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Sent via electronic mail (comments only), and U.S. Mail (comments and exhibits)

June 27, 2014

Marcelo Calle
Office of Surface Mining Reclamation and Enforcement
Western Region Office
1999 Broadway, Suite 3320
Denver, CO 80202-3050
FCPPNavajoEnergyEIS@osmre.gov

Re: Conservation Groups' Comments on the Draft Environmental Impact Statement for the Four Corners Power Plant and Navajo Mine Energy Project

Dear Mr. Calle:

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 submits the following comments on 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, pursuant to the National Environmental Policy Act ("NEPA").

The Proposed Action that the Project DEIS analyzes includes several related actions, including:

1. Approval of Navajo Mine's application for a new Surface Mining Control and Reclamation Act (SMCRA) permit for the Pinabete Permit Area, which is located within the existing Navajo Mine Lease Area, to begin operations in 2016 and continue through 2041 in 5-year permit renewal

intervals;¹

2. Renewal of Navajo Mine's existing SMCRA permit for Areas I, II, III, and portions of Area IV North of the Navajo Mine Lease Area for 5 years beginning in 2014;
3. Approval of Arizona Public Service Company's (APS') Proposed Four Corners Power Plant (FCPP) lease amendment and right-of-way (ROW) renewals, located on the Navajo Reservation in San Juan County, New Mexico, for continued operation through 2041;² and
4. ROW renewals for portions of four transmission lines associated with the FCPP.

DEIS at ES-i; *see also* Notice of Intent To Initiate Public Scoping and Prepare an Environmental Impact Statement for the Four Corners Power Plant and Navajo Mine Energy Project, 77 Fed. Reg. 42329 (July 18, 2012). These actions are collectively referred to as "the Project," or "the Proposed Action."

I. INTRODUCTION

Obtaining electricity from coal-fired power plants is not a wise decision. The impacts to communities and the environment from coal are enormous and, tragically, too often ignored, discounted, and left unremedied. Attempts to mitigate those impacts are expensive, and not necessarily effective. The Navajo Mine and FCPP, making up one of the dirtiest fossil fuel complexes in the United States, illustrate these facts well.

Furthermore, coal is no longer competitive with clean, renewable energy sources. Colstrip Power Plant in Montana, for example, was recently assigned a negative value in a deal for the purchase of hydro units and the coal-fired Colstrip plant.³ El Paso Electric plans to sell its stake

¹ Conservation Groups request that OSM provide information regarding why this lease area is referred to as the Pinabete Expansion instead of continuing with previous nomenclature, especially in light of ongoing litigation surrounding Area IV, part of which would be included in the Pinabete Expansion.

² A major component of the DEIS is whether BIA should approve the lease (Lease #3) for the FCPP. As such, a copy of lease #3 should be an appendix to the DEIS so the terms of the lease can be reviewed by the public and subject to comment. OSM's failure to produce this crucial document as an appendix to the DEIS is arbitrary, capricious, and denies the public of meaningful input into a major component of the DEIS. We ask that the lease #3 be released to the public as a component of the DEIS and that the public be given an adequate amount of time to review and comment on the terms of the lease as part of the DEIS public comment process.

³ NorthWestern Energy, *Application for Approval to Purchase and Operate PPL Montana's*

in FCPP, and just announced that its electricity mix will be free from coal by 2016.⁴ Instead of coal, El Paso is doubling its solar portfolio, and has signed an agreement for the purchase of solar for “5.79 cents a kilowatt-hour — less than half the 12.8 cents per kilowatt-hour average price for electricity from new coal plants, according to Bloomberg.”⁵

Despite the huge shifts in electricity production, and the alternatives now available, OSM has put the blinders squarely on in crafting the DEIS for the Navajo Mine and FCPP. OSM’s DEIS fails, among other things, to:

- Consider compliance with Diné law despite the Project’s location on Navajo lands, and the impacts that the Project imposes on the Navajo Nation.
- Comply with NEPA’s mandates to take a hard look at the past, present, and future impacts that the Project has had and would continue to impose on surrounding communities and the environment.
- Ensure that the agency and the public can consider the Project thoroughly instead of treating the NEPA process as a required formality that the agency must go through before rubber-stamping the proposed project.
- Consider any alternatives that would deviate from continued operation of the mine and plant, thus limiting the ability of the DEIS to sharply define the issues and provide a clear basis for choice among options by the decision maker and the public.

In short, OSM’s DEIS is deficient. It fails to provide for meaningful public discussion, limiting the public’s ability to participate effectively in the NEPA process for a crucial decision about continued operation of FCPP and expansion of Navajo Mine, and fatally undermining OSM’s ability to make a reasoned and informed decision to allow coal operations beyond 2016.

With these comments, we ask OSM and the Cooperating Agencies to correct the inadequacies in the DEIS’s analysis of impacts, and to provide real consideration of additional alternatives, including alternatives that include transition away from continued operation of Navajo Mine and FCPP. Once OSM and the Cooperating Agencies have made the necessary corrections, we request that OSM and the Cooperating Agencies re-issue the DEIS for public comment. It is only when these deficiencies are corrected, the impacts and costs of the plant are properly

Hydroelectric Facilities, for Approval of Inclusion of Generation Asset Cost of Service in Electricity Supply Rates, for Approval of Issuance of Securities to Complete the Purchase, and for Related Relief, Docket No. D2013.12.85 (December 2013) (attached as Exhibit 1).

⁴ Kiley Kroh, *Texas Utility Doubles Large-Scale Solar, Says It Will Be Coal-Free By 2016*, ThinkProgress, June 17, 2014 (available at: <http://thinkprogress.org/climate/2014/06/17/3449604/texas-utility-solar/> (last accessed June 24, 2014)) (attached as Exhibit 2).

⁵ *Id.*

assessed, and appropriate alternatives considered, that OSM and the Cooperating Agencies will have a rational basis for making any decision regarding the mine and plant. Further, it is our sense that a robust analysis may demonstrate that the continued operation of the FCPP and Navajo mine for an additional 25 years will result in significant environmental impacts that cannot be acceptably mitigated.

II. CONSERVATION GROUPS

A. Conservation Groups' Participation

The Project directly impacts the Conservation Groups and their members: the Navajo Mine and FCPP are situated just miles from many of the Conservation Groups' members, and the impacts of the Project, which ripple across the land, water, and sky of the region, have been imposed on all. Consequently, the Conservation Groups have participated extensively in proceedings surrounding the Navajo Mine and FCPP.

Related specifically to this NEPA process, the Conservation Groups timely submitted scoping comments on October 31, 2012, and supplemental scoping comments on April 3, 2013; we hereby incorporate those comments and their exhibits by reference. The Conservation Groups' members also participated in public scoping meetings in 2012, and more recently in public meetings for the DEIS in April and May 2014.⁶ In addition, Diné C.A.R.E. organized and attended several Chapter and community meetings to inform the Diné public about the Navajo Mine/FCPP EIS process from June 2013 - June 2014. Several resolutions were passed regarding requests to extend the DEIS comment period in April and May 2014.

Most of the Conservation Groups also submitted numerous comment letters regarding the transfer of the Navajo Mine from BHP Billiton to the Navajo Transitional Energy Company (Navajo Mine SMCRA Permit NM-0003F Transfer), including a letter sent on June 7, 2013, comments on the Environmental Assessment submitted on June 17, 2013, supplemental comments submitted on June 24, 2013, and supplemental comments submitted on September 27, 2013.⁷ Diné C.A.R.E. also sent letters (via electronic mail and postal mail) to the office of Secretary of the Interior, Sally Jewell, to the office of U.S. Senate Committee on Indian Affairs, to the office of Deputy Inspector General, which are all within the Department of the Interior ("DOI"). These letters outlined concerns by Diné community members about the rushed Navajo Mine purchase, the Navajo Mine transfer permit, the exclusion of BIA's approval, and other concerns. As of June 24, 2014, no response has been received by any of the DOI's offices. These comments letters are incorporated herein by reference. The Conservation Groups believe that OSM illegally segmented the mine sale from this DEIS and thus this DEIS is deficient for failing to analyze the mine sale as part of this DEIS.

⁶ As discussed below, the Conservation Groups have numerous concerns about the way in which OSM allowed for public participation on the DEIS.

⁷ Conservation Groups' comments regarding the mine transfer are attached as Exhibits 3-7.

In addition, many of the Conservation Groups submitted comments on BHP Billiton's application for the Pinabete mine expansion on August 13, 2012.⁸ The Conservation Groups also submitted comments on BHP's application for a Clean Water Act section 404 permit for activities at the Navajo Mine on November 1, 2012.⁹ Many of the Conservation Groups are also engaged in active litigation challenging the adequacy of OSM's Environmental Assessment for the expansion of Area IV North at Navajo Mine.¹⁰

B. About the Conservation Groups

The following is a description of the Conservation Groups that are signatories to this comment letter.

San Juan Citizens Alliance ("SJCA") is a non-profit organization, with over 500 members in the Four Corners region, actively involved in energy development oversight; advocating for cleaner air quality and better stewardship of our natural systems; promoting reduced energy consumption, energy efficiency and renewable energy; and working for improvements to community health. SJCA members in the Four Corners region live in areas of existing high-density energy development and infrastructure.

Diné Citizens Against Ruining Our Environment ("Diné C.A.R.E.") is an all-Navajo non-profit environmental organization who works with many Navajo communities affected by energy and environmental issues on the Navajo Nation. Diné C.A.R.E. is comprised of a federation of grassroots community activists from Arizona, New Mexico and Utah who strive to educate and advocate for our traditional teachings derived from Diné Fundamental Laws. Diné C.A.R.E.'s goal is to protect all life in Navajo ancestral homeland by empowering local and traditional people to organize, speak out, and determine the outlook of the environment through civic involvement and engagement in decision-making process relating to tribal development.

The Center for Biological Diversity ("the Center") is a non-profit 501(c)(3) corporation with offices in Arizona, New Mexico, California, Nevada, Oregon, Washington, Alaska, Illinois, Minnesota, Vermont, and Washington, D.C. The Center works through science, law, and policy to secure a future for all species, great or small, hovering on the brink of extinction. The Center has 320,000 members and online activists throughout the United States, Colorado, New Mexico and the world. The Center is actively involved in species and habitat protection issues worldwide, including throughout the western United States. The Center, its members, and staff members use the lands in and near the BNCC Navajo Mine, and in particular the Chaco and San

⁸ Conservation Groups' comments regarding the Pinabete expansion are attached as Exhibit 8.

⁹ Conservation Groups' comments regarding the CWA section 404 permit are attached as Exhibit 9.

¹⁰ *Dine Citizens Against Ruining the Environment v. U.S. Office of Surface Mining Reclamation and Enforcement*, Civil Action No. 1:12-cv-1275-JLK (D. Colo).

Juan rivers, for recreational, scientific, and aesthetic purposes. They also derive recreational, scientific, and aesthetic benefits from these lands through wildlife observation, study, and photography. The Center and its members have an interest in preserving their ability to enjoy such activities in the future. As such, the Center and its members have an interest in helping to ensure their continued use and enjoyment of these activities on these lands. The Center is particularly concerned about species and critical habitats that are affected by coal mining at the BNCC Navajo Mine and coal burning at FCPP. The Center and its members are adversely affected by mining operations at the Navajo Mine as well as from impacts at the FCPP.

Amigos Bravos is a nonprofit river conservation organization whose mission is protect and restore the waters of New Mexico. Amigos Bravos' effort is inspired by New Mexico's traditional water users and guided by the vision of water as both a cultural and natural resource. Amigos Bravos has members throughout New Mexico that use and enjoy the water resources of New Mexico for irrigation, livestock watering, fishing, recreation, spiritual pursuits, and aesthetic interests. Amigos Bravos is increasingly concerned that the observed and anticipated impacts of global warming and climate change will compromise its interests and the interests of its members.

WildEarth Guardians is a west-wide nonprofit environmental organization dedicated to protecting and restoring the wildlife, wild places, and wild rivers of the American West. Through its Climate and Energy Program, WildEarth Guardians advocates for cleaner energy and works to ensure the impacts of fossil fuel development are minimized in order to protect the Earth's climate and natural resources.

Sierra Club has more than 1.4 million members and supporters who work for a safe and healthy community in which to live, smart energy solutions to combat global warming and an enduring legacy for America's wild places. Since 1892, the Sierra Club has been working to protect communities, wild places, and the planet itself. Sierra Club is the oldest, largest, and most influential grassroots environmental organization in the United States. In New Mexico, Sierra Club has over 7000 members. It has been a priority of the Sierra Club nationally and locally to stop irresponsible coal mining, curb global warming and ensure clean air and clean water for all.

III. COMMENTS ON THE DEIS

A. The DEIS Fails To Consider Fundamental Laws of the Diné.

Diné Bi Beenahaz'áanii (Fundamental Laws of the Diné [hereinafter "FLD"], was approved by the Navajo Nation Council in 2002. (1 NNC §§ 201-206, enacted by Council Resolution CN-69-02).¹¹ It articulates the origin and foundation of all Navajo life and government (§1). It presents an authoritative Diné perspective on what are proper and acceptable ways for human beings to sustain themselves and their communities. Therefore, any

¹¹ See Dine Fundamental Law (attached as Exhibit 10) (available at: <http://www.navajocourts.org/dine.htm> (last accessed June 26, 2014)).

credible analysis of the environmental and cultural impacts of the proposed Navajo Mine/FCPP project, located on the Navajo Nation must specifically address all relevant portions of the FLD.

Diné C.A.R.E. provided comments during the Navajo Mine/FCPP EIS Scoping comment period in the fall of 2012. Those comments included a section noting that OSM must consider and respond to the FLD in the DEIS.¹² Yet, the DEIS failed to consider FLD, especially as it pertains to coal combustion waste, climate change, environmental justice, water impacts, health impacts, socioeconomics, and endangered species. For these categories, the DEIS states that prolonging mining and power plant operations for an additional 25 years would cause minor to no impacts.

Diné C.A.R.E. would like to know why the following principles of the FDL were not considered in the DEIS:

§4.E. “It is the right and freedom of the people that every child and every elder be respected, honored and protected with a healthy physical and mental environment, free from all abuse.”

§5.A. “The four sacred elements of life, air, light/fire, water and earth/pollen in all their forms must be respected, honored and protected for they sustain life.”

§5.C. “All creation, from Mother Earth to Father Sky to the animals, those who live in water, those who fly and plant life have their own laws, and have rights and freedom to exist.”

§5.D. “The Diné have a sacred obligation and duty to respect, preserve and protect all that was provided for we were designated as the steward of these relatives through our use of the sacred gifts of language and thinking.”

§5.E. “Mother Earth and Father Sky is part of us as the Diné and the Diné is part of Mother Earth and Father Sky; The Diné must treat this sacred bond with love and respect without exerting dominance for we do not own our mother or father.”

§5.F. “The rights and freedoms of the people to the use of the sacred elements of life as mentioned above and to the use of the land, natural resources, sacred sites and other living beings must be accomplished through the proper protocol of respect and offering and these practices must be protected and preserved for they are the foundation of our spiritual ceremonies and the Diné life way.”

§5.G. “It is the duty and responsibility of the Diné to protect and preserve the beauty of the natural world for future generations.”

These are not hortatory admonitions that OSM can simply ignore. They are foundational precepts of the Diné people, and must be considered in good faith by OSM in the DEIS and,

¹² See Conservation Groups’ Scoping Comments at 6-8.

indeed, must help drive OSM's decision-making process. Unfortunately, due to the fact that FLD principles were not considered, the DEIS fails to thoroughly assess the cultural, human, health impacts, and environmental impacts associated with prolonging mining and power plant operations for another 25 years and fails to ensure consistency with the FLD, as required by OSM's legal responsibilities to the Diné people. The DEIS is therefore arbitrary and capricious.

B. The DEIS Fails To Provide Clarity As To Applicable Regulations Or Even Who Is Acting As Project Proponent.

1. The DEIS Fails To Explain Adequately The Implications Of The Transfer of Ownership Of The Navajo Mine To The NEPA Process.

As an initial matter, the DEIS fails to provide clarity about who is acting as the Project Proponent seeking the permits subject to the NEPA review in the DEIS. Ownership of the Navajo Mine was transferred to the Navajo Nation on December 31, 2013. The DEIS does not make it clear whether this transfer included a wholesale adoption of the permit applications previously submitted by BHP, or whether those permit applications are subject to change now that the Navajo Nation is the owner of the mine. The DEIS notes only that the DEIS analyzes “approval of *Navajo Mine's* application” for a new SMCRA permit, and “[r]enewal of *Navajo Mine's* existing SMCRA permit.” DEIS at 1-1 (emphasis added). As it is not the mine itself that can seek the permits, but, rather, only the mine's owners or operators, it is unclear whose applications are being reviewed. The DEIS must identify and disclose all documents related to the purchase of the mine by the Navajo Nation from BHP to allow the public a full understanding of the nature of the transaction and its implications. OSM's failure to analyze the mine sale as part of this DEIS constitutes an illegal segmentation of the project.

The DEIS also includes Navajo Nation as designated Cooperating Agency. DEIS at 1-13. As noted, Navajo Nation completed the purchase of Navajo Mine in December of 2013, which shifted Navajo Nation from being in a permitting/agency role concerning delegated authority on several regulations (including CCA Title V, cultural and Endangered Species Act components) to a project proponent, as owner of Navajo Mine. OSM, as Lead Agency for the DEIS, and the Office of Environmental Compliance and Policy (“OECPP”) – “as cooperating agency to assist with compliance of NEPA and other applicable Federal laws,” DEIS at 5-2 – should have immediately (in late 2013) removed Navajo Nation from the project Memorandum of Understanding where Navajo Nation had Cooperating Agency status. Cooperating agencies (i.e., agencies with jurisdiction by law or special expertise) and agencies that are authorized to develop or enforce environmental standards, must comment on environmental impact statements within their jurisdiction, expertise or authority. 40 C.F.R. §§ 1503.2, 1508.5. OSM has inappropriately allowed Navajo Nation to continue to participate in formulation of the DEIS even where the status of Navajo Nation changed from agency oriented actions to a proponent of continued operations at Navajo Mine (as new owner). This situation presents a conflict of interest that OSM has failed to address or remedy. Further, as noted elsewhere in this comment letter, the Navajo Nation has contracted away its rights to enforce its tribal environmental standards on the FCPP, further evidencing its conflict of interest in this matter.

2. The DEIS Fails To Recognize and Explain Applicable Regulations

In addition to failing to explain who is acting as the Project Proponent, the DEIS presents a muddled picture of the applicable regulatory structure at the mine and power plant. The DEIS states that under covenant 17 of APS's lease for the FCPP, the Navajo Nation may not impose tribal regulation on the operation of FCPP. DEIS at 4.8-3, 4.5-4. OSM then states that it may not rely on tribal water quality standards or tribally listed endangered species to assess the environmental impacts of the DEIS alternatives. *Id.* However, the DEIS then contradicts itself by stating “[t]he Navajo Mine and FCPP are located on the Navajo sovereign tribal land; therefore, air emissions and air quality are under the jurisdiction of the Navajo Nation Environmental Protection Agency (“NNEPA”) and overseen by the EPA Region IX in San Francisco.” DEIS at 4.1-1. The DEIS attempts to explain this contradiction by stating: “In 2005, the NNEPA and owners of the FCPP entered into a Voluntary Compliance Agreement that resolves jurisdictional authority dispute and states that the administration and enforcement of the NNEPA permit cannot be more stringent than EPA limits and federal court decisions; thereby, limiting the tribe’s ability to enforce more stringent limits than that established by the EPA.” DEIS at 4.1-1, fnt. 1.

The Conservation Groups reject the notion that OSM may ignore tribal environmental standards for purposes of this NEPA process. The Navajo Nation has set environmental standards that have universal applicability on the reservation. OSM has a duty to consider compliance with all such tribal environmental standards in conducting its NEPA assessment. More specifically, NEPA regulations impose a duty on OSM to consider “[p]ossible conflicts between the proposed action and the objectives of Federal, regional, State, and local (*and in the case of a reservation, Indian tribe*) land use plans, policies and controls for the area concerned. 40 C.F.R. § 1502.16(c) (emphasis added); *see also* 40 C.F.R. § 1506.2(d). OSM’s failure to assess compliance with tribal water quality standards, endangered species regulations, and other tribal environmental standards violated the regulatory requirements of NEPA.

Furthermore, even assuming, *arguendo*, that the Navajo Nation’s water quality or other protective standards cannot be *enforced* against the FCPP, this does not obviate OSM’s procedural obligation, in accord with NEPA, to take a hard look at environmental impacts relative to those standards. Given that such standards are presumably designed to actually protect water quality—including use of that water for, e.g., swimming, fishing, agriculture, and aquatic wildlife—these standards provide critical benchmarks for gauging the acceptability of coal operations to guide the development of mitigation measures and to ensure that OSM’s choice of action is reasoned and informed. Indeed, by not providing this analysis, OSM’s DEIS strongly suggests that there is something to hide regarding impacts.

The Conservation Groups also object to the attempt by the Navajo Nation and the owners of the APS to prevent OSM from applying tribal standards through a series of contractual agreements. The owners of the FCPP should not be able to “pick and choose” the tribal environmental standards with which it wishes to comply. Instead, the FCPP is subject to the same generally applicable tribal environmental standards as all other parties. OSM’s uncritical acceptance of this scheme to allow the largest polluter on the Navajo Nation to contractually avoid compliance with tribal environmental law is arbitrary, capricious, unconstitutional, and a violation of the

NEPA regulations. OSM must, at the least, provide a critical analysis explaining why this scheme is legally permissible. OSM must also, regardless, re-issue the DEIS for public comment after conducting a full and complete analysis of whether the DEIS alternatives will comply with federal, state, local, and generally applicable *tribal* environmental laws and, independently, take a hard look at impacts by using tribal environmental standards as benchmarks to guide the development of mitigation measures and to ensure that OSM's choice of action is reasoned and informed.

C. NEPA Requires OSM Both To Consider Carefully The Project's Significant Environmental Impacts, and To Ensure That Relevant Information Is Available To The Public; the DEIS Does Not Fulfill These Requirements.

NEPA is “our basic national charter for protection of the environment.” 40 C.F.R. § 1500.1(a). “The centerpiece of environmental regulation in the United States, NEPA requires federal agencies to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives.” *New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 703 (10th Cir. 2009); 42 U.S.C. § 4331(b). “NEPA's purpose is twofold: (1) to ensure that agencies carefully consider information about significant environmental impacts and (2) to guarantee relevant information is available to the public.” *Northern Plains Resource Council v. Surface Transp. Bd.*, 668 F.3d 1067, 1072 (9th Cir. 2011) [hereinafter “NPRC”]. An “action-forcing” statute, “NEPA’s purpose is not to generate paperwork – even excellent paperwork – but to foster excellent action.” 40 C.F.R. § 1500.1(a), (c). NEPA thus compels agencies to take a “‘hard look’ at the environmental consequences of its proposed action, carefully reviewing the record to ascertain whether the agency decision is ‘founded on a reasoned evaluation of the relevant factors.’” *Wetlands Action Network v. U.S. Army Corps of Eng’rs*, 222 F.3d 1105, 1114 (9th Cir. 2000) (*rev’d on other grounds Wilderness Soc’y v. U.S. Forest Service*, 630 F.3d 1173, 1178 (9th Cir. 2011)).

To accomplish these goals, NEPA requires that all federal agencies prepare a “detailed statement” regarding all “major federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). This statement, an EIS, must, among other things, describe the “environmental impact of the proposed action,” and evaluate alternatives to the proposal. *Id.* An EIS “shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1. An agency must therefore take a hard look at the direct, indirect, and cumulative impacts of the proposed action. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8, 1508.25. The agency also must “study, develop, and describe alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources” 42 U.S.C. § 4332(E). CEQ regulations provide that the alternatives evaluation “is the heart of the environmental impact statement.” 40 C.F.R. § 1502.14. It should “sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14.

The Project DEIS that OSM has prepared does not meet NEPA’s requirements. First, instead of illustrating that “OSM carefully consider[ed] information about significant environmental

impacts,” it reveals that OSM failed to take a hard look at the impacts of continued operation of the Navajo Mine and FCPP for an additional 25 years. OSM’s analysis is deficient in several respects. OSM improperly defined the baseline, and thus discounts significant impacts. OSM failed to take a hard look at impacts of the Project on climate change, public health, water resources, air quality, coal combustion waste, endangered species, and environmental justice, trust assets, cultural resources, and cumulative impacts. Finally, OSM also failed to “guarantee relevant information is available to the public.” *Northern Plains Resource Council*, 668 F.3d 1067, 1072. Not only does the EIS fail to provide sufficient information as noted, OSM’s public participation process has been lacking: OSM has not allowed sufficient time for review of the Project DEIS, and public meetings were lacking in both information and a process by which to ensure that the public was welcomed, could provide information, and have questions about the Project DEIS answered.

The Conservation Groups request that OSM significantly amend the DEIS to incorporate and respond to the information and issues raised below, as well as the information and concerns raised in the Conservation Groups’ scoping comments. At that point, we request that OSM release an amended DEIS so that the public has an opportunity to comment on a DEIS that adequately describes the impacts of the Proposed Action.

D. OSM Has Illegally Defined The Baseline By Which Impacts Are Measured

Throughout the DEIS, OSM relies upon an improper baseline by which to measure impacts of the Proposed Action. This deficiency is critical, in particular, because neither OSM nor any other federal agency has ever completed a comprehensive environmental review of the mine and power plant complex, evidencing the fact that this so-called “baseline” is one that hides largely unknown and potentially significant direct, indirect, and cumulative impacts. In this context, the additional impacts caused by another 25 years of coal mining, coal combustion, and coal ash waste disposal could constitute the proverbial ‘straw that breaks the camel’s back,’ in particular at the regional and local scale relevant to properly understanding the scope, magnitude, and long-term consequences of coal operations at this complex to inform alternatives, mitigation measures, and the very propriety of permitting further coal operations.

OSM quotes from the CEQ guidance on establishing a proper baseline, but then completely ignore that guidance in the DEIS. CEQ notes specifically:

The current condition is frequently used as the benchmark for comparing the environmental effects of the alternatives. However, in cases of continued operations, the current condition may not adequately represent how actions have impacted resources in the past, are currently impacting resources, or how resources might respond to future impacts. Designating existing environmental conditions as a benchmark may focus the environmental impact assessment too narrowly, overlooking cumulative impacts of past and present actions or limiting assessment to the Proposed Action and future actions. For example, if the current environmental condition were to serve as the condition for assessing the impacts of relicensing a dam, the analysis would only identify the marginal environmental

changes between the continued operation of the dam and the existing degraded state of the environment. In this hypothetical case, the affected environment has been affected for more than 50 years with accompanying declines in flows reductions in fish stocks, habitat loss, and disruption of hydrologic functions. If the assessment took into account the full extent of continued impacts, the significance of the continued operation would more accurately express the state of the environment and thereby better predict the consequences of relicensing the dam (CEQ 1997).

DEIS at 4-1. CEQ's guidance is reinforced by the CEQ regulations implementing NEPA. CEQ's definition of cumulative effects, for example, provides that OSM's duty to take a hard look at impacts encompass "the incremental impact of the action *when added to other past, present, and reasonably foreseeable actions* regardless of what agency (Federal or non-Federal) or person undertakes such actions." 40 C.F.R. § 1508.7. This definition then proceeds to explain that "[c]umulative impacts can result from individually minor but collectively significant actions taking place over a period of time." *Id.*

Despite CEQ's admonishment in its guidance – as reinforced by the definition of "cumulative effects" – that federal agencies not discount the "cumulative impacts of past and present actions or limiting assessment to the Proposed Action and future actions," as well as CEQ's regulations themselves, OSM proceeds to do just that. OSM asserts that two completed actions – and these actions' past, present, and reasonably foreseeable impacts – constitute part of the baseline, including the BART determination, and the Navajo Mine transfer. DEIS at 4-1. As a result of this definition of the baseline, OSM fails to take a hard look at the direct, indirect, and cumulative impacts caused by continued operation of the Navajo Mine and FCPP.

First, to reiterate a point made above, OSM's so-called "baseline" operates to obscure and hide the true scope, magnitude, and long-term consequences of coal operations. For example, there is an obvious and significant difference between 50 years of mercury deposition caused by coal-fired power plant combustion and 75 years of mercury deposition caused by coal-fired power plant combustion, even if the last 25 years is anticipated to result in marginally less deposition than the first 50 years. In this light, reducing suffering caused by impacts from the mine and power plant may be welcomed, but reduction of impacts neither eliminates impacts nor does it address past and cumulative impacts. Thus, OSM must take a hard look at the true extent of that suffering and the true extent of the impacts causing that suffering by taking a hard look at past, present, and future impacts in the aggregate, to identify where impacts are additive or synergistic, and to calibrate alternatives and mitigation measures accordingly. It is only when OSM is armed with such a "hard look" environmental review that it can provide itself a basis for determining whether coal operations should continue beyond 2015.

Second, with its inclusion of the BART determination as part of the baseline, OSM ignores the past 50 years of operation of Navajo Mine and FCPP. FCPP and its five coal burning units have been in nearly continuous operation from the late 1960s through 2013. Each year of operation involved myriad and persistent direct, indirect, and cumulative impacts to the land, air, water, and people of the region expressly caused by coal mining at the Navajo Mine, the coal

combustion process at the FCPP, and the disposal of coal ash waste. Year in and year out, these impacts piled up, causing ever increasing and, at the least, ever persistent impacts.

On December 31, 2013, APS ceased operation of Units 1-3. This DEIS was issued for public comment in March 2014. Despite the fact that Units 1-3 had been in continuous operation for nearly 50 years from the late 1960s through all of 2013, OSM considers the cessation of operations of Units 1-3 to be the baseline for the FCPP. Units 1-3 were in operation when this NEPA process was commenced. Units 1-3 were in operation when OSM elicited scoping comments from the public. At the time OSM issued its DEIS, Units 1-3 had been dormant for only 2 months. Nevertheless, OSM ignores the nearly 50 years of operation of units 1-3—and those units' attendant impacts—and instead claims that 2 months of dormancy at these units represents the baseline. With this conceit, OSM sweeps the prior 50 years of operations under the rug, effectively concluding that continued coal operations to provide 1500-MW of power are a benefit to the environment. This conclusion is absurd; while coal impacts moving forward may be less, that does not mean they provide a benefit to the environment, or that impacts are minor or insignificant and thus do not require serious mitigation or a serious evaluation regarding the propriety of authorizing another 25 years of coal operations.

The CEQ NEPA Regulations direct federal agencies to “commence[] its NEPA process at the earliest time possible.” 40 C.F.R. § 1501.2(d)(3). More specifically, “[f]or applications to the agency appropriate environmental assessments or statements shall be commenced no later than immediately after the application is received.” 40 C.F.R. § 1502.5(b). It appears that OSM intentionally delayed issuance of the DEIS until after December 30, 2013, to claim that FCPP's retirement of Units 1-3 could be considered part of the baseline for the project. To help clarify OSM's action, OSM should clearly state—and support with evidence in the record—when OSM initially received an application from APS, BHP, or the Navajo Nation to commence the NEPA process. Alternatively, if this NEPA process was initiated by OSM, OSM should state the date that this NEPA process was initiated, and under what basis. OSM should also include all documents supporting or involving the commencement of this NEPA process into the administrative record for this proceeding. Further, OSM should include in the administrative record any and all communications discussing the issuance of the DEIS after December 30, 2013 or the cessation of operations of Units 1-3.

As discussed in more detail throughout these comments, by sweeping the 50 years of coal mining and combustion at the FCPP and Navajo mine complex under the rug, OSM purports to improperly “focus the environmental impacts assessment too narrowly,” and “overlook impacts of past and present actions.” CEQ Guidance, quoted at DEIS at 4-1; 40 C.F.R. § 1508.7. Nowhere does the DEIS take a proper hard look at the past impacts from coal mining, coal combustion, or coal ash disposal. Thus, OSM completely disregards the significant degradation caused by Navajo Mine and FCPP over the last 50 years, and limits its concerns about impacts to the 25 years of future operation, as if it were operating on a clean slate. *See, e.g.*, DEIS at 4.5-41 (discounting water quality issues: “Information on existing water resources was used as the baseline to measure and identify potential impacts from the Proposed Action and alternatives.”); DEIS at 4.5-45 (discounting increased pollution as within the variation of “baseline” wells); DEIS at 4.5-59 (discounting continued deposition of toxics to waterways due to relative impacts: “Therefore, while mercury and selenium would continue to be deposited into the San Juan River

watershed, surface water quality impacts would be minor compared to baseline conditions.); DEIS at 4.7-30 (discounting impacts to wildlife from continued operation merely because they are not an increase over “baseline”).

While it is certainly a good thing that surface water quality impacts from coal operations over the course of the next 25 years will be less (we reject OSM’s subjective use of “minor,” in particular given its failure, detailed above, to use Navajo Nation water quality standards as a benchmark for analysis) than operations over the preceding 50 years, OSM must take a hard look at the full 75 years of coal operation impacts, in particular to gauge whether these impacts are additive (e.g., 25 years of impacts + 50 years of impacts=cumulative impact) or synergistic (e.g., 50 years of impacts x 25 years of impacts=cumulative impact) given their persistence.

