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Western Environmental Law Center

February 18, 2015

Sent via E-Mail (supplemental comments only) and Certified Mail (comments and exhibits)

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RE: SUPPLEMENTAL COMMENTS REGARDING THE DRAFT EIS FOR FOUR CORNERS POWER PLANT AND NAVAJO MINE

Dear Mssrs. Calle & Williamson,

The Western Environmental Law Center, on behalf of San Juan Citizens Alliance, Diné Citizens Against Ruining Our Environment, Center for Biological Diversity, Amigos Bravos, WildEarth Guardians, and Sierra Club (collectively "Conservation Groups"), respectfully submit the following supplemental comments concerning significant new circumstances and information relevant to the environmental concerns and analysis of the Office of Surface Mining Reclamation and Enforcement's (OSM) Draft Environmental Impact Statement for the Four Corners Power Plant (FCPP) and Navajo Mine Energy Project [hereinafter "Project DEIS" or "DEIS"] released for comment on March 28, 2014. 40 C.F.R. § 1502.9(c). Conservation Groups have previously submitted extensive comments to the agency, including Scoping Comments on October 31, 2013, Supplemental Scoping Comments on April 3, 2013, and Draft EIS Comments on June 27,

2014. Specifically, these Supplemental DEIS Comments present important information necessary for consideration in the pending EIS on the following topics: the social cost of carbon, the proposed modification of EPA ozone standards, the Four Corners methane hotspot, and the final EPA coal ash rule.

1. Social Cost of Carbon

As the Conservation Groups earlier comments observed, OSM's DEIS incorrectly asserts that there is no means of "assessing the significance of the GHG [greenhouse gas] emissions" from the mine-power plant complex. DEIS at 4.2-23. As a result of this erroneous assertion, OSM reaches an absurd conclusion: "The Proposed Action, including the continuing operations of Navajo Mine, FCPP, and the transmission lines, by itself, would not result in a major contribution to adverse effects associated with climate change. Therefore, no additional mitigation is recommended." *Id.* at 4.2-24. Contrary to OSM's basic assertion, there is a proven and sound methodology for assessing the significance of GHG emissions—the social cost of carbon (SCC). Application of the SCC demonstrates that the GHG emissions from the mine-power plant complex have dramatic and negative impacts on the human environment.

Research conducted by the National Research Council has confirmed the fact that the negative impacts of the production and consumption of fossil fuels are not represented in the market price for such generation.[1] In other words, failing to internalize the externalities of fossil fuel production and combustion—such as the impacts to climate change and human health—has resulted in a market failure that requires government intervention. Executive Order 12866 directs federal agencies to assess and quantify such costs and benefits of regulatory action, including the effects on factors such as the economy, environment, and public health and safety, among others. *See* Exec. Order No. 12866, 58 Fed. Reg. 51,735 (Sept. 30, 1993).[2] The Ninth Circuit has ruled that agencies must include the climate costs and benefits of a significant regulatory action in federal cost-benefit analyses to comply with EO 12866:

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[1] National Research Council, Hidden Costs of Energy (2010) (attached as Exhibit 1); *see also, e.g.*, Nicholas Z. Muller et al., Environmental Accounting for Pollution in the United States Economy 101 Am. Economic Review 1649 (2011) (cost of economic harm from coal vastly exceeds market value generated by coal) (attached as Exhibit 2); Ben Machol & Sarah Razk, Economic Value of U.S. Fossil Fuel Electricity Health Impacts 52 Env't Int'l 75 (2013) (fossil fuel generation costs nation $361-886 billion annually in externalized costs) (attached as Exhibit 3); Paul R. Epstein et al., *Full Cost Accounting for the Life Cycle of Coal* 1219 Ann. N.Y. Acad. Sci. 73 (2011) (life cycle of costs from coal causes $175 to 523 billion in damages in United States annually) (attached as Exhibit 4).

[2] *See also* Executive Order 13563, 76 Fed. Reg. 3821 (Jan. 18, 2011) (reaffirming the framework of EO 12866 and directing federal agencies to conduct regulatory actions based on the best available science).

> [T]he fact that climate change is largely a global phenomenon that includes actions that are outside of [the agency's] control . . . does not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming.

Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1217 (9th Cir. 2008) (quotations and citations omitted); *see also Border Power Plant Working Grp. v. U.S. Dep't of Energy*, 260 F. Supp. 2d 997, 1028-29 (S.D. Cal. 2003) (finding agency failure to disclose project's indirect carbon dioxide emissions violates NEPA). As detailed in previously submitted comments, climate change is the preeminent threat to human health and welfare today, the overwhelming cause of which are human emissions of greenhouse gases. *See* 74 Fed. Reg. 66,496 (Dec. 15, 2009), Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act. Indeed, a recent study has concluded that "globally, a third of oil reserves, half of gas reserves and over 80 percent of current coal reserves should remain unused from 2010 to 2050 in order to meet the target of 2°C"[3]—the point after which the "worst impacts" of climate change can not be avoided.

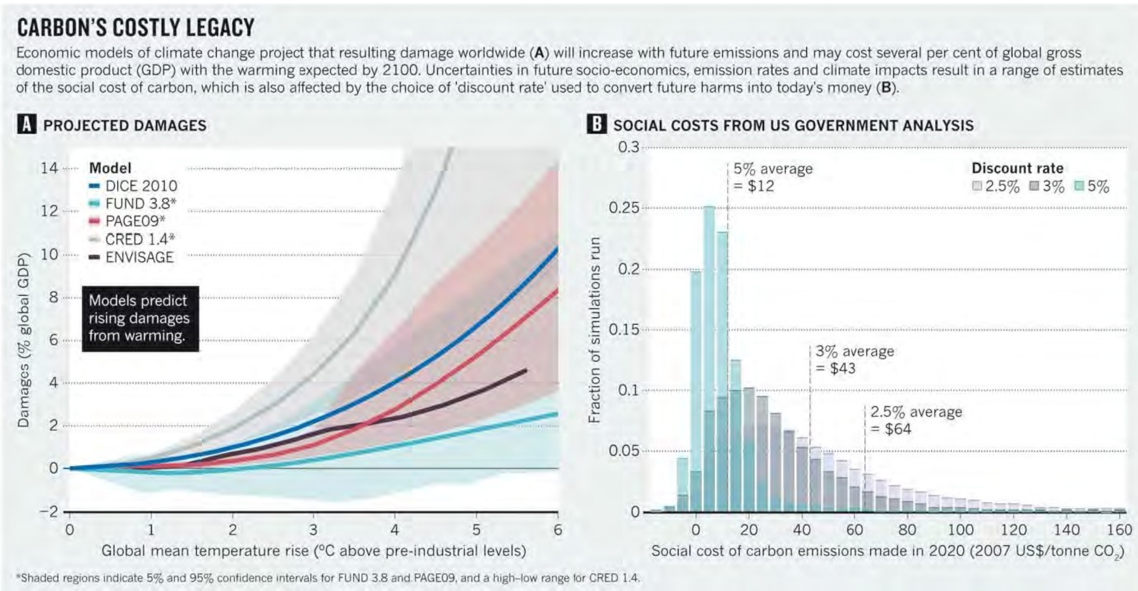
In response, an Interagency Working Group (IWG), consisting of eleven Federal agencies, was formed to develop a consistent and defensible dollar estimate of the social cost of carbon (SCC)—allowing agencies to "incorporate the social benefits of reducing carbon dioxide (CO2) emissions into cost-benefit analyses of regulatory actions that impact cumulative global emissions."[4] "The SCC estimates the benefit to be achieved, expressed in monetary value, by avoiding the damage caused by each additional metric ton (tonne) of carbon dioxide (CO_2) put into the atmosphere.[5] These costs are created when greenhouse gas emissions force climate change, increasing global temperatures. This leads to sea level rise, increased intensity of storms, drought, and other changes, which have negative economic impacts including property damage from storms and floods, reduced agricultural productivity, impacts on human health, and reduced

