's ambient air quality, climate and meteorology, terrain, soils and vegetation, and visibility.

Climate change impacts observed at national parks have been dramatic. If EPA fails to comply with PSD permitting requirements designed to protect air quality in Federal Class I areas, FLMs will be unable to fulfill their CAA duty to assess the impact of new and modified sources to national parks. In short, the absence of a BACT limit for CO2 will impede the ability of FLMs to conduct an accurate impact analysis. The legal shortcomings of EPA Region 8's decision to omit a BACT limitation from the Bonanza permit is all the more problematic because it opens the floodgates for agencies to exclude the most basic CAA requirement of incorporating a BACT emissions limitation into a PSD permit for a regulated pollutant.

In order to ensure that AQRVs are fully protected in Federal Class I areas, and that neither Class I or Class II areas sink below their air quality floor, the permitting agency must establish CO2 BACT emissions limitations for each new and modified source.

4. Omitting CO2 BACT Limits Deprives the Public of Their Right to Know the Full Extent of Impacts from a New or Modified Source

Section 165(a)(2) of the CAA requires a public hearing allowing interested persons "to appear and submit written and oral presentations on the air quality impact of such source, alternatives thereto, control technology requirements and other appropriate considerations." In implementing this provision, Agency regulations require the reviewing authority to "[n]otify the public... in each region in which the proposed source would be constructed, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, and the opportunity for comment at a public hearing as well as written public comment." 40 CFR § 51.166(q)(2)(iii). The agency is required to inform that public of an FLM's finding of adverse impact and provide the public with the opportunity to comment on such finding. If the agency disagrees with an FLM's adverse impact finding, the agency must explain its reasons for rejecting the FLM's finding. 40 C.F.R. 51.307(a)(3). Such explanation must be provided in the notice of public hearing, *id.*, so that the public has the opportunity to comment on the findings of the FLM and the agency.

Without knowledge of BACT emissions limits for CO2 in a PSD permit, FLMs are unable to provide the public with a full and fair air quality impact determination thereby depriving the public of their right to know the full impact of a new or modified source. Without accurate and complete information regarding a proposed source's impacts, the public is unable to meaningfully review a PSD permit, and provide useful comments to the permitting agency. The absence of a CO2 BACT emission limit amounts to an illegal assault on the public process.

CONCLUSION

EPA's assertion that it lacks authority to address greenhouse gas emissions categorically under the CAA's PSD program is simply untenable, especially for the largest sources of such emissions – coal-fired power plants. CO2 is clearly regulated under the CAA. Because the Supreme Court's decision in *Massachusetts v. EPA* confirmed that CO_2 is indeed a "pollutant" under the Act, the EAB should remand the Bonanza PSD permit and direct EPA to establish a BACT limit for CO_2 for the Bonanza facility, and for other new coal-fired power plants.[48]

[48] As EPA has never attempted to form a coherent policy regarding its authority under the Act to require BACT for CO2, and certainly has not done so since the Court issued its decision in *Massachusetts v. EPA*, the Agency's interpretation must be adequately justified on the record. Here, however, EPA has used this permit inappropriately to articulate a significant new legal and policy position. In doing so, it has not clearly explained, justified, or solicited comment on that policy decision. Thus, if the Board does not find, as the petitioner asserts, that the CAA clearly requires a BACT analysis for CO2, it should remand the permit to the Agency for a full public process that addresses all relevant policy considerations, and require that EPA make a final permit determination that is properly informed by deliberative analysis and meaningful public participation.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that five true and correct copies of the foregoing document, NATIONAL PARKS CONSERVATION ASSOCIATION'S AMICUS CURIAE BRIEF IN SUPPORT OF PETITIONER, has been hand delivered, this 31st day of January, 2008, to the U.S. Environmental Protection Agency, Clerk of the Board Environmental Appeals Board, Colorado Building, 1341 G Street N.W., Suite 600, Washington D.C. 20005. I further certify that a copy of the foregoing document has been sent by regular mail, this 31st day of January 2008, to the following:

Brian L. Doster
Kristi M. Smith
Elliot Zenick
Air and Radiation Law Office
Office of General Counsel
Environmental Protection Agency
1200 Pennsylvania Ave. N.W.
Washington, DC 20460
Fax: 202-564-56O3

Sara L. Laumann
Office of Regional Counsel (R8-ORC)
Environmental Protection Agency,
Region 8
1595 Wynkoop Street
Denver, CO 80202-1129
Fax: 303-312 -6859

Joanne Spalding
Sierra Club
85 Second Street, Second Floor
San Francisco, CA 94105
415-977-5725
415-977-5793 (Fax)
joanne.spalding@sierraclub.org

David Bookbinder
Sierra Club
408 C Street, NE
Washington, DC 20002
202-548-4598
202-547-6009 (Fax)
david.bookbinder@sierraclub.org

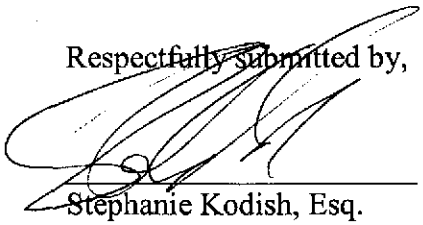
James H. Russell
35 W. Wacker Drive
Chicago, IL 60601
Fax: 312-558-5700
JRussell@winston.com

Steffen N. Johnson
Susan A. MacIntye
Luke W. Goodrich
1700 K Street N.W.
Washington, DC 20006
Fax: 202-282-5100
SJohnson@winston.com

Callie Videpich, Director
Air and Radiation Program
U.S. Environmental Protection Agency
Region 8
999 18th Street Suite 300
Denver, CO 80202-2466

Pat Gallagher
Director of Environmental Law
Sierra Club
85 Second Street, 4th Floor
San Francisco, CA 94105
415.977.5709
415.977.5793 fax
pat.gallagher@sierraclub.org

Respectfully submitted by,



Stephanie Kodish, Esq.
DC Bar No. 493405
On behalf of National Parks Conservation Association

Dated: January 31, 2008
National Parks Conservation Association
1300 19th Street, NW Suite 300
Washington, DC 20036

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Joanne Spalding
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Sierra Club
408 C Street, NE
Washington, DC 20002
202-548-4598
202-547-6009 (Fax)
david.bookbinder@sierraclub.org

James H. Russell
35 W. Wacker Drive
Chicago, IL 60601
Fax: 312-558-5700
JRussell@winston.com

Steffen N. Johnson
Susan A. MacIntye
Luke W. Goodrich
1700 K Street N.W.
Washington, DC 20006
Fax: 202-282-5100
SJohnson@winston.com

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Air and Radiation Program
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999 18th Street Suite 300
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Pat Gallagher
Director of Environmental Law
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85 Second Street, 4th Floor
San Francisco, CA 94105
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415.977.5793 fax
pat.gallagher@sierraclub.org