Including the mine transfer as part of the baseline presents additional problems. OSM seems to assume that because it has included that transfer as part of the baseline, that it need not consider numerous aspects of the Project, instead claiming that those impacts were addressed in the Environmental Assessment for the transfer.¹³ However, the Navajo Mine Transfer EA specifically states that it does not address impacts beyond 2016:

This EA considers implications of the permit and lease transfers through the end of the current coal supply agreement, July 2016 (OSM 2012b). Proposed Navajo Mine operations beyond the life of the coal supply agreement would be analyzed in the Environmental Impact Statement (EIS) currently being prepared by OSM (OSM 2012c).¹⁴

Moreover, the Navajo Mine Transfer EA never conducted a comprehensive analysis of the mine’s full history of impacts—i.e., the cumulative impacts caused by 50 years of coal mining—and certainly did not consider those impacts relative to the context and intensity of connected and cumulative coal-fired combustion operations. As the DEIS only addresses impacts beyond 2016, OSM cannot point to the transfer EA as a proxy for analysis of post-2016 impacts.

¹³ See, e.g., Videos of Public Meeting (available at: https://www.youtube.com/watch?v=p_5wBhTi4-k&feature=youtu.be, and <https://www.youtube.com/watch?v=B0JBhqUk9Ag> (last accessed June 26, 2014)).

¹⁴ OSM, *Environmental Assessment, Navajo Mine SMCRA Permit NM-0003F Transfer*, 2 (November 2013) (attached as Exhibit 11); OSM, *Finding of No Significant Impact, Navajo Mine SMCRA Permit NM-0003F Transfer*, (November 2013) (attached as Exhibit 12); see also Letter from Pearl Chamberlin, Acting Regional Director, United States Department of the Interior, Bureau of Indian Affairs, Navajo Region, to Charles Roybal, BHP Navajo Coal Company, May 10, 2013 (attached as Exhibit 13); Letter from Pat Risner, President, BHP Navajo Coal Company and Harrison Tsosie, Attorney General, Navajo Nation to Sharon Pinto, Regional Director, United States Department of the Interior, Bureau of Indian Affairs, May 15, 2013 (attached as Exhibit 14).

Instead, as explained by the Conservation Groups, OSM should have discussed the transfer and the Proposed Action in a single EIS, partly to avoid the absurd consequences now apparent in the DEIS.¹⁵ Furthermore, OSM should have taken a comprehensive hard look at the mine's historic impacts – impacts caused by 50 years of coal mining and coal ash waste disposal. As they have engineered it, BIA and OSM never fulfill their responsibilities to comprehensively assess the environmental and financial implications of the mine transfer (and underlying mine operations at the heart of that transfer) and the changing status of the Navajo Nation from Cooperating Agency role to project proponent (with a financial stake in the perpetuation of the Navajo Mine and FCPP. OSM thus acts arbitrarily and capricious when it segments connected and cumulative actions and consequently fails to address the significant environmental and financial implications of the transfer. *See Utahns for Better Transp. v. U.S. Dept. of Transp.*, 305 F.3d 1152, 1182-83 (10th Cir. 2002); *Thomas v. Peterson*, 753 F.2d 754, 758 (9th Cir. 1985); 40 C.F.R. § 1508.25(a) (agencies may not “divid[e] a project into multiple ‘actions,’ each of which individually has a insignificant environmental impact, but which collectively have a substantial impact);” *Wetlands Action Network v. U.S. Army Corps of Eng’rs.*, 222 F.3d 1105 (9th Cir. 2005) (the test for determining connected actions is “whether each of two projects would have taken place with or without the other and thus had independent utility”); *Conservation Soc’y of S. Vt. v. Sec. of Transp.*, 531 F.2d 637, 640 (2d. Cir. 1976).

The Project and the mine transfer are both connected and cumulative actions. NEPA regulations provide that actions are connected if they “[c]annot or will not proceed unless other actions are taken previously or simultaneously” or if they “[a]re independent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1508.25(a)(1)(ii)-(iii). Relevant factors for determining whether actions are connected include, whether the segment (1) “has logical termini”; (2) “has substantial independent utility”; (3) “does not foreclose the opportunity to consider alternatives”; and (4) “does not irretrievably commit federal funds for closely related projects.” *Utahns for Better Transp.*, 305 F.3d at 1183. The transfer and approval of post-2016 operations are also cumulative actions. 40 C.F.R. § 1508.25(b). “Cumulative actions” are actions that, “when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.”

Even if these actions are somehow deemed neither connected nor cumulative, OSM still, as discussed below, has an independent duty to address indirect and cumulative impacts, in particular where impacts were not addressed in prior environmental reviews. 40 C.F.R. §§ 1508.7, 1508.8(b). OSM’s transfer EA delimited the temporal scope of its assessment to only impacts occurring through the life of the permit—i.e., the end of 2015. Yet the indirect consequence of the transfer was to continue the Navajo mine’s operations and, therefore, to set the stage – i.e., create indirect impacts from – mine and power plant operations to continue in 2016 and beyond. Moreover, the impacts of continued mine operations – whether pre-transfer, or during the time period assessed by the Navajo mine transfer EA, when combined with impacts caused by post-2016 operations, cause cumulative impacts.

¹⁵ See Exhibits 3-7.

OSM's DEIS should have fully analyzed the implications of the Navajo Mine transaction, including evaluation of due diligence reports and full analysis of financial information concerning continued operations of FCPP and Navajo Mine.¹⁶ Ideally, this would be done in a single EIS, but OSM's decision to separate out these various projects, even if somehow permissible in accord with NEPA, does not obviate the agency's duty, if it prepares multiple NEPA analyses, to take a hard look at past, present, and cumulative impacts caused by pre-2016 mining operations, pre-2016 coal-fired power plant operations, and pre-2016 coal combustion waste disposal impacts, in conjunction with post-2016 mine, power plant, and coal combustion waste impacts. We would note that the inclusion of the SMCRA permit in the DEIS as part of the Proposed Action makes the assigning of transfer liabilities (that can only be understood relative to a comprehensive assessment of impacts) and assets, defining of ownership and regulatory requirements, and the responsibility of the Federal government even more important to consider in the context of a true hard look NEPA review, which this DEIS is not.

E. The Project DEIS Does Not Meet the Requirements of NEPA Because OSM Has Failed To Take The Requisite Hard Look At Significant Environmental Impacts, Including Direct, Indirect, and Cumulative Impacts, of the Project.

1. OSM Failed To Take A Hard Look At The Project's Contributions To Climate Change

a. The Project's Contributions to Climate Change Are Significant, And Warrant Additional Analysis

The United States National Climate Assessment recently released a report discussing impacts caused by climate change that are occurring presently, and that are expected to occur in the future.¹⁷ The report notes: "observed warming and other climatic changes are triggering wide-

¹⁶ The Navajo Nation spent approximately \$3 million on the preparation of a due diligence assessing the risks and liabilities associated with the purchase of the Navajo mine from BHP. Navajo Nation Press Release Discussing Due Diligence Report (attached as Exhibit 15). This due diligence report has never been released to the public, despite requests from Diné C.A.R.E. See Open File Request to Navajo Nation from Diné C.A.R.E. (April 29, 2014) (attached as Exhibit 16). The DEIS should have included the Due Diligence Report as an appendix to the DEIS because it contains valuable information on potential environmental, economic and human health risks and impacts. Such information is directly relevant to a NEPA analysis of the impacts of continued operation of the mine for an additional 25 years. We ask that the due diligence report and all related information be released to the public as a component of the DEIS and that the public be given an adequate amount of time to review and comment on the report and related information as part of the DEIS public comment process.

¹⁷ Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe, Eds., *Climate Change Impacts in the United States: The Third National Climate Assessment*. U.S. Global Change Research Program (May 2014) (attached as Exhibit 17).

ranging impacts in every region of our country and throughout our economy,” and that GHG “emissions come mainly from burning coal, oil, and gas.”¹⁸ Contrary to assertions in the Project DEIS that climate change will only present challenges in the future, *see* DEIS at 4.2-1, the Climate Assessment makes it clear the challenges from climate change are already upon us, and the need to reduce GHG emissions is pressing.¹⁹ President Obama reiterated these conclusions, noting: “This is not some distant problem of the future. This is a problem that is affecting Americans right now. Whether it means increased flooding, greater vulnerability to drought, more severe wildfires – all these things are having an impact on Americans as we speak.”²⁰

Given this imperative, the need to address climate change at FCPP is obvious. FCPP historically has been the 15th most-polluting power plant of GHGs,²¹ emitting around 14 million metric tons of CO₂e each year, which by itself represented over half a percent of total U.S. electric power generation emissions nationally, and 18.5 percent of regional electric power generation emissions, making it the largest contributor in the state. *See* DEIS at 4.2-10, 4.2-11.²² The electric power generation sector emits one-third of all GHG emissions nationally, with FCPP contributing 0.2 percent of total U.S. GHG emissions. *Id.* Even after the retirement of units 1-3, and once Selective Catalytic Reduction is installed on the remaining units, FCPP will continue to emit at least 10.34 million metric tons of GHGs annually, still placing it easily within the top 50 most GHG polluting coal-fired power plants in the country. DEIS at 4.2-16.²³ Over the 25 years that the Project anticipates continued operation, FCPP would contribute 258.5 million metric tons of CO₂e, the equivalent of over 29 billion gallons of gasoline consumed, or the electricity use of over 35.5 million homes in one year.²⁴

Emissions from the Navajo Mine would add an additional 70,251 metric tons of CO₂e, an additional 1.8 million metric tons over the life of the Proposed Action. DEIS at 4.2-22. As

¹⁸ *Id.* at 1-2.

¹⁹ *Id.*, *passim*.

²⁰ Justin Gillis, *U.S. Climate Has Already Changed, Study Finds, Citing Heat and Floods*, N.Y. Times, May 6, 2014 (attached as Exhibit 18).

²¹ Environment America, *America’s Dirtiest Power Plants: Their Oversized Contribution to Global Warming and What We Can Do About It*, 28 (Sept. 2013) (attached as Exhibit 19).

²² *See also*, Rodica Lindenmaier, Manvendra K. Dubey, Bradley G. Henderson, Zachary T. Butterfield, Jay R. Herman, Thom Rahn, and Sang-Hyun Lee, *Multiscale observations of CO₂, CO₂, and pollutants at Four Corners for emission verification and attribution*, Proceedings of the National Academy of Sciences (2014) (attached as Exhibit 20).

²³ Exhibit 19 at 28.

²⁴ *See* EPA Greenhouse Gas Equivalency Calculator (available at: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>).

discussed in our scoping comments,²⁵ although the mine's emissions are significantly smaller than FCPP's, they are nonetheless substantial, and made even more problematic given that they are primarily fugitive emissions of methane, a GHG with a global warming potential ("GWP") 33 times that of carbon dioxide over a 100-year time period, and 105 times as potent as carbon dioxide over a 20-year time period.²⁶ EPA, notably, does not assess methane's GWP over a near-term 20-year time period, using only a 100-year time period. Furthermore, EPA uses an outdated methane GWP of 21, premised on the Intergovernmental Panel on Climate Change's (IPCC's) 1997 Fourth Assessment Report. The IPCC's most recent 2013 Fifth Assessment Report has abandoned the 1997 figures. Instead, while the IPCC has not updated its methane GWP's in accord with the study cited in footnote 25, it has increased its methane GWPs significantly, concluding that, over a 100-year time period, methane, accounting for carbon feedbacks, is 34 times as potent a climate pollutant as carbon dioxide and, over a 20-year time period, 86 times as potent.²⁷ Based on the Shindell study cited in footnote 25, the mine's methane emissions would contribute not 57,687 metric tons of CO₂e annually as asserted in the Project DEIS, but, rather, 90,651 metric tons CO₂e annually using a 100-year time period, or 288,435 metric tons CO₂e annually using a 20-year time period to gauge warming impacts; over the Proposed Action's 25-year life, the mine's total GHG emissions would total between 2.6 million metric tons and 7.5 million metric tons CO₂e.

As a nation, we are seeking to make changes to decrease our GHG emissions. On a personal level, homes and businesses are seeking, among other steps, to implement energy efficiency measures, reduce miles traveled or buying more efficient cars. Local and state governments are implementing broader measures, including renewable portfolio standards, and incentives for renewable energy development, among many other measures. Nationally, the President just unveiled his plan to cut carbon pollution in America.²⁸ Noting that "[p]ower plants are the largest major source of emissions in the U.S., together accounting for roughly one-third of all domestic greenhouse gas pollution," the President put the reduction of carbon pollution from power plants at the top of the list.²⁹ To implement that goal, the Administration has announced

²⁵ See Conservation Groups' Scoping Comments at 33-35.

²⁶ Shindell et al., *Improved Attribution of Climate Forcing to Emissions*, SCIENCE 2009 326 (5953), p. 716, available at: www.sciencemag.org/cgi/content/abstract/326/5953/716 (attached as Exhibit 67 to Conservation Groups' Scoping Comments); see also Robert Howarth, Drew Shindell, et al., *Methane Emissions from Natural Gas Systems* (Feb. 25, 2012) (attached as Exhibit 68 to Conservation Groups' Scoping Comments).

²⁷ IPCC Fifth Assessment Report, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2013), available at: www.climatechange2013.org.

²⁸ President's Plan to Cut Carbon Pollution in America (available at: <http://www.whitehouse.gov/climate-change> (last accessed June 26, 2014)).

²⁹ *Id.*

new carbon pollution standards for new power plants, and just recently issued proposed carbon pollution standards for existing power plants.³⁰

Despite the urgent need for action called for by the Climate Assessment, the numerous IPCC reports, and scientists worldwide, and despite the significant GHG emissions from FCPP that will continue for 25 years if the Proposed Action goes forward, OSM amazingly concludes that “while the Proposed Action would contribute to the effects of climate change, its contribution relative to other sources would be minor in the short- and long-term.” DEIS at 4.2-23. In short, OSM is stating that 258.5 million metric tons of CO₂e does not need to be addressed because relative to total GHG emissions, the emissions are minor. What OSM’s absurd argument fails to recognize is that all GHG pollution relative to total emissions is minor. Climate change is a death by a thousand cuts; there is no one source that if shut down will solve the problem. There are few individual sources, however, that contribute to climate change as much as coal-fired power plants. As the President’s Climate Action Plans acknowledges, given that one third of U.S. GHG emissions come from power plants, they are a good place to start. OSM, however, even dismisses a third of our nation’s GHG emissions, stating: “Electrical power generation accounts for *just* 34 percent of GHG emissions nationwide.” DEIS at 4.2-23 (emphasis added). This blasé attitude reveals the root problem with OSM’s argument: if taken to its logical conclusion, OSM would have us all sit on our hands, as any effort to reduce GHG emissions, by OSM’s standards, could be brushed aside as minor.

Not only is OSM’s approach ridiculous, it is also illegal. NEPA does not allow an agency to sweep significant impacts under the rug without first taking a hard look at the impacts, including impacts from climate change. An agency must “consider every significant aspect of the environmental impact of a proposed action.” *Baltimore Gas & Elec. Co.*, 462 U.S. at 107 (quotations and citation omitted). To fulfill this mandate, agencies must disclose the “ecological[,] ... economic, [and] social” impacts of a proposed action. 40 C.F.R. § 1508.8(b). It is well settled that where an agency action causes greenhouse gas pollution, NEPA mandates that agencies analyze and disclose the impacts of that pollution. As the Ninth Circuit has held: [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). 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.”).

The EIS must “discuss the *actual* environmental effects resulting from [the proposed action’s] emissions.” *Ctr. for Biological Diversity*, 538 F.3d at 1216. As we noted in our scoping comments, CEQ has come out with draft guidance for agencies for evaluating climate change

³⁰ *Id.*

impacts.³¹ CEQ's guidance provides that, as a general rule, an agency should consider a project's GHG emissions if they exceed 25,000 metric tons CO₂-equivalent (CO₂e). CEQ, *Draft Guidance* at 3. An agency should consider "direct and indirect GHG emissions," and where they are significant (i.e., greater than 25,000 tons CO₂e), they should be "quantified and disclosed," taking "account of all phases and elements of the proposed action over its expected life." *Id.* at 5; 40 C.F.R. §§ 1508.25(c)(1)-(3). CEQ's Guidance counsels: "In the agency's analysis of direct effects, it would be appropriate to: (1) quantify cumulative emissions over the life of the project; (2) discuss measures to reduce GHG emissions, including consideration of reasonable alternatives; and (3) qualitatively discuss the link between such GHG emissions and climate change." CEQ, *Draft Guidance* at 3.

OSM's quantification of emissions – although a step in the right direction – and cursory discussion of the issue of climate change, do not constitute the required hard look of the issue and the Project's contribution to the problem compelled by NEPA. As discussed above, the Project's contribution is not, as OSM would like to believe, insignificant or minor. OSM's conclusion that the Proposed Action "would not result in a major contribution to adverse effects associated with climate change," and [t]herefore, no additional mitigation is recommended," DEIS at 4.2-24, flies in the face of CEQ guidance directing that mitigation be addressed when emissions are over 25,000 tons CO₂e annually. When direct and indirect GHG emissions exceed the relevant threshold, 25,000 tons CO₂e, the agency should also consider "mitigation measures and reasonable alternatives to reduce action-related GHG emissions." CEQ, *Draft Guidance* at 3. Here, emissions will be well over *400 times* CEQ's threshold for considering "mitigation measures and reasonable alternatives." Contrary to the Conservations Groups' recommendations in scoping comments, OSM has failed to include any alternatives that provide for meaningful comparison amongst impacts. Furthermore, OSM's forthright statement that it will not consider mitigation measures demonstrates that instead of taking a hard look at impacts, OSM is merely stating that there will not be any, and therefore further analysis is unnecessary.

The DEIS acknowledges that FCPP and SJGS are the overwhelming sources of GHG emissions for the state of New Mexico:

As shown in Table 4.2-6, electric power generation, including FCPP, comprised 76 percent of GHG emissions in geographic New Mexico during the 2008-2010 reporting period. Of electric power generation, FCPP contributed 45 percent, the San Juan Generating Station contributed 37 percent, and other plants contributed 18 percent. The FCPP was the largest emitter of GHGs in the geographic state during the reporting period.

DEIS at 4.2-11. A recent study published by Los Alamos National Laboratory and Department of Energy refers to the San Juan Generating Station and Four Corners Power Plant as the largest

³¹ See CEQ, *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions* (Feb. 2010) (hereinafter CEQ, *Draft Guidance*) (attached to Conservation Groups' Scoping Comments as Exhibit 62).

point source of pollution in the United States.³² According to the Featured Research Release on the study in Science Daily on May 21, 2014:

Air pollution and greenhouse gas emissions from two coal-fired power plants in the Four Corners area of northwest New Mexico, the largest point source of pollution in America, were measured remotely by a Los Alamos National Laboratory team. Led by Laboratory senior scientist Manvendra Dubey, the study is the first to show that space-based techniques can successfully verify international regulations on fossil energy emissions. Furthermore, the study was able to distinguish that emissions from the nearby San Juan Generating Station are actually less polluting than those from the nearby Four Corners Generating Station.³³

The study concludes that 75 percent of the atmosphere (~10 km) in the region is polluted.³⁴ Given this information, it becomes indisputably apparent that the DEIS must be significantly updated to account for the atmospheric impacts to the Four Corners region from the FCPP/Navajo Mine. The fact that DOE and LANL consider SJGS and FCPP a single source of pollution points to the importance of evaluating cumulative impacts to the region. Despite the DEIS failing to analyze climate change from FCPP/Navajo Mine with the position that greenhouse gases remain unregulated, OSM and Cooperating Agencies must acknowledge, identify and evaluate the significant impacts now occurring from climate change in the Four Corners region.

The slight reduction in CO₂ from FCPP envisioned in the DEIS Proposed Action is a band-aid on a gaping wound. Carbon dioxide emissions from FCPP are historically 13 million tons per year; the plan for 2016-2041 would still allow 10.34 million tons per year. The Four Corners region continues to experience drought, fires, drier/hotter conditions that are leading to environmental and ecosystem degradation and collapse. The United States Southwest is extremely susceptible to the impacts from continued burning of coal. The Navajo Nation has seen an increase in the formation of sand dunes, which has altered the landscape and restricted traditional uses of the land.³⁵ As we are writing these comments, a massive uncontained fire of almost 15,000 acres has broken out near Asaayi Lake on the Navajo Nation (in the Chuska Mountains – in the higher elevated northeastern part of the Navajo Nation). On June 16, 2014, Navajo Nation President Ben Shelly declared a State of Emergency where families/homes are being evacuated and heavy

³² See Exhibit 20.

³³ Dep't of Energy, Los Alamos National Laboratory, *Power plant emissions verified remotely at Four Corners sites, largest point source pollution in U.S.*, Science Daily (May 20, 2014) (attached as Exhibit 68).

³⁴ *Id.*

³⁵ See studies by USGS Scientist Dr. Margaret Hiza, (available at: <http://www4.nau.edu/eeop/dunes/index.asp> (last accessed June 26, 2014)).

smoke is inhaled by humans throughout the entire region. Sadly, this fire represents conditions that are now common in the U.S. Southwest. The Asayyi Lake fire follows on the heels of the Oak Creek Fire near Sedona, Arizona with devastating environmental and economic impacts on affected communities.

Moreover, as the DEIS meekly admits: “Due to the area’s aridity, climate change could have a substantial impact if the already low precipitation amounts decrease in the future (NM 2005).” DEIS at 4.1-16. Given these two facts, OSM’s failure to consider the Project’s contribution to climate change and the impacts already being felt in the Southwest is unsupportable. As the primary author of the Climate Assessment’s section on impacts to the Southwest explained:

“For the Southwest, climate change is water change,” said Garfin. “What affects the reliability of our water supplies, and the timing of rain and snow in our region affects everything. The snow-covered peaks of Colorado, Utah, and California are the water towers of the Southwest.”³⁶

The author notes that these impacts will be of particular significance to Native American communities:

“If I could add one more page to the Southwest section of the National Climate Assessment, I would highlight the important impacts of climate change on southwestern tribes and Native Nations, and the special vulnerabilities of Native peoples to climate change,” said Garfin. “Impacts include drying up of springs and other important sources of water, and losses of important ceremonial plant species from the same global change-type drought that has made ghost forests of millions of acres of pines across the West, including on reservation lands.”³⁷

Given what is known about the association of burning coal and climate change impacts, the DEIS must take a hard look at the impacts of continued operation of the Navajo Mine and FCPP in conjunction with global and national emissions trends—and climate change impact forecasts for the region—to take the requisite hard look at direct, indirect, and cumulative climate change impacts. The IPCC has determined that the next fifteen years are critical in averting potentially disastrous climate changes.³⁸ As President Obama’s science adviser, John P. Holdren, noted “the longer society waits to implement strong measures to cut greenhouse gas emissions, the more

³⁶ Ari Phillips, *As Population Surges, Harsh Climate of Southwest Will Only Get Harsher*, ClimateProgress, May 8, 2014 (available at: <http://thinkprogress.org/climate/2014/05/08/3434633/national-climate-assessment-southwest/> (last accessed June 23, 2014)) (attached as Exhibit 21).

³⁷ *Id.*

³⁸ Intergovernmental Panel on Climate Change, Fifth Assessment Report, *Climate Change 2014: Mitigation of Climate Change*, 2014 (available at: <http://www.ipcc.ch/report/ar5/index.shtml> (last accessed June 23, 2014)).

costly and difficult it will become to limit climate change to less than catastrophic levels.”³⁹ OSM must heed this warning, and address the issue fully in the DEIS.

b. OSM Fails to Consider the Social Cost of the Significant Carbon Emissions At Navajo Mine and FCPP

OSM also attempts to avoid analysis of climate change by asserting: “at present no regulatory mechanism exists for assessing the significance of the GHG emissions,” and that “the regulatory framework does not support quantification of [the societal] costs.” DEIS at 4.2-23. The Project DEIS’s claims of impossibility are flatly contradicted by the fact that a standardized federal agency protocol – the social cost of carbon – does exist, and was specifically developed to estimate the social, economic, and ecological impacts of greenhouse gas pollution. The federal social cost of carbon is an estimate of the incremental dollar value of damages associated with an incremental increase in greenhouse gas pollution. It is intended to include changes in net agricultural productivity, human health, property damages, and the value of ecosystem services, all of which climate change can degrade.⁴⁰ A dozen departments and agencies developed the protocol in 2010 to effectively measure the costs and benefits of proposed regulations, as required by Executive Order 12866.⁴¹ The social cost of carbon thus permits decision-makers to address, and the public to understand, the broad benefits of reducing carbon emissions, or the costs of increasing emissions, in analyses of actions that may have small, or “marginal,” impacts on cumulative global emissions.⁴² Agencies have routinely used the social cost of carbon protocols to achieve these goals when evaluating the costs and benefits of rulemakings, and the Environmental Protection Agency (EPA) has recommended that other agencies use the protocol

³⁹ Justin Gillis, *Climate Efforts Falling Short, U.N. Panel Says*, New York Times, April 13, 2014 (available at: <http://www.nytimes.com/2014/04/14/science/earth/un-climate-panel-warns-speedier-action-is-needed-to-avert-disaster.html> (last accessed June 23, 2014)) (attached as Exhibit 22).

⁴⁰ Interagency Working Group on Social Cost of Carbon, Technical Support Document (May 2013) (attached as Exhibit 23) at 1; *see also* Cass R. Sunstein, *The Real World of Cost-Benefit Analysis: Thirty-Six Questions (and Almost as Many Answers)*, 114 Colum. L. Rev. 167, 171-73 (Jan. 2014) (describing origins of interagency agreement on the social cost of carbon).

⁴¹ Interagency Working Group on Social Cost of Carbon, Technical Support Document (Feb. 2010) at 1-3 (attached as Exhibit 24). Federal agencies that developed and endorsed the protocol included: the Council on Environmental Quality (which oversees NEPA compliance); the Department of Agriculture; and the Environmental Protection Agency (EPA) (which regulates greenhouse gas emissions). The federal social cost of carbon was developed through a robust process that included “[t]echnical experts from numerous agencies [meeting] on a regular basis to consider public comments, explore the technical literature in relevant fields, and discuss key model inputs and assumptions.” *Id.* at 1.

⁴² *Id.* at 1.

in NEPA reviews.⁴³

Indeed, in an opinion issued just today in the U.S. District Court for the District of Colorado, Judge Jackson lambasted the Forest Service for attempting to avoid quantifying these costs when a tool to do so is available: “a tool is and was available: the social cost of carbon protocol.” *High Country Conservation Advocates v. U.S. Forest Service*, Docket no. 1:13-cv-01723-RBJ, slip op. at 17 (June 27, 2014). Thus, Judge Jackson concluded: “Even though NEPA does not require a cost-benefit analysis, it was nonetheless arbitrary and capricious to quantify the *benefits* of the lease modifications and then explain that a similar analysis of the *costs* was impossible when such an analysis was in fact possible.” *Id.* at 19.

Research conducted by the National Research Council has confirmed the fact that the negative impacts of energy generation from fossil fuels are not represented in the market price for such generation.⁴⁴ In other words, failing to internalize the externalities of energy generation from fossil fuels – such as the impacts to climate change and human health – has resulted in a market failure that requires government intervention. OSM should be mindful of this cost failure as it

⁴³ For example, EPA, the Department of Transportation and the Department of Energy have utilized the Interagency Working Group’s approach in rulemakings. See, e.g., EPA and National Highway Traffic Safety Administration, Final Rule, 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions, 77 Fed. Reg. 62,624, 63,004-06 (Oct. 15, 2012); Department of Energy, Final Rule, Energy Conservation Program: Energy Conservation Standards for Standby Mode and Off Mode for Microwave Ovens, 78 Fed. Reg. 36,316; 36,349-52; 36,363-64 (June 17, 2013) (explaining basis for social cost of carbon analysis and identifying range of benefits from reducing energy use of appliances). EPA has recommended that other federal agencies use the Interagency Working Group’s approach in NEPA documents. See Sarah E. Light, NEPA’s Footprint: Information Disclosure as a Quasi-Carbon Tax on Agencies, 87 Tul. L. Rev. 511, 545-46 & n.160 (Feb. 2013) (describing EPA recommendation that State Department, in evaluating impacts of Keystone XL Pipeline, “explore ... means to characterize the impact of the GHG emissions, including an estimate of the ‘social cost of carbon’ associated with potential increases of GHG emissions.”).

⁴⁴ See, e.g., National Research Council, *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use* (2010) (attached as Exhibit 56 to Conservation Groups’ Scoping Comments); Nicholas Muller, et. al., *Environmental Accounting for Pollution in the United States Economy*, AMERICAN ECONOMIC REVIEW at 1649-1675 (Aug. 2011) (attached as Exhibit 58 to Conservation Groups’ Scoping Comments); see also, Generation Investment Management, *Sustainable Capitalism*, (Jan. 2012) (advocating a paradigm shift to *Sustainable Capitalism*; “a framework that seeks to maximize long-term economic value creation by reforming markets to address real needs while considering *all* costs and stakeholders.”) (attached as Exhibit 25); see also Risky Business Project, *Risky Business, The Economic Risks of Climate Change in the United States*, (June 2014) (attached as Exhibit 26); see also Justin Gillis, *Bipartisan Report Tallies High Toll on Economy From Global Warming*, New York Times (June 24, 2014) (available at: <http://www.nytimes.com/2014/06/24/science/report-tallies-toll-on-economy-from-global-warming.html> (last accessed June 25, 2014)) (attached as Exhibit 27).

evaluates the Proposed Action, and should consider the social cost of carbon emissions from the mine and power plant. Moreover, the federal working group addressing the social cost of carbon (“SCC”) has released new estimates that revise significantly upward the costs associated with GHG pollution, with median impacts pegged at \$43 and \$65 per ton.⁴⁵ However, OSM’s analysis arbitrarily assumes a price of carbon that is \$0 by failing to consider externalized costs altogether, such as human health and environmental degradation, thus stacking the deck in favor of perpetuating the mine and power plant. Moreover, the DEIS has failed to meaningfully contemplate a transition to renewable energy generation, not only as an alternative which may eventually suppress demand for the power from FCPP and consequently the coal from Navajo Mine, but also, as suggested above, as a reasonable and alternative pathway toward mitigating climate change as it relates to agency decision-making on federal lands.⁴⁶

In short, OSM’s analysis must fairly account for both benefits *and* the associated costs. *Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983) (once agency chose to “trumpet” a set of benefits, it also had duty to disclose the related costs); *High Country Conservation Advocates v. U.S. Forest Service*, Docket no. 1:13-cv-01723-RBJ, slip op. (June 27, 2014). “There can be no hard look at costs and benefits unless all costs are disclosed.” *Id.*

c. The DEIS fails to assess the impact of mandatory greenhouse gas reductions requirements on the FCPP.

On June 2, 2014, the U.S. EPA issued a proposed rule setting guidelines for reduction of greenhouse gas (GHG) emissions from existing coal-fired power plants.⁴⁷ This proposal is known as the Clean Power Plan. Generally, the rule would require a 30 percent nationwide reduction of GHG emissions from existing coal fired power plants by 2030. The rule does not propose GHG reductions from existing coal fired power plants located on tribal lands.⁴⁸ However, EPA is taking comment on how to address GHG emissions from these sources.⁴⁹ EPA will issue a final rule on GHG reductions from existing coal plants on tribal lands by June 2015.⁵⁰ As such, the DEIS must assess the reasonably foreseeable impact of mandatory GHG reductions requirements on the FCPP. Independently, the Clean Power Plan’s 30% reduction

⁴⁵ See 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* (May 2013) (attached as Exhibit 23).

⁴⁶ See, e.g., United Nations Intergovernmental Panel on Climate Change, *Renewable Energy Sources and Climate Change Mitigation* (2012) (attached as Exhibit 28).

⁴⁷ EPA’s Clean Power Plan Proposed Rule, 79 Fed. Reg. 34830.

⁴⁸ *Id.* at 34854.

⁴⁹ *Id.*

⁵⁰ *Id.*

should serve as a reasonable benchmark for gauging carbon mitigation alternatives or mitigation measures at the mine and power plant complex. 40 C.F.R. §§ 1500.2(c), (f), 1502.1, 1502.14, 1508.20, 1508.25(b)(2), (3).

Regardless, based on the proposed rule, the DEIS should assume that at least a 30 percent reduction of GHG emissions will be required from coal-fired power plants on the Navajo Nation from 2005-2030. Operationally, this can be done through various mechanisms, e.g., by improving the efficiency of the power plant's operations, capturing and marketing methane emissions from the mine, or mandating lower power plant capacity factors and replacing that power with energy efficiency and clean energy programs.

Of the three coal-fired power plants located on tribal lands in the United States, two of them are located on the Navajo Nation—the FCPP and the Navajo Generating Station (“NGS”).

The FCPP is one of the largest coal fired power plants in the western United States. In 2012, the Four Corners power plant consisted of 5 units with 2,060 megawatts (MW) of generating capacity emitting an annual average of 15,439,236 tons per year of CO₂e. DEIS at ES-iii. Of this total, Units 1-3 at the FCPP emitted an annual average of approximately 4,042,526 tons per year of CO₂e, while units 4-5 emitted an annual average of approximately 11,396,710 tons per year.⁵¹ On December 31, 2013 Units 1-3 ceased operation, resulting in a 17 percent reduction of GHG emissions at the FCPP.⁵²

NGS is the largest coal fired power plant in the western United States with a generating capacity of 2,250 MW. 78 Fed. Reg. 8275. Each of the three units at NGS is rated at 750 MW.⁵³ In 2012 NGS emitted 15,474,761 tons of CO₂e.⁵⁴ NGS does not have a final enforceable requirement to cease operation of any of its three units or reduce its emissions of GHGs.

In summary, in 2012, the combined CO₂e emissions from the FCPP and NGS amounted to 30,913,997 tons. In 2014, the FCPP reduced its emissions by 17 percent. Thus, it is reasonably foreseeable that the Navajo Nation will need to achieve an additional 13 percent reduction of CO₂e or 5,231,663 tons per year. This reduction could be achieved by the retirement of either FCPP Unit 4 or 5 by 2030.