[3] Christophe McGlade and Paul Ekins, The geographical distribution of fossil fuels unused when limiting global warming to 2°C, NATURE (Jan. 8, 2015) (attached as Exhibit 5).

[4] Interagency Working Group on the Social Cost of Carbon, United States Government, Technical Support Document: Technical Update on the Social Cost of Carbon for Regulatory Impact Analysis—Under Executive Order 12866, at 2 (May 2013) (hereinafter 2013 TSD) (attached as Exhibit 6); Interagency Working Group on the Social Cost of Carbon, United States Government, Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis—Under Executive Order 12866 (February 2010) (hereinafter 2010 TSD).

[5] Ruth Greenspan and Dianne Callan, *More than Meets the Eye: The Social Cost of Carbon in U.S Climate Policy, in Plain English,* World Resources Institute, (July 2011) at 1 (attached as Exhibit 7).

ecosystem services. The SCC estimates the dollar value of these negative economic impacts and recognizes that every marginal ton of CO_{2e} carries with it a social cost of carbon. The charts below depict, (A) dramatically increasing damages from global warming over time (expressed as the percent decline in global GDP), as well as (B) the distribution of the social cost of carbon across a range of future economic conditions and discount rates.[6]



The modeling tools employed to forecast climate change and economic impacts all point in the same direction: that climate change causes substantial net economic harm, justifying immediate action to reduce emissions.[7] The interagency process to develop SCC estimates—originally described in the 2010 TSD—utilized three discount rates to calculate the SCC in constant dollars, using three integrated assessment models (DICE, PAGE, and FUND).[8] In addition to the

[6] Richard Revesz, et al., *Global Warming: Improve Economic Models of Climate Change,* 508 Nature 173-175 (April 10, 2014) (attached as Exhibit 8).

[7] *Id.* at 174.

[8] The choice of which discount rate to apply—translating future costs into base year dollars—is critical in calculating the social cost of carbon. Higher discount rates reduce the dollar value of future costs thereby shifting a greater burden to future generations based on the notion that economic growth will make the world better able to make climate investments in the future. The IWG's "central value" of three percent is consistent with this school of thought—that successive generations will be increasingly wealthy and more able to carry the financial burden of climate impacts. "The difficultly with this argument is that, as climate change science becomes increasingly concerning, it becomes a weaker bet that future generations will be better off. If they are not, lower or negative discount rates are justified." WRI Report, *supra* at 9. "Three

resulting three SCC estimates, a fourth value is included to estimate the SCC when impacts are higher than expected.[9]

These models are intended to quantify damages, including health impacts, economic dislocation, agricultural changes, and other effects that climate change can impose on humanity. While these values involve a degree of uncertainty, a recent GAO report has confirmed the soundness of the methodology in which the IWG's SCC estimates were developed, therefore further underscoring the importance of integrating SCC analysis into the agency's decisionmaking process.[10] In fact, additional damages have been identified that remain either unaccounted for or poorly quantified in the SCC estimates, suggesting that the estimated values are conservative and should be viewed as a lower bound.[11]

The updated interagency SCC estimates for 2020 are \$12, \$43, \$65 and \$129 (in 2007\$).[12] The IWG does not instruct federal agencies which discount rate to use, suggesting that the 3 percent discount rate (\$43 per ton of CO2) as the "central value," but further emphasizing "the importance and value of including all four SCC values," i.e., that the agency should use the range of values in developing NEPA alternatives.[13]

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percent values an environmental cost or benefit occurring 25 years in the future at about half as much as the same benefit today." *Id.*

[9] 2013 TSD, *supra* at 2. This SCC is based on the 95th percentile estimates derived from scenario runs from all three models, discounted at 3%

[10] GAO-14-663, *Social Cost of Carbon* (July 24, 2014) (attached as Exhibit 9).

[11] *See* Peter Howard, et al., Environmental Defense Fund, Institute for Policy Integrity, Natural Resources Defense Council, Omitted Damages: What's Missing From the Social Cost of Carbon, (March 13, 2014) (attached as Exhibit 10) (providing, for example, that damages such as "increases in forced migration, social and political conflict, and violence; weather variability and extreme weather events; and declining growth rates" are either missing or poorly quantified in SCC models); Frank Ackerman and Elizabeth A. Stanton, *Climate Risks and Carbon Prices: Revising the Social Cost of Carbon* (2010) (attached as Exhibit 11); Frances C. Moore and Delavane B. Diaz, *Temperature impacts on economic growth warrant stringent mitigation policy,* NATURE CLIMATE CHANGE (2015) (attached as Exhibit 12) (identifying a central value of \$220 for one ton of additional CO_2e).

[12] 2013 TSD, *supra* at 3 (including a table of revised SCC estimates from 2010-2050). To put these figures in perspective, in 2009 the British government used a range of \$41-\$124 per ton of CO2, with a central value of \$85 (during the same period, the 2010 TSD used a central value of \$21). WRI Report, *supra* at 4. The UK analysis used very different assumptions on damages, including a much lower discount rate of 1.4%. Their central value supports regulation four times a stringent as the U.S. central value. *Id.*

[13] 2013 TSD, *supra* at 12.

According to the DEIS, the annual carbon emissions from the mine-power plant complex would total approximately 10.3 million metric tons (MMT), principally from coal combustion. Table 1, below, presents the range of the SCC values from these emissions, for the three discount rates and a "worst case" scenario discussed above.

Table 1

SOCIAL COST OF CARBON (SCC): Navajo Mine/FCPP				
Discount Rate [1]	5%	3%	2.5%	95th percentile @3%
Estimated Annual CO2e Emissions (MMT) [2]	10.3	10.3	10.3	10.3
2015 SCC (2007$/metric ton CO2e) [3]	$12	$38	$56	$109
Total 2015 SCC (2007$)	$123,600,000	$391,400,000	$576,800,000	$1,112,700,000
2020 SCC (2007$/metric ton CO2e)	$12	$43	$65	$129
Total 2020 SCC (2007$)	$123,600,000	$442,900,000	$669,500,000	$1,328,700,000
2023 SCC (2007$/metric ton CO2e)	$13	$46	$68	$138
Total 2023 SCC (2007$)	$133,900,000	$473,800,000	$700,400,000	$1,421,400,000

[1] 2013 TSD at 2; [2] DEIS Table 4.2-13; [3] 2013 TSD Table A2

OSM's obligation to analyze the costs associated with GHG emissions through NEPA was directly affirmed by the court in *High Country Conservation Advocates v. U.S. Forest Service*, ___F.Supp.2d___, 2014 WL 2922751 (D.Colo. 2014). In his decision, Judge Jackson identified the IWG's SSC protocol as a tool to "quantify a project's contribution to costs associated with global climate change." *Id.* at 17.13 To fulfill this mandate, they agency must disclose the "ecological[,] … economic, [and] social" impacts of the proposed action. 40 C.F.R. § 1508.8(b).