Based on the Clean Power Plan, the DEIS should assume that the federal government will impose a 30 percent GHG reduction requirement on the FCPP. The DEIS states in several places

⁵¹ *Id.*

⁵² The DEIS incorrectly reports the greenhouse gas reduction as a 26 percent reduction. In fact, the reduction is only 17 percent. *See*, Expert Report of Victoria Stamper (attached as Exhibit 29).

⁵³ *Id.*

⁵⁴ <http://ghgdata.epa.gov/ghgp/main.do>

the lease between APS and the Navajo Nation prohibits the tribe from adopting regulations applying to FCPP. DEIS at 4.5-4, 4.8-3. Thus, in the event the Navajo Nation adopted a tribal implementation plan, it would not be able to mandate emission reductions at the FCPP. The same is true at NGS.⁵⁵ Therefore, the DEIS should not defer an analysis of GHG reductions at FCPP until the adoption of a tribal implementation plan and instead should assume that the FCPP will likely be regulated directly by the federal government's mandate for a 30 percent reduction by 2030. In light of the foregoing, the DEIS is deficient because it fails to assess the impact of the Clean Power Plan on the FCPP and also fails to fully assess the reasonably foreseeable alternative of the retirement of either unit 4 or 5 at the FCPP by 2030.

Further, OSM is required to consider and ameliorate GHG pollution by law. Secretarial Order 3226 (January 19, 2001) ("Order") commits the Department of the Interior to address climate change through its planning and decision-making processes. The Order provides that "climate change is impacting natural resources that the Department of the Interior ("Department") has the responsibility to manage and protect." Sec. Or. 3226, § 1; *see also* Sec. Or. 3289 Amend. No. 1 (Feb. 22, 2010). The Order also "ensures that climate change impacts are taken into account in connection with Department planning and decision making." *Id.* The Order obligates BLM to "consider and analyze potential climate change impacts" in four situations: (1) "when undertaking long-range planning exercises"; (2) "when setting priorities for scientific research and investigations"; (3) "when developing multi-year management plans, and/or" (4) "when making major decisions regarding the potential utilization of resources under the Department's purview." *Id.* at § 3. The Order specifically provides that "Departmental activities covered by this Order" include "management plans and activities developed for public lands" and "*planning and management activities associated with oil, gas and mineral development on public lands.*" *Id.* (emphasis added). The Order underscores the obligation of OSM to fully assess a Unit 4/5 retirement alternative and renewable energy alternatives to burning coal at FCPP. Unfortunately, the DEIS is deficient because it fails to fully assess either alternative.

d. OSM Fails To Consider The Necessity For Ecological Resiliency To Withstand The Ongoing Impacts Of Climate Change

Beyond mitigating climate change by reducing contributions of GHG pollution to the atmosphere, the agency can also help promote ecological resiliency and adaptability by reducing external anthropogenic environmental stresses as a way of best positioning communities to withstand what is acknowledged as ongoing and intensifying climate change degradation. Such work, of course, requires OSM to actually take a hard look at climate change impacts to the region, including the incremental impact caused by the power plant's past, present, and future GHG pollution emissions.

Thus, OSM has an obligation – independent of its duty to consider the Proposed Action's contribution to climate change – to consider how the Proposed Action is contributing to the ability of the area to withstand climate change. Resilience is "an ability to recover from or adjust

⁵⁵ <http://bigstory.ap.org/article/carbon-standards-reservation-plants-delayed>

easily to misfortune or change.”⁵⁶ In the context of climate change and the many resultant impacts, such as the alteration to the biosphere and impairments to human health, the resiliency of our landscapes and a community’s ability to respond and adapt to these changes takes on a new magnitude of importance.

This analysis is of particular importance given the increasingly severe ways in which climate change is already impacting the Southwest.⁵⁷ As noted, the Navajo Nation is experiencing increased temperatures and drought which are changing the way of life for Navajo people.⁵⁸ Indeed, CEQ expressly noted that “[a]gencies should also consider the particular impacts of climate change on vulnerable communities where this may affect the design of the action or the selection among alternatives.” CEQ, Draft Guidance at 8. “[S]overeign tribal governments with legal rights to reservations and trust resources are affected by ecological changes on the landscape in ways that many Americans are not.” CEQ, Draft Guidance at 8.

Finally, OSM must adequately consider the cumulative impacts of GHG emissions in the region. “The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” *Ctr. for Biological Diversity*, 538 F.3d 1172, 1217. Accordingly, in addition to considering the specific direct, indirect, and cumulative GHG pollution emissions from the FCPP power plant, OSM must also consider aggregate, cumulative GHG emissions from all sources within the region, including the San Juan Generating Station, a stone’s throw to the north of the FCPP, and the NGS, just across the border, on the Navajo Nation, in Arizona, as well as the intensive oil and gas development underway in the area. The agency’s failure to assess cumulative impacts, particularly, as here, the cumulative impacts of climate change, “impermissibly subject[s] the decisionmaking process contemplated by NEPA to ‘the tyranny of small decisions.’ ” *Kern*, 284 F.3d at 1078 (citation omitted).

2. OSM Failed To Take A Hard Look At The Project’s Impacts To Public Health

In our scoping comments, the Conservation Groups requested a public health study to evaluate the legacy of pollution and public health impacts that the Navajo Mine and FCPP have inflicted on surrounding communities.

Given the nearly 50 year history of the FCPP and the high levels of pollution from the facility, including, notably, that the FCPP is a top coal plant emitter of NOx in

⁵⁶ MERRIAM-WEBSTER COLLEGIATE DICTIONARY (11th ed. 2008).

⁵⁷ See Climate Assessment (attached as Exhibit 17).

⁵⁸ Julie Nania & Karen Cozzetto, et. al, *Considerations for Climate Change and Variability Adaptation on the Navajo Nation* (March 2014) (attached as Exhibit 30); Bobby Magill, *The Navajo Nation’s Shifting Sands of Climate Change*, Climate Central (May 28, 2014) (attached as Exhibit 31).

the U.S. – with an estimated 44,649 tons of emissions per year – the subject EIS should include a thorough human health assessment. Such an assessment should further include relevant data from Center for Disease Control, EPA, Navajo Nation, and Indian Health Services, as well as information from the states of Utah, Colorado, New Mexico, and Arizona. Moreover, the Navajo Nation should be provided specific studies that evaluate Navajo Nation human life expectancies compared to the general U.S. population, including mortality rates and rates for diseases such as diabetes, cancer, respiratory, and heart disease. Accordingly, the EIS should provide comprehensive analysis of human health and other environmental factors that critically evaluate the impacts from the subject coal facilities. Among other things, the EIS should evaluate if there are disproportionate health impacts that may be occurring to the people of the Four Corners Region.⁵⁹

This request followed earlier, and repeated requests. The Conservation Groups have consistently commented in earlier NEPA analyses for the region (including Desert Rock Energy project DEIS, Navajo Mine Expansion EA) that public health studies for the region remain inadequate and unacceptable. Moreover, throughout these comments, whether with regard to water quality, air quality, coal combustion waste, or other issues, we have emphasized that coal operations may cause potentially significant public health impacts—in particular in light of total, cumulative impacts caused by multiple public health impact vectors that have caused persistent impacts for the past 50 years, impacts that may persist for an additional 25 years. Unfortunately, the Project DEIS does not deviate from gross mischaracterizations and unsupported claims concerning public health, ignoring the 50-year legacy of FCPP and Navajo Mine that have contributed to mercury deposition throughout the region’s waterways, high human respiratory problems, as well as numerous other health issues.

In addition to the Conservation Groups, the Navajo Nation has raised concerns over the lack of public health data for the region. Navajo Nation comments to the USEPA on the Federal Implementation Plan for BART for FCPP included the following (pertaining also to Navajo Generating Station):

The Navajo Nation recognizes that pollution and human exposure to environmental hazards are important factors in assessing impacts of these plants and for framing a rule to meet the goal-oriented progress towards pristine air conditions in federal Class 1 mandated by the CAA. Furthermore, the Navajo Nation expects that within each implementation phase of the Regional Haze Program, there will be strong integration of health assessments and studies which are interrelated to the goal of promoting a strong economy and healthy environment and are vital to the sovereignty of the Navajo Nation. The USEPA is encouraged to pursue health studies in collaboration with the Navajo Nation to study local risks associated with exposure to criteria pollutants, indoor air pollutants, and other contributing air pollutants, from which improved public

⁵⁹ Conservation Groups’ Scoping Comments at 58.

health and effective rulemakings under the CAA may be achieved.

USEPA proposes that BART determinations will improve public health in addition to improving visibility. We can anticipate that the same stance on improving public health will be included in the forthcoming NGS proposed rule. On that issue the Navajo Nation provides the following comments:

- 1. Very little public health data is available in the Four Corners region and on the Navajo and Hopi reservations to establish a meaningful public health baseline;**
- 2. A meaningful public health baseline is critical to measuring the impacts to public health for any BART option or future USEPA rulemaking;**
- ...
- 4. The Navajo Nation urges USEPA to generate and collect more public health research/data that characterizes the actual public health impacts attributed to FCPP and NGS; and actual health impacts attributed to other sources.⁶⁰**

In short, a meaningful public health baseline for the Four Corners region does not exist. Conservation Groups' requests for data from EPA, Center for Disease Control and Indian Health Services in evaluating the correlation between public health and FCPP/Navajo Mine remain ignored. The DEIS goes to great length to let the public know how fortunate we are that reduced emissions from FCPP will now improve our health, but the legacy of past operations combined with another 25 years of continued operation of over two thirds of the plant, continue to contribute to, if not cause, potentially significant public health issues.

The DEIS discussion of Sensitive Receptors includes recognition of certain population groups considered more sensitive to air pollution, including "those with cardio respiratory diseases such as asthma and bronchitis." DEIS at 4.1-66. Despite this recognition that perhaps there are serious health issues associated with living in proximity to FCPP/Navajo Mine, the DEIS does not contain a scientific, data-driven approach to evaluation of public health issues, instead callously dismissing impacts to people – including the elderly and children – who live in the region.

OSM must consider the direct, indirect, and cumulative impacts of allowing the Navajo Mine and FCPP to pollute for another 25 years, but the DEIS fails to do so. See 40 C.F.R. §§ 1508.25(c); 1508.7; *Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1172 (10th Cir. 2002) *as modified on reh'g*, 319 F.3d 1207 (10th Cir. 2003). In particular, OSM must consider public health in light of cumulative impacts in the region. Cumulative impacts include

⁶⁰ Letter from Ben Shelly, President, Navajo Nation to Dr. Anita Lee, United States Environmental Protection Agency, Region IX, Navajo Nation Comments on the October 19, 2010, Notice of Proposed Rulemaking and the February 25, 2011 Proposed Supplemental Rulemaking Implementing BART at Four Corners Power Plant: Navajo Nation, EPA-R09-OAR-2010-0683, FRL-9213-7 and FRL-9269-4 (June 2, 2011) (emphasis added) (attached as Exhibit 32).

the “incremental impact of the action when added to other *past*, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.7. In order to add the incremental impacts of the Proposed Action to past, present, and future actions, OSM must first determine what the impacts from those other actions are. “A proper consideration of the cumulative impacts of a project requires “some quantified or detailed information; . . . [g]eneral statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided.” *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004). The analysis “must be more than perfunctory; it must provide a useful analysis of the cumulative impacts of past, present, and future projects.” *Id.* at 994.

The Project DEIS presents a classic case of “perfunctory” analysis. Instead of describing past impacts from 50 years of Project operation and what those impacts have done over that time period populations in the area, or performing a public health study as requested, the Project DEIS summarizes a few studies in a couple of paragraphs, brushes them off as not specific enough to determine impacts with certainty, and then summarily concludes that health impacts are therefore minor. DEIS at 4.17-4. For example, the DEIS quotes a recent Community Health Profile, which concludes:

San Juan County’s most recent Community Health Profile includes a comprehensive overview of health indicators including respiratory health (San Juan County 2010). This study found that 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. This study found that San Juan County residents are 34 percent more likely to have asthma-related medical visits after 20 parts per billion increases in local ozone levels (NMDH 2007).

DEIS at 4.17-4.

Instead of considering the impacts of the Project in that context, OSM considers the Proposed Action in a vacuum, conducting a risk analysis solely based on future air emissions from FCPP. *See* DEIS at 4.17-23-24. Based entirely on that analysis, which did not take into account possible impacts from water contamination or other exposure pathways, OSM concludes that the “effects are minor.” DEIS at 4.17-24. The DEIS’s cumulative impacts analysis is no better, focusing again solely on air emissions from FCPP, and using primarily “default exposure assumptions” rather than actual data from the site to assess impacts. DEIS at 4.18-53.

Even where OSM concedes that pollution exceeds EPA standards for residential land uses, OSM refuses to consider the Project’s contribution, and the cumulative impacts of those exceedances, instead brushing the issue aside; “Arsenic is known to be high in the soils of the southwestern U.S. Therefore, cumulative health risks from deposition are minor.” DEIS at 4.18-53 (citation omitted). Arsenic is also carcinogen, with serious impacts to humans and animals with increased

exposure.⁶¹ The fact that arsenic levels are already high should cause OSM to pay special attention to additional contributions, not serve as an excuse to brush aside impacts. Furthermore, OSM fails to consider whether the high levels are a result of the Project, and importantly, whether different alternatives, or at the least, mitigation measures could address the problem.

OSM similarly dismisses the Project's contribution to decreased ambient air quality, summarily stating that the counties within the air basin are attainment areas for criteria pollutants, and apparently therefore assuming that no further analysis is necessary. DEIS at 4.18-54. Compliance with NAAQS does not excuse OSM from its obligation to consider the direct, indirect, and cumulative impacts on public health from the Project. *S. Fork Band Council v. U.S. Dept. of the Int.*, 588 F.3d F.3d 718, 726 (9th Cir. 2009) (citing *Klamath-Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 998 (9th Cir. 2004)) (BLM's argument that it need not consider impacts because a facility operated under a state permit issued pursuant to the Clean Air Act is "without merit"); *Southern Oregon Citizens Against Toxic Sprays v. Clark*, 720 F.2d 1475, 1480 (9th Cir. 1983) (another agency's consideration of environmental impacts does not relieve BLM of its duty to consider effects; "BLM must assess independently [the impacts]"); *see also Calvert Cliffs' Coordinating Comm., Inc. v. U. S. Atomic Energy Comm'n*, 449 F.2d 1109, 1123 (D.C. Cir. 1971) ("Certification by another agency that its own environmental standards are satisfied involves an entirely different kind of judgment.").

The DEIS then attempts to take credit for an assumption that air emissions would be reduced in San Juan County and respiratory health status of residents, somehow justifying the continued operation of FCPP for another 25 years from 2016:

The cumulative public health effects also depend on the ambient air quality in the San Juan Air Basin and the respiratory health status of residents in the area. San Juan County and the other counties within the San Juan Air Basin are all designated as attainment areas for criteria pollutants. With the implementation of BART at FCPP, emissions from FCPP were reduced in comparison to baseline emissions. Given current regulatory trends, it is likely that allowable PM and ozone precursor emissions for all sources in San Juan County, including Navajo Mine, would be reduced to meet tighter ambient air quality standards for ozone and PM_{2.5}. As a result, ambient air concentrations of ozone and PM in San Juan County would be lower. Overall, there would be minor cumulative public health effects of the Proposed Action because there would be no measureable change to ambient air quality compared to baseline conditions, and there would be a reduction in FCPP emissions as a result of compliance with EPA's BART rule.

OSM's perfunctory conclusion that "there would be minor cumulative public health effects of the Proposed Action because there would be no measureable change to ambient air quality compared to baseline conditions" flies in the face of the entire NEPA process, and in particular fails to satisfy OSM's duty to take a hard look at direct, indirect, and *cumulative* impacts. 40

⁶¹ *See, e.g.*, Agency for the Toxic Substances and Disease Registry, *Public Health Statement: Arsenic* (August 2007) (available at: <http://www.atsdr.cdc.gov/ToxProfiles/tp2-c1-b.pdf>).

C.F.R. §§ 1508.25, 1508.7, 1508.8. As stated above, before OSM can assert that the status quo – or even an improvement over the status quo – will not cause impacts to public health, OSM must determine that the future impacts “when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions,” will not cause impacts. 40 C.F.R. § 1508.7. OSM’s cursory statement of minor impacts does not take into consideration whether the past impacts actually caused public health impacts, whether the future impacts will cause public health impacts, and most importantly, whether the future impacts on top of the past impacts will cause significant impacts. Simply, OSM has not “created a record sufficient to allow us to evaluate whether its ‘no effects’ determination is reasonable.” *California Wilderness Coalition v. U.S. Dept. of Energy*, 631 F.3d 1072, 1101 (9th Cir. 2011).

Moreover, OSM cannot shun its duty to address cumulative impacts by summarily stating that impacts will not change from previous conditions, or even that they will be potentially be ameliorated. As the Ninth Circuit has explained regarding a rule *improving* fuel efficiency standards: “simply because the Final Rule may be an improvement over the [status quo] does not necessarily mean that it will not have a ‘significant effect’ on the environment.” *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1224 (9th Cir. 2008); 40 C.F.R. § 1508.27(b)(1) (“a significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial”).

The Conservation Groups request that OSM completely update the DEIS to establish a meaningful public health baseline identifying the multitude of known impacts from humans living in proximity to FCPP/Navajo Mine and SJGS/San Juan Mine and allow public comment on the same.

3. OSM Failed To Take A Hard Look At The Project’s Impacts To Scarce Water Resources

One hundred percent of New Mexico continues to suffer from drought conditions, with 85 percent of the state in severe drought.⁶² The current drought conditions have persisted for four years and have revealed just how precious water resources in New Mexico are for the economy and way of life of New Mexicans.⁶³ An article in Smithsonian released on June 20, 2014 states that Arizona could be out of water in 6 years due to prolonged drought and expanding human population.⁶⁴ In addition, cities in Arizona (Phoenix and Tucson) could be forced to cut water

⁶² See National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration, United States Drought Monitor (available at: <http://droughtmonitor.unl.edu/MapsAndData/DataTables.aspx?NM> (last accessed June 9, 2014)).

⁶³ *Id.*

⁶⁴ Colin Schultz, *Arizona Could be Out of Water in Six Years*, Smithsonian.com, June 20, 2014, (available at: http://www.smithsonianmag.com/smart-news/arizona-could-be-out-water-6-years-180951814/?utm_source=facebook.com&no-ist (last accessed June 23, 2014)).

deliveries from the Colorado River and Lake Mead with uncertainties over water supplies to the Central Arizona Project.⁶⁵ According to data used by the New York Times, Lake Powell holds 42 percent of its capacity and Lake Mead holds approximately 45 percent of its capacity.⁶⁶

If upstream states continue to be unable to make up the shortage, Lake Mead, whose surface is now about 1,085 feet above sea level, will drop to 1,000 feet by 2020. Under present conditions, that would cut off most of Las Vegas's water supply and much of Arizona's. Phoenix gets about half its water from Lake Mead, and Tucson nearly all of its.⁶⁷

Navajo Mine and FCPP use a significant amount of water. BHP Billiton holds the water rights for the water used at the Navajo Mine and the FCPP.⁶⁸ DEIS 4.12-6. BHP's right allows them a diversionary right of 51,600 acre-feet annually, with a consumptive right of 39,000 acre-feet annually for waters drawn from the San Juan River. DEIS at 4.5-32. Put another way, the mine and power plant allow the equivalent of a 71 cubic foot per second ("cfs") diversion, with a continuous 54 cfs of that being consumed. If even more water is needed, FCPP also has an agreement with Jicarilla Apache Water Authority for supplemental water. *Id.* In addition to surface water use, the Project "would result in the loss of coal seam aquifers in the Fruitland Formation and a reduction in groundwater quantity as a result of mining operations." DEIS at 4.12-6.

The DEIS concedes that water withdrawals from the San Juan River are already of great concern, especially given reasonably foreseeable increased demands on the river for residential, municipal, and agricultural uses. DEIS at 4.12-3. "Future water development within the basin is anticipated to occur and has the potential to affect species dependent on the flow regime of the San Juan River." DEIS 4.12-3. OSM fails to take the next step, however, of considering the impact of large withdrawals for mining and power production at the Navajo Mine and FCPP and how those could be mitigated.

In addition, decreased flows have substantial impacts to water quality. As flows decrease contaminants become more concentrated which can result in an increase of water quality

⁶⁵ Michael Wines, *Arizona Cities Could Face Cutbacks in Water From Colorado River*, *Officials Say*, New York Times, June 17, 2014 (available at: <http://www.nytimes.com/2014/06/18/us/arizona-cities-could-face-cutbacks-in-water-from-colorado-river-officials-say.html> (last accessed June 23, 2014)) (attached as Exhibit 33).

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ Interestingly, the ownership of these water rights will remain with BHP Billiton despite the fact that they will no longer own or operate the mine, and have no interest in FCPP. DEIS at 4.12-6.

standard violations. The DEIS fails to analyze the water quality impacts of continued withdrawal of water from the San Juan River.

As the San Juan River is a principal tributary of the Colorado River, the continued primary use of San Juan River to cool FCPP and the San Juan Generating Station represents a significant problem. Scientists have highlighted the association between climate change and impacts to water, worsening dust storms and rising human health problem in the Southwest:

Some researchers say climate change in the Southwest is also essentially “water change” because the biggest, most difficult adjustments may be forced upon the region by worsening water scarcity.

Climate scientists have described the desert Southwest as a hotspot for climate change. Climate data show that much of the Southwest has been heating up more than other regions of the country, and scientists say the region's dryness appears to be contributing because in wetter areas, some of the sun's heat would be used up evaporating water vapor from the soil.

Scientists also have found that recent droughts are worsening dust storms. Hotter temperatures and more frequent droughts are projected to worsen smog and air pollution in the future, posing health risks, particularly for those who are most vulnerable — the elderly, those with health problems and the poor.⁶⁹

The DEIS ignores the severity of the associated impacts between climate change and drought plaguing the U.S. Southwest. APS's quest to retrofit and continue operations at FCPP will require more water and result in more water scarcity.

Despite this combination of scarce resources, and large consumptive use, the DEIS fails to take a hard look at the Project's impact to water resources, not only in its consumptive use, but the impacts the Project has to water quality, which effectively decreases the amount of water in the system available for higher uses. First, OSM fails to consider the impact to water quality as a result of the installation of SCR. Second, OSM fails to look analyze reasonably foreseeable actions under the Clean Water Act. Finally, OSM fails to take a hard look at numerous other ways in which the Project is polluting ground and surface waters.

⁶⁹ Ian James, *Vanishing Water: An Already Strained Water Supply, Threatened by Climate Change*, Desert Sun, Desert Sun, (available at: <http://www.desertsun.com/longform/news/environment/2014/06/14/global-warming-southwest-water-supply-drought/10418637/> (last accessed June 23, 2014)) (attached as Exhibit 34).

a. OSM Failed To Consider The Impact To Water Quality Resulting From The Installation Of Selective Catalytic Reduction On The Remaining Units At FCPP.

Glaringly missing from OSM's analysis on water quality impacts is the DEIS's complete lack of information on how water quality will change given the installation of Selective Catalytic Reduction on units 4 and 5 for any post-2016 operation. DEIS at 4.5-41. OSM asserts: "Neither of these completed Federal actions [mine transfer and BART] would change the affected environment for water resources/hydrology." DEIS at 4.5-41. This conclusion, however, simply ignores basic principles of physics.

Without SCR, significant amounts of pollutants have been allowed to escape into the air with numerous impacts to air quality, water quality, public health, wildlife, and the environment generally. SCR will improve those impacts. However, SCR does not make these pollutants magically disappear. Rather, it transfers them from the plant's stack emissions to its coal ash waste, with likely impacts to water quality. These impacts are made even more likely – if not virtually certain – if OSM is entirely failing to consider the issue as its specific conclusion that SCR installation will not affect water resources indicates.

As noted above, once an agency chooses to "trumpet" the benefits of an action, it also must disclose the related costs. *Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983) ("There can be no hard look at costs and benefits unless all costs are disclosed."). Although SCR is an improvement to current operations, OSM has nevertheless failed to address the related impacts to water quality that it could cause if the Proposed Action is chosen and operations continue for another 25 years.

Despite the fact that OSM includes the BART decision as part of its "baseline," OSM "trumpet[s]" that decision's benefits. *Id.*; see, e.g., DEIS at 4.1-67, 4.1-69. OSM calculates that arsenic will be reduced by 96 percent, lead by 96 percent, mercury by 81 percent, and selenium by 95 percent, among other heavy metal reductions. DEIS at 4.1-67-69. These figures are striking – both because of the positive impact that these decreases will have on air quality, but in the context of water quality, they are also striking because such massive decreases in air emissions mean that those heavy metals must necessarily go into the coal ash waste stream. Historically, units 4 and 5 contributed 2,412 pounds per year of arsenic to air emissions; post-2014, they will contribute only 124 pounds per year. Consequently, 2,288 pounds per year of arsenic that was not previously in the coal ash waste stream will now be present there. DEIS at 4.1-69. In addition, there will be 2,281 additional pounds of lead per year, 352 pounds of mercury, and 7,083 pounds of selenium per year added to the CCW, as well as numerous other hazardous pollutants. DEIS at 4.1-69-70. OSM's failure to consider these contributions in the context of its hard look at impacts—and consideration of alternatives and mitigation measures for coal ash waste disposal—is arbitrary and capricious and must be remedied.

b. OSM Failed To Analyze Reasonable Foreseeable Actions Under the Clean Water Act

At the public meetings, SJCA raised the question as to why the NPDES permit for FCPP was suspiciously absent from the DEIS. Cardno told SJCA that EPA requested that the NPDES permit for FCPP be separate from the DEIS.⁷⁰

Despite the claim that the NPDES permit for FCPP will be addressed under NEPA separately, the DEIS states:

Should this alternative be implemented, FCPP would continue to operate in accordance with the existing NPDES permit and the SWPPP (Stormwater Pollution Prevention Plan). Therefore, stormwater discharge during continued operations would have no adverse effects on water quality.

DEIS at 4-5-59. For the reasons stated below, OSM must include an analysis of the FCPP NPDES permit reissuance in the DEIS. As we noted above relative to NAAQS and air quality protection, the mere fact that EPA may regulate water quality via a reissued NPDES permit does not obviate OSM's responsibility to take a hard look at direct, indirect, and cumulative water quality impacts. *S. Fork Band Council v. U.S. Dept. of the Int.*, 588 F.3d F.3d 718, 726 (9th Cir. 2009) (citing *Klamath-Siskiyou Wildlands Center v. BLM*, 387 F.3d 989, 998 (9th Cir. 2004)) (BLM's argument that it need not consider impacts because a facility operated under a state permit issued pursuant to the Clean Air Act is "without merit"); *Southern Oregon Citizens Against Toxic Sprays v. Clark*, 720 F.2d 1475, 1480 (9th Cir. 1983) (another agency's consideration of environmental impacts does not relieve BLM of its duty to consider effects; "BLM must assess independently [the impacts]"); *see also Calvert Cliffs' Coordinating Comm., Inc. v. U. S. Atomic Energy Comm'n*, 449 F.2d 1109, 1123 (D.C. Cir. 1971) ("Certification by another agency that its own environmental standards are satisfied involves an entirely different kind of judgment.").

Table ES-2 of the DEIS lists Federal actions to be taken related to the Four Corners Power Plant. Table ES-2 only identifies certain actions to be taken by the EPA under the Clean Air Act. The DEIS fails to identify or analyze upcoming mandated EPA actions required under the Clean Water Act at the Four Corners Power Plant. OSM has a duty to list and analyze "all Federal permits, licenses, and other entitlements which must be obtained in implementing the proposal." 40 C.F.R. §1502.25(b). As discussed more fully below, the owners of the FCPP are under a current and future duty to obtain a re-issued NPDES permit. The DEIS fails to analyze the re-issuance of an NPDES permit for the Four Corners Power plant and also fails to assess the environmental impacts of unpermitted water pollution discharges from the plant. A full analysis of environmental consequences of the continued operation of the FCPP serves as the scientific and analytic basis for the DEIS. 40 C.F.R. §1502.16. Failure to analyze water pollution issues at the FCPP is a significant oversight of the DEIS. As such, OSM must "prepare and circulate a

⁷⁰ Personal communication between Mike Eisenfeld, SJCA, and Dan Tormey, Project Manager for DEIS, Cardno, Public Meeting, Durango Colorado, May 3, 2014.

revised draft” of the DEIS for public comment that includes this critical and requisite analysis. 40 C.F.R. §1502.9(a).

Moreover, the DEIS states the following:

The Proposed Action, including the continuing operations of Navajo Mine, FCPP, and the transmission lines, would not result in major adverse effects to water resources or hydrology. Therefore, no additional mitigation is recommended.

DEIS at 4.5-64.

As noted above, there is no scientific or analytic basis in the DEIS to conclude that there will be “no major effects to the water resources or hydrology” and that “no additional mitigation is recommended.” The DEIS conducts no such analysis of the Clean Water Act/NPDES permitting issues associated with continued operation of the FCPP for an additional 25 years. For the reasons discussed more fully below, OSM’s conclusion that water resources will not adversely impacted or that no further mitigation is necessary to protect such resources is arbitrary, capricious, and unsupported by the administrative record.

- i. *The DEIS must analyze a re-issued NPDES permit for the FCPP*

EPA Region 9 is the Clean Water Act permitting authority for the FCPP because it is located on Indian lands. On April 3, 2001, EPA Region 9 issued the current NPDES permit for the FCPP, NPDES Permit No. NM0000019.⁷¹ The FCPP discharges pollutants via Morgan Lake to the No Name Wash, a tributary of the Chaco River, which is tributary to the San Juan River.⁷² The current NPDES permit became effective on April 7, 2001 and expired on April 6, 2006. To date, EPA has not issued a renewal NPDES permit for the FCPP for over 13 years. The owners/operators of the FCPP submitted a renewal NPDES permit application to EPA in late 2005.⁷³

Congress has determined that NPDES permits may only be issued “for fixed terms not exceeding five years.” 33 U.S.C. § 1342(b)(1)(B). EPA’s permit program “shall be subject to the same terms, conditions, and requirements as apply to a State permit program and permits issued thereunder” including the maximum 5-year term. 33 U.S.C. § 1342(a)(3). Thus, EPA does not have the statutory authority to administratively extend an NPDES permit beyond the statutory 5-year time period. *ONRC Action v. Columbia Plywood, Inc.*, 286 F.3d 1137, 1146 (9th Cir. 2002, dissent by Reinhardt). Likewise, a continuing shield under 40 C.F.R. §122.6 may in no event last more than five years, the term of a properly issued renewal permit under 33 U.S.C.

⁷¹ APS’ Current NPDES Permit NM0000019 (attached as Exhibit 35).

⁷² EPA May 8, 2012 Inspection Report at 1 (attached as Exhibit 36).

⁷³ EPA Letter to APS re: NPDES Permitting (attached as Exhibit 37).

§1342(b)(1)(B) and 40 C.F.R. § 122.6. Permit #NM0000019 expired on April 6, 2006 and thus may only be administratively extended by EPA through April 6, 2011. EPA's attempt to administratively extend Permit NM0000019 and the continuing shield beyond 5 years is illegal. EPA has refused to act for almost ten years, and by its inaction, attempted to allow APS and the other FCPP owners to receive not only the equivalent of one additional NPDES permit (until 2011), but the equivalent of *two* additional permits, with no further or additional review to ensure the efficacy of the permits terms and conditions. In doing so, EPA has illegally ignored the plain language of Congress limiting the term of NPDES permits to 5 years and risked water quality protections. Thus, Permit NM0000019 became void by operation of law on April 7, 2011. Accordingly, the owners/operators of the FCPP are currently discharging water pollution from the plant without a permit in violation of Section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a). This underscores the point made above that OSM has an independent duty, pursuant to NEPA, to take a hard look at direct, indirect, and cumulative water quality impacts, as well as reasonable alternatives to mitigate water quality impacts. Regardless, EPA's legal duty to take action on the APS's pending NPDES permit application is a reasonably foreseeable action that the DEIS fails to address or analyze. The DEIS fails to analyze this issue, or any other issue, regarding the discharge of water pollution into receiving waters from the FCPP. Therefore, we request that OSM "prepare and circulate a revised draft" of the DEIS. 40 C.F.R. §1502.9(a).

EPA's failure to timely issue a renewal NPDES permit for the FCPP constitutes an unreasonable delay for rendering its decision under the Administrative Procedures Act, 5 U.S.C. § 558(c). SJCA and the Center for Biological Diversity have issued a notice of intent to sue EPA and/or the owners of the Four Corners Power Plant related to these NPDES permitting issues.⁷⁴ The DEIS fails to evaluate the reasonably foreseeable environmental and financial impacts of a re-issued NPDES permit on the FCPP, and the environmental impacts of FCPP's water pollution discharges resulting from the plant's continued operation for an additional 25 years.

A new NPDES permit could have serious implications for continued operations. For example, NNEPA has indicated that it is conducting assessments of receiving waters around the Navajo Mine and FCPP.⁷⁵ NNEPA indicated that it expects to find that some of those waters are not meeting water quality standards.⁷⁶ The results of the assessments could impact permit limits and thus how FCPP is able to operate. OSM must address the impacts of more stringent permit limits both on continued operations and with regard to water quality more generally.

Some of the related issues associated with a re-issued NPDES permit are discussed more fully below.

⁷⁴ EPA/APS 60 Day Notice Letter (attached as Exhibit 38).

⁷⁵ Personal communication between Rachel Conn, Amigos Bravos, and Steve Austin, NNEPA (June 23, 2014).