The Council on Environmental Quality, in *Revised Draft Guidance for Greenhouse Gas Emissions and Climate Change Impacts*,[14] also recently affirmed the inclusion of this type of economic assessment.

[14] Council on Environmental Quality, *Revised Draft Guidance for Greenhouse Gas Emissions and Climate Change Impacts* (December 18, 2014), available at: http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance (attached as Exhibit 13).

> If tools or methodologies are available to provide the public and the decision-making process with information that is useful to distinguishing between the no-action and proposed alternatives and mitigations, then agencies should conduct and disclose quantitative estimates of GHG emissions and sequestration.
>
> Federal social cost of carbon, which multiple Federal agencies have developed and used to assess the costs and benefits of alternatives in rulemakings, offers a harmonized, interagency metric that can provide decisionmakers ad the public with some context for meaningful NEPA review.

Id. at 15, 16; *see also* 40 C.F.R. § 1508.25(c).

This directly contradicts OSM's assertion that "at present, no regulatory mechanism exists for assessing the significance of the GHG emissions." DEIS at 4.2-23. Indeed, simple calculations applying the SCC to GHG emissions from this project identifies very significant costs. The agency recognizes that the project will cause emissions of at least 10.3 million tons of CO_2e. DEIS at 4.2-19. Applying the IWG central value of $43 per ton of CO_2 results in a **SCC of $442,900,000 per year**. This demonstrates that, contrary to OSM's flawed logic, the mine-complex's small contribution to the enormous problem of climate change is far from insignificant. *Cf.* DEIS at 4.2-24. Indeed, this demonstrates that the costs of continuing to burn coal at the mine-power plant complex exceed the gross economic benefits of continued operations. *Cf.* DEIS at 4.10-31 (gross state product from complex $371,600,00).

OSM, however, ignores these costs. By failing to consider the costs of GHG emissions from the mine-power plant complex, the agency's analysis effectively assumes a price of carbon that is $0. *High Country Conservation Advocates*, 2014 WL 2922751 at *21 (holding that although there is a "wide range of estimates about the social cost of GHG emissions," "neither the BLM's economist nor anyone else in the record appears to suggest the cost is as low as $0 per unit. Yet by deciding not to quantify the costs as all, the agencies effectively zeroed out the cost in its quantitative analysis"). The agency's failure to consider the SCC is arbitrary and capricious, violates NEPA, and ignores the explicit directive of EO 12866.

An agency must "consider every significant aspect of the environmental impact of a proposed action." *Baltimore Gas & Elec. Co. v. Natural Resources Defense Council*, 462 U.S. 87, 107 (1983) (quotations and citation omitted). This includes the disclosure of direct, indirect, and cumulative impacts of its actions, including climate change impacts and emissions. 40 C.F.R. § 1508.25(c). The need to evaluate such impacts is bolstered by the fact that "[t]he harms associated with climate change are serious and well recognized," and environmental changes caused by climate change "have already inflicted significant harms" to many resources around the globe. *Massachusetts v. EPA*, 549 U.S. 497, 521 (2007); *see also id.* at 525 (recognizing "the enormity of the potential consequences associated with manmade climate change."). Among other things, the agency's analysis must disclose "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity[,]" including the "energy requirements and conservation potential of various alternatives and mitigation measures." 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.16(e). And the agency must "insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical consideration." 42 U.S.C. § 4332(2)(B). As explained by CEQ, this requires agencies to "analyze total energy costs, including possible hidden or indirect costs, and total energy benefits of proposed actions." 43 Fed. Red. 55,978, 55,984 (Nov. 29, 2978); *see also* Executive Order 13514, 74 Fed. Reg. 52,117 (Oct. 5, 2009) (requiring government agencies to disclose emissions information annually from direct and indirect activities). Failing to perform such analysis undermines the agency's decisionmaking process and the assumptions made.

Calculating the SCC is all the more important here because, as noted, OSM repeatedly compares the project's projected GHG emissions against the baseline of national and/or global GHG emissions—thereby marginalizing the project's contribution to our climate crisis while concluding the agency is powerless to avoid or mitigate such impacts. CEQ warns against such a comparison, providing:

> Government action occurs incrementally, program-by-program and step-by-step, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, including decisions made by the government. Therefore, the statement that emissions from a government action or approval represent only a small fraction of global emissions is more a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether to consider climate impacts under NEPA. Moreover, these comparisons are not an appropriate method for characterizing the potential impacts associated with ta proposed action and its alternatives and mitigation.

CEQ Guidance at 9. CEQ also provides that "[i]t is essential … that Federal agencies not rely on boilerplate text to avoid meaningful analysis, including consideration of alternatives or mitigation." *Id.* at 5-6 (citing 40 C.F.R. §§ 1500.2, 1502.2). Indeed, EPA has cautioned "against comparing GHG emissions associated with a single project to global GHG emission levels" because it erroneously leads to a conclusion that "on a global scale, emissions are not likely to change" as a result of the project. Sarah E. Light, *NEPA's Footprint: Information Disclosure as a Quasi-Carbon Tax on Agencies*, 87 Tul. L. Rev. 511, 546 (2013). Applying the SCC, as provided above, takes these abstract emissions and places them in concrete, economic terms. It also allows the agency to easily perform the cost-benefit analysis mandated by EO 12866, as the policy of BLM (OSM's sister agency within the Department of the Interior). Specifically, Instruction Memorandum No. 2013-131 (Sept. 18, 2013) is reflective of the BLM's attempt to require quantification of the costs of environmental impacts, like GHG emissions:

> All BLM managers and staff are directed to utilize estimates of nonmarket environmental values in NEPA analysis supporting planning and other decision-making where relevant and feasible, in accordance with the attached guidance. At least a qualitative description of the most relevant nonmarket values should be included for the affected environment and the impacts of alternatives in NEPA analyses….
>
> Nonmarket environmental values reflect the benefits individuals attribute to experiences of the environment, uses of natural resources, or the existence of particular ecological conditions that do not involve market transactions and therefore lack prices. Examples include the perceived benefits from hiking in a wilderness or fishing for subsistence rather than commercial purposes. The economic methods described in this guidance provide monetary estimates of nonmarket values. Several non-economic, primarily qualitative methods can also be used to characterize the values attributed to places, landscapes, and other environmental features. Guidance on qualitative methods for assessing environmental values, including ethnography, interviews, and surveys, is in preparation.
>
> Ideally, economic analysis for resource management should consider all relevant values, not merely those that are easy to quantify. Utilizing nonmarket values provides a more complete picture of the consequences of a proposed activity than market data alone would allow. The BLM's Land Use Planning Handbook, Appendix D encourages inclusion of information on nonmarket values, but does not provide detail.