⁷⁶ *Id.*

ii. *The DEIS must analyze the impacts of new CWA regulations.*

It is important for the Clean Water Act permitting issues to be evaluated in the DEIS because the Clean Water Act regulations affecting coal fired power plants are currently evolving. For example, on May 16, 2014, EPA issued its final cooling water intake structure regulations for coal-fired power plants under Section 316(b) of the Clean Water Act, 33 U.S.C. §1326(b).⁷⁷ Additionally, the EPA is also under a consent decree to issue final rules updating their Effluent Limitation Guidelines (“ELGs”) for coal fired power plants by September 30, 2015. As will be discussed below, the DEIS should evaluate the impact of these reasonably foreseeable current and future regulatory changes on the FCPP, including, but not limited, the economic viability of continuing to operate the FCPP an additional 25 years.

a. *The intake structure regulations and their impact on the FCPP.*

The FCPP operates a river station, which pumps water from the San Juan River two miles to Morgan Lake.⁷⁸ The FCPP uses cooling water intake structures utilizing a design flow withdrawal of greater than 50 million gallons/day of water from the San Juan River, of which greater than 25 percent is used exclusively for cooling purposes the power plant.⁷⁹ The FCPP cooling system is a “once through” cooling system in that the water is not re-circulated for use in a closed loop containment system.⁸⁰ Instead, the cooling water passes through the system one-time and then is discharged either to Morgan Lake and/or eventually back to the San Juan River.

The FCPP has an intake structure on its cooling system where surface water is collected from the San Juan River. “The intake in the river is equipped with screens that catch debris to prevent damage to the pump system.”⁸¹ A photograph of the San Juan River intake structure is attached.⁸² The intake velocity from the river is close to 0.5 ft/s.⁸³

⁷⁷ EPA 2014 Cooling Water Intake Structure Regulation (attached as Exhibit 39).

⁷⁸ APS 2013 Revised NPDES Permit Application at 1, section 12 (attached as Exhibit 40).

⁷⁹ APS April 18, 2005 Letter to EPA at 4 (attached as Exhibit 41).

⁸⁰ *Id.*; 2001 NPDES Permit Fact Sheet at 2-3 (attached as Exhibit 42); EPA 2012 Inspection Report at 1-2 (attached as Exhibit 36).

⁸¹ APS 2013 Revised NPDES Permit Application at 1, section 12 (attached as Exhibit 40).

⁸² *See* EPA 2012 Inspection Report, Figures 23 & 25 (attached as Exhibit 36).

⁸³ APS 2013 Revised NPDES Permit Application at 4.

Cooling water is conveyed from Morgan Lake to FCPP Units 4 and 5 via a canal system.⁸⁴ Units 4 and 5 also have their own intake structures located on the cooling water canal. These intake structures consist of four sets of traveling screens and pumps: two for each unit.⁸⁵ The intake velocity for these structures is typically well above 0.5 ft/s.⁸⁶ Fish are frequently observed swimming around the Unit 4 and 5 intake structures. Fish that are impinged on the screens are collected in a bucket, with the contents being disposed of daily.⁸⁷

Cooling water intakes can cause adverse environmental impacts when aquatic organisms are drawn into a power plants cooling system and exposed to heat, pressure, mechanical systems and chemicals. This process is known as “entrainment.” Aquatic organisms can also be harmed when they are trapped against screens protecting the opening of an intake structure. This process is known as “impingement.” Section 316(b) of the Clean Water Act requires that “the location, design, construction, and capacity of cooling water intake structures reflect best technology available for minimizing adverse environmental impacts.” 33 U.S.C. § 1326(b). Under EPA’s final rule, power plants that withdraw at least 2 million gallons of water per day from waters of the United States and use at least 25 percent of that water exclusively for cooling water purposes are subject to new requirements. 76 Fed. Reg. 22174. The re-issued NPDES permit for the FCPP must impose Best Technology Available (“BTA”) requirements to reduce impingement at the FCPP.

The DEIS is grossly deficient because it fails to evaluate the following:

- i. the current baseline, and future environmental impact, of impingement and entrainment of aquatic life in the San Juan River and Unit 4 & 5 intake structures;
- ii. the current baseline, and future environmental impact, on threatened and endangered species resulting from operation of the FCPP cooling water system;
- iii. the current baseline, and future impact, of diverting over 50 million gallons per day of San Juan River surface water from the watershed for use as cooling water at the FCPP.
- iv. whether the “the location, design, construction, and capacity of cooling water intake structures [at FCPP] reflect best technology available (BTA) for minimizing adverse environmental impacts.” If not, the DEIS must identify *mitigation* measures required to be taken that comply with the Section 316(b) BTA requirements and the dates of implementation. 40 C.F.R. § 1502.16(h). The technologies evaluated in the DEIS should include, but not be limited to, dry closed cycle cooling, a true wet closed cycle re-

⁸⁴ EPA 2012 Inspection Report at 4, 11, Figure 9 (attached as Exhibit 36).

⁸⁵ *Id.* at 4.

⁸⁶ *Id.* at 2.

⁸⁷ *Id.* at 10-11, Figures 9 & 10.

circulated cooling system that relies on cooling towers, rather than Morgan Lake, as the means to cool the high temperature cooling water generated by the FCPP. A true closed cycle cooling system (wet or dry) would greatly reduce water consumption at the FCPP and alleviate many of the environmental impacts of water withdrawal from the San Juan River. True wet closed cycle systems use only 2-5% of the water of a once-through system, such as FCPP's. A dry system consumes only *de minimis* water. The DEIS should also consider capacity factor reductions and/or retirement of Units 4 & 5 as a means of compliance. The DEIS should include a binding requirement to promptly implement BTA as a mandatory mitigation measure in the DEIS to reduce harm to aquatic life. In the event OSM attempts to defer this analysis to EPA's future NPDES permit re-issuance, it should withdraw its DEIS until such time that EPA has conducted its analysis and allowed for public comment so that the DEIS is being prepared "concurrently with and integrated with" EPA's CWA Section 316(b) analysis. 40 C.F.R. §1502.25.

v. the financial impact on the price of coal fired electricity generated at the FCPP resulting from compliance with the recently promulgated Section 316(b) Clean Water Act intake structure regulations. The DEIS should also conduct a comprehensive analysis of the total cost of all reasonable foreseeable regulatory requirements, the future price of electricity generated by the FCPP as a result of compliance with these reasonable foreseeable future regulatory requirements, and an analysis of whether the electricity generated by FCPP remains price competitive and dispatchable in lieu of the costs of future upgrades.

On April 18, 2005, APS submitted a Proposal for Information Collection (PIC), which was a component of a Comprehensive Demonstration Study required for compliance with Section 316(b) of the Clean Water Act.⁸⁸ The PIC states that a one-year impingement study was performed by APS in 2005.⁸⁹ OSM must acquire the 2005 APS impingement study and make it publicly available for comment prior to finalizing the EIS. APS's April 18, 2005 letter also references technologies to reduce such impacts, a list of impingement studies performed in the vicinity of the structures and the associated physical and biological conditions, and consultations with fish and wildlife agencies. These documents must be made publicly available for comment prior to finalizing the EIS. All entrainment studies or data for the FCPP must also be made publicly available for comment prior to finalizing the EIS. Once these studies are obtained, we request that OSM re-issue the DEIS for public comment including a complete analysis of the environmental and socioeconomic impacts associated with compliance with the CWA issues identified herein. Alternatively, if OSM is unable or unwilling to obtain the requested studies, OSM should postpone the NEPA process until all impingement/entrainment studies are performed by OSM or the owners of the FCPP and the BTA alternative is selected.

⁸⁸ See Exhibit 41 at 4.

⁸⁹ *Id.* at 12.

b. The ELG regulations and their impact on FCPP

EPA is also in the process of revising its effluent limitation guidelines (“ELGs”) for coal fired power plants. Effluent limitation guidelines set enforceable pollution discharge limitation for water pollution discharges. The current ELGs applicable to Steam Electric Power Generating Point Sources are found at 40 C.F.R. Part 423. On June 7, 2013, EPA published a proposed rule to revise the power plant ELGs. 78 Fed. Reg. 34432. EPA is under a consent decree to issue a final rule on the ELGs on or before September 30, 2015. Thus, final revised ELGs are a reasonable foreseeable action that must be evaluated by OSM in the DEIS. These revised ELGs will likely govern water pollution discharges from the FCPP during at least a portion of the 25-year time period contemplated by the DEIS. As such, the DEIS should evaluate the likely impact of the new ELGs on the environment, the economics of operation of the FCPP, the cost of electricity generated by the plant and its marketability.

Steam electric power plants contribute over half of all toxic pollutants discharged to surface waters by all industrial categories currently regulated in the United States.⁹⁰ These toxic pollutants include metals, mercury, arsenic, lead, selenium, and others. Exposure to these toxic pollutants are linked to cancer, neurological damage, and ecological damage.⁹¹ EPA’s proposed ELG rule will likely impose new pollution discharge limits on various waste streams at existing coal plants, including flue gas desulfurization waste, fly ash transport water, bottom ash transport water, flue gas mercury controls, and non-chemical metal cleaning.⁹²

Again, the DEIS fails to analyze the impact of the reasonable foreseeable proposed ELGs on operation of the FCPP. The DEIS also fails to undertake an analysis of the likely and more stringent case-by-case effluent limits that would be imposed in a re-issued NPDES permit.

It is crucial that the DEIS fully evaluate the potential risks to the public health and the environment from the current, past, and future discharges from the FCPP into Morgan Lake, No Name Wash, the Chaco River, and the San Juan River. For example, local residents utilizing surface and groundwater live within 2,000 feet of Morgan Lake.⁹³ There is a publicly accessible boating dock located on Morgan Lake.⁹⁴ Consumptive fishing is commonly practiced in Morgan Lake.⁹⁵ Primary contact recreation, such as windsurfing, is not only allowed, but encouraged in

⁹⁰ EPA ELG Powerpoint at 6 (attached as Exhibit 43).

⁹¹ *Id.*

⁹² *Id.* at 11.

⁹³ EPA May 8, 2012 Inspection Report at 20, Figure 25 (attached as Exhibit 36).

⁹⁴ *Id.*

⁹⁵ *Id.*

Morgan Lake.⁹⁶ APS has admitted that Morgan Lake is a “water of the U.S.” and thus the beneficial uses of the lake must be protected from pollution discharges at the FCPP.⁹⁷ Therefore, we request that OSM perform a complete public healthy study evaluating the human health risk associated with contact with surface and groundwater in the vicinity of the FCPP.

c. OSM Failed To Take A Hard Look At Documented Water Pollution Problems At FCPP

The DEIS also fails to analyze other documented water pollution problems at the FCPP. For example, the DEIS fails to analyze or otherwise mention the following water pollution issues at the FCPP:

i. An October 4, 2007 EPA Region 9 site inspection report of the FCPP revealed seeps on the eastern bank of the Chaco River.⁹⁸ These seeps have been previously documented and are emanating from the FCPP coal ash dumps. These seeps are more fully described in a letter from APS to OSM dated April 3, 2013.⁹⁹ Thus, OSM was clearly aware of this issue prior to the issuance of the DEIS. The DEIS should collect the following information on these coal ash seeps and make it available to the public for comment prior to finalizing the DEIS: flow rate of the seeps; all water quality sampling of the seeps; immediate upstream and downstream water quality and quantity sampling of the Chaco River; an upstream and downstream biological assessment of the Chaco River; sediment samples along the path of the seeps; all assessments of remediation alternatives to eliminate/collect/treat the seep prior to discharge into the Chaco River. OSM should also explain why its DEIS failed to address this issue, as well as the other CWA issues identified in this comment letter.

ii. An EPA Region 9 site inspection report of the FCPP on May 8, 2012 states:

Total Dissolved Solids are built-up in Morgan Lake before being discharged to the receiving water. Elevated TDS may adversely impact downstream beneficial uses, however there is no criterion for TDS in the Navajo Nation Water Quality Standards.¹⁰⁰

The DEIS should collect the following information on this TDS issue and make it available to the public for comment prior to finalizing the DEIS: flow rate of the discharge; all water quality sampling of the discharge; immediate upstream and downstream water quality and quantity

⁹⁶ Windsurfing Conditions Website (attached as Exhibit 44).

⁹⁷ See Exhibit 41 at 4.

⁹⁸ EPA Inspection Report (October 4, 2007) (attached as Exhibit 45).

⁹⁹ APS letter to OSM (April 3, 2013) (attached as Exhibit 46).

¹⁰⁰ EPA 2012 Inspection Report at 4 (attached as Exhibit 36).

sampling of No Name Wash and the Chaco River; an upstream and downstream biological assessment of the No Name Wash and Chaco River; sediment samples along the path of the discharge; all assessments of remediation alternatives to treat the discharge.

iii. The May 8, 2012 EPA Inspection Report also states:

Sanitary, fly ash and FGD blowdown wastewater is not regulated in the NDPES Permit. Although there is no discrete outfall from the fly ash ponds, the ponds do have a potential to discharge to Waters of the U.S. through subsurface leaching.¹⁰¹

The DEIS should collect the following information on the ash pond discharge issue and make it available to the public for comment prior to finalizing the DEIS: all studies on the hydrological connection of the coal ash dumps with all waters of the United States; flow rate of any discharge; all water quality sampling of the discharge; immediate upstream and downstream water quality and quantity sampling in any water of the United States, including, but not limited to No Name Wash, the Chaco River, the San Juan River, and Morgan Lake; an upstream and downstream biological assessment of these waters of the United States; sediment samples in the coal ash dumps; and, all assessments of remediation alternatives to treat the discharge.

iv. 2013 Report of petroleum discharge

A February 2013 report prepared for APS by Mogollan Environmental Services documents continuing and ongoing releases of petroleum, benzene, and other petroleum byproducts from the FCPP Garage Fueling Area into soil, groundwater, and Morgan Lake.¹⁰² The FCPP Garage Fueling Area is immediately adjacent to, and nearly surrounded by, Morgan Lake.¹⁰³ In the mid-1980's it was reported that "diesel was bubbling up" to the surface of Morgan Lake.¹⁰⁴ It was found that there were releases of petroleum substances from the FCPP Garage Fueling Area into Morgan Lake.¹⁰⁵ The results of the 2013 investigation revealed that petroleum substances are still present in the soil and groundwater at the FCPP Garage Fueling Area.¹⁰⁶

The DEIS fails to adequately evaluate whether there is a continuing discharge of petroleum substances from the FCPP Garage Fueling Area into Morgan Lake or other surface waters

¹⁰¹ *Id.* at 5.

¹⁰² 2013 Petroleum Spill Report (attached as Exhibit 47).

¹⁰³ *Id.* at Figure 1. *See also*, 2013 FCPP Field Sampling Plan at Figure 1 and 2 (attached as Exhibit 48).

¹⁰⁴ *Id.* at 1.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

requiring an NPDES Permit and, at the least, fails to take a hard look at past, present, and future direct, indirect, and cumulative impacts from this discharge pursuant to NEPA. The DEIS also fails to consider or impose mitigation measures to remediate the site and prevent future releases of petroleum substances into Morgan Lake. The DEIS should consider and impose mitigation measures, including but not limited to: a complete investigation into the extent of the contamination with evidence of whether petroleum substances are still be released from soils or groundwater into Morgan Lake; a complete removal and remediation of soils at the site to prevent current or future releases of petroleum products from the FCPP Garage Fueling Area into Morgan Lake; imposition of a pump and treat groundwater treatment system to completely remediate the contaminated groundwater at the site; and a requirement that APS immediately apply for an NPDES permit with EPA Region 9 for the discharge of petroleum products from the FCPP Garage Fueling Area into Morgan Lake.

v. The DEIS states “NNEPA water quality standards do not apply to the facilities or operations of the FCPP, only Navajo Mine.” The DEIS fails to identify the water quality standards that apply to discharges from the FCPP into Morgan Lake, No Name Arroyo, Cottonwood Wash, Chaco River and the San Juan River. By failing to identify these water quality standards, any hard look analysis, to the degree it even exists, is deficient because OSM provides itself with no benchmarks to measure significance and to inform its consideration of alternatives and mitigation measures, as well as its assessment of the propriety of allowing post-2016 operations, period. OSM should therefore clearly state whether State of New Mexico water quality standards apply to discharges from the FCPP or which federal, state, local or tribal government’s water quality standards apply and identify all such water quality standards that apply to such discharges, using those standards as a benchmark for the NEPA analysis in terms of impact analysis, consideration of alternatives, consideration and imposition of mitigation measures, and to inform OSM’s decision whether to allow post-2016 operations. If no water quality standards apply to discharges from FCPP, please state as such.

vi. The DEIS states that during construction of the new coal ash facilities at the FCPP at least one water of the United States will be permanently filled. DEIS at p. 4.5-59. The DEIS states that APS “would avoid impacts to this portion of the drainage and maintain a 300-foot buffer from it during construction of the proposed ash pond.”¹⁰⁷ However, the DEIS then summarily concludes that “no impacts to waters of the US would result from the Proposed Action.”¹⁰⁸ The DEIS is deficient because it fails to produce evidence in support of this conclusion. First, the DEIS fails to state its legal authority for allowing APS to fill a portion of a waters of the U.S. without a Clean Water Act Section 404 permit. Second, the DEIS fails to explain how a portion of a watershed could be filled with material without affecting the hydrology and water quality of the remaining portion of the watershed that has been determined to be a “water of the United States” under the Clean Water Act. By failing to provide such an explanation or evidence to support it, OSM’s conclusion of “no impact” to this water of the United States is without support in the administrative record and is thus arbitrary and capricious.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

In addition to fully explaining OSM's rationale for its conclusion, the Conservation Groups also request that prior to finalizing the EIS, OSM produce all evidence in support of OSM's conclusion of "no impact" including a specific identification of the waters of the US that will be filled, the location of the fill relative to the remaining portion of the water of the US, whether the portion that has been designated a water of the US is located upstream or downstream of the proposed fill; and all evidence relied upon or reviewed by OSM for its conclusion that there will be no impact to this portion of the water of the US.

4. OSM Failed To Take A Hard Look At The Project's Impacts To Air Quality

a. Decision-makers have assumed that the Regional Haze Program BART determinations have dictated an approval of continuing operations at FCPP for 25 years from 2016-2014

At the public meetings May 2-5, 2014, the EIS contractors (primarily Cardno) and agency representatives (OSM) kept referring to the FCPP BART alternative allowing for the closure of Units 1, 2, & 3 as the driving regulatory decision allowing the continued operation of Units 4 & 5 for an additional 25 years. Contractor Cardno stated that at the public hearings that they had quickly inserted the three-unit closure BART FIP determination in the Draft EIS. OSM appears to be assuming that the native and non-native communities have agreed with this approach. As outlined in this comment letter, the undersigned Conservation Groups are opposed to the continued operation of FCPP Units 4 and 5 for an additional 25 years. EPA is the cooperating agency with direct regulatory responsibility for air quality and air emissions at the FCPP; EPA does not make the ultimate choice regarding whether the mine or power plant should actually continue for another 25 years. EPA also did not attend any of the public meetings and therefore could not be adequately consulted on their decision-making processes within the Draft EIS. EPA's comments on the Draft EIS are not expected until the June 27, 2014 deadline,¹⁰⁹ and thus could not be reviewed to provide the public with a basis for comment and public involvement.

b. The DEIS's characterization of "good" air quality is factually incorrect, arbitrary, and capricious.

The FCPP is located on tribal land within the borders of San Juan County, New Mexico. The DEIS states, "San Juan Basin air quality is generally good and meets EPA ambient air quality standards." DEIS at 4.1-1. For the reasons stated below, OSM's characterization of air quality standards in the San Juan Basin is factually incorrect, arbitrary, and capricious.

As noted in the DEIS, "ambient concentrations of ozone and particulate matter have sometimes approached, but not exceeded, Federal standards in the three most recent years for which validated data are available." DEIS at 4.1-6. As will be discussed more fully below and in the expert reports of Victoria Stamper¹¹⁰ and Howard Gebhart¹¹¹, the San Juan County is either

¹⁰⁹ Mike Eisenfeld conversation with Karen Vitulano, NEPA contact for EPA for Draft EIS.

¹¹⁰ Expert Report of Victoria Stamper (attached as Exhibit 29).

exceeding or on the verge of exceeding National Ambient Air Quality Standards for both ozone and PM. As such, OSM's characterization of air quality being "good" is factually false, arbitrary and capricious.

Further, San Juan County is the worst county in New Mexico for release of toxic materials to the environment, and is ranked in the top 10 percent of worst counties in the United States for toxic releases to the environment.¹¹² Moreover, San Juan County is in the top 10% of the worst counties in the United States for particulate matter (2.5 microns in diameter (PM-2.5) emissions, PM-10 emission, and sulfur dioxide emissions. Area power plants are the major contributor to these three pollutants. The neighboring coal mines and oil and gas operations also contribute to air pollution problems. In 2006, monitoring stations reported individual readings in excess of the NAAQS for ozone.¹¹³

Not surprisingly, San Juan County suffers higher rates of chronic lower respiratory disease than the average rate in New Mexico or the United States more broadly.¹¹⁴ "Ozone levels, particulate matter pollution and mercury are all recognized concerns in San Juan and the Four Corners in General."¹¹⁵ Therefore, a full and complete assessment of the air quality impacts – in particular relative to public health, discussed elsewhere in these comments – various DEIS alternatives is essential to a complete understanding of the implications of implementing the alternatives. As noted in the comments below, and in the expert reports of Howard Gebhart and Victoria Stamper, the DEIS fails to accurately assess both the baseline and future air impacts from the FCPP. As such, the Conservation Groups request that OSM correct the deficiencies noted by Howard Gebhart and Victoria Stamper and reissue the DEIS for public comment prior to finalization of the EIS.

c. The DEIS fails to adequately assess the environmental impacts of the installation of SCR and related PSD permit application.

The DEIS states:

APS is planning to install SCR NOX control equipment on FCPP Units 4 and 5 in compliance with 40 CFR 49 BART requirements. Preliminary engineering calculations have shown that this would result in byproduct emissions of sulfuric

¹¹¹ Expert Report of Howard Gebhart (attached as Exhibit 49).

¹¹² Salvatore & Dee, *San Juan Community Health Profile*, COMMUNITY HEALTH IMPROVEMENT COUNCIL, at 28 (January 2010) (attached as Exhibit 104 to the Conservation Groups' scoping comment letter).

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *Id.*

acid gas (H₂SO₄) in excess of the 7 ton per year threshold. APS has prepared the PSD permit application for the Proposed Action, including PSD increments modeling. The PSD permitting action is exempt from NEPA; but not from Endangered Species Act (ESA) Section 7 reviews. As such, APS is also preparing an ESA impacts analysis (discussed in detail in Section 4.8 Special Status Species). Engineering estimates for NO_x and H₂SO₄ emissions used in the impacts analyses were done prior to installation of the SCR equipment. These estimated values were conservative and subsequent analyses are expected to result in lower values and lower impacts once actual SCR performance is known. The PSD permit will ultimately contain actual values determined after the SCR equipment is installed and operating. For Section 7 ESA compliance, EPA has its own permitting process, commencing with publication of the draft PSD permit and the public comment period. Before EPA can take further action on the PSD permit, it must comply with ESA requirements.

DEIS at 4.1-13 - 4.1.14.

The DEIS fails to note that APS is projecting a future increase in heat input to both Units 4 & 5 in the future.¹¹⁶ This will result in an increase of emissions of all pollutants.¹¹⁷ By failing to account for this increase in heat input and the corresponding increase in pollution emissions from Units 4 and 5, the DEIS fails to accurately characterize the impact of future emissions from these units. The Conservation Groups request that OSM recalculate all future emissions from these units and re-issue of the DEIS for public comment prior to finalizing the EIS.

d. The FCPP Title V must be reissued.

The DEIS discloses that the current Clean Air Act, 42 U.S.C. § 7661, et seq. Title V operating permit for FCPP (NN-R0P- 05-07) expired August 1, 2013. DEIS at 4.1-15. The Title V permit must be reissued and must include all emission limitations and monitoring requirements to ensure continuous compliance with the Clean Air Act. The DEIS fails to acknowledge that the FCPP may be subject to additional monitoring requirements upon issuance of a new DEIS. The DEIS should list the Title V permit as a mandatory federal permit that must be obtained for continued operation of the FCPP and evaluate the full implications of the new Title V permit.

e. The DEIS fails to adequately assess airborne deposition issues associated with emissions from the FCPP.

The FCPP emits significant pollution from its smokestacks resulting from the combustion of coal as a fuel source. Some of these emissions are deposited in the soils and watersheds in the vicinity of the FCPP. This is particularly true for heavier metals such as mercury and selenium. The DEIS concludes that “[d]eposition impacts within 50 kilometers of FCPP would be

¹¹⁶ Expert report of Victoria Stamper, pp. 7-9 (attached as Exhibit 29).

¹¹⁷ *Id.*

negligible.” DEIS at 3-58, Table 3-12. For the reasons stated below, the DEIS fails to adequately assess the deposition impacts of emissions from the FCPP. As such, the Conservation Groups request that OSM correct the deficiencies identified below and re-issue the DEIS for public comment prior to finalization of the EIS.

The DEIS states:

When elemental mercury from the air reaches surface waters via direct and indirect deposition, microorganisms can convert it into methylmercury, a highly toxic form that bio-accumulates in fish. Humans are primarily exposed to mercury by eating contaminated fish. Methylmercury exposure is a particular concern for women of childbearing age, fetuses, and young children because studies have linked high levels of methylmercury to damage to the developing nervous system, which can impair children’s ability to think and learn. Mercury and other power plant emissions also damage the ecological environment (EPA 2013a).

DEIS at 4.1-8.

The Four Corners area experiences significant deposition of mercury and other airborne emissions resulting in the establishment of fish consumption advisories in nearby watersheds, such as the San Juan River, Navajo Reservoir, Lake Farmington, and Morgan Lake at FCPP.¹¹⁸

The DEIS ignores the immense historic and current impacts to the region from mercury emissions and deposition. The DEIS at page 4.1-61 discloses:

According to the EPRI (Electric Power Research Institute) baseline scenario modeling results, the maximum contribution of FCPP mercury emissions to mercury total deposition is about 28 percent in San Juan County near the FCPP and contributions range from 2 to 28 percent in the vicinity of the plant; however, the contribution from FCPP are less than 2 percent over the remainder of the San Juan basin (EPRI 2013).

The DEIS neglects to mention the 50-year legacy of FCPP mercury emissions that have taken a toll on San Juan basin waterways. Since mercury is a known bio-accumulative neurotoxin that works its way up the food chain, the attempt of the DEIS to restrict mercury analysis to a narrow snippet of current mercury contributions is meaningless and renders a scientific analysis of mercury in the region as a result of past, current and projected FCPP operations insufficient. The Conservation Groups request that OSM conduct a complete analysis of the direct, indirect, and cumulative impacts of mercury deposition from the FCPP since it began operations to the present. We also request that the DEIS analyze the direct, indirect, and cumulative future

¹¹⁸ <http://www.nmenv.state.nm.us/swqb/advisories/>. See also, <http://www.navajohopiobserver.com/main.asp?SectionID=8&SubSectionID=8&ArticleID=4321&TM=45374.5>

impacts of mercury deposition from the FCPP in the event Units 4 and 5 are authorized to operate an additional 25 years.

The DEIS only conducted minimal and unacceptable deposition analysis in the vicinity of the FCPP. For example, the DEIS fails to establish significance threshold for deposition. DEIS at 4.1-77.

In addition, a November 6, 2012 Memo from OSM to the project proponents describes significant deficiencies with the deposition analysis in the vicinity of the FCPP.¹¹⁹ These deficiencies include:

- Inadequate sampling densities;
- Lack of identification of soil maps sampled;
- Failure to include erodible outcrops and badlands soils in sampling;
- Failure to follow standards and accepted soil sampling methodologies;
- Failure to sample deeper depths of soil;
- Failure to use standard and accepted analytical procedures.¹²⁰

Accordingly, the Conservation Groups request that OSM reissue the DEIS with a full explanation of how the deposition sampling deficiencies were resolved and allow further public comment on this matter prior to finalization of the EIS.

f. Significant deficiencies in the air quality modeling require that OSM issue a supplemental EIS with public comment.

The Conservation Groups retained the services of air quality modeling expert Howard Gebhart to review the air quality modeling performed by OSM. Mr. Gebhart's review identified several significant errors with the SO₂ and PM modeling.¹²¹ More specifically, Mr. Gebhart identified the following significant deficiencies with OSM's air quality modeling:

1. The AERMET/AERMOD modeling applies a "non-guideline" beta version of the USEPA dispersion model, without securing regulatory agency approval or documenting the scientific applicability of the non-guideline beta options as required by 40 CFR 51

¹¹⁹ OSM November 6, 2012 Memo to APS and AECOM (attached as Exhibit 50).

¹²⁰ *Id.* All deficiencies noted this memo are fully incorporated herein by reference.

¹²¹ *See*, Expert Report of Howard Gebhart (attached as Exhibit 49 and is fully incorporated herein by reference).

Appendix W. Any meaningful analysis documenting compliance with NAAQS standards needs to follow the applicable USEPA modeling guidelines, without exception.

2. The SO₂ modeling demonstration relies on actual emissions data from Four Corners Units #4 and #5 without any documentation that such emissions would be representative of the 2016-2041 period under consideration in the Draft EIS. Such documentation is required and/or the modeling needs to be revised to reflect a more representative SO₂ emissions rate. Also, OSM should adopt enforceable mitigation measures in the Final EIS to ensure that future operations are consistent with the SO₂ emissions data and other operating assumptions used in the EIS air quality modeling.
3. The plume visibility modeling shows some cases where degraded visibility is expected over the 2016-2041 period based on higher primary sulfate emissions associated with “ammonia slip” from the planned SCR emissions control equipment. OSM should adopt enforceable mitigation measures to minimize any “ammonia slip” from Units #4 and #5, which would help mitigate the adverse plume visibility impact predicted in the Draft EIS.
4. The air quality modeling analysis in the Draft EIS relies on assumptions for certain equipment that limits operations for some power plant and mine emission units, especially at night. OSM should adopt enforceable mitigation measures that limit operating hours for such sources consistent with the assumptions used in the air quality modeling analysis.
5. The air quality modeling in the Draft EIS contains significant errors in the specification of particle size information for the PM-10 and PM-2.5 modeling. Because of these data input errors, neither the PM-10 nor PM-2.5 modeling results in the Draft EIS are reliable or accurate. In fact, the Draft EIS likely significantly underreports the PM-10 and PM-2.5 concentrations expected from the project. The modeling needs to be revised such that the particle size inputs used for the AERMOD deposition algorithms are consistent with the underlying emissions inventory. The only viable solution to correct this type of significant analytical error is to present the updated modeling results in a Supplemental Draft EIS for review by interested parties and the public.

The Conservation Groups request that OSM correct the air quality modeling deficiencies identified by Mr. Gebhart and issue a supplemental EIS for review and comment.

g. The Stamper report identifies numerous significant deficiencies with the air quality analyses in the DEIS.

The Conservation Groups also retained the services of air quality technical expert Victoria Stamper to review and critique the air quality components of the DEIS. Ms. Stamper identified numerous technical problems with the air quality analysis, including the following significant issues:

1. The DEIS only included air quality data through 2011. Air quality data is available through early 2014 and the most recent data should be used in OSM’s analysis. By failing

to include the most recent data, OSM did not identify air quality issues, such as rising ambient ozone concentrations approaching the NAAQS.

2. The DEIS fails to disclose that many Class I areas impacted by the FCPP are not projected to meet natural background conditions by 2064. The Colorado Regional Haze plan projects that Mesa Verde National Park will not achieve natural background visibility conditions until 2168 which is 104 years later than required by the EPA's Regional Haze rules. Arizona's Regional Haze Plan projects that Petrified Forest National Park, Mount Baldy Wilderness Area, and Grand Canyon National Park won't achieve natural background visibility conditions for 258 years, 234 years, and 125 years, respectively.
3. The DEIS fails to analyze APS's planned future increase of heat input into Units 4 & 5 which will result in an increase of emissions of criteria pollutants, toxic pollutants, and greenhouse gases over the next 25 years.
4. The DEIS greatly overstates the historical particulate matter (PM) emissions from the Four Corners Power Plant Units 1-5.
5. The ozone analysis in the DEIS is significantly flawed.
6. The sulfur dioxide analysis is significantly flawed.
7. The PM analysis does not use accepted modeling methodologies.
8. The DEIS fails to impose mitigation measures to offset air quality impacts.¹²²

The Conservation Groups request that OSM correct the deficiencies identified in the Stamper report and reissue the DEIS for public comment prior to finalization of the EIS.

5. OSM Failed To Take A Hard Look At The Project's Use, Production, Storage, and Disposal of Coal Combustion Waste and Hazardous Materials

For the reasons discussed below, the DEIS fails to adequately address the environmental impacts associated with the past, present, and future disposal of Coal Combustion Waste ("CCW") generated by the FCPP.¹²³ The DEIS also fails to adequately examine the impact of reasonably likely future regulatory requirements, alternatives to the current CCW disposal practices, and reasonable mitigation measures.

¹²² Expert Report of Victoria Stamper (attached as Exhibit 29). The Stamper report is incorporated by reference into this comment letter.

¹²³ See Images of CCW at Navajo Mine and FCPP (attached as Exhibit 69).

First, the DEIS fails to identify whether ash disposal at the FCPP is regulated by federal, state, local, or tribal law. The Conservation Groups request that OSM issue a revised DEIS for public comment clearly identifying all federal, state, local, and tribal laws regulating ash disposal and ash disposal units at the FCPP.

CCW consists of fly ash, scrubber sludge and bottom ash from the combustion of coal at the FCPP. At least seventeen potentially toxic elements are commonly present in CCW: aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, hexavalent chromium, lead, manganese, mercury, molybdenum, nickel, selenium, vanadium, zinc and radionuclides.¹²⁴ When CCW becomes exposed to water, leaching of these toxic elements may occur.¹²⁵ The U.S. Environmental Protection Agency recently determined that coal ash, due to the potential presence of numerous toxics, can pose a “substantial present or potential hazard to human health and the environment when improperly treated, stored, transported, disposed of.”¹²⁶ Additionally, “the cancer risk associated with arsenic ingestion via [the groundwater ingestion and fish ingestion pathway] emerged as a principal factor in the [EPA’s CCW human health risk assessment] report’s conclusion that there are ‘potentially significant risks to human health from CCW disposal in landfills and surface impoundments.’”¹²⁷ Cancer risks associated with exposure to CCW constituents are as high as smoking a pack of cigarettes per day, breathing air with a radon concentration 20 times the safe level, and consuming water contaminated with vinyl chloride 10 times the EPA MCL.¹²⁸

In addition, CCW wastes often generate a complex mixture of compounds that can have adverse

¹²⁴ See Hazardous and Solid Waste Management: Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities, 63252 Fed. Reg. 17,197 (Oct. 12, 2011) (attached as Exhibit 90 to the Conservation Groups’ scoping comment letter); Physicians for Social Responsibility and Earthjustice, *Coal Ash The Toxic Threat to Our Health and Environment*, vii (Sept. 2010) (attached as Exhibit 91 to the Conservation Groups’ scoping comment letter); Earthjustice, *EPA’s Blind Spot: Hexavalent Chromium in Coal Ash* (Feb. 1, 2011) (attached as Exhibit 92 to the Conservation Groups’ scoping comment letter); Environmental Integrity Project, *Toxic Waters Run Deep* (June 23, 2011) (attached as Exhibit 93 to the Conservation Groups’ scoping comment letter).

¹²⁵ See 63252 Fed. Reg. 17,197 (attached as Exhibit 90 to the Conservation Groups’ scoping comment letter).

¹²⁶ EPA, *Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals From Electric Utilities*, 75 Fed. Reg. 35128, 35168 (June 21, 2010) (attached as Exhibit 89 to the Conservation Groups’ scoping comment letter).

¹²⁷ Letter from Doctors Smith and Vahter re. coal ash to Lisa Jackson (November 14, 2010) (attached as Exhibit 51).

¹²⁸ Dr. Foran coal ash comment letter (attached as Exhibit 52).

synergistic effected on those exposed to the mixed wastestream.¹²⁹ As a result, risk assessments often underestimate the risk to human health from exposure to CCW waste because the entire effect of exposure to each compound is not accounted for.¹³⁰ The DEIS suffers from this same deficiency by failing to assess the risk to human health from a multitude of toxic pollutants via multiple pathways.

Recent studies also show that groundwater contaminated by CCW can migrate quickly and extensively – during the lifetime of operations at a coal plant rather than on the order of hundreds to thousands of years.¹³¹

Until 2008, the majority of CCW generated by the FCPP was disposed of in mine pits at the Navajo mine. This practice was discontinued in 2008, resulting in the disposal of the majority of CCW at the FCPP site beginning on 2008 and continuing to the present and throughout the remaining life of FCPP. From 1962 to the present, approximately 33.5 million tons, or 20,800 acre-feet, of fly ash, bottom ash, and Flue Gas Desulfurization (FGD) solids have been placed into the FCPP ash disposal areas. DEIS at 2-24.

There have been at least two studies conducted concerning the impacts of CCW disposal at the FCPP and/or Navajo mine: *A Preliminary Evaluation of the Potential for Surface water Quality Impacts from Fly Ash Disposal at the Navajo Mine, New Mexico, Zimmerman 2005* and *Effects of Four Corners Power Plant Coal Combustion Waste Disposal on Surface and Groundwater Quality, Ross, 2007*.¹³² In addition, in 2010 Earthjustice and the Environmental Integrity Project (EIP) conducted an analysis of numerous coal ash disposal sites throughout the county. The Earthjustice EIP report found:

At the Four Corners Power Plant, boron and selenium downstream from the plant's coal ash ponds are much higher than upstream levels and approximately twice the levels established to protect aquatic life.¹³³

In addition, the Zimmerman study found that CCW constituents, including selenium, are migrating into the San Juan River ecosystem.¹³⁴ More specifically, the Zimmerman Report

¹²⁹ Dr. Mary Fox coal ash comment letter (attached Exhibit 53.).

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² Attached as Exhibits 94 and 63 to the Conservation Groups' scoping comment letter.

¹³³ Environmental Integrity Project and Earthjustice, *Out of Control: Mounting Damages From Coal Ash Waste Sites. Thirty-one New Damage Cases of Contamination from Improperly Disposed Coal Combustion Waste* (February 24, 2010).

<http://earthjustice.org/sites/default/files/library/reports/ej-eipreportout-of-control-final.pdf> (attached as Exhibit 95 to the Conservation Groups' scoping comments).

found: “[t]he Chaco Basin surface water quality data collected and analyzed in this study are strongly indicative that CCW disposal practices at the mine and power plant have adversely impacted the water quality of the Chaco River.”¹³⁵

a. The DEIS fails to examine the impact of impending federal coal ash regulations

OSM has a duty to analyze “all Federal permits, licenses, and other entitlements which must be obtained in implementing the proposal.” 40 C.F.R. § 1502.25(b). Within six months, EPA will promulgate final regulations governing the disposal of coal combustion waste at coal plants. On June 21, 2010, EPA proposed regulations for disposal of coal ash. *See*, 75 Fed. Reg. 35128. EPA is under a consent decree to finalize these regulations by December 19, 2014, in all likelihood prior to the issuance of a final EIS/Record of Decision in this matter. These proposed regulations would require all surface impoundments built after finalization of the regulations to install a liner and conduct comprehensive groundwater monitoring. *Id.* For surface impoundments built before finalization of the regulations, all coal ash must be removed and the impoundment must be retrofitted with a liner. *Id.* The coal ash dumps at the FCPP would qualify as a “surface impoundment” and be subject to the requirements of the proposed rule.

The DEIS acknowledges that the EPA’s “new regulatory requirements dictate that [the lined ash impoundment] be discontinued.” DEIS at 3-15. However, the DEIS fails to adequately evaluate the full impact of the nearly final coal ash regulations on the FCPP. Instead, the DEIS simply states that, “FCPP would comply with EPA’s Final Rule, irrespective of which CCR management option is selected.” DEIS at ES-xiii. This conclusory statement does not fulfill OSM’s duty to analyze the foreseeable impact of the rule on CCW disposal activities at the FCPP including, the future costs of CCW disposal, the full remedial effect of the impending rules on historic CCW disposal practices, and reasonable alternatives to future CCW disposal at the FCPP. In addition, the brief discussion of the proposed coal ash rule contained in the DEIS does not describe the financial implications of the rule on the existing or future coal ash impoundments at the FCPP, including the cost to remediate existing coal ash impoundments, the cost to construct future coal ash structures, the costs to conduct monitoring, and an assessment of the collective impact of these costs on the cost to produce electricity at the FCPP in comparison with other existing or alternative generation sources. DEIS at 4.15-27, 4.15-32. The Conservation Groups request that OSM disclose this information for public comment prior to finalizing the EIS.

b. The DEIS fails to analyze the whether the CCW disposal practices at FCPP violate the open dumping prohibition of RCRA.

The DEIS fails to analyze whether the current and past CCW practices violate the “opening dumping” prohibition of the Resource Conservation and Recovery Act, 42 U.S.C. §6945(a), and

¹³⁴ Zimmerman Report (attached as Exhibit 94 to Conservation Groups’ scoping comments).

¹³⁵ *Id.* at 35.

if so, the remedial measures that must be employed to achieve compliance with the Act. For the reasons set forth below, the CCW waste disposal practices at both the FCPP and Navajo mine violate the opening dumping provisions of RCRA and the DEIS must acknowledge this fact and analyze immediate remedial measures that must be undertaken to achieve compliance with the Act. The DEIS must also impose enforceable mitigation measures to ensure compliance with the Act.

One of the primary concerns of RCRA is that “open dumping is particularly harmful to health, contaminates drinking water from underground and surface supplies, and pollutes the air and land.” 42 U.S.C. § 6901(b)(4). The EPA published final regulations, Criteria for Classification of Solid Waste Disposal Facilities and Practices, on September 13, 1979 to define the practices that distinguish “open dumps” from sanitary landfills. *See* 44 Fed. Reg. 53,438. Disposal sites not meeting the standards set forth in 40 C.F.R. Part 257 are classified as “open dumps” and are prohibited under RCRA section 4005(a). 42 U.S.C. § 6945(a). The term “open dump” is defined as “any facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 6944 of this title and which is not a facility for disposal of hazardous waste.” 42 U.S.C. § 6903(14). The term “solid waste” includes “any...other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations.” 42 U.S.C. § 6903(27). The term “disposal” is defined as “the discharge, deposit, injection, dumping, spilling, leaking, or placing any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.” 42 U.S.C. § 6903(3). From these provisions of RCRA, CCW practices of discharging its coal ash onto land at the FCPP and Navajo mine constitute illegal open dumping under RCRA. The DEIS is deficient for failing to analyze whether activities at the FCPP and Navajo mine have violated this federal law and the remedial measures that must be immediately employed to achieve compliance with the Act. The DEIS also fails to analyze APS’s exposure to civil penalties under RCRA for its 30 years of illegal CCW disposal practices.

RCRA’s part 257 subpart A regulations require that all dumping practices comply with general environmental performance standards addressing: floodplains, endangered species, surface water, ground water, land application, disease, air and safety. 40 C.F.R. Part 257, subpart A. The existing and proposed coal ash dumps at the FCPP fail to comply with these criteria and thus are illegal open dumps under RCRA. The DEIS fails to consider the open dump prohibition under RCRA and whether the coal ash dumps at the FCPP and Navajo mine comply with the performance standards in 40 C.F.R. Part 257. The DEIS must assess whether the current, past, and future CCW disposal practices comply with applicable law.

The existing coal ash dumps at FCPP pose a threat to public health and the environment. As is discussed more fully in the expert comments of Geo-Hydro Inc., coal ash dumping practices at FCPP and Navajo mine have contaminated groundwater with pollutants such as TDS, metals, nutrients and organic and inorganic compounds.¹³⁶ Pollutants found in the groundwater

¹³⁶ *See*, Expert Report of Geo-Hydro, Inc (attached as Exhibit 54).

pollution at the FCPP contain metals, selenium, and other compounds that pose a threat to aquatic life, birds, mammals, and plant-life.

c. The DEIS fails to analyze an off-site disposal and re-use alternatives for CCW.

The DEIS Alternative D evaluates a slightly different CCW on-site disposal configuration to the preferred alternative. As is discussed below, the DEIS is deficient for failing to analyze other reasonable CCW disposal alternative.

Adoption of either CCW alternative will result in significant environmental impacts, including: massive disturbance of native ground for construction of 5 additional dry ash disposal areas each being 60 acres in size totaling 385 acres; additional ground disturbance at 5 borrow sites that would be used to generate 4.8 million cubic yards of soil materials for the proposed evapotranspiration “cover” for each closed dry ash disposal area totaling 731 acres; and construction of a surge pond to dispose of FGD waste and seepage from the existing coal ash dumps. DEIS at xiii and Table ES-7. In addition to these impacts, construction of five new coal ash dumps and a surge pond would also increase the risk of groundwater and surface water contamination from CCW byproducts and increase the risk of windblown fugitive ash air pollution. FCPP is running out of room at the site to construct CCW disposal areas because the preferred alternative would continue the current practice of constructing new coal ash facilities adjacent to or on top of existing ones. The only alternative considered in the DEIS is a slight modification to the preferred plan that would reduce the size of the new ash dumps from 385 acres to 350 acres. Otherwise, the two alternatives are nearly identical.

Despite the fact that the preferred alternative and Alternative D would disturb over 1,000 acres of land, the DEIS concludes, “impacts to landforms and topography would be considered minor” and “impacts to soils would be considered minor.” DEIS at xxvi, Table ES-12. OSM’s conclusion that disturbance of over 1,000 acres of land is “minor” is not logically consistent with the facts and thus is arbitrary and capricious. The DEIS also attempts to defer an assessment of the effect on cultural resources by admitting that the proposed alternative and Alternative D would have “potential impacts to 20 archeological resources and 7 TCPs” but “OSMRE is consulting with the Navajo THPO and SHPO for determination of Project effects.” OSM has a duty to present the project effects in the DEIS. “NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.” 40 C.F.R. § 1500.1(b). This includes, “[u]rban quality, historic and *cultural resources*, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures.” 40 C.F.R. § 1502.16(g).

OSM has a duty to “[r]igorously explore and objectively evaluate all reasonable alternatives” to the preferred alternative. 40 C.F.R. § 1502.14. Moreover, OSM has a duty to “[u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.” 40 C.F.R. § 1500.1(e).

The DEIS fails to examine obvious alternatives to onsite CCW disposal. For example, the DEIS fails to consider an offsite CCW disposal alternative. This alternative could include disposal of CCW either at an existing landfill or at a newly created RCRA compliant landfill located offsite in a location that that would present a smaller risk of groundwater and surface water contamination and a reduced risk of exposure to air born contamination. The current CCW disposal areas at the FCPP are surrounded by surface waters, including Morgan Lake, Chaco Wash, and the San Juan River. The DEIS suggests that the CCW disposal areas at FCPP could adversely impact ground water and surface water. Disposal at an off-site existing or new landfill could obviate the need for the extensive land disturbance at the FCPP site and would reduce the present and future risk of exposure to CCW from water and air pollution. OSM's DEIS is deficient for failing to closely examine an off-site disposal alternative and for failing to carry forward such an alternative as a viable option for CCW disposal.

The DEIS also notes that “[a] portion of the fly ash [from Units 4 & 5] is also sold for beneficial reuse.” DEIS at 2-24, 2-26, 2-27. The DEIS also fails to adequately examine an alternative of increasing the re-use of coal ash from Units 4 & 5 as an alternative to on-site disposal.

The DEIS also fails to adequately examine a conversion of Units 4 and 5 to natural gas as an alternative to future CCW disposal. Conversion of Units 4 and 5 to natural gas would eliminate virtually all coal ash waste and SO₂ scrubber waste by eliminating coal as the fuel source. The DEIS admits that “[i]t is technically feasible to convert the FCPP to a natural gas plant” and that such conversion is “economically feasible.” DEIS at 3-49. The DEIS then arbitrarily dismisses the gas conversion option by stating, “it is not cost-effective because more commercially viable sites are available in Arizona that are closer to major load centers, which would reduce the potential for line losses.” DEIS at 3-49. This statement by OSM is illogical, arbitrary and capricious. If “line losses” between the FCPP and Arizona load centers makes a gas plant “not cost effective” then these same line losses would make the coal burning FCPP “not economic.” OSM's dismissal of the gas conversion option is arbitrary, capricious, and unsupported by the administrative record. The Conservation Groups request that OSM “prepare and circulate a revised draft” of the DEIS and include fully analyzed alternatives to on-site CCW disposal, such as an offsite CCW disposal alternative, an increased reuse coal ash alternative, and a gas conversion alternative. 40 C.F.R. § 1502.9(a).

d. The DEIS fails to submit complete scientific information on the effects of CCW disposal practices at the FCPP.

Conditions have changed at FCPP/Navajo Mine since 2008 concerning CCW processing and storage. BHP no longer accepts CCW for dumping at Navajo Mine; all CCW is now the responsibility of FCPP owners and the Federal government, with siting of CCW on the FCPP lease site in closer proximity to perennial waters. The DEIS describes the On-site Ash/Flue Gas Desulfurization (FGD) Disposal System in Section 2.2.6.1:

Units 1, 2, and 3 ash/FGD waste slurry historically was sluiced to impoundments in the Ash Disposal Area located approximately 1 mile west of the power plant. Prior to 2008, ash and FGD wastes generated by Units 4 and 5 were hauled to the adjacent mine for placement in mined-out areas regulated by the OSMRE. Since

2008, fly ash generated by Units 4 and 5 has been trucked to a lined DFADA located within the onsite Ash Disposal Area. A portion of the fly ash is also sold for beneficial reuse. FDG slurry from Units 4 and 5 scrubbers is pumped to thickeners. The thickeners underflow is pumped to the Lined Ash Impoundment in the Ash Disposal Area where the solids settle and the liquid is decanted to the Lined Water Impoundment. The liquid is pumped back to the scrubbers for reuse, and the bottom ash is trucked to the Dry Fly Ash Disposal Area (DFADA). From 1962 to the present, approximately 33.5 million tons, or 20,800 acre-feet, of fly ash, bottom ash, and FGD solids have been placed into the Ash Disposal Area.

OSM has never adequately analyzed the placement of ash and FGD wastes generated by Units 4 and 5 on the FCPP lease sit and has no current permits allowing disposal. The NPDES permit for FCPP does not contemplate permanent storage of CCW on the FCPP lease site nor does it contemplate impacts to perennial waterways from discharges (including slurried materials). The DEIS discloses that Units 4 and 5 are expected to produce 40 tons per hour of furnace bottom ash and 150 tons per hour of fly ash during full load conditions. Using the stated historic annual average capacity factor at FCPP of 86 percent, DEIS at 2-124, the annual estimate for total bottom ash and fly ash generated at FCPP is 1.43 million tons:

Ash produced in the combustion process consists of bottom ash and fly ash (also known as coal combustion residuals or CCR). Bottom ash accumulates along the inside walls and floors of the boiler units. The bottom ash inside the boiler is directed to the bottom ash hopper. The total production rate of furnace bottom ash for Unit 4 and Unit 5 is approximately 40 tons per hour during full load conditions. The total bottom ash production rate for Units 1, 2, and 3 was 20 tons/hour. The furnace bottom ash is collected and removed by means of a hydraulic-vacuum system and delivered via sluice water pipelines to dewatering bins. In the bins, the sluice water is decanted and the bottom ash is unloaded to trucks for disposal. Two dewatering bins are each 35 feet in diameter with a storage capacity of approximately 21,600 cubic feet, or 400 tons, with a bottom ash density of 37 pounds per cubic foot. Each bin is elevated for 20-foot truck clearance, with trucks periodically hauling the ash from the dewatering bins to the Dry Fly Ash Disposal Area (DFADA) or to construction sites for the buttresses of the dams and access roads.

Fly ash constitutes approximately 80 percent of the FCPP's total ash output. Units 1, 2, and 3 produced fly ash at a total rate of approximately 70 tons/hour. Fly ash is produced by Units 4 and 5 at a total rate of approximately 150 tons per hour during full load conditions. The fly ash from the boiler passes through the flue gas draft system to the fabric filter dust collectors ("baghouses"), which remove fly ash from the flue gas. A fly ash handling system then removes the fly ash from the baghouse hoppers and conveys it to silos for storage. The ash is mixed with scrubber process water for dust control and to aid in compaction. Trucks then transport the dry fly ash (no free liquid) to a lined DFADA on site for disposal. The baghouse system for Units 4 and 5 is designed to remove not less than 99.87 percent of fly ash from the flue gas.

The immense volume of CCW created by FCPP illuminates the flawed logic and deficiencies in not including the essential NPDES permit for the FCPP as part of the proposed action of the DEIS and undermines OSM's analysis by ignoring the public health and environmental impacts from this unregulated site (under EPA jurisdiction). The Ash Disposal Areas contemplated in the DEIS are very poorly located in proximity to Chaco and San Juan Rivers. The DEIS discusses the project component of constructing five additional DFADAs each approximately 60 acres in size and approximately 120 feet high. *See* DEIS at ES-xii. These DFADAs would be constructed in the area to the west of FCPP adjacent to Chaco River and perennial water where existing CCW problem remain unresolved (potential contamination to San Juan River from saturation and immense fugitive dust control problems). The DEIS then discloses that another alternative is a CCW Supercell but provides no map on the DEIS showing the facility. The concept of DFADAs and borrow areas in to the west of FCPP would exacerbate existing significant problems to groundwater and surface water.

A 2010 Report by Earthjustice and Environmental Integrity Project discussed contamination issues at FCPP:

For more than thirty years fly ash, bottom ash and scrubber sludge from the Four Corners Power Plant was placed in unlined impoundments and backfilled into the Navajo Mine, which has supplied coal to the plant since 1968. The Power Plant and coal combustion waste (CCW) disposal areas are within the Navajo Nation. Full evaluation of the impacts of the CCW on groundwater is hampered by the lack of public availability of data, but two separate statistical analyses of surface water quality data in the Chaco River Basin have documented significant degradation of water quality downstream from the CCW impoundments, for which contamination by seepage and groundwater inflow is the only reasonable explanation. In one study concentrations of boron were nearly twelve times higher than upstream concentrations, and total dissolved solids (TDS), sulfates and selenium were more than three times higher in the downstream segment of the river basin. The second study also found higher downstream levels of copper, lead, mercury and zinc.

The Navajo Nation water quality standards list the Chaco Wash as used for wildlife and livestock watering and aquatic habitat. For these uses, the elevated concentrations of boron, selenium and zinc are approximately twice recommended levels for freshwater aquatic organisms, and the concentrations of copper and lead slightly exceed levels recommended in New Mexico for livestock.

This case focuses primarily on surface water contamination of Chaco Wash by coal combustion waste (CCW) from the Four Corners Power Plant. As discussed in the additional narrative, contamination of groundwater downgradient from the Navajo Mine ash disposal areas is well documented, but groundwater data for the CCW surface impoundments has not been made available for independent review

and analysis.¹³⁷

A 2014 report by Sierra Club, “Dangerous Waters: America’s Coal Ash Crisis,” highlights the continued lack of federal standards for CCW, the public health impacts of exposure to CCW and the continuing problems at FCPP. As Sierra Club stated in its press release for the report:

Coal ash, which is a toxic substance created when coal is burned, has been generated in the millions of tons at the Arizona Public Service (APS) owned Four Corners Generating Station. According to the report, APS has already stored 50 to 55 million tons of coal ash in unlined pits near the San Juan River and more recently are believed to be storing it in stockpiles. Improper storage of coal ash leaves water resources, the environment, and neighboring Navajo communities vulnerable as it has been known to seep into groundwater and blow on to their lands. Without federal regulation of coal ash, there is little known about how the plant's storage is being handled.

“The major concerns for Navajo tribal members are the continued health impacts and the financial burden of health care. Additionally, there are concerns on what would happen if the 100 million tons of toxic coal ash is released or floods the rivers nearby,” said Lori Goodman, Boardmember and Coordinator for Dine’ Citizens Against Ruining our Environment. “Tribal members are worried about the looming financial burden of future clean up of coal ash and its impact on their health.”

To better understand how the coal ash is impacting health and the environment, testing has been done on the Chaco River both downstream and upstream stream from the coal ash storage sites. The most recent available testing downstream on the Chaco River, which runs 50 feet from where the bulk of the coal ash is stored, has shown dangerously high levels of toxic constituents found in coal ash. The Chaco River flows directly into the San Juan River basin, which is one of the Navajo’s main sources for drinking water. Without restrictions on how to dispose of coal ash, the Navajo people are at risk of breathing and drinking toxic contaminants that have been linked to cancer and other chronic illnesses that many Navajo people in the region suffer from today.¹³⁸

¹³⁷ Environmental Integrity Project and Earthjustice, *Out of Control: Mounting Damages From Coal Ash Waste Sites. Thirty-one New Damage Cases of Contamination from Improperly Disposed Coal Combustion Waste* (February 24, 2010). <http://earthjustice.org/sites/default/files/library/reports/ej-eipreportout-of-control-final.pdf> (attached as Exhibit 95 to the Conservation Groups’ scoping comment letter).

¹³⁸ Sierra Club, Press Release: *Sierra Club Releases Report Showing The Dangers Of Coal Ash At The Four Corners Power Plant Sierra Club cites Arizona Public Service coal ash storage sites among the worst in the country* (May 15, 2014) (available at: <http://content.sierraclub.org/press-releases/2014/05/sierra-club-releases-report-showing-dangers->

The report demonstrates the vast problem of unregulated CCW disposal at FCPP. The DEIS must be completely revised to address the historic, current and future impacts from CCW. In recognition of the EPA's requirement to finalize new federal standards for the disposal of coal ash by the end of 2014, the DEIS must be updated. The DEIS must also evaluate the financial implications and liabilities associated with the standards for the disposal of coal ash at FCPP – APS and other owners at FCPP should have complete financial responsibility.

Under the Environmental Justice heading, the DEIS takes the extraordinary step in claiming that under the Proposed Action and all Action Alternatives:

If a breach of the ash disposal impoundments occurred, potential impacts to tribal lands would be minor.

DEIS at 3-69. This conclusion is disturbing and negligent given that a breach of the ash disposal impoundments could have potentially significant impacts on the San Juan River and Navajo Nation lands/communities. The DEIS must define the legal responsibilities and liabilities of the ash disposal impoundments before jumping to a baseless, misguided conclusion on impacts to tribal lands. OSM is ignoring the regulatory responsibility to truly evaluate impacts associated with CCW disposal. The fact that OSM has included this discussion of CCW breaches under Environmental Justice suggests that OSM would place the financial burden on the Navajo Nation to contend with breach impacts.

Although the DEIS discloses some of the problems associated with CCW, it fails to address the potential impacts:

The two primary concerns related to disposal of CCR have to do with how it is stored after disposal. The first issue is the storage of wet CCR in ponds or impoundments. The wet coal ash is contained by earthen dams, and a breach or failure of the impoundment dam could result in a release of the wet CCR, which has environmental and public safety implications downstream of the release. An earthen dam contains the CCR impoundment at the FCPP and is regulated by the New Mexico Office of the State Engineer, Dam Safety Bureau.

The second concern is related to the metals and other compounds found in CCR. These metals are potentially toxic and have the potential to leach into the groundwater. Two factors increase this leaching risk from disposal units: the use of wet surface impoundments instead of dry landfills, and unlined disposal units have a higher risk of leaching than do disposal units with composite liners to prevent leaking and leaching. (DEIS at 4-15.4)

The admission by OSM that metals in CCR are potentially toxic and the interaction between CCR and NAPI return flows point to very serious problems that must be resolved in a revision of

[coal-ash-four-corners-power-plant](#) (last accessed June 26, 2014)); Sierra Club, *Dangerous Waters: America's Coal Ash Crisis* (2014) (attached as Exhibit 55).

the DEIS. This issue is only exacerbated by the fact that SCR installation at units 4-5 will only increase the toxicity of CCW.

The Conservation Groups retained the services of a hydrology consulting firm, Geo-Hydro Inc., to conduct a critical review of the DEIS's analysis of the environmental effects of CCW disposal practices at the FCPP.¹³⁹ Geo-Hydro's report identified numerous deficiencies with the DEIS' analysis, including:

- Characterization of the extent of groundwater contaminants migrating in groundwater from coal combustion residue (CCR) at FCPP is inadequate.
- Background groundwater chemistry has yet to be adequately characterized at FCPP after 40 years of operation. Only two rounds of high quality groundwater sampling data have been generated over that period.
- Portions of the DEIS appear to rely upon general descriptions of planned groundwater monitoring and remediation systems provided to OSMRE by Arizona Public Service (APS) in a data summary document (APS, 2013). No detailed designs, construction plans, or operational details are provided or even referenced in the DEIS. It is unclear how the environmental impacts of CCR disposal at FCPP can be adequately evaluated with the little available information.
- Many sections of the DEIS make the statement that groundwater within and adjacent to the permit area is of poor quality and is only marginally suitable for livestock watering use. Despite this, groundwater has been and is currently being used for livestock watering. The marginal quality of the water for this purpose indicates that there is very little room for degradation of water quality related to mine or FCPP operations without causing material damage to the hydrologic balance by eliminating livestock watering as a future use of groundwater outside the permit area.

Id.

Geo-Hydro's report is entirely incorporated into this comment letter by reference. The Conservation Groups request that OSM address each of the technical deficiencies of the DEIS outlined in the Geo-Hydro report and re-issue the DEIS for public comment after addressing these deficiencies and disclosing the relevant information requested.

e. The DEIS fails to accurately present the risk of harm from coal ash dam failures.

The DEIS states, “[o]ne of the potential impacts from the disposal of CCR is an accidental release of the ash disposal surface impoundments at the FCPP. Based on this assessment of the dam, impacts from the potential accidental release would be minor.” DEIS at p. 4.11-23. This conclusion is arbitrary and capricious because it fails to present a complete and accurate assessment of the risk of dam failure. In 2008, the New Mexico Office of the State Engineer

¹³⁹ Expert Report of Geo-Hydro Inc. (attached as Exhibit 54).

commented that the coal ash dams at the FCPP should be classified as High Hazard Potential dams.¹⁴⁰ APS responded by acknowledging that at least three residences were identified for evacuation because they were located within close proximity of the inundation area that would be affected by a breach of the coal ash dams.¹⁴¹ These facts were not identified in the DEIS. DEIS at 4.15-15. OSM's characterization of the impact of dam failure as "minor" is arbitrary and capricious in light of the admissions by APS that three residences are at risk for death and destruction in the event of coal dam failure. This risk will only increase as the volume of coal ash waste increase over the next 40 years thus expanding the area of inundation and increasing the risk of death and destruction. The DEIS fails to assess this reasonably foreseeable risk.

f. The DEIS fails to submit complete scientific information on the effects of CCW disposal practices at Navajo Mine.

From 1971 until 2008, CCW was disposed of in unlined pits at the Navajo Mine. DEIS at 4.15-7. As noted above, CCW includes numerous toxins; OSM has calculated the "Navajo Mine On-site Land Disposal Release of Toxic Release Inventory Chemicals," to include at least between 1,532,872 and 2,147,990 pounds each year of toxic chemicals in CCW between 2002 and 2007, including arsenic, barium, lead, mercury, selenium, and thallium. DEIS at 4.15-7-8. OSM admits that the impacts of the placement of CCW in Navajo Mine are "unknown." DEIS at 4.15-31. OSM does know, however, that at two of the pits where CCW was placed have become saturated with groundwater. DEIS at 4.15-31. Despite the fact that OSM does know that CCW contains large amounts of toxic materials, but admits that the impacts of storage of these toxins in unlined pits saturated with groundwater are unknown, OSM nevertheless comes to the conclusion that "potential impacts of CCRs in Navajo Mine were minor." DEIS at 4.15-18. OSM's unsupported conclusion about an issue of such great magnitude does not constitute the hard look required by NEPA.

The DEIS claims that springs and seeps in the Region of Influence (ROI) are associated with Navajo Agricultural Products Industry (NAPI) and discounts the presence of natural springs/seeps based on BHP studies.

No springs or seeps have been observed during hydrologic investigations conducted within or adjacent to the ROI (BNCC, 2012a). However, springs and seeps do occur along upper Chinde Wash, above the Navajo Mine Lease boundary. These springs and seeps are due to Navajo Agricultural Products (NAPI) irrigation return flows

DEIS at 4.5-9. The DEIS then states that:

Unsaturated conditions currently exist at CCR backfill placement locations except for two locations at the northern end of Area 1. CCR materials placed in the

¹⁴⁰ URS letter to NM OSE at 1 (June 23, 2011) (attached as Exhibit 56).

¹⁴¹ *Id.*

Bitsui Pit are saturated as are an isolated location of basal saturation of CCR material around the Watson-4 well. Current groundwater flow directions from the Bitsui Pit are toward the subcrop of the Fruitland Formation along the alluvium of the San Juan River (BNCC 2011a). Any groundwater flow in the future from Area I and portions of Area II is also expected to be to the northeast toward Fruitland Formation subcrop along the alluvium of the San Juan River. Consequently, groundwater from CCR placement locations and associated mine backfill within Areas I and II are not expected to affect the alluvium of the Chaco River.

OSM's assertion that groundwater is not affecting Chaco River alluvium is contradicted by impacts seen in the San Juan River, which the Chaco River feeds. The DEIS discloses that the San Juan River is listed as impaired for sedimentation and turbidity between the Animas River and Largo Canyon and that the Navajo Lake on the San Juan River is impaired for mercury in fish tissue. DEIS at 4.5-21. The DEIS fails to disclose many more waterways on the Navajo Nation that have mercury contamination.

The DEIS does not dispute the presence of heavy metals in the project area and provides evidence of spotty insufficient monitoring:

The NNEPA maintains a number of water quality monitoring sites along surface waterbodies in the Navajo Nation. In the vicinity of the ROI, monitoring locations are located along the Chaco River, Chinde Wash, Bitsui Wash, and the San Juan River. Monitoring data for all sample locations for all years collected was compared to NNEPA surface water quality standards for designated uses (NNEPA 2008). The Chaco River had the longest dataset of record with sampling from 1998 to 2011. Chinde Wash data covered the period 2009-2011, Bitsui Wash only had data for 2010 and 2011 and data collected in the San Juan River was for the years 2006, 2011, and 2012. Based on the data collected, nearly all sample sites met the standards for the designated beneficial uses. The exceptions are listed below:

- Mercury levels in Chaco River in all samples in which it was detected are above the standards for acute and chronic wildlife habitat and fish consumption. Concentrations detected range from 0.000001 mg/L to 0.002 mg/L.
- Two samples in 2005 and two in 2011 in the Chaco River were above the acute and chronic wildlife habitat standards for cadmium
- A sample collected during one sample event in the Bitsui Wash in 2011 was above the standards for secondary human contact and acute wildlife for lead.
- Samples collected during a sample event in the San Juan River in 2011 were above the standard for acute wildlife for cadmium and lead. One sample collected in 2006 was above the standard for acute wildlife habitat for mercury (NNEPA 2013).