OSM simply cannot continue to ignore its obligation to consider the costs of GHG emissions in its decisionmaking, as it has done here. Nor can the agency continue to tout the benefits of coal mining without similarly disclosing the costs. 42 U.S.C. § 4332(2)(B); 40 C.F.R. § 1502.23. In this case, OSM fails to mention *any* of the environmental costs associated the mine-power plant complex's GHG emissions. In contrast, the agency trumpets at length the economic benefits of continued mine operations. DEIS at 4.10-7 to -32. This type of misleading analysis is expressly forbidden. *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 446-47 (4th Cir. 1996) ("[I]t is essential that the EIS not be based on misleading economic assumptions."); *Sierra Club v. Sigler,* 695 F.2d 957, 979 (5th Cir. 1983) (agency choosing to "trumpet" an action's benefits has a duty to disclose its costs).

Here, OSM violated NEPA by failing to use a proven and sound methodology for quantifying the environmental costs of the project's GHG emissions, while at the same time stating in significant detail the project's supposed economic benefits. As detailed herein, a fair and full analysis of the project's benefits *and costs* will reveal dramatically greater costs to people and the environment than anticipated benefits from the project, which seriously undermines the economic logic of approving the project. Failing to provide any quantification of GHG emissions is impermissible according to the agency's multiple legal obligations, including NEPA, EO 12866, as well as BLM's own policy IM No. 2013-131.

2. Proposed Ozone Standards

As noted in the Conservation Groups' previous comments, the DEIS's analysis of ozone fails to meet the most basic threshold of rational analysis. The DEIS omits the most recent air-quality data, employs an erroneous baseline, and uses inaccurate models. Ultimately, the DEIS's concludes that the "Proposed Action"—25 additional years of air pollution from the mine-power-plant complex—"would not result in major adverse effects to air quality." DEIS at 4.1-107. This conclusion is based in part on the agencies' determination that San Juan County and the surrounding Four Corners Area are in attainment of national ambient air quality standards (NAAQS). DEIS at 4.1-85 ("Attainment of primary NAAQS is protective of public health, including sensitive receptors…; therefore, impacts in the short- or long-term operation of the FCPP or Navajo Mine are estimated to be minor."). U.S. EPA's recent proposal to revise NAAQS for ozone negates the DEIS's reasoning: current ozone NAAQS are *not* protective of public health, and San Juan County and the surrounding areas are *not* in attainment of EPA's proposed revised NAAQS for ozone.

Ozone has long been recognized to cause adverse health effects. Short term exposure to ozone causes multiple negative respiratory effects, from inflammation of airways to more serious respiratory effects that can lead to use of medication, absences from school and work, hospital admission, emergency room visits, and chronic obstructive pulmonary disease (COPD). Respiratory harm from ozone exposure, even at current standards, can harm healthy people. The impacts are much more serious for people with lung disease, such asthma. Long-term exposure to elevated levels of ozone results in numerous negative harmful effects, such as permanent lung damage and abnormal lung development in children. Long-term exposure may also increase risk of death from respiratory problems. Short- and long-term exposure to elevated levels of ozone can also harm people's hearts and cardiovascular system. *See* 79 Fed. Reg. 75234-311.

On December 17, 2014, EPA published a proposal to revise NAAQS for ozone to 65 to 70 parts per billion (ppb) from the current 75 ppb. National Ambient Air Quality Standards for Ozone, 79 Fed. Reg. 75234 (Dec. 17, 2014). This decision was driven by significant recent scientific evidence that the current standard of 75 ppb does not adequately protect public health and that ozone concentrations as low as 72 ppb can cause respiratory harm to young, healthy adults following exposure for less than eight hours. *Id.* at 75249-311 (citing controlled human exposure studies documenting adverse effects to lung function from ozone concentrations of 60 ppb and 72 ppb and epidemiologic panel studies documenting short- and long-term respiratory harms in cities that meet the 75 ppb ozone standard).[15] Recent studies have also documented decreased lung functioning and airway inflammation in young, healthy adults at ozone concentrations as low as 60 ppb; these effects, if repeated, can lead to more serious respiratory impairments. *Id.* at 75280, 75305.

Studies have documented "significant associations with respiratory emergency department visits with children and adults" in places—like San Juan County—that met the current standard of 75 ppb, but would not have met the proposed standards of 65-70 ppb. *Id.* at 75283-85, 75307 (citing Mar and Koenig, 2009; Dales et al., 2006). The existing standard is plainly insufficient to protect children with asthma and members of other sensitive groups. *Id.* at 75285-87. These impacts will be exacerbated by the worsening impacts of climate change. *Id.* at 75242.

In short, the best science shows that the 75 ppb standard is inadequate to protect public health: "the respiratory effects experienced following exposures to O_3 concentrations lower than 75 ppb could be adverse to some individuals, particularly if experienced by members of at risk populations (*e.g.*, people with asthma, children)." *Id.* at 75280.[16]

Revision of the ozone standard from 75 ppb to 65 or 70 ppb is expected to lead to "meaningful reductions in mean premature mortality." *Id.* at 75308. The Clean Air Scientific Advisory Committee (CASAC) has noted that even a reduced standard of 70 ppb may not be sufficient to protect public health with an adequate margin of safety, and that a standard as low as 60 ppb would be scientifically justified. *Id.* at 75309-10. CASAC concluded that adverse respiratory effects "almost certainly occur" at lower levels for potentially at risk populations, such as children, the elderly, and people with asthma, people who are active or work outdoors, and people with lung diseases such as COPD. *Id.* at 75305. Thus, a lower level is necessary in order to protect the broader population. *Id.* This last point is particularly relevant for San Juan County, which has a particularly vulnerable population with high incidence of respiratory disease:

> San Juan County has a higher incidence of chronic lower respiratory disease (CLRD) comprised of chronic bronchitis, asthma, and emphysema compared to New Mexico or the rest of the United States. Another study found that elevated levels of ozone in San Juan County were linked to incidence of asthma-related medical visits. The study found that San Juan County Residents are 34 percent

[15] Brown et al., 2008; Kim et al., 2011; Schelegle et al., 2009; Adams 2002; Adams 2008; Brunekreef et al., 1994; Spektor et al., 1988a; Ulmer et al., 1997; Gielen et al., 1997; Mar and Koenig, 2009.