DEIS at 4.5-22.

OSM relies upon several assumptions to reach its faulty conclusion that CCW disposal does not present any potential impacts. First, it asserts that unsaturated conditions exist in most of the CCW disposal areas. However, as noted by the report done by Geo-Hydro, the unsaturated conditions may not exist permanently:

groundwater modeling conducted in support of the Navajo Mine SMCRA permit indicates that groundwater gradients are expected to inward toward the mine pit for many decades following mine closure. Adverse impacts of CCR disposal will not likely become evident until groundwater within the mine spoil has rebounded to the point that lateral migration of impacted groundwater out of the spoil and into surrounding areas is reasonably expected.¹⁴²

Thus, OSM's assumption that there will be no impacts rests on the conceit that just because there are no impacts presently, there will be no impacts in the future. OSM must consider future conditions in its analysis of impacts from the disposal of huge amounts of toxic materials. As noted by Geo-Hydro:

Unfortunately for the residents of the Navajo Nation groundwater modeling performed in support of the Area IV North mine plan significant revision application (BNCC, 2011) showed that groundwater gradients will be inward toward the mine backfill for as long as 80 years before resaturation of the mine spoils will progress to the point that groundwater will possibly begin to flow out of the mine spoils. Since environmental monitoring programs are routinely terminated and bonds released soon after completion of mine reclamation, the monitoring system needed to evaluate whether predictions of minimal impacts to water quality are correct will no longer be in place at the time and place where data will be needed.¹⁴³

OSM's next attempt to explain away any impacts rests on a supplemental groundwater study program and laboratory batch testing (performed by BHP) that was implemented to assess possible impacts to groundwater from historic CCW disposal. However, Geo-Hydro's report again reveals the problems with reliance upon this study:

The DEIS concludes that TDS and sulfate concentrations do not increase in concentration and that other metals are attenuated in water that flows from CCR placement areas through spoils. The conclusions of this section of the DEIS are at best speculative and likely wrong for the following reasons.

The supplemental groundwater study consisted of installation and monitoring of wells completed upgradient, downgradient, and within CCR that has been disposed in the mine. The DEIS states that TDS and sulfate concentrations do not increase in CCR that become saturated with spoil water. The analytical results

¹⁴² Expert Report of Geo-Hydro (attached as Exhibit 54).

¹⁴³ *Id.*

from sampling of both spoil and CCR wells show very high concentrations of TDS and sulfate. These results do not indicate that CCR does not leach these parameters to water when saturated, rather it shows that the concentrations of TDS and sulfate are so high in the spoil wells that they approach those of CCR leachate.

Analytical results from monitoring points completed in CCR showed increased concentrations of arsenic, boron, fluoride and selenium. The study cites dispersion and bacterially mediated sulfate reduction to explain why the concentrations of the elevated metals is lower in wells located downgradient of the ash. Missing however is any discussion of the distance and depth of the downgradient wells relative to the CCR, the site specific rate and direction (lateral and vertical) of groundwater flow between the CCR source and downgradient wells; and the size, location, and orientation of the migrating CCR contaminant plumes. Sample analyses only document groundwater quality changes if wells are located and constructed in the correct location and screened intervals are set at the correct depth to intercept the contaminant plume. It is not clear from the provided discussion whether the CCR-derived contaminants had sufficient time to travel the distance to the downgradient monitoring wells. The ability of the monitoring system to detect and characterize the range of contaminants migrating downgradient of the mine spoils must be evaluated and discussed if conclusions drawn from the data are to be relied upon.

Application of short duration, low solid-ratio (dilute) leaching tests like those cited in this section of the DEIS and discussed more fully in Area IV North Permit Application (BNCC, 2011) routinely underestimate the concentration of contaminants in flyash-derived leachate. The procedure does not allow ash constituents sufficient time to come into equilibrium with the fluid, the solid-water ratio is far more dilute than under disposal conditions, and the laboratory conditions do not represent the disposal conditions under which leachate will actually form. The National Research Council warned of the inadequacy of laboratory characterization tests as surrogates for determining field leachate composition specifically with respect to CCR in their investigation of coal combustion ash disposal in mined settings (National Research Council, 2006). These tests were not designed or intended to represent predictions of leachate that will form in the field, and to use them as such is inappropriate (National Research Council, p. 123 et seq.). Citing decades old results from outmoded tests that are widely acknowledged to be ineffective at predicting leachate concentrations from saturated CCR calls into question the validity of the entire evaluation of current and potential future environmental impacts.¹⁴⁴

¹⁴⁴ *Id.*

OSM also tries to explain away impacts by asserting that dilution of groundwater flow will alleviate impacts. DEIS at 4.5-17. Again, however, Geo-Hydro explains that OSM's conclusions are in error:

The DEIS cites dilution by the larger volume of groundwater flow in river alluvium to support the claim of no adverse impacts to surface water quality from CCR or mine spoil constituents that eventually discharge from the Fruitland Formation to the alluvium along the San Juan River. The marginal quality of the water for its current use indicates that there is very little room for addition of Navajo Mine or FCPP-related contaminants without causing material damage to the hydrologic balance by eliminating livestock watering as a future use of groundwater in areas surrounding the permit area.¹⁴⁵

This point is of particular importance given the concerns enumerated above that we simply do not have water to spare to pollution in New Mexico presently, and certainly not with drought conditions becoming more frequent with changes in our climate.

Although groundwater now may be used only for livestock watering, that water may become necessary to treat for higher uses, including agricultural, domestic, and other uses in the future. Dismissing adding additional pollution to groundwater just because it is not being used now is irresponsible and illegal. “[I]f the existing concentration of any water contaminant in groundwater exceeds the [groundwater] standards . . . no degradation of the groundwater beyond the existing concentration will be allowed.” NMAC 20.6.2.3101.A.2. As the New Mexico Court of Appeals found: “[c]ertainly, the legislature meant to capture the concept that clean water that is currently being withdrawn for use, or clean water that is likely to be used in the reasonably foreseeable future, must be protected.” *Phelps Dodge Tyrone, Inc. v. New Mexico Water Quality Control Comm'n*, 143 P.3d 502, 509 (NM Ct. App. 2006). A Commissioner on the Water Quality Control Commission put it more simply: “we are darn sure obligated to make sure that the water that isn't contaminated outside of [the currently contaminated] area is protected.” *Id.* The Commissioner's comment seems to state the obvious, and yet OSM has ignored this obvious obligation by failing to take a hard look at whether historic CCW disposal will cause further deterioration of groundwater, regardless of whether that groundwater is presently of the highest quality, or if it is presently used only for livestock watering.

In sum, OSM has failed to take a hard look at the disposal of enormous amounts of hazardous materials into unlined mine pits. OSM must obtain additional information about current conditions, and present further modeling of future conditions before it can reach any conclusions about impacts.

6. OSM Failed To Take A Hard Look At The Project's Impacts To Endangered Species

The Endangered Species Act (“ESA”) implements a Congressional policy that “all Federal Departments and agencies shall seek to conserve endangered species and threatened species.” 16 U.S.C. § 1531(c)(1). An “endangered species” is a species of plant or animal that is “in danger

¹⁴⁵ *Id.*

of extinction throughout all or a significant portion of its range,” while a “threatened species” is one which is likely to become endangered within the foreseeable future. 16 U.S.C. § 1532(6), (20). The operative core of the ESA is a list maintained by the Secretary of the Interior of threatened and endangered species, and the ESA permits citizens to petition the Secretary to add species to that list. 16 U.S.C. § 1533(b)(3)(A).

At the heart of Congress’s plan to preserve endangered and threatened species is Section 7 of the ESA, which places affirmative obligations upon federal agencies. Section 7(a)(1) provides that all federal agencies “shall, in consultation with and with the assistance of the Secretary [of Commerce or the Interior], utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species.” 16 U.S.C. § 1536(a)(1). The mandate of section 7(a)(2) is even clearer:

Each Federal agency shall, in consultation with and with the assistance of the Secretary [of Commerce or the Interior], insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined . . . to be critical, unless such agency has been granted an exemption for such action . . . pursuant to subsection (h) of this section.

16 U.S.C. § 1536(a)(2). Thus, section 7(a)(2) imposes two obligations upon federal agencies. The first is *procedural* and requires that agencies consult with the FWS to determine the effects of their actions on endangered or threatened species and their critical habitat. *See* 16 U.S.C. § 1536(b). The second is *substantive* and requires that agencies insure that their actions not jeopardize endangered or threatened species or their critical habitat. *See* 16 U.S.C. § 1536(a)(2); *see also, Florida Key Deer v. Paulison*, 522 F.3d 1133, 1138 (11th Cir. 2008).

The requirements of the ESA are triggered by “any ‘agency action’ which may be likely to jeopardize the continued existence of the species or its habitat.” 16 U.S.C. § 1536(a). By this process, each federal agency must review its “actions” at “the earliest possible time” to determine whether any action “may affect” listed species or critical habitat in the “action area.” 50 C.F.R. § 402.14; 50 C.F.R. § 402.02. When there exists a chance that such species “may be present,” the agency must conduct a biological assessment (“BA”) to determine whether or not the species “may be affected” by the action. *See* 16 U.S.C. § 1536(c). The term “may affect” is broadly construed by FWS to include “[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character,” and is thus easily triggered. 51 Fed. Reg. at 19926. If a “may affect” determination is made, “formal consultation” is required and a biological opinion (“BiOp”) must be prepared.

Section 9 of the ESA prohibits the unlawful “take” of an endangered species, 16 U.S.C. § 1538(a)(1)(B), a term that is broadly defined to include harassing, harming, pursuing, wounding, or killing such species. 16 U.S.C. § 1532(19). The term “harm” means “an intentional or negligent omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” 50 C.F.R. § 17.3. The ESA’s legislative history supports “the

broadest possible” reading of “take.” *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687, 704-05 (1995). “Take” includes direct as well as indirect harm and need not be purposeful. *Id.* at 704; *see also Nat’l Wildlife Fed’n v. Burlington No. R.R.*, 23 F.3d 1508, 1512 (9th Cir. 1994).

If an action constitutes a take under Section 9 of the ESA, a party must apply for and be granted an “incidental take permit” (“ITP”) from FWS pursuant to Section 10 of the ESA. 16 U.S.C. § 1539(a)(1)(B). If such a party takes a listed species without an ITP, the ESA authorizes civil and criminal penalties against that party. *See* 16 U.S.C. § 1540.

The DEIS states at several points that consultation with the FWS under section 7 has begun or is imminent. DEIS at 4.8-1, 5-4. The analysis of special status species issues in Sections 4.8 and 4.18 of the DEIS, however, appear to rely on erroneous legal and factual assumptions and methodologies in an effort to obscure or downplay the effects of continued FCPP operations on listed species and their critical habitat. For OSM to meet its obligations under section 7(a)(2) to ensure that federal actions do not jeopardize listed species or adversely modify their critical habitat, it must address and rectify these errors and omissions, as detailed below.

In particular, as will be discussed in detail below the DEIS relies improperly on two arguments to contend that FCPP mercury and selenium emissions are “insignificant” or “minor” in their impacts to listed fish and birds. First, it contends, misleadingly, that FCPP emissions alone are insufficient to cause risk to listed individuals or populations, ignoring the fact that those emissions, and resulting deposition of mercury and selenium, impact waterways and aquatic food webs already sufficiently impacted to cause harm to substantial proportions of listed fish within the San Juan River. DEIS 4.8-69. This overly-narrow definition of risk ignores the fact that Section 7 analyses must consider baseline conditions in the action area – “[t]he baseline includes State, tribal, local, and private actions already affecting the species or that will occur contemporaneously with the consultation in progress,”¹⁴⁶ and that, by its own admission, “metals concentrations under current conditions alone appears to pose a risk to ecological receptors within the deposition area as well as in the San Juan River downstream of the deposition area,” DEIS 4.18-48.

Second, the DEIS, where it does discuss endangered fish toxicity, in its discussion of cumulative impacts, it dismisses the risk from FCPP emissions because toxicity risks to aquatic species such as the Colorado pikeminnow and razorback sucker are predicted to remain high from other sources, “but this risk would remain with or without the future operation of FCPP.” DEIS 4.18-49. It then goes on to argue that because pollution controls would reduce FCPP toxic metals emissions from current levels, FCPP’s incremental contribution to the species’ impairment is only “moderate.”

As a result of the past, present, and reasonably foreseeable emissions from power plants in the region, as well as other sources of emissions (e.g., coal burned in private homes), the potential exists for cumulatively major impacts to aquatic

¹⁴⁶ United States Fish and Wildlife Service, Endangered Species Consultation Handbook 4-22.

species, such as the pike minnow and razorback sucker. However, as modeled in the two ERAs described above, the contribution of FCPP to this potential cumulative effect would be significantly less than historic conditions, and still represent a decline over baseline emissions. Consequently, the long-term contribution of FCPP to cumulative impacts to threatened and endangered species is considered moderate.

DEIS 4.18-49. What is missing from this analysis is any support for the “consequently.” The fact that FCPP mercury emissions will likely decrease with the addition of best available retrofit technology does not excuse the DEIS from providing sufficient information to allow the public and decision-makers to compare continued FCPP operation (even with emissions reductions) with the no-action alternative (no FCPP operation). The unsupported conclusion that FCPP’s contribution will be only “moderate” appears to represent an effort to excuse FCPP’s adverse impacts, not to meet the agency’s NEPA and ESA Section 7 obligations to take a hard look at what the incremental and cumulative effects of its actions will actually be.

a. The DEIS Incorrectly and Inconsistently Defines the Action Area

OSM must prepare a Biological Assessment for the EIS that accurately determines the “action area” for the entire project. According to ESA implementing regulations, the “action area” is defined as “all areas to be affected directly and indirectly by the Federal action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02.¹⁴⁷ The court in *Wilderness Society v. Wisely*, 524 F.Supp.2d 1285, 1305 (D. Colo. 2007), provided: “it is clear from the definition of ‘action area’ that the agencies must consider the effects that occur beyond ‘the immediate area involved in the action,’ i.e., those known to have incidences of the [protected species].” In *Wilderness Soc.*, the informal consultation between BLM and FWS was specifically limited to parcels known to contain a protected species, and did not consider the entire “action area.” In that case, the Court provided that, “[a]lthough the [agency] believes that such consequences are localized or can be adequately mitigated, it is not clear [from the conferral] whether the FWS agrees” because the “action area” was ill-defined. *Id.* at 1305. Accordingly, the Court concluded that “the agencies’ conferral under the ESA was insufficient to encompass all potential adverse effects resulting from development in the action area, and thus, their concurrence that no further consultation was necessary was arbitrary and capricious.” *Id.* By generally confining its “action area” to a “one mile buffer” around the mine and half-mile buffer around transmission lines, OSM arbitrarily limits its analysis of impacts to listed species – in contravention to its ESA mandate.

¹⁴⁷ “Effects of the action” means “direct and indirect effects of an action on the species or critical habitat together with the effects of other activities that are interrelated or interdependent with that action.” 50 C.F.R. § 402.02. “Cumulative impacts” are those effects of future State or private activities ... that are “reasonably certain to occur within the action area.” *Id.*; see also, *Sierra Club v. U.S.*, 255 F.Supp.2d 1177, 1187 (D. Colo. 2002). Further, “interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.” *Id.*

The DEIS defines its “Region of Influence” (“ROI”) as “the lease boundary for the Navajo Mine and FCPP, with an additional 1-mile buffer. For the transmission lines, the ROI is a one-half mile buffer outside each side of the ROW boundary.” DEIS 4-8.1. It also includes an additional area of analysis for FCPP emissions deposited on land or water outside this limited ROI. At one point, the DEIS states that “For the FCPP, the ROI also includes the deposition area around the plant within which 99 percent of all [constituents of potential ecological concern] emitted from the plant are projected to the ground or water.” *Id.* This definition of the analysis area, however, does not appear to find any support either elsewhere in the EIS or in the two APS-generated “Ecological Risk Assessments” on which it heavily relies for its conclusions. Those analyses look instead at “the area identified by air dispersion modeling as having a 1 percent future increase in soil metals concentrations above current condition (baseline) metals concentrations,”¹⁴⁸ or “the aquatic environment of the San Juan River basin, both within the deposition area and downstream of the deposition area into the San Juan River arm of Lake Powell.”¹⁴⁹ It appears that the Deposition ERA limited its analysis of deposition impacts to a 50 km radius around FCPP based on the following reasoning:

The ERA Deposition Area, shown with the red outline in Figure 2-1, was determined by delineating the area where the predicted incremental increase in soil concentration of any of the metals due to 25 years of future full load plant operations is projected to be more than 1% of current concentrations (based on the PLUTO data). Beyond this area, the very small increase in soil concentration associated with the Proposed Action would be sufficiently low to be considered discountable.

Deposition ERA 2-5 (citation omitted). These predicted increases in soil concentration, used to limit the area of analysis, appear to be derived from estimates of EPA’s CALPUFF model for large-scale atmospheric deposition, compared to general soil samples from San Juan county from the 1960s through 1990s. *See* Deposition ERA at 2-4 to 2-5. This method of limiting the analysis area, however, fails to take into account either the Fish and Wildlife Service’s use of a 300 km radius for assessing coal plant deposition impacts,¹⁵⁰ or the existence of a detailed site-

¹⁴⁸ DEIS 4.8-69, citing AECOM, Four Corners Plant and Navajo Mine Energy Project Ecological Risk Assessment (2013) (“Deposition ERA”).

¹⁴⁹ DEIS 4.8-69, citing AECOM, San Juan River Ecological Risk Assessment Conducted in Support of the Four Corners Power Plant and Navajo Mine Energy Project (2013) (“San Juan River ERA”).

¹⁵⁰ *See* U.S. Dep’t of the Interior, U.S. Fish and Wildlife Service, *Draft Biological Opinion for the Desert Rock Energy Project, U.S. Bureau of Indian Affairs, Gallup, New Mexico* at 9-10 (Oct. 2009) [hereinafter “Desert Rock BiOp”] (attached as Exhibit 163 to Conservation Groups’ scoping comments).

specific study showing that sources of mercury deposition at Mesa Verde National Park include coal-fired power plants between 55 and 321 km from the Park.¹⁵¹

In determining the “action area” for air emission-related impacts from FCPP, the FWS and OSM should include, at a minimum, a 300 km radius from FCPP just as FWS employed in the Desert Rock Biological Opinion (“Desert Rock BiOp”). This is because FCPP and the proposed Desert Rock Energy Project would have been located adjacent to one another, they would have burned coal from the same mine, and similar impacts to the same listed species and critical habitats could be anticipated from both facilities’ operations. The Desert Rock BiOp describes and justifies its 300 km radius action area as follows:

The action area encompasses the San Juan River watershed and eight sub-basins of the Rio Grande–Elephant Butte watershed (separated by the Continental Divide), including the 300 kilometer (km) radius of the proposed DREP power station. This action area is defined based on infrastructure and modeled atmospheric emissions from the plant. It includes the northwestern portion of New Mexico west of the Rio Grande and north of Elephant Butte Reservoir and extends generally northeast to include portions of southwestern Colorado, southeastern Utah, and northeastern Arizona.

The Rio Grande originates in southwestern Colorado and bisects the eight sub-basins of the Rio Grande–Elephant Butte watershed within the action area. The upper Rio Grande is fed by several streams, including the Rio Chama, Rio Hondo, and El Rito, which all flow into Cochiti Reservoir, located about half way between Santa Fe and Albuquerque. The Rio Chama and Rio Grande originate in the lower San Juan Mountains of southwestern Colorado, which extend into northern New Mexico south to near Chama. This portion of the action area is characterized by the high elevation San Juan Mountains and the Jemez Mountains with elevations ranging from 5,000 to 10,000 feet (ft).

The middle Rio Grande (below Cochiti Reservoir to Elephant Butte) is bounded on the east by the Sandia and Manzano Mountains, which are outside of the action area, and on the northwest by the volcanic steep-walled canyons and mesas of the Jemez Mountains. Topographically, the middle Rio Grande within the action area decreases in relief to the south with lower elevation mesas, cuerdas, and buttes located west of the broad river valley.

The San Juan River watershed is within the Navajo Section of the Colorado Plateau physiographic province. Topographically, the area is characterized by broad, rolling plains, sandstone capped cuerdas, and high mesas bisected by broad canyons. The San Juan River watershed is the second largest of three sub-basins

¹⁵¹ See Mountain Studies Institute, *Sources of Atmospheric Mercury Concentrations and Wet Deposition at Mesa Verde National Park, Southwestern Colorado, 2002-08, Report 2010-03* at 4, 19 (2010) [hereinafter “MSI Report”] (attached as Exhibit 168 to Conservation Groups’ scoping comments).

of the upper Colorado River basin. The San Juan River originates in the San Juan Mountains of southwestern Colorado and flows approximately 50 km (31 miles [mi]) south to the Colorado/New Mexico border, 305 km (190 mi) westward to the New Mexico/Arizona border, and then continues another 219 km (136 mi) into Lake Powell, which is the western extent of the action area. The San Juan River has few perennial tributaries (the Animas River is the largest), and it receives substantial seasonal flows from a number of ephemeral drainages. In 1962, Navajo Dam was constructed just south of the Colorado border in New Mexico to store flows from the San Juan, Los Piños, and Piedra Rivers.

Desert Rock BiOp at 9, 10. In addition to the 300 km air emission radius, the action area should include all lands directly, indirectly and cumulatively affected by all facets of the proposed action, including coal mining, coal combustion, transportation and transmission corridors.

b. The DEIS Understates Impacts to Threatened and Endangered Species

Threatened, endangered and candidate species are known to occur within the action area, all of which “may” be affected directly, indirectly, and/or cumulatively by the proposed action. Listed and candidate species and critical habitats that may be affected in the FCPP/Navajo Mine ROI include but are not limited to the endangered Colorado pikeminnow (*Ptychocheilus lucius*) and its designated critical habitat; the endangered razorback sucker (*Xyrauchen texanus*) and its designated critical habitat; the listing-candidate roundtail chub (*Gila robusta*); the endangered southwestern willow flycatcher (*Empidonax traillii extimus*) and its designated critical habitat; the listing-candidate yellow-billed cuckoo (*Coccyzus americanus*); the threatened Mesa Verde cactus (*Sclerocactus mesae-verdae*); the threatened Little Colorado spinedace (*Lepidomeda vittata*) and its designated critical habitat; the endangered Mancos milkvetch (*Astragalus humillimus*); the endangered Rio Grande silvery minnow (*Hybognathus amarus*) and its designated critical habitat; the threatened Mexican spotted owl (*Strix occidentalis lucida*) and its designated critical habitat; and, the endangered California condor (*Gymnogyps californianus*) (collectively referred to herein as “Imperiled Species and Critical Habitats”).¹⁵² See also 50 C.F.R. § 402.02 (defining “indirect effects” as “those that are caused by the proposed action and are later in time, but still are reasonably certain to occur.”). In consulting under ESA Section 7, and formulating Biological Opinions, action agencies and the Service are required to consider not only direct and indirect but also cumulative effects. 50 C.F.R. § 402.14(g)(3)-(4).

The DEIS goes to considerable effort, however, to try to minimize the reasonably foreseeable impacts to listed species, particularly aquatic and avian species, adversely affected by toxic emissions from the FCPP, both from stack air emissions and from the leaching of coal combustion waste into ground and potentially surface water. In its cumulative effects analysis, the DEIS acknowledges that “metals concentrations under current conditions alone appears to pose a risk to ecological receptors within the deposition area as well as in the San Juan River downstream of the deposition area.” DEIS 4.18-48. It then declines to quantify or even

¹⁵² See Desert Rock BiOp.

characterize the role of FCPP emissions in this risk, though, apparently relying either on predicted declines in emissions under BART controls, or on potential increases in mercury from Chinese emissions, to dismiss the significance of FCPP's contribution. These excuses are not consistent with the fundamental purpose of the cumulative effects analysis. A cumulative effects analysis is intended to ensure that agencies cannot ignore significant impacts from a collection of sources by analyzing each source individually and dismissing its contribution as relatively minor. See 40 C.F.R. § 1508.7; *Northwest Env'tl. Advocates v. Nat'l Marine Fisheries Serv.*, 460 F.3d 1125, 1134 (9th Cir. 2006) (an environmental impact statement must "catalogue adequately past projects in the area" and provide a "useful analysis of the cumulative impact of past, present, and future projects") (citing *City of Carmel-by-the Sea v. United States DOT*, 123 F.3d 1142, 1160 (9th Cir. 1997) and *Lands Council v. Powell*, 395 F.3d 1019, 1027 (9th Cir. 2005)); *Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1379-80 (9th Cir. 1998) ("In accord with NEPA, the Forest Service must "consider" cumulative impacts. 40 C.F.R. § 1508.25(c). To "consider" cumulative effects, some quantified or detailed information is required. Without such information, neither the courts nor the public, in reviewing the Forest Service's decisions, can be assured that the Forest Service provided the hard look that it is required to provide."); *Mountaineers v. United States Forest Service*, 445 F.Supp. 1235, 1248 (W.D. Wash. 2006) ("It is the additive effect of both agency and other actions taken together that constitutes the gravamen of appropriate cumulative impacts analysis under NEPA.").

Despite these efforts in the special status species section to minimize the contribution of FCPP to adverse effects on listed species, other portions of the DEIS, and the EPRI study, make clear that its role is substantial. According to the EPRI baseline scenario modeling results, the maximum contribution of FCPP mercury emissions to mercury total deposition is about 28 percent in San Juan County near the FCPP and contributions from FCPP range from 2 to 28 percent in the vicinity of the plant; however, the contributions from FCPP are less than 2 percent over the remainder of the San Juan basin (EPRI 2013)." DEIS 4.1-61. What the DEIS and ERAs fail to disclose, however, is the relative contribution of FCPP to mercury deposition, bioavailability, and bioaccumulation within the San Juan's aquatic ecosystems and food web. Without this basic information, there is no way to assess whether the DEIS's claims of "minor" "moderate" or "insignificant" impacts are validated.

c. Baseline Mercury Levels and Additional Mercury Deposition Jeopardize Endangered Species

The U.S. Fish and Wildlife Service ("FWS") has determined that baseline mercury levels in the San Juan River basin are causing reproductive impairment in 64 percent of pikeminnow, a number which it expected to rise to 72 percent by 2020. Desert Rock BiOp at 96. Even with the shutdown of Units 1-3 and the anticipated installation of pollution controls on Units 4-5, the FCPP is a major source of these mercury concentrations in the San Juan River basin, and its emissions of mercury are significantly contributing to these effects. The San Juan River basin is

one of only three sub-basins where pikeminnow still survive, and it is critical to their long-term recovery from the brink of extinction.¹⁵³

Mercury is an element that occurs naturally, but it is also a local, regional, and global pollutant that is harmful to wildlife and human health.¹⁵⁴ Atmospheric mercury is produced from, among other things, combustion of coal at power plants, which releases mercury into the air where it is then deposited by precipitation water bodies, where micro-organisms convert it to methyl mercury – a particularly toxic form – at which point it becomes biomagnified through the food chain.¹⁵⁵ A recent study by the Mountain Studies Institute reports that coal-fired power plants are the largest human source of mercury emissions in the United States, and atmospheric deposition appears to be the dominant source of mercury contamination in North America.¹⁵⁶

There are high mercury levels in southwestern Colorado and northwestern New Mexico. The state of Colorado has posted advisories warning against eating fish from McPhee, Totten, Narraguinne, and Vallecito reservoirs and Navajo Lake due to mercury accumulation.¹⁵⁷ Nine water bodies in northwestern New Mexico have mercury consumption advisories.¹⁵⁸ Sediment cores at four high-elevation lakes in the San Juan Mountains show mercury concentrations that are up to six times above pre-industrial times. San Juan County, New Mexico is among the highest emitters of mercury among U.S. counties due to its coal-fired power plants including FCPP.¹⁵⁹ Data collected from Mesa Verde National Park show mercury deposition levels that are among the highest in the western U.S.¹⁶⁰ Modeling of 47 single storm events from 2002 to 2008 and subsequent identification of storm source direction indicate that 87 percent of mercury deposition came from south of the Park – in particular, from air-pollution plumes from FCPP and the San Juan Generating Station (“SJGS”), another coal-fired power plant located nearby.^{161 162}

¹⁵³ See United States Fish and Wildlife Service, Colorado pikeminnow (*ptychocheilus lucis*) recovery goals: amendment and supplement to the Colorado squawfish recovery plan (2002) (attached as Exhibit 57).

¹⁵⁴ MSI Report.

¹⁵⁵ See Desert Rock BiOp.

¹⁵⁶ See MSI Report.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

FCPP is a “significant source” of mercury deposition at the Park.¹⁶³ FCPP has installed air pollution measures for sulfur dioxide and nitrogen oxides, and these emission reductions correlate with decreasing trends of sulfate, nitrate, and chloride, and an increasing trend in pH in precipitation, at the Park.¹⁶⁴ Unlike SJGS, however, FCPP has not installed mercury pollution control measures, and there has been no change in mercury concentrations and deposition in the Park.¹⁶⁵ Current rates of mercury deposition in the San Juan River basin from FCPP are expected to be unchanged over the next decade.¹⁶⁶

The Colorado pikeminnow is a critically-endangered fish and top natural predator in the Colorado River that has been federally protected since 1967. The pikeminnow is imperiled due to widespread destruction and modification of the Colorado River basin, including its tributaries, where it once occurred. It currently survives as a result of stocking programs in some areas of the upper and lower Colorado River basins, and in a limited stretch of the San Juan River. The San Juan River is critical to the long-term survival and recovery of the Colorado pikeminnow.

In considering the effects of the Desert Rock Energy Project (“Desert Rock”) – a coal-fired plant that was proposed to be sited on the Navajo Nation within 20 km of FCPP – FWS considered the effects of atmospheric mercury deposition to endangered and threatened species including the Colorado pikeminnow.¹⁶⁷ Using a threshold for adverse effects of 0.2 mg/kg WW, 64 percent of

¹⁶² Public Resources New Mexico (“PNM”), the operator of SJGS, recently installed new pollution controls at SJGS as part of a court-ordered Consent Decree. These new improvements include mercury removal on Units 3 and 4 of SJGS. The improvements were completed in early 2009, and are expected to reduce mercury emissions by 62 percent. APS has not taken steps to install any such improvements at FCPP.

¹⁶³ MSI Report.

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ *See* Desert Rock BiOp, Appendix A.

¹⁶⁷ *See* Desert Rock BiOp at 106; The Desert Rock BiOp was prepared by FWS pursuant to section 7(a)(2) of the ESA, which imposes a “substantive duty on federal agencies” to “insure” that any action they undertake or authorize is “not likely to jeopardize the continued existence of any endangered species or threatened species”; it is each agency’s duty to “insure no jeopardy.” 16 U.S.C. § 1536(a)(2); 51 Fed. Reg. at 19926. The ESA’s implementing regulations set forth a process by which an action agency ensures that its affirmative duties under section 7(a)(2) are satisfied. 50 C.F.R. § 402.14(a); *Sierra Club v. Babbitt*, 65 F.3d 1502, 1504-05 (9th Cir. 1995). By this process, each federal agency must review its “actions” at “the earliest possible time” to determine whether any action “may affect” listed species or critical habitat in the “action area.” 50 C.F.R. § 402.14. If the biological assessment concludes that the action is “likely” to adversely “affect listed species,” the agency must enter into “formal consultation,” with FWS.

Colorado pikeminnow experience reproductive impairment due to mercury presently.¹⁶⁸ By 2020, the Desert Rock BiOp finds that mercury deposition in the San Juan River basin is expected to increase by 35.4 percent without or 35.5 percent with the construction of the proposed Desert Rock Energy Project.¹⁶⁹ For this reason, FWS’s draft biological opinion predicts that 72 percent of Colorado pikeminnow in the San Juan River basin will experience mercury-induced reproductive impairment by 2020 – which “is likely to *jeopardize* the continued existence of the Colorado pikeminnow.”¹⁷⁰ Neither the DEIS nor either of the ERAs even attempts to provide such quantitative assessment of probable levels of reproductive impairment. The Deposition ERA, acknowledging risks to fish from mercury and selenium, goes on to state that “Although risks to mobile adult fish are likely overestimated by the [critical body residues “CBRs”], and in particular by the [No Observed Effect Concentration] CBRs, the potential for risks to sensitive life stages and listed species cannot be ruled out.” Deposition ERA at 7-4 (emphasis added).

Given OSM’s and FWS’s obligations to avoid jeopardy and contribute to the recovery of listed species under the ESA, it is not sufficient for the DEIS to conclude that “risks exist with or without continued FCPP operation.” Rather, it must actually take a hard look at what the levels of harm, including reproductive and other sublethal effects, under all scenarios (including comparing FCPP operation and closure), against a baseline that includes existing conditions and other local, regional, and global sources and in full light of the direct, indirect, and cumulative impacts to species over the full 50-year lifetime of the power plant, and the additional 25 years of operations contemplated by the DEIS. Furthermore, while risks may certainly exist with or without continued FCPP operation, the DEIS should consider, via comparative analysis of the impacts of various alternatives, including an alternative that would consider the consequences of not allowing post-2016 coal operations, what the reduction in risk to the species would be. That reduction in risk may warrant retirement of the coal complex well before 25 years are up.

In 2009, FWS determined that Desert Rock would jeopardize the continued existence of the Colorado pikeminnow and would adversely modify its critical habitat. FWS reached this determination, which is set forth in the peer-reviewed Desert Rock BiOp, in part due to existing

Id. §§ 402.14(a), 402.01(b), 402.12(k); *Gifford Pinchot Task Force v. U.S. Forest Service*, 378 F.3d 1059, 1063 (9th Cir. 2007). In formal consultation, after evaluating all relevant information, FWS prepares a “biological opinion,” which considers the current status of the species, the environmental baseline, and the effects of the proposed action, and concludes “whether the action, taken together with cumulative effects, is likely to jeopardize the continued existence of listed species. . . .” *Id.* § 402.14(g)(2)-(4). If “jeopardy” is likely to occur, FWS must prescribe in the BiOp “reasonable and prudent alternatives” to avoid that result. 50 C.F.R. § 402.14(i)(1)(ii).

¹⁶⁸ *Id.*

¹⁶⁹ *Id.* at 3.

¹⁷⁰ *Id.* at 120 (emphasis added).

coal-fired power plants, including FCPP, which have degraded the environmental baseline to such a degree that the emissions from an additional coal plant, Desert Rock, would have driven the pikeminnow to extinction in the San Juan River, one of only three sub-basins where it still survives.¹⁷¹ FWS determined that 64 percent of Colorado pikeminnow currently experience reproductive impairment due to mercury.¹⁷² FWS also determined that by 2020, mercury deposition in the San Juan River basin is expected to result in 72 percent of pikeminnow being reproductively impaired.¹⁷³

The Desert Rock BO and its conclusions are based on *conservative* estimates. Among other things, the Desert Rock BO does not specifically consider the significant contribution of mercury from CCW disposal at the Navajo Mine. According to EPA's TRI, which provides BHP reported data from 2000-2007, thousands of pounds of mercury have been disposed of in the Navajo Mine annually as "minefill."¹⁷⁴ The CCW is not treated prior to disposal and a liner system or other control mechanism is not used, *i.e.*, to prevent saturation and migration of the mercury or other constituents into surface or ground waters which flow directly into the San Juan River. The DEIS acknowledges, but does not analyze at all, the fact that releases are occurring from CCW disposal sites and that CCW leachate contains selenium. DEIS 4.5-14, 4.5-57. "Previous studies found two primary areas of groundwater seepage beneath the ash disposal areas, the "north seep" and "south seepage area" (APS 2013)."

In addition to the Colorado pikeminnow and razorback sucker, as reflected in the attached maps, there are many endangered and threatened species, and some designated critical habitats, that occur within 300 km of FCPP and/or NGS.¹⁷⁵ In addition to the Colorado pikeminnow and razorback sucker, such species include the humpback chub, desert tortoise, Little Colorado River

¹⁷¹ The Desert Rock Energy Project has been on hold following the EPA's Environmental Appeals Board ("EAB") remand of a Prevention of Significant Deterioration permit to EPA, in part due to violations of ESA in connection with the analysis of Desert Rock's effects to endangered and threatened species. *See In re Desert Rock Energy Company, LLC*, 2009 EPA App. LEXIS 28 (EPA App. 2009).

¹⁷² Desert Rock BiOp.

¹⁷³ *Id.* Adult fish with diets high in mercury do not typically experience associated mortality; rather, they deposit excess mercury or selenium in the yolks of developing eggs that fry then use as an energy and protein source; it is at this stage that developmental anomalies occur. *Id.* at 120-21. The deformities are either lethal or cause the fry to be more susceptible to predators or other environmental stressors. *Id.*

¹⁷⁴ *See* Environmental Protection Agency, *Toxics Release Inventory*, available at: <http://www.epa.gov/tri/>.

¹⁷⁵ *See* Center for Biological Diversity, *Map, Endangered Species Habitats and Observations Near the Navajo Generating Station* (attached as Exhibit Exhibit 164 to Conservation Groups' scoping comments).

spinedance, Southwestern willow flycatcher, Navajo sedge, and Mexican spotted owl, as well as each these species' designated critical habitats. Each of these species also occur within a 300 km radius of the FCPP, SJGS, and NGS in some locations.

In reaching its conclusions in the Desert Rock BO, FWS relied on (1) muscle tissue samples (“plugs”) collected from Colorado pikeminnow collected throughout the Upper Colorado River Basin, including within the San Juan River,¹⁷⁶ (2) estimates of brain-tissue population-scale mercury concentrations derived from muscle-brain mercury tissue concentration ratios established in peer-reviewed literature,¹⁷⁷ (3) peer-reviewed brain tissue mercury concentration thresholds for reproductive impairment derived.¹⁷⁸ The DEIS should have been supported by similar reliance on actual physical evidence which the Desert Rock BO demonstrates are feasible and practical and essential to a reasoned choice among alternatives, not merely statistical models. See 40 C.F.R. §§ 1502.22(a), 1502.24. Moreover, although the ERAs advocate consideration of “alternative” and more permissive thresholds for toxic exposure, the nevertheless acknowledge that the scientific-consensus exposure levels used in the Desert Rock BiOp are appropriate for listed species and sensitive life stages. Deposition ERA at 7-4.

Because, even under conservative estimates baseline mercury levels already exceed thresholds for reproductive impairment in a majority of individuals within Colorado pikeminnow, FCPP's past and ongoing mercury emissions already jeopardize Colorado pikeminnow by polluting the fish's critical habitat and preventing its survival and recovery. Because already-deposited mercury that has bio-accumulated in the San Juan River ecosystem will persist for decades, any future mercury emissions from FCPP will only worsen conditions for Colorado pikeminnow and other listed species. The fact that these species are already at risk does not excuse OSM from taking a hard look and disclosing the extent of, intensity of, and comparative effects of various alternatives on those risks.

d. The DEIS Mischaracterizes APS's Own Ecological Risk Analyses

As a threshold matter, we object to the DEIS's decision to obscure the reasoning behind its conclusions by citing repeatedly and in a conclusory fashion to proprietary studies that are not disclosed to the public in the DEIS or its appendices. Failure to make public the assumptions and methodologies underlying its conclusions makes it very difficult – if not impossible – for the

¹⁷⁶ Environmental Contaminants Data Management System (ECDMS) Catalogs, *Hg in San Juan River Colorado Pikeminnow Muscle* (obtained from Desert Rock BiOp record) (attached as Exhibit Exhibit 165 to Conservation Groups' scoping comments).

¹⁷⁷ See Appendix E, *Mercury concentrations in both brain and muscle tissues from fish toxicity studies* (obtained from Desert Rock BiOp record) (attached as Exhibit 16g to Conservation Groups' scoping comments).

¹⁷⁸ Raw data on effects to Pikeminnow (obtained from Desert Rock BiOp record) (attached as Exhibit 167 to Conservation Groups' scoping comments).

general public to understand or comment on OSM's analysis. Moreover, review of the two Ecological Risk Assessments reveals that the DEIS, at several points, either mischaracterizes their significance or omits critical conclusions and/or uncertainties in order to minimize the adverse affects of continued FCPP operations.

The DEIS, in its analysis of cumulative impacts on special status species, states:

In summary, regardless of the source of emissions, metals concentrations under current conditions alone appears to pose a risk to ecological receptors within the deposition area as well as in the San Juan River downstream of the deposition area. Because of the considerable uncertainty in predicting future regional and global metals emissions, future cumulative impacts to ecological resources may be best described by bounding potential impacts within the range of HQs reported for "Current Conditions + FCPP Only Contributions" and "Scenario 8 Contributions". Even at the lower range of HQs that assume status quo current conditions in combination with future FCPP emissions, several highly elevated HQs (e.g., HQ of 190 for selenium exposure to generic San Juan River aquatic receptors; HQs as high as 12 for mercury exposure to Colorado pikeminnow in the San Juan River; HQs as high as 71 for selenium exposure to early life stage fish in the San Juan River) indicate the potential for adverse effects to individual receptors, as well as potential for population level effects. Cumulative impacts associated with past, present, and future conditions may be substantial regardless of whether China mercury emissions increase in the future, but this risk would remain with or without the future operation of FCPP, and as indicated in the ERAs, its future operation would not meaningfully increase those risks. Therefore the contribution of future FCPP operations would not be cumulatively substantive with respect to these ecological risks.

DEIS 4.18-48-49. This conclusion – that FCPP future operation would not meaningfully increase risks – is not supported by the actual methods and conclusions cited ERA. The "HQ" cited in the DEIS refers to a "hazard quotient," a method of determining whether a particular constituent of potential ecological concern ("COPEC") poses a risk to a specified biological receptor. San Juan ERA at 4-5. The actual quotient in question refers to an exposure point concentration ("EPC") divided by an ecological screening value ("ESV"). *Id.* at 4-1, 4-5. The DEIS relies on the fact that hazard quotients for mercury and selenium exposure would be extremely high even without future FCPP emissions to avoid engaging in any quantitative or even qualitative analysis of the incremental effects of either FCPP emissions or cumulative emissions on pikeminnow and sucker toxicity, mortality, reproduction, or recovery. The ERA makes clear, however, that the hazard quotient method is designed only to determine whether or not a risk exists (i.e. whether or not the HQ is greater than 1), and that it does not quantify or describe the scope or severity of that risk. *See* San Juan ERA at 6-19 to 6-20 ("The simple "HQ" approach provides a conservative measure of the potential for risk based on a "snapshot" of conditions and the hazard quotient approach has no predictive capability. HQs are measures of levels of concern, not measures of risk.) ("The HQ is not a measure of risk . . . the HQ is not a population-based measure, HQs do not refer to the number of individuals or percentage of the exposed population that is expected to be impacted . . . HQs are not linearly scaled, the level of

concern for a receptor with a HQ of 10 may not be twice the concern over a HQ of 5.” Because risk does not scale linearly with HQ nor does HQ quantify the extent of potential population effects, the existence of extremely high HQs alone does not excuse OSM from at least making some reasoned attempt to quantify or otherwise describe the numbers of endangered fish that will be adversely affected both with and without FCPP, and to assess the resulting impacts on species survival and/or recovery.

Interestingly, the DEIS’s discussion of vegetation impacts does acknowledge the significant limits of the ERAs approach, limits that are not acknowledged in its discussion of special status species nor cumulative impacts thereon:

It is important to recognize that these ERAs do not directly address potential impacts to communities or populations, but rather address potential impacts to individuals. For generic ecological receptors population-level effects may be of greater relevance than impacts to individuals. Thus, potential risks to individuals are likely not representative of risks to populations; in general, for the same exposures, population risk tends to be lower than individual risk. However, for special status species, and in particular, federally listed species, potential effects to individuals may be relevant, especially for immobile early life stage individuals.

DEIS 4.6-15. Despite this acknowledgment, the DEIS’s treatment of listed species, including the Colorado pikeminnow, razorback sucker, and southwestern willow flycatcher, fails to undertake any informed analysis of population-level effects or effects on sensitive life stages.

e. The EIS Must Address Reactive Gaseous Mercury Deposition

OSM must take a proper hard look at FCPP/Navajo Mine Complex’s impact on endangered Colorado pikeminnow, the razorback sucker and their critical habitat. Both fish would be exposed to mercury emissions through surface and groundwater contamination and ambient air exposure, deposition, and runoff into aquatic habitats, and subsequent bioaccumulation through the food chain.¹⁷⁹ Upon entering the San Juan River ecosystem, microorganisms convert mercury to methylmercury, a highly toxic form of mercury.¹⁸⁰ Because methylmercury is stable and accumulates through the food chain, the highest mercury concentrations are found in top predators, such as the Colorado pikeminnow, causing reproductive impairment, behavioral changes, and brain damage.¹⁸¹ The FWS and OSM must evaluate the relative contribution of reactive gaseous mercury deposition from FCPP and other coal-fired power plants in the action area. The Desert Rock BiOp notes that “[t]he reactive form of mercury is often deposited to land or water surfaces much closer to their sources due to its chemical reactivity and high water

¹⁷⁹ Desert Rock BiOp, at 120.

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

solubility” and that “[p]articulate mercury is transported and deposited at intermediate distances depending on aerosol diameter or mass.”¹⁸²

Data from Mesa Verde National Park show mercury concentrations in precipitation that are “among the highest measured in the United States” and “have trajectories that trace back to within 50 km of the FCPP and SJGS,” supporting the theory that “air masses passing from south Arizona and near these coal - fired power plant facilities [FCPP and SJGS] are contributing to high deposition of mercury there.”¹⁸³ There is also a “clear increase” in mercury deposition in lake bottoms in southwestern Colorado that correlates with the construction of FCPP and SJGS between 1963 and 1977.¹⁸⁴ These two plants “are among the largest sources of mercury emissions in the western U.S.”¹⁸⁵ The BiOp suggests but does not explicitly link the reactive form of mercury presumably coming from FCPP and SJGS and the fact that pikeminnow are experiencing reproductive impairment due to mercury.

f. Analysis of Mercury in Muscle Plugs and Emissions Sources

The EIS and Section 7 consultation should undertake an analysis to determine whether and how much of the tissue-bound mercury in endangered Colorado pikeminnow is derived from mercury deposited by FCPP and other regional coal-fired power plants. The DEIS does not answer this question. The ERAs, by focusing solely on the narrow question of whether a hazard quotient is greater or less than 1 (whether a risk exists or not) under various scenarios, also fail to address the relative contribution of FCPP and other four corners plants to mercury accumulation in fish tissues. In order to determine the sources from which mercury in endangered fish muscle tissue samples is derived, OSM, USFWS and USGS must, as part of the EIS and Biological Opinion process, undertake a study to compare isotopic signatures of mercury in endangered fish tissue samples to isotopic signatures of mercury from FCPP and other regional and pan-regional mercury sources. Short of undertaking of this or another such analyses, neither OSM nor USFWS can ensure that FCPP’s past, ongoing and future mercury deposition is not significantly responsible for elevated mercury and corresponding jeopardy in endangered San Juan River fish.

g. Consideration of Recovery Plans

The DEIS, in its abbreviated consideration of impacts to the Colorado pikeminnow and razorback sucker, fails to give any consideration to the recovery plans for those species adopted pursuant to ESA Section 4(f).¹⁸⁶ In particular, the DEIS fails to assess whether continued

¹⁸² *Id.* at 74.

¹⁸³ *Id.* at 75; *see also* MSI Report.

¹⁸⁴ *Id.*

¹⁸⁵ *Id.* at 76.

¹⁸⁶ *See* United States Fish and Wildlife Service, Colorado pikeminnow (*ptychocheilus lucis*) recovery goals: amendment and supplement to the Colorado squawfish recovery plan (2002)

operations at the mine and power plant would undermine or conflict with these recovery plans. Both these plans include the San Juan River as an integral part of the downlisting or delisting strategy for the species. For the pikeminnow, the San Juan is one of only three subbasins supporting the species, and downlisting requires a population of at least 1000 age 5+ fish.¹⁸⁷ “In the Recovery Goals for the Razorback Sucker (Service 2002b), the San Juan River system is one of two that must show stable or increasing trends in order to achieve downlisting or delisting.”¹⁸⁸ In the Desert Rock BiOp, however, the Service concluded that these delisting goals could not be met due to the toxic and reproductive impacts of mercury on the pikeminnow and selenium on the razorback sucker. Desert Rock BiOp at 121. Neither the DEIS nor the ERAs give any consideration whatsoever to these recovery goals or how FCPP contributions to mercury and selenium loads will affect the possibility of achieving those goals.

h. Impacts of Climate Change

OSM and FWS must consider the impacts that climate change will have on candidate and listed species and their critical habitat, in particular relative to existing non-climate impact vectors, like mercury deposition. Adding stress upon stress upon stress to these vulnerable species invariably pushes them one step closer to extinction. According to experts at the GAO, federal land and water resources are vulnerable to a wide range of effects from climate change, some of which are already occurring. These effects include, among others, “(1) physical effects, such as droughts, floods, glacial melting, and sea level rise; (2) biological effects, such as increases in insect and disease infestations, shifts in species distribution, and changes in the timing of natural events; and (3) economic and social effects, such as adverse impacts on tourism, infrastructure, fishing, and other resource uses.”¹⁸⁹ There is a growing consensus within the scientific community that climate change will:

[C]omponent existing threats to declining species and lead to an acceleration of the rate at which biodiversity is lost. The species that are most vulnerable to

(attached as Exhibit 57); United States Fish and Wildlife Service, Razorback sucker (*Xyracuchen texanus*) recovery goals: amendment and supplement to the razorback sucker recovery plan (2002) (attached as Exhibit 58).

¹⁸⁷ See Desert Rock BiOp at 121.

¹⁸⁸ *Id.*

¹⁸⁹ GAO Report, *Climate Change: Agencies Should Develop Guidance for Addressing the Effects on Federal Land and Water Resources* (2007) (attached as Exhibit 169 to Conservation Groups’ scoping comments); see also Committee on Environment and Natural Resources, National Science and Technology Council, *Scientific Assessment of the Effects of Global Climate Change on the United States* (2008) (attached as Exhibit 170 to Conservation Groups’ scoping comments); Melanie Lenart, et al., (attached as Exhibit 50 to Conservation Groups’ scoping comments) (describing impacts from temperature rise, drought, floods and impacts to water supply on the Southwest).

extinction from whatever cause are those with restricted ranges, fragmented distribution within their range, low populations, reducing range, decreasing habitat within the range, and/or which are suffering population declines. Species with quite restrictive habitat requirements are most vulnerable to extinction. Where climate change is projected to reduce habitats of such species there are likely to be the greatest extinction risks.¹⁹⁰

Not surprisingly, “[a]quatic and wetland ecosystems display high vulnerability to climate change. Changes in water temperature and shifts in timing of runoff will change aquatic habitats, resulting in species loss or migration as well as novel and unpredictable interactions of new combinations of species.”¹⁹¹

Impacts from climate change are anticipated to acutely affect New Mexico, and include the “dewatering of rivers and streams,” as well as “[i]ncreased drying of soils and significant reductions in soil moisture” – all of which are “likely with climate change as potential evapotranspiration rises with increasing temperatures.”¹⁹² These effects will “compound the adverse effects of changes in the hydrology of runoff and water availability throughout New Mexico.”¹⁹³ Water availability has the potential to significantly impact endangered and threatened species. For example, “[s]ubstantial changes in the natural hydrograph and intensification of managed uses will severely disrupt stream ecology and health, which may have additional implications for managing endangered [fish species],”¹⁹⁴ as well as those species – like the Southwestern willow flycatcher – which “rely on riparian vegetation for nesting and food resources.”¹⁹⁵

The direct, indirect, and cumulative impacts to threatened and endangered species and their critical habitats must be analyzed as a result of the proposed FCPP/Navajo Mine/Transmission Corridor project area, per compliance requirements with Section 7 of the ESA, 16 U.S.C. § 1536,

¹⁹⁰ Agency Technical Work Group, State of New Mexico, *Potential Effects of Climate Change on New Mexico* (2005), at 24-25 (attached as Exhibit 171 to Conservation Groups’ scoping comments).

¹⁹¹ John R. D’Antonio, *The Impact of Climate Change on New Mexico’s Water Supply and Ability to Manage Water Resources* (2006), at 45 (attached as Exhibit 172 to Conservation Groups’ scoping comments).

¹⁹² Brian H. Hurd, et al., *Climate Change and Its Implications for New Mexico’s Water Resources and Economic Opportunities* (2007), at 18 (attached as Exhibit 173 to Conservation Groups’ scoping comments).

¹⁹³ *Id.*

¹⁹⁴ Hurd, et al. at 19.

¹⁹⁵ See Agency Technical Work Group, State of New Mexico, at 25, 26.

and its implementing regulations, at 50 C.F.R. § 402. Those impacts include but are not limited to the impacts of mercury and selenium pollution resulting from coal mining, combustion, waste disposal and climate change on all the listed species and critical habitat in question. In addition, the Navajo Nation Fish and Wildlife Department and Hopi Tribe must be consulted on any potential action concerning the Navajo Nation and potential impacts to species listed under the Navajo Endangered Species List (“NESL”), and Hopi Land crossed by transmission corridors, and impacted by FCPP emissions.

7. OSM Failed To Take A Hard Look At The Project’s Impacts To Environmental Justice

As noted in our scoping comments and above, there can be no real dispute that the Navajo people have been disproportionately affected by the extensive energy development – including coal, oil and gas, and uranium – that has occurred on the Navajo Nation.¹⁹⁶ Adverse social, economic, and health effects are associated with the Project. DEIS at 4.11-21-24. Continued operation of the Project would cause additional, and cumulative impacts on Navajo communities surrounding the Project; the Project would continue to emit SO₂, NO_x, PM₁₀, PM_{2.5}, VOCs, CO, arsenic, lead, mercury, selenium, among other hazardous materials, and would therefore contribute to “ambient air quality deterioration, visibility impairment, and dry and wet deposition in the ROI.” DEIS at 4.11-14-15. Continued operation of the Project would increase ecological risks to terrestrial and aquatic habitats due to “deposition of metal emissions.” DEIS at 4.11-25. In addition, the Project “would result in extensive adverse impacts to landforms and topography during mining.” DEIS at 4.11-15. Continued operation and expansion of the coal ash disposal areas “would have the potential to contaminate local groundwater and water quality in Chaco Wash.” DEIS at 4.11-18. Stock ponds used to sustain livestock in the area would also be adversely affected. DEIS at 4.11-18. More glaringly, residents in the area would be relocated, and access to grazing areas on Navajo land would be restricted.” DEIS at 4.11-19. Accidental release of the ash disposal impoundments could occur, and off-site contamination from historical coal combustion waste “could occur as a result of seepage in groundwater.” DEIS at 4.11-23. Due to air quality deterioration, the Project will continue to affect public health. DEIS at 4.11-24. “Impacts would primarily affect Navajo populations.” DEIS at 4.11-15; *see also* 4.11-15-24.

Despite these impacts, OSM glosses over the disproportionate impact that the Project has had and will continue to have if it continues to operate. For example, although the DEIS mentions that “San Juan County has a higher incidence of chronic lower respiratory disease comprised of chronic bronchitis, asthma, and emphysema compared to New Mexico or the rest of the United States,” DEIS at 4.11-13, it does not address this situation in any detail. OSM notes that impacts to air quality “would be greatly reduced” under the No Action alternative compared to the Proposed Action, OSM nevertheless fails to consider the Project’s contribution to air quality impacts, in particular on the Navajo Nation, in any real detail. Instead, it summarily concludes that impacts would be minor, even while conceding that “elevated levels of ozone in San Juan County were linked to incidence of asthma-related medical visits (NMDH 2007). DEIS at 4.11-13. Indeed, “[a]t least one patient made an asthma-related visit on 350 (63.4%) of the 552 study days.” NMDH 2007. The New Mexico Department of Health study determined that the ozone

¹⁹⁶ *See* Conservation Groups’ Scoping Comments at 62-70.

levels in the county “were among the highest among EPA regional sites in the Southwest including Arizona, Utah, Colorado, New Mexico and Texas,” and were likely caused by NO_x, a pollutant emitted from FCPP. NMDH 2007. The New Mexico Department of Health concluded “high values [of ozone] in San Juan County are of concern. The San Juan County Community Health Profile echoed this concern noting, “[o]zone levels, particulate matter pollution and mercury are all recognized concerns in San Juan and the Four Corners in general,” noting in particular the “documented connection of ozone with emergency visits for asthma.” San Juan County 2010.

As noted, deposition of heavy metals including mercury is also of concern. The San Juan County Community Health Profile states: “According to the Four Corners Air Quality Task Force, mercury is a pollutant that is of particular concern in the Four Corners region. Mercury is released into the environment from coal-fired power plants and from mining.” San Juan County 2010. As noted in the health profile:

Mercury is a heavy metal that builds up and remains in the ecosystem and can be found in toxic levels in fish in many areas in San Juan County. Even in small amounts, mercury can cause a variety of physiological problems, illness, and even death, according to Dr. Grossman, a Durango physician researching the effects of mercury on pregnant women and their newborn infants.

The DEIS notes that “[m]ercury and other contaminants may be deposited in the soil due to power plant operations, and humans may ingest these contaminants through consumption of farm products grown in these soils, or fish harvested from local waters.” DEIS at 4.11-13. Despite the Project’s contribution to the problem, and the documented toxicity even in small amounts, OSM again glosses over the problem, summarily concluding – without any citation to support its conclusion – that according to risk assessments, it should not be a problem. DEIS at 4.11-13.

Given OSM’s responsibility to address environmental justice concerns, it is unclear why OSM did not include additional information about the impacts to the Navajo. This failure is especially apparent given Conservation Groups’ repeated request for a public health study.

Additional environmental justice concerns regarding OSM’s failure to provide for effective community participation and free, informed, and prior consent are discussed below in section III(G).

8. OSM Failed To Take A Hard Look At The Project’s Impacts to Trust Assets

Historically, Navajo Mine is Federal land held in trust for Navajo Nation. Department of the Interior oversees the lease and FCPP is a Federal facility. Secretarial responsibilities need to account for leasing, bonding, liabilities and the entire financial implications of mine ownership within the context of the coal complex. The FCPP Lease site is definitely Federal land held in trust for Navajo Nation with connectivity to Navajo Mine. Trust assets sections in DEIS are deficient (example, potential breach at CCW impoundments would result in “minor” impact to Navajo Nation according to DEIS). The DEIS suggest that there is some credence given to protecting the United States from liability, “DOI/BIA reviews each proposed trust-related project

with the intent to approve only those projects found beneficial to the Tribe and do not create a liability for the US (see Section 4.12.2) DEIS at 4.18-50. Yet, current conditions associated with coal could result in less than profitable outcomes for the Navajo Nation. Although it is being pitched that Navajo Nation's purchase of Navajo Mine will be profitable, there is a chance that liabilities could quickly be imposed on Navajo Nation wiping out their economy. This is why requests to see due diligence reports and requests to Sally Jewell are important. These requests have been ignored and the DEIS fails to adequately assess the Trust Assets component of the analysis. The DEIS continues the pattern of minimizing responsibilities when it claims:

In January 2014, BIA received a request for Secretarial approval on a mortgage between BHP and NMCC for the Navajo Mine lease area. BIA is reviewing this business transaction for compliance with federal trust policies. The action will undergo NEPA review per the requirements provided in the BIA NEPA Guidebook as Categorical Exclusion for the approval of a mineral lease adjustment or transfer (516 DM 1.5 G[3]).

DEIS at 2-34.

A Categorical Exclusion by BIA is unacceptable and the DEIS is inaccurate as we can only assume that the transfer here is between BHP and NTEC, as BHP and NMCC are basically the same company. We also remind OSM that BHP/NMCC intend to depart by 2016 so any mortgage analysis is a significant fiduciary transition for Navajo Nation taking over ownership of Navajo Mine. BIA is a Cooperating Agency to the DEIS and has to clarify the Trust Responsibility obligations that are obfuscated throughout the DEIS. BIA in no way resolves the bigger Trust Assets issues which should be in the DEIS concerning the Federal government involvement for the facilities/complex and the multitude of financial oversight issues, which are summarily dismissed through the DEIS.

9. OSM Failed To Take A Hard Look At The Project's Impacts to Cultural Resources

The DEIS sections on cultural resources are deficient. Appendix B. 1 of the DEIS Volume 2 – Appendices includes a list of cultural resources in the APE (“Area of Proposed Effect”) that have no compliance with Section 106 of National Historic Preservation Act (“NHPA”), with incomplete surveys, incomplete and deferred consultations and conclusions, and pending Programmatic Agreements (“PA”).

The DEIS takes the unlawful position that:

The Proposed Action, including the continuing operations of Navajo Mine, FCPP and the transmission lines, would not result in major adverse effects to cultural resources, Therefore, no additional mitigation is recommended.

DEIS at 4.4-35. OSM makes this determination while readily admitting that PAs are being developed, DEIS at 4.4-35, many sites are awaiting pending state and tribal Historic Preservation Officer concurrence with OSM findings, *see* Appendix B.1 of DEIS, and some properties have

simply not been surveyed yet, *see* Attachment G-1 of the DEIS Volume 2-Appendices, where reports are forthcoming.¹⁹⁷ In addition, Class I surveys noted in the DEIS are not adequate to evaluate the extents of archaeological resources in the project areas (including transmission lines).

This is a classic example of an agency predetermination. Without knowing what the impacts are, or indeed even where all of the relevant sites, OSM simply cannot make the claim that there will be no adverse effects. Moreover, OSM cannot rely on mitigation measures to minimize impacts that have not even been established in the DEIS.

NEPA “requires ... that an agency give a ‘hard look’ to the environmental impact of any project or action it authorizes.” *Morris v. U.S. Nuclear Regulatory Commission*, 598 F.3d 677, 681 (10th Cir. 2010). This examination “must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.” *Forest Guardians*, 611 F.3d at 712 (quoting *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000)); *see also* 40 C.F.R. § 1502.2(g) (“Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.”); *id.* § 1502.5 (“The statement shall be prepared early enough so that it can serve practically as an important contribution to the decision-making process and will not be used to rationalize or justify decisions already made.”).

Without such reasoned consideration, BLM’s reliance on mitigation measures merely skirts BLM’s duty to take a hard look at impacts *before* allowing impacts to occur.

Mitigation measures may help alleviate impact *after* construction, but do not help evaluate and understand the impact before construction. In a way, reliance on mitigation measures presupposes approval. It assumes that – regardless of what effects construction may have on resources – there are mitigation measures that might counteract the effect without first understanding the extent of the problem. This is inconsistent with what NEPA requires. NEPA aims (1) to ensure that agencies carefully consider information about significant environmental impacts and (2) to guarantee relevant information is available to the public.

N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067, 1084-85 (9th Cir. 2011). By failing to perform the necessary analysis, the agency, in effect, is presupposing that any site-specific impacts from coal development can be mitigated without significant, unacceptable impacts before even knowing what those site-specific impacts are. Without analyzing impacts from to cultural resources itself, any subsequent analysis intrinsically shifts from *preventing* impacts (and managing lands for other resource values) to merely *mitigating* impacts (and allowing coal entities to exercise their surface use rights to the lease at the expense of other resource values). This approach is fundamentally incongruous with NEPA’s mandate.

The DEIS also relies on data recovery as an acceptable treatment for cultural resources instead of avoidance. Preservation in place should always be the first option for treatment and should be so

¹⁹⁷ *See* Diné Citizens Against Ruining Our Environment, *History of Area IV Site Disturbance* presentation (Sept. 2013) (attached as Exhibit 72).

stated. The DEIS does not have a map showing the distribution of significant cultural resources sites in the APE. Without this map, the reader is unable to evaluate whether the proponent has considered the feasibility of avoidance. Some sites may be significant primarily for their landscape relationships or “setting”(for instance rock art and tower observatory/kivas).

The linkage of cultural resources, visual resources and recreation sources is not made in the DEIS; this failure negates the *interdisciplinary* analysis, which is fundamental to NEPA, and the requirement to consult under Section 106 of NHPA. The DEIS fails to include landscape assessments which are critical to archeological analysis. The types of sites in the “catchment” of the Navajo Mine direct effects should be evaluated for how representative of the region they are. If we have no terrace Pueblo II unit pueblos left because that landform has been completely mined, then the sites of that type that are left have a higher priority for preservation in place and should not be subject to data recovery.

OSM cannot issue a proper DEIS until it has taken a hard look and included relevant information so that decision-makers and the public can review the impacts of the Proposed Action. OSM has failed to perform this hard look and thus the DEIS is incomplete and must be reissued.

10. OSM Failed To Take A Hard Look At The Project’s Cumulative Impacts

NEPA requires agencies to include “a full and fair discussion” of cumulative impacts, defined as the “incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes other such actions.” 40 C.F.R. §§ 1502.1, 1508.7, 1508.8, 1508.9; *see also Resources Limited, Inc. v. Robertson*, 35 F.3d 1300, 1306 (9th Cir. 1994). An agency’s duty to consider cumulative impacts is one of NEPA’s most important mandates because it prevents a “tyranny of small decisions.” *Kern v. BLM*, 284 F.3d 1062, 1078 (9th Cir. 2002) (quoting Council on Environmental Quality, *Considering Cumulative Effects Under the National Environmental Policy Act* at 1, Jan. 1997). A NEPA analysis therefore “must give a realistic evaluation of the total impacts, and cannot isolate the proposed project, viewing it in a vacuum.” *Grand Canyon Trust*, 290 F.3d at 342.

OSM’s treatment of cumulative impacts in the DEIS is abysmal. As OSM knows well, the Project is not proposed in a vacuum. The Navajo Mine and FCPP sit within an area rife with energy development. Just across the San Juan River sit the San Juan Mine and 1800-MW San Juan Generating Station. Less than 200 miles to the West, the Navajo Generating Station emits additional pollution. Lee Ranch and El Segundo coal mines are about 125 miles to the South. Oil and gas development – thousands of oil and gas wells, associated compressor stations, processing facilities, and other infrastructure, as assessed by the Bureau of Land Management’s Farmington Field Office through a Resource Management Plan and Environmental Impact Statement – are, interspersed almost everywhere in this region.¹⁹⁸ In addition, BLM is

¹⁹⁸ *See* U.S. Dep’t of the Interior, Bureau of Land Management, Farmington Field Office GIS Dep’t, *Federal Oil and Gas Wells San Juan Basin* (Sept. 2008) (attached as Exhibit 59). Please note that this map is now 8 years old, with a great deal of development occurring since this time.

considering, through another Resource Management Plan amendment, increasing the level of oil and gas development through authorization of leasing and drilling in the Mancos Shale formation.¹⁹⁹ The Desert Rock Energy Project and Gallup to Farmington Freight Rail Line are also under consideration, and would add significant, additional impacts to the region. Indeed, OSM spends 28 pages for a table listing “Projects Considered in the Cumulative Impacts Analysis.” DEIS at 4.18-3 – 4.18-31. The cumulative impacts analysis itself, however, is less than 20 pages. Although the length of analysis does not always reveal its quality, here, unfortunately, it does.