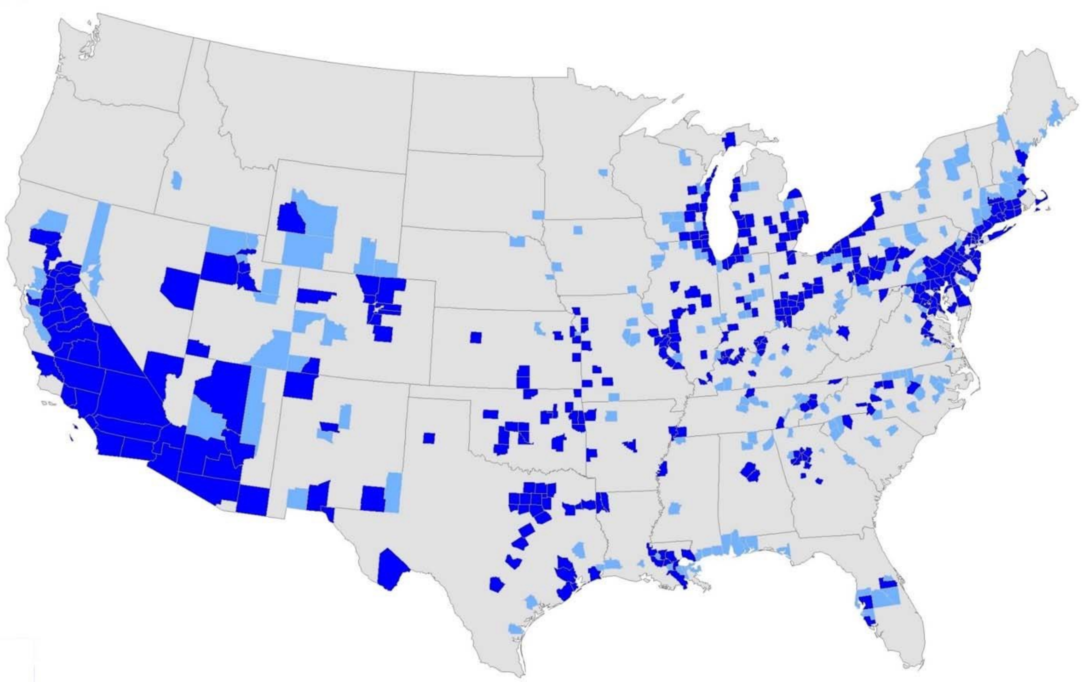
[16] This has clearly long been the case for San Juan County, where, despite meeting ozone NAAQS, the local population suffers from significant incidence of respiratory disease. DEIS at 4.17-4.

more likely to have asthma-related medical visits after 20 parts per billion increases in local ozone levels.

DEIS at 4.17-4.

Under EPA's proposed revised ozone standard, San Juan County, and adjacent counties in Utah and Colorado would be in nonattainment. *See* Map 1 below.[17] This conclusion is supported by the most recent monitoring data from the Four Corners Region, as shown in the report prepared by Victoria Stamper submitted with the Conservation Groups' prior comments. Table 1 of that report shows the 4th maximum 8-hour ozone concentrations for nine monitoring stations between 2011 and 2013 ranging 67 to 74 ppb. These recordings are, notably, significantly higher than the earlier concentrations from 2009 to 2011 used in the DEIS. However, even using the lower 2009-2011 figures, every station would document ozone concentrations shown to be harmful to human health, and all but two would exceed EPA's proposed ozone standard of 65 ppb. Some would even exceed the higher standard of 70 ppb. DEIS at 4.1-32 to -33; DEIS tbl. 4.1-10. And, as mentioned, it is clear that the elevated ozone levels in San Juan County and surrounding area are causing significant respiratory problems to the people who live there.

Map 1: Counties Where Measured Ozone is Above Proposed Range of Standards (65 ppb standard in light blue and 70 ppb standard in dark blue)



[17] This map is available at: http://www.epa.gov/groundlevelozone/actions.html (follow "Interactive Ozone Maps and Tables" hyperlink).

NEPA imposes on federal agencies a continuing duty to supplement draft or final environmental impact statements in response to significant new circumstances or information relevant to environmental concerns and bearing on the proposed action. *Idaho Sporting Cong., Inc. v. Alexander*, 222 F.3d 562, 566 n.2 (9th Cir. 2000); 40 C.F.R. § 1502.9(c)(1)(i). Here, EPA's proposal to revise ozone standards, as well as the science supporting the revision constitute new circumstances and information, which OSM must take account of in its final EIS. The DEIS's conclusions regarding ozone rest entirely on its determination that the area meets the existing NAAQS for ozone and that the existing NAAQS are sufficient to protect public health. EPA's proposed revision of the ozone NAAQS and the abundant science supporting the proposal plainly demonstrate that the current NAAQS are not sufficient to protect public health and San Juan County would not be in attainment of standards that would be sufficient to protect public health. Accordingly, the ozone analysis must be revised. Further, the DEIS's analysis of ozone neglects to address and consider that the impacts of climate change will worsen ozone pollution.

3. Four Corners Methane Hotspot

The DEIS analysis of the climate change impacts of the proposed project is inadequate. Here we focus on methane emissions, which, in the San Juan Basin, have created the largest regional concentration of methane in the country. Methane is a major climate pollutant with a dramatically greater climate impact than CO_2, with global warming potentials 86 times greater over a 20-year time span and 34 times greater over a 100-year time span.[18] The DEIS must consider the proposed project in terms of the absolute amount of methane that would be emitted and in terms of the contribution of the proposed project to cumulative basin-wide methane emissions. It also must consider alternatives for avoiding or mitigating the climate change impacts of the proposed project.

In September 2014, scientists from the University of Michigan, NASA's Jet Propulsion Laboratory, Los Alamos National Laboratory and California Institute of Technology published the results of a study (the "hot spot" study) of atmospheric methane concentrations in the U.S.[19] The study analyzed methane concentrations at a regional-scale using both space-based[20] and

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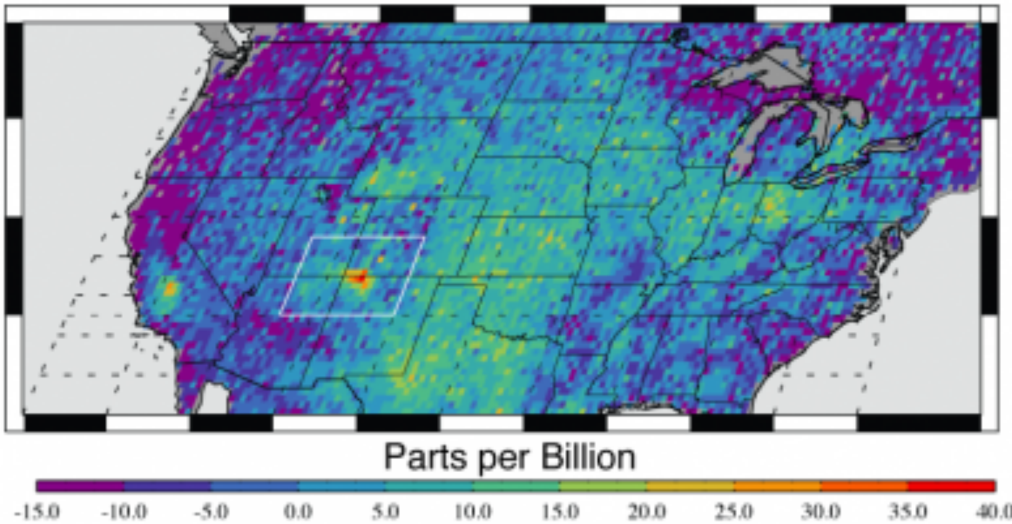
[18] G. Myhre et al., *Anthropogenic and Natural Radiative Forcing, in Climate Change 2013: The Physical Science Basis*, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change IPCC, Cambridge Univ. Press (2013) Table 8.7 at 714 (attached as Exhibit 14).

[19] Eric Kort et al., *Four Corners: The largest US methane anomaly viewed from space*, Geophysical Research Letters (2014), (attached as Exhibit 15).

[20] Spaced-based observations were made using the Scanning Imaging Absorption Spectrometer for Atmospheric Chartography, an imaging spectrometer carried on the European Space Agency

earth-based measurements. *See* Kort *et al*., at 4.[21] The two methods yielded consistent results. The study found that the largest concentration of methane in the U.S. occurs in the Four Corners region and is centered in the San Juan Basin, as shown below.



This map, from the study published Oct. 9 in Geophysical Research Letters, shows anomalous U.S. methane emissions averaged from 2003 to 2009 as detected by a European Space Agency satellite. Credit: American Geophysical Union

This methane "hot spot" persisted from 2003 to 2009, the period of the study. According to the authors:

> There are extensive gas, oil, coal, and coalbed CH_4 harvesting activities in the region southeast of Four Corners, centered on the San Juan Basin in New Mexico, along with associated gas processing and compressing facilities. This basin has been particularly important as a source of coalbed CH_4 production. The San Juan Basin has been the largest coalbed CH_4 production site in the U.S., with cumulative production in the 1990's exceeding all other U.S. coalbed CH_4 production combined [citation omitted]. Kort *et al*., at 3.

The authors conclude: "The persistence of this CH_4 signal from 2003 onward indicates that this source is likely from established gas, coal and coalbed methane mining and processing." *Id.* at 1. According to the NM Oil Conservation Division, there are roughly 20,000 active oil and gas

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satellite that measures trace gases in the troposphere and stratosphere. *See* European Space Agency, *Sciamachy,* available at: https://earth.esa.int/web/guest/missions/esa-operational-eo-missions/envisat/instruments/sciamachy.

[21] Ground-based observations utilized a spectrometer operated by Los Alamos National Laboratory located near the Four Corners from the Total Carbon Column Observing Network (TCCON) for 2011 and 2012.

wells in the basin, numerous compressors, and four large gas-processing facilities.[22] There are also thousands of miles of gas pipelines, one underground coalmine, and two surface coalmines operating in the San Juan Basin.

According to the authors, total oil and gas methane emissions in the Basin that have been reported to the U.S. EPA Greenhouse Gas Reporting Program (GHGRP) were 330,000 metric tons for 2012.[23] Reported methane emissions have grown by over 10% with a total for 2013 of almost 370,000 metric tons. As noted by the authors, these are likely underestimates, because the GHGRP has a reporting threshold for facilities of 25,000 metric tons CO_2e equivalent. Therefore a large but unquantified number of methane emissions sources below the threshold do not report.

The "hot spot" study conducted simulations of methane emissions for the region for 2012 to estimate what emissions rate would correspond to observed atmospheric methane concentrations. The simulations resulted in average methane emissions from all sources in the San Juan Basin of 590,000 metric tons per year. This level of emissions represents an exceptionally large share of total natural gas methane emissions identified in the U.S. Greenhouse Gas Inventory.[24] That is:

> This value is 1.8 times greater than GHGRP [EPA Greenhouse Gas Reporting Program] reported emissions for the region …The most recent U.S. EPA inventory released in 2013 estimates total U.S. emissions associated with natural gas as 7.7 Tg CH4/yr (for 2008, U.S. Environmental Protection Agency [2013]). If the U.S. EPA inventory is accurate, this suggests that the Four Corners region is responsible for the equivalent of almost 10% of U.S. CH4 emissions from natural gas systems [reference to figure omitted]. In this case, compared to estimated emissions from natural gas systems, coal mining, and petroleum systems combined, the Four Corners region alone represents almost 5% of total U.S. emissions for those sectors [reference to figure omitted]. Kort *et al*., at 3.

According to GHGRP data, the major emissions sources creating the "hot spot" are oil and natural gas operations, coal mining, electric generation and landfills.[25] The 2013 reported

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[22] *See* New Mexico Oil Conservation Division, OCD Permitting Database, available at: https://wwwapps.emnrd.state.nm.us/ocd/ocdpermitting/Data/Wells.aspx.

[23] *See* EPA Greenhouse Gas Reporting Program, available at: http://www.epa.gov/ghgreporting/.

[24] EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2012 (April 2014)*, available at: http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html (attached as Exhibit 16).

[25] EPA GHGR, *2013 Greenhouse Gas Emissions from Large Facilities*, available at: http://ghgdata.epa.gov/ghgp/main.do. Reported emissions for the oil and gas sector are by basin.

emissions are shown in Table 1 below.

Table 1. Major Methane Emissions Sources for the San Juan Basin

	2013 Methane Emissions (metric tons)
San Juan Basin Oil and Gas	327,670
Stationary Combustion Sources	66
Coal Mines (San Juan Mine only)	32,514
Electricity Generation	2,825
Landfills	6,136
TOTAL	369,211

The major sources of methane emissions from the oil and gas sector reported to the GHGRP are pneumatic devices (45%), liquids unloading (33%) and fugitive emissions (14%).[26] Venting and fugitive methane from associated gas production will also increase significantly as Mancos shale oil production grows, unless associated gas can be routed to gathering systems and sales lines. The major sources of methane emissions from surface coalmines include the coal excavated and processed during mining activities, the coal and other gas bearing strata in the overburden and/or underburden exposed by mining activities, and the overburden coal excavated and stored on site in waste piles.[27]

According to the DEIS, methane emissions forecast for the proposed project are estimated at 2,747 metric tons/yr. DEIS, Table 4.2-11 at 4.2-15. We believe that this estimate is significantly lower than the emissions that can be expected from the mine and the proposed action.

Underground coal mines with methane emissions above the GHGRP reporting threshold must report to the GHGRP, but surface mines, including the Navajo Mine, are exempt. Nevertheless, an independent estimate of methane emissions from the Navajo Mine can be derived from coal mining methane emissions reported to the GHGRP and estimates calculated using information

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The other sectors are based on methane emissions reported for the 9 counties within the San Juan Basin.

[26] *See* Western Environmental Law Center, *Comments submitted to BLM re: Methane Forum* (attached as Exhibit 17).

[27] *See* U.S. Surface Coal Mine Methane Recovery Project Opportunities (2008), available at: http://www.epa.gov/coalbed/docs/cmm_recovery_opps_surface.pdf (attached as Exhibit 18).

from the EPA's GHG Inventory.[28] The 2014 U.S. Inventory methane emission factors (i.e., methane emissions per ton) for surface mines in the San Juan Basin[29] applied to the 2013 mine-specific production figures[30] yield emissions for the Navajo Mine of 2,385 metric tons, roughly 14% lower than the DEIS estimate.