Conservation Groups brought many of the cumulative impacts of the Project to OSM’s attention in our scoping comments, in particular the combined effects on climate change, air quality, public health, and impacts to endangered species caused by the myriad projects and activities within the region. Although OSM touts the importance of scoping in its cumulative impacts section, DEIS at 4.18-1, we do not see the suggestions we made incorporated into the DEIS. We therefore refer you to those comments for a discussion of the cumulative impacts to communities and the environment in the region. In this section of our comments, we focus specifically on the errors in OSM’s analysis of cumulative impacts in the DEIS.

As discussed in more detail above, OSM’s consideration of cumulative impacts is flawed from the start in that it attempts to sweep all past impacts into what it calls the baseline. *See, e.g.*, DEIS at 4.18-1. Although that approach would not necessarily be problematic if OSM then added the present and future impacts to that baseline, and then considered the impacts as a whole, OSM does not do that. Instead, anything that OSM includes part of this baseline, OSM either ignores or discounts so that OSM effectively considers only the impacts of the Project itself, thus completely eliminating any legitimate discussion of cumulative impacts. OSM even goes so far as to claim that “[i]n general, the environmental analysis under NEPA is forward-looking, in that it focuses on the potential impacts of the proposed action that an agency is considering.” DEIS at 4.18-1. This confined view – effectively, a vacuum from reality – of the NEPA process forgets the requirement for cumulative impacts, which requires “a full and fair consideration” of the “incremental impact of the action *when added* to other past, present, and reasonably foreseeable future actions.” 40 C.F.R. §§ 1502.1, 1508.7, 1508.8, 1508.9. Moreover, it fails to recognize that CEQ’s NEPA regulations clearly warn that the mere fact that a project may provide some benefits does not mean that impacts are insignificant and does not justify an agency taking a blind eye at adverse impacts. 40 C.F.R. § 1508.27(b)(1). OSM also fatally errs in segmenting cumulative impacts into resource area, and thus failing to consider the cumulative impact of the myriad impacts on, for example, public health or the environment. DEIS at 4.18-1 (“The integration of the effects must be within each resource category.”). CEQ Guidance on Cumulative Impacts specifically notes as a guiding principle that an agency must “[a]ddress additive, countervailing, and synergistic effects.” CEQ 1997 at 37.

BLM notes that “New Mexico has one of the largest oil and gas programs in the Bureau.” *See* http://www.blm.gov/nm/st/en/prog/energy/oil_and_gas.html.

¹⁹⁹ 79 Fed. Reg. 10548 (Feb 25, 2014).

OSM's cumulative impact section fails most fundamentally, however, in its overall lack of analysis. Put simply, it does not constitute a hard look at cumulative impacts. CEQ notes some of the basic steps in a proper cumulative impacts analysis, including identify[ing] the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities," and then "determin[ing] the magnitude *and significance* of cumulative effects." CEQ 1997 at 37 (emphasis added). Here, although OSM provides some limited information about the magnitude of effects, the analysis is almost entirely lacking as to the significance of those effects—i.e., an assessment of their true scope, magnitude, and duration.

For example, with regard to climate change, OSM merely notes that GHG emissions are cumulative, and quantifies GHGs to be emitted. OSM fails to address the significance of those effects by assessing the incremental impacts of those GHGs relative to other fossil fuel activities – such as coal operations at SJGS and NGS, and oil and gas development in the San Juan Basin – and relative to the anticipated consequences of climate change to the region, period. To do so, OSM would need to determine what level of GHG emissions would be significant, instead of dismissing any level as "relatively small," and at least acknowledge that even incremental emissions, when understood in the proper context and relative to the intensity of climate change, may be significant – information critical to assess the propriety of allowing coal operations to continue beyond 2016. DEIS at 4.18-36. Moreover, this failure to take a hard look at impacts, versus just quantifying emissions then dismissing such emissions as "relatively small," underscores OSM absolute failure to "modify, or add alternative to avoid, minimize, or mitigate significant cumulative effects." CEQ 1997 at 37; 40 C.F.R. § 1502.14. Moreover, even if it is reasonable to conclude that impacts are "relatively small," there are clearly "unresolved conflicts" concerning the mine and power plant complex compelling the consideration of alternatives that would eliminate or reduce GHG emissions. 42 U.S.C. § 4332(2)(E). As discussed below, OSM fails to include any alternatives, other than the required No Action alternative, that would reduce cumulative impacts to climate change.

OSM's analysis of cumulative impacts to public health is even more troublesome. Instead of considering the contribution of past, present, and reasonably foreseeable impacts to public health, OSM appears to consider only future effects of the Project, and within those impacts, only the impacts from deposition of toxics, and air pollution. DEIS at 4.18-53-54. Thus, OSM completely fails to consider impacts to public health due to water pollution, changes in climate, and other stressors. Instead, as CEQ recommends, OSM should establish a threshold of significance, and consider whether past impacts have already brought impacts close to that threshold:

Ideally, the analyst can identify a threshold beyond which change in the resource condition is detrimental. More often, the analyst must review the history of that resource and evaluate whether past degradation may place it near such a threshold. For example, the loss of 50% of historical wetlands within a watershed may indicate that further losses would significantly affect the capacity of the watershed to withstand floods. It is often the case that when a large proportion of a resource is lost, the system nears collapse as the surviving portion is pressed into service to perform more functions.

CEQ 1997 at 41. OSM's cumulative impacts analysis must include this sort of analysis for it to be meaningful. This, in turn, should be used to inform OSM's identification, consideration, and comparative evaluation of alternatives and mitigation measures. "unresolved conflicts" concerning the mine and power plant complex compelling the consideration of alternatives that would eliminate or reduce public health impacts. 42 U.S.C. §§ 4332(2)(C)(iii); 4332(2)(E); 40 C.F.R. § 1502.14. As we noted above, to perform this level of analysis, it is likely that OSM will need to perform a public health study given the significant period and extent of stressors to public health.

Furthermore, OSM cannot dismiss impacts as minor merely because "there would be no measureable change to ambient air quality compared to baseline conditions," or because "there would be a reduction in FCPP emissions as a result of compliance with EPA's BART rule." DEIS at 4.18-54. As noted above, a continuation of the status quo – in particular when the status quo involves continuous emissions of various types of pollution to the air, land, and water – does not necessarily equate to a finding of minor impacts.

For OSM's proposition to hold water, OSM must make several assumptions that are inherently flawed. First, it must assume that there is no difference between a power plant and mine that operate for fifty years and a power plant and mine that operate for seventy-five years. This argument has already been rejected. In a similar case, BLM claimed because the proposed action would not cause a change to existing operations, and therefore those operations did not need to be considered. *South Fork Band*, 588 F.3d at 725-26. The court rejected that idea, stating: "the mine expansion will create ten additional years of such transportation that is, ten years of environmental impacts that would not be present in the no-action scenario." *Id.* at 725. As such, the court held that BLM's attempt to avoid addressing the direct, indirect, and cumulative impacts was inconsistent with NEPA's mandates. *Id.* Here too, even if the Project will not change existing operations, it will allow for continued operation of the mine and power plant, and thus allow for additional pollution – with attendant impacts to public health – for the life of the project.

Second, to reach its finding that impacts will be minor, OSM must also assume that past impacts do not exist; OSM must look at incremental impacts without considering those impacts "when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. Considering impacts out of context, however, misses the point of a cumulative impacts analysis. "[E]ven a slight increase in adverse conditions that form an existing environmental milieu may sometimes threaten harm that is significant. One more factory . . . may represent the straw that breaks the back of the environmental camel." *Grand Canyon Trust*, 290 F.3d at 342 (quoting *Hanly v. Kleindienst*, 471 F.2d 823, 831 (2d Cir. 1972)).

The cursory analysis of cumulative impacts the EIS did provide is also, on its face, inadequate, providing only a "perfunctory" analysis that does not "provide a useful analysis of the cumulative impacts of past, present, and future projects." *Te-Moak*, 608 F.3d at 603-08 ("A cumulative impact analysis must be more than perfunctory; it must provide a useful analysis of the cumulative impacts of past, present, and future projects." (internal citations omitted)). The

cumulative impacts section provided in the DEIS fails to provide a useful analysis of the cumulative impacts, and must be supplemented.

F. OSM Has Failed To Adequately Consider Reasonable Alternatives To The Proposed Action

An EIS's alternatives section should be "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. This section should present alternatives in "comparative form" *so that* the issues are "sharply defin[ed]" and there is "a clear basis for choice among options by the decisionmaker and the public." *Id.*; *see also Westlands Water Dist. v. U.S. Dept. of Interior*, 376 F.3d 853, 872 (9th Cir. 2004) (quoting *California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982) (The "touchstone" of the alternatives analysis is "whether [the] selection and discussion of alternatives fosters informed decision-making and informed public participation.")). OSM's treatment of alternatives fails to provide this clarity; the similarity of the alternatives forecloses the possibility that their comparison will define the issues or provide a clear basis for choice. Although the No Action alternative normally would help to ameliorate this flaw, OSM muddles the situation even more by failing to analyze the No Action alternative in the same way as it discusses the action alternatives. These deficiencies are exacerbated by OSM's failure to take a hard look at direct, indirect, and cumulative impacts—in particular relative to the context and intensity of not only the projected 25 years of continued coal mining, coal combustion, and coal ash disposal operations, but relative to the context and intensity of the prior 50 years of coal activity.

OSM must consider "alternatives to the proposed action," and "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. §§ 4332(2)(C)(iii), 4332(2)(E). OSM must "[r]igorously explore and objectively evaluate all reasonable alternatives" and must "[i]nclude the alternative of no action." 40 C.F.R. §§ 1502.14(a), (d).

As an initial matter, OSM failed to ensure that the No Action alternative served its purpose to illustrate the impacts of the Proposed Action as compared to a No Action alternative. As the Ninth Circuit has explained:

The goal of the statute is to ensure "that federal agencies infuse in project planning a thorough consideration of environmental values." The consideration of alternatives requirement furthers that goal by guaranteeing that agency decisionmakers "[have] before [them] and take [] into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance."

Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988) (citations omitted). "Informed and meaningful consideration of alternatives-*including the no action alternative*-is thus an integral part of the statutory scheme." *Id.* (emphasis added).

However, throughout the DEIS, OSM fails to use the No Action alternative to analyze impacts in comparative form. Instead, OSM downplays benefits of the No Action alternative and highlights the negative consequences of the No Action alternative that would actually be common to all alternatives. For example, in the discussion of air quality impacts, the DEIS lists emissions under the No Action alternative for years 2014 and 2015 when under any alternative the mine and power plant would continue operations, instead of discussing the benefits of reduced emissions in future years, other than a limited discussion of ozone. DEIS at 4.1-104. OSM's analysis of the No Action alternative for climate change is similar. DEIS at 4.2-23-24. Even more egregiously, OSM highlights impacts to paleontological resources that would occur with the No Action alternative, but again, these impacts would occur with any alternative and thus should be discussed accordingly. DEIS at 4.3-27. Similarly, OSM fails to consider or analyze the benefits of the No Action alternative and shutdown of FCPP with regard to deposition of heavy metals: "since the FCPP is only one of a number of power plants in the area, potential metal uptake by plants would not be eliminated and it is unknown if any beneficial impacts to vegetation would occur as a result of FCPP shutdown." DEIS at 4.6-21. This argument is odd given the weight OSM places, elsewhere, on the reduced magnitude of impacts of post-2016 operations given the retirement of units 1-3. In short, OSM seems to want to downplay the benefits of the No Action alternative as much as it wants to downplay the costs of the Proposed Action. This type of analysis is directly contrary to NEPA's goal that alternatives – including the no action alternative – sharply define the issues and present a comparison of costs and benefits of choices. 40 C.F.R. § 1502.14. "Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made." 40 C.F.R. §1502.2(g).

OSM also fails to consider reasonable alternatives. The Conservation Groups' scoping comments included several alternatives for consideration in the DEIS:

- (1) An alternative that considers retirement of units 1-3 as anticipated, and retirement of units 4-5 by 2027. As a result of this earlier retirement date, this alternative would exclude the Pinabete Expansion, and instead would consider winding down operations at the Navajo Mine. This alternative would need to fully assess liabilities of FCPP/Navajo Mine/Transmission corridors and initiate an economic development scenario that the U.S. Department of the Interior should facilitate, in the role of trust responsibility oversight. This alternative would also require analysis of the significant reclamation/restoration required at the project site with financial assurance mechanisms for owners/operators.
- (2) An alternative that considers the impacts of all potential retirement scenarios the Four Corners, including installation of Selective Catalytic Reduction on units 4 and 5, early retirement of unit 4, and early retirement of units 4 and 5.
- (3) Proposed Action analysis of the 1,500 MW FCPP/Navajo Mine Expansion/Transmission Corridor renewal 2016-2041, which requires full analysis of liabilities incurred by all owners of facilities and contractual/leasing obligations covering future operations/liabilities and financial assurance mechanisms (for example, for CCW).
- (4) Transitioning the proposed action facilities to development of economic opportunities for

Navajo Nation and region, including potential for manufacturing and incorporating renewable energy opportunities on the FCPP Lease and Navajo Mine sites. This alternative would acknowledge the U.S. Department of the Interior's obligation to assist the region in identifying that the 50-year historic legacy of the FCPP/Navajo Mine/Transmission Corridors projects will come to end at some point, but, at any rate, within the next 25 years. In preparation for this inevitable transition, the EIS provides the appropriate template to analyze and incorporate diverse agency expertise necessary to develop and evaluate these transition opportunities. This alternative would also account for fair market value of the contractual costs of coal, water, land, royalties, and leasing, which have historically been low, abetting coal development at the expense of resource damages and human public health problems in the region.

- (5) Analysis of different alternatives for the disposal of coal combustion waste (“CCW”), including alternatives for storage at FCPP, permanent disposal at FCPP, and/or disposal off-site. This analysis must include specifics about how CCW will be handled, and what the storage and/or disposal facilities will look like, with details about pond and/or landfill liners, transportation to facilities, dust suppression techniques and alternatives, water and air monitoring, impacts of the various alternatives, and cumulative impacts of the alternatives. This analysis also must include examination of the legal authority for the various storage and/or disposal options.
- (6) Alternatives at the Navajo Mine, including an alternative that includes no expansion at the mine, or allowing only the expansion of Area IV North, but not the Pinabete Expansion. This alternative should consider the amounts of coal available to FCPP and whether alternate sources of coal would be needed for various scenarios at FCPP.²⁰⁰

OSM failed to consider these reasonable alternatives, or really any alternatives that deviated from “business as usual.” The only alternative considered for FCPP was a slight reduction of the size of the coal ash disposal area from 385 acres to 350 acres. DEIS at ES-xvii. Other than this insignificant change, no other alternative was considered other than the mandated “no action alternative.” For Navajo Mine, the only alternatives included were slight variations to continued mining. DEIS at ES-xv-xvi. By failing to consider any significant alternative to “business as usual” at the FCPP, the DEIS fails to comply with the purpose of the Act—namely to consider alternatives to the proposed action.

Moreover, a recent FERC ruling prohibited a contractual sale of Southern California's transmission rights to Arizona Public Service related to the Four Corners Power Plant.²⁰¹

²⁰⁰ Conservation Groups' Scoping Comments at 23-24.

²⁰¹ Federal Energy Regulatory Commission, Order Rejecting Agreement and Tariff, Southern California Edison Company, 146 FERC 61,136, Docket No. ER14-897-000 (Feb. 27, 2014) (attached as Exhibit 70); *see also* FERC Shoots Down SCE Plan to Transfer Ariz. Transmission Rights to APS, Energy Prospect (March 18, 2014) (attached as Exhibit 71).

Instead, FERC ruled that such transmission rights must be subject to open access bidding. The DEIS is deficient for failing to consider the impacts of this FERC decision, including:

- The economic impact the FERC decision on operation of FCPP and the transmission of electricity.
- Whether the FERC decision alters OSM's conclusion that renewable energy alternatives are not economic at the FCPP.

The DEIS should have considered the Conservation Groups' recommended alternatives, or similar alternatives that considered accelerated retirement schedules, increased use of energy efficiency and renewable energy, storage of CCW off-site and other related alternatives. Not only are these alternatives reasonable and even wiser courses of action, their consideration would be consistent with NEPA's requirement that alternatives "sharply define" the issues, and provide a "clear basis for choice" for decision-makers and the public. 40 C.F.R. § 1502.14.

Although the scope of "reasonable alternatives" is delimited by the purpose and need statement articulated by that agency, that statement cannot "define the agency's objectives in unreasonably narrow terms." *See Ilio 'laokalani Coal. v. Rumsfeld*, 464 F.3d 1083, 1098, n.5 (9th Cir. 2006). Conservation Groups thus requested that OSM "test the assumption that 'ongoing operations' at these facilities best 'provide for long-term, reliable, continuous and uninterrupted base load electrical power' relative to a range of renewable energy alternatives and balance that assumption against the agency's obligation to protect the environment and, in particular, account for climate change."²⁰² Instead, OSM dismisses the alternatives from the DEIS with conclusory and unsupported assertions that they are not feasible. DEIS at 3-48-56.

"The existence of reasonable but unexamined alternatives renders a [NEPA analysis] inadequate." *Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998) (citation omitted). The DEIS must be rewritten to include the reasonable alternatives discussed above.

G. OSM Failed To Guarantee That Relevant Information Is Available To The Public By Failing To Prepare An Adequate DEIS, By Failing To Provide Adequate Opportunity For Public Comment, And By Failing To Allow For Meaningful Public Participation In Public Meetings.

NEPA requires that OSM "make diligent efforts to involve the public in preparing and implementing their NEPA procedures." 40 C.F.R. § 1506.6(a). Indeed, one of NEPA's twin goals is "to guarantee relevant information is available to the public." *NPRC*, 668 F.3d at 1072. OSM has failed to comply with its duties to inform and involve the public in numerous ways.

²⁰² Conservation Groups' Scoping Comments at 15-16.

First, as discussed in detail above, the DEIS fails to include adequate information about the Project's impacts to communities and the environment, and consequently has failed to ensure that the public even can be involved in the NEPA process in a meaningful and informed manner.

Second, OSM has failed to allow for sufficient time to comment on the DEIS. The DEIS itself is over 1500 pages. The references OSM uses to support it are thousands more pages of information. In addition to the length itself, the DEIS addresses numerous aspects of the Project, and a consideration of cumulative impacts in the area encompasses significantly more. Despite the complexity and length of the DEIS, OSM initially provided only a 60-day comment period, and then, after multiple requests,²⁰³ extended that only by 30 days.

To be clear, the Conservation Groups appreciate that OSM is analyzing these connected actions in one EIS; the actions analyzed are part of an interconnected project, and analyzing them separately disallows a cohesive look at the entire project. The consequence of such a large Project, however, is complexity that takes time to address, in particular for the public reviewing the DEIS for the first time and, until now, without OSM ever having provided analysis addressing the mine, power plant, and associated facilities in a single environmental review.

Instead of recognizing the magnitude of the task presented to the public and interested parties, and "mak[ing] diligent efforts to involve the public," 40 C.F.R. § 1506.6(a), and ensuring that the public had the time and resources to review the DEIS, OSM constrained ability of the public to participate by making participation a race against the clock. First, OSM allowed only a 60-day comment period. Even if members of the public and staff of the Conservation Groups could have dropped everything else to focus entirely on the DEIS, 60 days would have been an insufficient amount of time to review the DEIS, supporting documents, and draft meaningful comments. Recognizing the obvious fact that no one could focus so intensely, the time provided was entirely inadequate.

OSM pointed to the CEQ regulations as justification for the time provided, noting that CEQ regulations only required 45 days for public comment.²⁰⁴ CEQ regulations, however, are based on the idea that an EIS "shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages." 40 C.F.R. § 1502.7. Conservation Groups complaint is not that the EIS should have been shorter – indeed, as noted in these comments, Conservation Groups believe that critical information was missing from the DEIS. Rather, Conservation Groups note "normal" page limits to highlight that CEQ regulations anticipate a 45-day comment period for an EIS of 300 pages or less. By that logic, the Project DEIS, which spans over 1500 pages, or 5 times what CEQ regulations project, deserves a comment period 5 times the normal public comment period, or 225 days. Conservation Groups requested only an

²⁰³ Letter from Conservation Group Request to Marcelo Calle, OSM RE: Request for Extension of Comment Deadline for Four Corners-Navajo Mine Draft Environmental Impact Statement (April 7, 2014) (attached as Exhibit 60).

²⁰⁴ Letter from Marcelo Calle, OSM, to Megan Anderson, Western Environmental Law Center (April 10, 2014) (attached as Exhibit 61).

additional 60 days, for a total of 120 days, but even that was finally limited only to 90 days by OSM.

Furthermore, the limited extension finally granted by OSM came, once again, at the last minute. Conservation Groups sent their request for an extension to OSM on April 7, 2014, just 10 days after OSM released the DEIS. Instead of making a timely decision on the request, OSM strung everyone along, noting that it was considering the request and would make a final decision until after the public meetings, or after May 9, 2014.²⁰⁵ OSM did not actually grant the limited extension until May 16, 2014 – over a month after Conservation Groups’ request, and only seven business days before the original deadline. 79 Fed. Reg. 28549 (May 16, 2014). OSM made a similar last-minute response to an extension request for the scoping comments, granting a limited extension to that request only six business days before the deadline, and again over a month after Conservation Groups’ request. These delayed responses have been completely inadequate in ensuring that the public can participate fully in the process and suggest gamesmanship by OSM to undermine effective public involvement. Without knowing whether the deadline will be granted, the public must rush to complete comments in the original time provided, rearranging schedules, and pushing other obligations back. Although the extensions are ultimately helpful, their efficacy is limited by OSM’s last-minute decisions. Moreover, OSM has not provided, nor can Conservation Groups think of a reason, why OSM would need to postpone its decision on these reasonable requests. OSM’s responsibility as lead agency of the DEIS is to provide for meaningful public involvement, rather than fast-tracking a schedule driven analysis, and leveraging its power as a federal agency to ultimately weaken the ability of the public to participate effectively in this decision-making process – action that only reduces the agency’s credibility as an objective agency faithfully implementing and complying with its legal responsibilities, in particular relative to the broad public, rather than the project proponent. 40 C.F.R. § 1506.6.

Third, the open house format for the nine public meetings (April 30-May 9, 2014) for the DEIS was deficient. OSM opted for resource stations manned primarily with third party consultants with some of the Cooperating Agency personnel available (however, EPA and Navajo EPA were absent from all meetings). The absence of Federal agencies with technical expertise (primarily EPA), and the failure of OSM to include NOAA and USGS as Cooperating Agencies, marginalized the open house meetings. At the Public Meetings, the contractors (Cardno) claimed that they have been constrained by the idea that GHGs are not currently regulated and, as writers of the DEIS to be adopted by OSM and Cooperating agencies, they cannot assert regulatory authority.²⁰⁶ Mr. Tormey pointed members of Conservation Groups towards EPA to answer our questions on climate change, but EPA unfortunately did not attend any of the Public Meetings on the DEIS. Moreover, OSM cannot consciously or legally allow this DEIS to circumvent climate change impact and/or mitigation. In addition, Navajo EPA was not at any of

²⁰⁵ See, e.g., *id.*; Letter from Marcelo Calle to Colleen Cooley, Diné C.A.R.E. (April 28, 2014) (attached as Exhibit 62).

²⁰⁶ Personal communication, Mike Eisenfeld SJCA with Dan Tormey, Project Manager for DEIS, Cardno, Public Meeting, Durango, Colorado, May 3, 2014.

the nine Public Meetings. As a result, many questions went unanswered. Similarly, OSM, BIA, and the contractors were unable to adequately respond to questions concerning Indian Trust assets, financial issues, due diligence, and bonding. Cardno erroneously claimed that this analysis covered in the Navajo Mine Transfer EA.

The open house format was not conducive for the public to obtain relevant information, as the third party consultants were imprecise, vague, quick to minimize impacts, and quick to point out their limitations in deferral to agency actions and regulations. The format of the public meetings was intimidating to the public. The open house format restricted the value of public hearings where communities can increase knowledge of the issues by listening to diverse vantage points. Although OSM had personnel to record comments in the corner of the meeting rooms, no effort was made by OSM to document individual questions/comments presented to consultants/agency personnel, or answers provided, at any of the public meetings.²⁰⁷

The open house format was particularly daunting for non-English speaking members of the public. On May 30, 2014, Diné C.A.R.E. filed a formal complaint with OSM. The complaint states the following:

On behalf of the Diné people, Diné Citizens Against Ruining Our Environment (Diné C.A.R.E.) is filing a complaint on the process of the Four Corners Power Plant/Navajo Mine Environmental Impact Statement (EIS) public meetings that occurred between April 30-May 9, 2014. We are filing this complaint because it is an environmental justice issue and a serious concern to the Diné people.

The EIS public meetings that were hosted by the Office of Surface Mining Reclamation & Enforcement (OSM) was conducted in a poster style format, which was unfamiliar to the Diné public who are used to an open-mic forum seen at Chapter meetings, Council meetings, and other meetings/forums across the Navajo Nation. This EIS process was intimidating and inadequate as there were 20+ OSM staff and third-party consultants, mostly English-speaking individuals standing next to 20+ poster boards. This format was confusing for the Diné people to fully comprehend, especially for the non-English speaking community members. Some experienced harassment, racial profiling, and intimidation by the OSM staff and consultants during these meetings.

Attached are several reports by Diné community members portraying their experiences at the EIS public meetings. In addition, Diné C.A.R.E. is awaiting a response from your office on whether OSM can host two additional hearings on the Navajo Nation before the June 27th comment period deadline for the Draft EIS.

We hope the Diné people's concerns are taken with careful and serious

²⁰⁷ See, e.g., Video of Public Meeting (available at: <https://www.youtube.com/watch?v=TZcDBZsON94> (last accessed June 26, 2014)).

consideration.²⁰⁸

The May 30, 2014 letter from Diné C.A.R.E. mentions attached reports from Diné community members relating their experiences at the public meetings.²⁰⁹ The Reports by Diné Community Members at the EIS Public Meetings were included in the May 30, 2014 complaint letter to OSM and relate experiences of Diné citizens concerning cultural insensitivity, harassment, profiling and a general tone of disdain for many of the questions asked by the public at the meetings. Despite Diné C.A.R.E.'s documentation, OSM denied Diné C.A.R.E.'s request for the two additional meetings on June 20, 2014, and refuted any cultural insensitivity, harassment, racial profiling and/or intimidation claims:

In your May 30, 2014, letter of complaint with attached reports by community members you allege Dine community members experienced "...harassment, racial profiling, and intimidation by OSM staff and consultants..." during public meetings hosted by OSM. For your information all agency representatives and consultants attending the meetings have completed public communication training and were instructed to interact with the public in a professional and culturally sensitive manner. OSM regrets that statements or actions of agency and consultant personnel were misinterpreted by members of the community, but based on OSM's observations and participation at the meetings, and internal discussions afterwards, OSM does not agree that agency representatives and consultants attending the meetings acted in an unprofessional or culturally insensitive manner as you allege. To date, OSM has not received any other complaints of this nature.²¹⁰

OSM's response does not address Diné C.A.R.E.'s or Conservation Groups' concerns. As iterated in Diné C.A.R.E.'s complaint letter, the Diné people are used to an open-microphone forum primarily used in Chapter meetings and community meetings across the Navajo Nation. Thus, OSM's assertion that an open house format is sufficient due to people's fear of public speaking is not an adequate response.

²⁰⁸ Letter from Diné C.A.R.E. to Marcelo Calle, Department of the Interior, OSM (May 30, 2014) (attached as Exhibit 63); *see also* Letter from Diné C.A.R.E to Jared Blumenfeld EPA Region 9 Administrator Re. Office of Surface Mining EIS Public Meetings (May 20,2014) (attached as Exhibit 64).

²⁰⁹ Reports by Diné Community Members at the EIS Public Meetings, Attachment to Letter from Diné C.A.R.E. to Marcelo Calle, Department of the Interior, OSM, May 30, 2014 (attached as Exhibit 65); *see also* Diné C.A.R.E. Press Release: *"Inadequate and Intimidating" Navajo community members speak up for limiting Navajo public input on a Four Corners EIS that's severely deficient on health, renewables, climate, and environmental justice* (May 8, 2014) (attached as Exhibit 66).

²¹⁰ Letter from Rick Williamson, Manager, United States Department of the Interior, Indian Program Branch, Office of Surface Mining Reclamation & Enforcement to Dine Citizens Against Ruining Our Environment, NM-0042-A-S-01, June 20, 2014 (attached as Exhibit 67).

OSM's cursory denial regarding the Diné community members' complaints about the unprofessional manner in which they acted at the EIS public meetings is also disappointing. On behalf of the Diné people, Diné C.A.R.E. filed a formal complaint to OSMRE by organizing and compiling the community members' experiences into one document, which was attached with the complaint letter.²¹¹ Thus, for OSM to say that they "have not received any other complaints of this nature" is misleading because the attachment of eight community members' experiences were provided. OSM's response that they did not receive other complaints of this nature is therefore inaccurate. Further, a Diné community member who attended the Navajo Mine/FCPP EIS hearings alone may not know the process of filing a formal complaint.

Tellingly, however, a similar process is happening with the Kayenta Mine/Navajo Generating Station (NGS) EIS Scoping Hearings. Several community members have attended the scoping hearings in the last two weeks and a similar open house format was displayed. Concerns from two Diné community members about this format and requests to change this format to a public hearing format were discussed in a meeting between concerned Diné community members and BIA's Regional Director, Sharon Pinto on June 23, 2014. Ms. Pinto stated she would call the OSM office and request for a public hearing format at the remaining Kayenta Mine/NGS EIS scoping meetings.

Our hope is that in the future, the concerns expressed by Diné community members will be taken more seriously. The open house format and denial of unprofessionalism continues to illustrate OSM's disregard for the Diné people because it seems Diné people are portrayed as misinformed, unaware of our rights to speak and file a complaint, and fear of public speaking. Ultimately this conduct presents an issue of environmental justice as it seems that OSM is abandoning its duties to ensure "effective community participation in the NEPA process." DEIS at 4.11-1 (citing BIA NEPA Handbook). Moreover, OSM's dismissal of these concerns, and failure to provide adequate opportunities for participation from Diné community members violates the principles of free, prior, and informed consent. *See* DEIS at 4.11-3 (quoting the EPA National Environmental Justice Advisory Council, *Fostering Environmental Justice for Tribes and Indigenous People* (Jan. 15, 2013) and *United Nations Declaration on the Rights of Indigenous Peoples*).

Other community members had similar experiences. San Juan Citizens Alliance's Executive Director discussed his experience at the Durango public meeting on May 3, 2014, in a column for the Durango Herald:

The majority of the dialogue in the room transpired between community members and consultants one-on-one with no record of objections raised or concerns aired. Yes – there was a courtroom recorder hidden in a corner should someone like to lodge formal comments. That poor soul was by far the loneliest person in the room. With all of the venting going on in private dialogues, most of the exchanges went unrecorded – off the record. Effectively, the public was not heard. Well-intentioned though they were – citizens were talking to a wall that pretended to

²¹¹ *See* Exhibit 64.

care, emptying their concerns into hollow vessels that would be tossed aside en route to the next “public meeting.”

The wonderful thing about government malfeasance these days is how subtle it has become. After years of learning that breaking skulls is a bad long-term strategy for advancing political goals, political disenfranchisement went and got all grown up. If you participated in the “public meeting,” you probably feel that you were heard. And you probably weren’t, not in a way that matters. How sophisticated. So to my much-maligned tea party brethren – I concede that you are absolutely right to be mad. Sometimes, the government really doesn’t care what you or I think.

The question, though, becomes: What do we do with our disappointment in obviously, if not purposefully, flawed government processes? And this is where my fleeting dalliance with the tea party begins to sour. The answer, in my humble opinion, is not to eviscerate government. It’s to own it. With rights comes responsibility. Democratic institutions are painfully, lovingly maintained – or lost – based on the public’s acceptance of responsibility for their stewardship. I don’t want the DOI to go away. I want the people who work there to care about public input and best available science.²¹²

In sum, instead of presenting a forum for community discussion of the Project, the public meetings were marginalized. It appeared that the OSM and the DEIS contractors had convinced themselves that the reduction in emissions as a result of the BART determination and closing of the three older units at FCPP (560 MW) should satisfy the public, thus cutting off additional discussion about other concerns or alternatives. The Conservation Groups request that the DEIS be re-issued and that additional public meetings be held on the amended DEIS that allow for an open and informed public discussion of the Project.

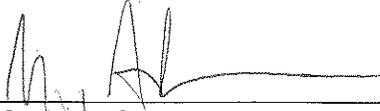
IV. CONCLUSION

For the reasons discussed above, the DEIS prepared by OSM is deficient, and must be redone. As noted above, we ask OSM and the Cooperating Agencies to correct the inadequacies in the DEIS’s analysis of impacts, and to provide consideration of additional alternatives, including alternatives that include transition away from continued operation of Navajo Mine and FCPP. Once OSM and the Cooperating Agencies have made the necessary corrections, we request that OSM and the Cooperating Agencies re-issue the DEIS for public comment. It is only when these deficiencies are corrected, the impacts and costs of the plant are properly assessed, and appropriate alternatives considered, that OSM and the Cooperating Agencies will have a rational basis for making any decision regarding the mine and plant. Further, it is our sense that a robust analysis may demonstrate that the continued operation of the FCPP and Navajo mine for an

²¹² Dan Olson, *We can’t allow government to ignore our voices*, Durango Herald, Thinking Green, May 15, 2014 (available at: <http://www.durangoherald.com/article/20140514/COLUMNISTS37/140519757/0/FRONTPAGE/We-can't-allow-government-to-ignore-our-voices> (last accessed June 23, 2014)).

additional 25 years will result in significant environmental impacts that cannot be acceptably mitigated.

Sincerely,



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