To evaluate this estimate, we compared methane emissions for the San Juan Mine, using the 2014 Inventory underground mine methane emissions factor[31] and 2013 production which yields mine methane emissions of 16,022 metric tons. This is less than half of the reported emissions of 32,514 metric tons. To address this discrepancy, we re-calculated emissions factors for underground (328 vs. 139 ft^3/ton) and surface mines (40.4 versus 17 ft^3/ton) based on the most recent national emissions and production figures.[32] Applying these updated emissions factors yields San Juan emissions of 37,845 metric tons and Navajo Mine emissions of 5,668 metric tons.

Scaling down the Navajo Mine estimate by the 14% over-estimate for the San Juan Mine yields an estimate for Navajo Mine emissions of 4,870 metric tons. This is a significant amount of emissions, representing over 1% of the total methane emissions in the San Juan Basin. It is equivalent to the carbon emissions from over 131 million pounds of coal burned or 11,000 homes' energy use for one year, or the annual GHG emissions from 26,000 passenger vehicles.[33] While the 2,385 metric ton estimate may be considered a lower bound, we believe the 4,870 metric ton estimate, taking into account the underestimate of San Juan Mine emissions and based

[28] *See* EPA, *GHG Inventory* at 3-47 to -48.

[29] *See* EPA, *GHG Inventory* Table A-121 (Methodological Descriptions for Additional Source or Sink Categories, Coal Underground, Surface and Post-Mining CH_4 Emission Factors (ft^3/Short Ton).

[30] Energy Information Administration, *Annual Coal Report 2013*, Table 9, available at: http://www.eia.gov/coal/annual/pdf/table9.pdf (attached as Exhibit 19).

[31] Emissions factors used in the 2014 U.S. Inventory are based on a 1986 U.S. DOE report.

[32] The updated emissions factors were calculated as follows: Total national 2014 GHG Inventory methane emissions for underground and surface mining and post mining (metric tons) were converted to cubic feet and then divided by total national production (short tons) to obtain emissions factors for each type of mining in cubic feet/short ton. These were then multiplied by San Juan and Navajo mine 2013 production (short tons) to obtain total mine emissions (cubic feet). These totals were then converted back to metric tons for comparison to the estimates using the 2014 Inventory, the GHGRP, and the DEIS.

[33] *See* EPA, *Greenhouse Gas Equivalencies Calculator*, available at: http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results.

on updated emissions factors, to be more accurate. This level of emissions must be addressed in the DEIS.

Finally, the DEIS also provides a visual perspective on the extreme concentration of energy-related facilities in the Basin. These facilities include electric power generation, surface and underground coal mining, oil and gas drilling, processing and refineries, as well as a very large area of oil and gas exploration on BLM lands. *See* DEIS at 4.18-33 (Figure 14.8-1).

Given this supplemental information, the agency must give additional consideration to methane emissions from the proposed project, their contribution to the regional methane "hot spot," their potential climate change impacts, and alternatives available to avoid or mitigate these impacts, including, for example, pre-mining methane drainage.

4. Final Coal Ash Rule

On December 19, 2014, EPA promulgated its final rule governing coal ash under the Resource Conservation and Recovery Act (RCRA). While the agency opted not to treat coal ash as hazardous waste under subtitle C, it did establish mandatory federal regulations under subtitle D. Contrary to the statement in the DEIS that a rule under subtitle D "would not apply on tribal lands," DEIS at 4.15-5, the final rule is a mandatory federal requirement applicable to the mine-power-plant complex. The final rule contains requirements intended to prevent catastrophic impoundment failures, protect ground water. It also contains mandatory operating criteria and record keeping and reporting requirements. Coal ash impoundments that do not comply with these rules are considered open dumps and subject to enforcement action by states and citizens.

The DEIS declines to address any potential requirements of the coal ash rule (which was only in draft form upon the issuance of the DEIS), beyond stating that the mine and power plant will comply with EPA's requirements. However, now that the rule has been finalized, OSM must address if and how the power plant will comply with this rule. 40 C.F.R. § 1502.25(b); *id.* § 1502.9(c)(1)(i) (duty to supplement).

First, OSM must determine whether the existing coal ash impoundments are located at least five feet above any aquifer. 40 C.F.R. § 257.60(a). The coal ash rule requires owners and operators of ash impoundments to demonstrate compliance with this rule. *Id.* § 257.60(b)-(c). If APS cannot demonstrate compliance with this requirement, it must close the impoundment. *Id.* at § 257.60(c)(4). If the impoundment closes, it is not clear (and the EIS must consider) where additional coal ash will be placed. The DEIS largely fails to characterize the groundwater movement through the existing impoundments. There are strong indications that leakage from Morgan Lake are saturating portions of the impoundments, leaching pollutants, and then discharging to the Chaco River and alluvium. For example, a hydrograph included in APS's Groundwater Monitoring Data (2013) indicates that groundwater from Morgan Lake flows through current and former ash disposal sites. Further, OSM's CHIA for the proposed mine expansion found increased levels of boron, chloride, fluoride, nitrate, selenium, sulfate, TDS, and conductivity" in the Chaco River downstream from the coal ash impoundments. CHIA at 82. These closely mirror the parameters that EPA uses as indicators of water contamination from coal ash: "boron, chloride, conductivity, fluoride, pH, sulfate, sulfide, and total dissolved solids." Final Rule at 344; *see also* 40 C.F.R. § 257 appx. III. It is telling that since 2011, APS has undertaken three major projects intended to "remediate" water pollution to the Chaco River from the coal ash impoundments: installation of extraction wells in 2011, construction of an intercept trench in 2011, and now a second intercept trench in 2013. DEIS at 4.5-57. In order to properly address the requirements of the coal ash rule, OSM must actually evaluate whether the coal ash impoundments are in fact located at least five feet above groundwater.

Similarly, the coal ash rule prohibits placement of coal ash from new or existing facilities in wetlands. 40 C.F.R. § 257.61(a). Owners and operators must demonstrate compliance with this requirement or else shutdown the impoundment. *Id.* § 257.61(c)(4)-(5). Here, the DEIS indicates that multiple wetlands surround the power plant and ash disposal facilities. DEIS fig. 4.5-7.

APS must also demonstrate that its coal ash waste impoundments are not located near fault areas, seismic impact zones, or unstable areas. 40 C.F.R. §§ 257.61(a), (b), (c)(4)-(5), 257.62(a), (b), (c)(4)-(5), 257.62(a), (b), (c)(4)-(5). The DEIS does not address whether there are faults or seismic impact zones in the vicinity of the power plant and coal ash waste impoundments. The DEIS must consider whether any seismic activity due to hydrologic fracturing operations or injection wells could impact the existing and proposed impoundments.

The final coal ash rule establishes mandatory requirements for liners for coal ash landfills. 40 C.F.R. § 257.70. New impoundments must have a composite liner that is at least 60-mil thick and be atop soil compacted to a specific density limiting transmission of water. *Id.* § 257.70(b). The DEIS contains no information about the design specifications of the proposed ash disposal units at the power plant. The final rule also provides that requirements for existing coal ash impoundments: the impoundment must have either a composite liner that is at least 60-mil thick or be compacted to a given density. *Id.* § 257.71. The DEIS provides the liner specifications for some of the existing impoundments, but not all. In particular, it appears that there are no liners in the upper retention sump, low-volume wastewater system decant cells, and low-volume wastewater ponds, even though each holds coal ash waste. DEIS tbl. 4.15-4. Each of these storage areas is currently in use. *Id.* The final EIS must address whether these storage areas comply with the design criteria of the final coal ash rule. If APS's existing impoundments do not meet these requirements, then they are subject to closure and the company will be required to find new ash impoundment sites.

The final coal ash rule requires owners and operators of ash waste impoundments that are considered to have significant hazard potential to have an emergency action plan (EAP). 40 C.F.R. § 257.73(a)(3). The ash impoundments at FCPP have been determined to have significant hazard potential. DEIS at 4.15-15. There is no indication in the DEIS that APS has an EAP. The final EIS must address this issue. The final ash rule also requires owners and operators of impoundments to compile and make publically available a history of the construction of the existing impoundments. 40 C.F.R. § 257.73(c). This information must be, but is currently not, included in the final EIS. Impoundment considered significant hazard potential must also have spillways sufficient to manage flow from a 1,000-year flood. There is no indication in the DEIS that the existing impoundments at the power plant have an adequate spillway. It must also have vegetated dikes. *Id.* § 257.73(d)(iv). Here, there appears to be some degree of vegetation on the dikes supporting the ash impoundment, DEIS fig. 4.5-7, but substantial portions of the dikes are unvegetated.

The coal ash rule also establishes various operating criteria, which must be addressed in the final EIS. This includes requirements for managing fugitive dust from coal ash waste units. 40 C.F.R. § 257.80. Owners and operators must develop dust control plans that implement dust control measures. *Id.* § 257.80(b). They must also prepare annual reports that address, among other things, all citizen complaints and resultant corrective measures. Historically, fugitive dust has been one of the major problems reported by citizens living near the mine and power plant. The final EIS must contain a detailed evaluation of the existing dust control measure, an analysis of their (in)adequacy, and should address which further measures will be necessary to adequately address this issue. OSM should specifically consider the impacts of fugitive dust in conjunction with the unhealthy air quality and the history of respiratory ailments in the region (as noted in the ozone discussion above). More intensive dust control measures may be required in light of the fragile pulmonary health of many residents in the area.

The final ash rule also requires owners and operators to implement run-on controls sufficient to prevent storm water from flowing onto ash impoundment sites during a 24-hour 25-year storm event. *Id.* § 257.81(a)(1). Similarly, there must be run-off controls sufficient to prevent discharge from ash impoundments from precipitation less than a 24-hour, 25-year storm. *Id.* § 257.81(a)(2). From the DEIS, it is altogether unclear whether the current ash impoundments are built to meet these standards. Ash impoundments with significant hazard potential, like that at the FCPP, must have adequate capacity to manage a 1,000 year flood. *Id.* § 257.82(a). There is no indication that the current impoundments have such capacity. The final EIS must address these issues.

OSM must also address the monitoring and corrective action requirements of the coal ash rule. In light of the numerous documented cases of ground and surface water pollution due to coal ash impoundments, EPA's new rule establishes provisions intended to protect ground and surface waters. The coal ash rule requires owners and operators of coal ash impoundments to implement a groundwater-monitoring program that is sufficient to detect whether pollution is leaching from existing impoundments into ground or surface waters. 40 C.F.R. §§257 90-98. If the monitoring system detects pollution of ground or surface water resulting the ash impoundments or landfills, corrective must follow. *Id.* § 257.90(c). If a leak is detected, the owner or operator must "immediately take all necessary measures to control the source(s) of release so as to reduce or eliminate, to the maximum extent feasible, further releases of contaminants to the environment." *Id.* § 257.70(d). The DEIS must also explain what additional testing will be required to meet these monitoring criteria.

As it stands, the DEIS goes to great length to emphasize the inadequacy of the current monitoring system for detecting release of pollution from coal ash into the Chaco River. Regarding surface waters, the DEIS states: "A comparison of surface water quality data at USGS gaging stations on the Chaco River upstream and downstream of the Navajo Mine was conducted. The analysis indicates that the downstream gage is also downstream of the FCPP and Morgan Lake discharge; therefore, it is impossible to differentiate the impact of the Navajo Mine from the FCPP." DEIS at 4.5-31. Elsewhere the DEIS disclaims, on the basis of the existing geology, any ability to detect leaching of pollution from the current ash waste impoundments:

> Owing to the geology of the area, all of the groundwater samples, including those representing background conditions, have elevated levels of total dissolved solids, (TDS), chlorides, sulfate, arsenic, cadmium, nitrate, selenium, thallium, and boron. The wells within the DFADA, and the wells outside the area of influence of the DFADA, all have these elevated levels. Owing to the similarity in groundwater concentrations, if there is any ongoing release from the unlined ash disposal ponds 1 or 2, or the later ponds, the effect cannot be readily discerned from the natural background concentrations.

DEIS at 4.15-27. Given OSM's repeated insistence that the existing monitoring is insufficient to determine whether pollution from the unlined, leaking ash waste impoundments is contaminating the Chaco River or alluvial groundwater, the DEIS must discuss what APS will have to do to develop a monitoring system capable of determining whether their leaking waste ponds are contributing the extremely polluted condition of the Chaco River.

The DEIS must also address what foreseeable corrective actions may result. At present, it appears that APS's various efforts to stem and remediate pollution from the leaking ash impoundments have not been successful, as APS continues to take action to remediate these leaks. DEIS at 4.5-57. Currently, the open ditch system installed in 1977, the extraction wells installed in 1993 and 2011, the intercept trench installed below the north seep in 2011, the second intercept trench installed in 2013 below the south seep, do not appear to have worked. *Id.* Indeed, the DEIS concedes that despite these efforts there is various still "potential" that the ash impoundments will continue to "contaminate local groundwater and water quality in Chaco

Wash." *Id.* The final DEIS must address what additional measures corrective action is available, and, if it will not be effective, what options remain if the inadequate ash impoundments close. In particular, the DEIS must address what APS will do with the coal ash in the unlined leaking impoundments if, as part of the corrective action, it is required to remove the ash to abate the pollution. *See* 40 C.F.R. § 257.97(b)(4).

The final coal ash rule expressly address concerns about long-term risks from polluting coal ash impoundments and landfills. Accordingly, the final EIS must address the long-term (i.e., post-closure) fate of the tons of coal ash spread and buried in the environs of the mine and power plant. The EIS must also address who will ultimately be liable for the cost of cleaning up this legacy of pollution.

Conclusion

Thank you for carefully considering these comments. Should you have any questions about our comments, please do not hesitate to contact me.

Sincerely,

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