

Southern Utah Wilderness Alliance \* Utah Physicians for a Healthy Environment \*  
Wild Utah Project \* Wasatch Clean Air Coalition \* Breathe Utah \* Utah Moms For Clean Air \*  
HEAL Utah \* Grand Canyon Trust \* WildEarth Guardians \* Natural Resources Defense Council \*  
Center for Biological Diversity \* Friends of the Earth\* Sierra Club

September 10, 2015

Via email and U.S.P.S.

Bureau of Land Management  
Kanab Field Office  
Attn: Keith Rigtrup  
669 South Highway 89 A  
Kanab, Utah 84741  
UT\_Kanab\_Altoncoal@blm.gov

Re: Alton Coal Lease Supplemental Draft Environmental Impact Statement

Dear Mr. Rigtrup:

On behalf of the Southern Utah Wilderness Alliance, Utah Physicians for a Healthy Environment, Wild Utah Project, Wasatch Clean Air Coalition, Breathe Utah, Utah Moms For Clean Air, HEAL Utah, Grand Canyon Trust, WildEarth Guardians, Natural Resources Defense Council, Center for Biological Diversity, Friends of the Earth, and Sierra Club we are writing to comment on the supplemental draft environmental impact statement (“SDEIS”) that the Bureau of Land Management (“BLM”) prepared for the proposed Alton coal mine expansion.

Our organizations collectively represent millions of members and supporters, many of whom are opposed to the proposed expansion. More than 200,000 members of the public have weighed in against the proposed action, including at least 50,000 that have urged BLM to select the “no action” alternative during the SDEIS comment period. On behalf of our millions of members and supporters, we call on BLM to put the interests of the American people above the special interests of a single mining company and to select the “no action” alternative on the proposed Alton coal mine expansion.

The proposed expansion unnecessarily jeopardizes the iconic landscapes of Grand Staircase Escalante National Monument and the uncommonly dark night skies in Bryce Canyon National Park; threatens to degrade the air, water, and other natural wonders of Southern Utah; puts the area’s recreation tourism industry at great and unnecessary risk; poses unacceptable impacts to tribal cultural resources; would result in millions of tons of carbon pollution that would undercut the President’s climate objectives; and would likely eliminate the southern-most population of Greater Sage-Grouse in North America. In exchange, the proposal would give a single coal company with a poor track record of environmental compliance the ability to mine 3,500 acres of public land and extract roughly 45 million tons of tax-payer owned coal. We

urge BLM to reject the proposed mining in favor the “no action” alternative, as that is the only option that adequately protects Bryce Canyon National Park, Grand Staircase National Monument, and the Greater Sage-Grouse.

**I. BLM MUST ADDRESS ALL COMMENTS SUBMITTED ON THE DRAFT AND SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENTS.**

BLM’s public process for the SDEIS has unreasonably compromised the public’s ability to fully understand the nature of the proposal and the true extent of the project’s likely environmental effects. As BLM is well aware, the proposed Alton expansion has drawn unprecedented levels of public opposition—including from hundreds of thousands of American citizens, a Native American Tribe, and three of BLM’s sister federal agencies. BLM released a draft environmental impact statement (DEIS) in November 2011. More than 200,000 citizens submitted comments urging BLM to select the “no action” alternative because of the project’s impacts to climate, sage grouse, and iconic public lands, among other issues. The Hopi Tribe, the U.S. Fish & Wildlife Service, and the National Park Service all submitted detailed comments calling for “no action.” The U.S. Environmental Protection Agency (EPA) submitted comments that were highly critical of the proposal, but withheld recommendation because BLM had committed to EPA to conduct further environmental review.

More than 3.5 years after the release of the DEIS, BLM finally produced the supplemental review of the project (the SDEIS). Unfortunately for the public, the SDEIS does not explain how the proposal or the alternatives considered have changed since 2011, how BLM has changed its evaluation of the project’s impacts, and whether and to what extent BLM addressed concerns raised by the public, the Hopi Tribe, and federal agencies in its supplemental review. BLM’s refusal to include a simple response to comment summary in the SDEIS unreasonably put the burden on the public to review not just the SDEIS and more than a dozen appendices, but also the initial DEIS and the comments submitted back in 2011-2012 in order to attempt to understand whether BLM has even begun to adequately address the serious concerns raised by the members of the public, the scientific community, and federal agencies.

Although BLM states that it has tried to address substantive comments on the DEIS throughout this supplemental review, (SDEIS p. ES-4), as explained in detail below, BLM has not in fact addressed many of the deficiencies raised by our organizations more than three years ago. In order to comply with its legal obligation to respond to issues raised during the NEPA process, BLM must not only address each issue we raise below, it must separately respond to each issue raised in our prior comments submitted in January 2012 and the accompanying expert reports from both our 2012 and 2015 comments.

**II. BLM FAILED TO TAKE A HARD LOOK AT THE DIRECT, INDIRECT, AND CUMULATIVE ENVIRONMENTAL IMPACTS OF THE PROPOSED MINE EXPANSION.**

NEPA regulations require BLM to “provide full and fair discussion of significant environmental impacts” and state that federal agencies, “shall inform decision makers and the public of the

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’s “hard look” under NEPA should provide detailed analysis that will be “useful to a decision maker in deciding whether, or how, to alter [a project] to lessen cumulative environmental impacts.” *Natural Res. Def. Council v. Hodel*, 865 F.2d 288, 299 (D.C. Cir. 1988). In reviewing an agency’s NEPA analysis, courts will not rubber-stamp agency decisions, and must “ensure that [the] agency has taken the requisite ‘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).

This discussion must include an analysis of “direct effects,” which are “caused by the action and occur at the same time and place,” as well as “indirect effects which . . . are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. 1508.8. BLM must also analyze and disclose the cumulative impacts of the proposed action together with past, present and reasonably foreseeable future actions, including all federal and non-federal activities. 40 C.F.R. 1508.7.

For each of the issues addressed below, the SDEIS fails to adequately address the direct, indirect, and cumulative impacts of the proposed mining action as required by NEPA.

#### **A. Greater Sage-Grouse**

##### **1. BLM Failed to Fully Disclose Impacts to Greater Sage Grouse.**

In recommending BLM select the “no action” alternative in its 2012 comments, the U.S. Fish & Wildlife Service urged BLM to “reject the lease application” in large part because, “mining activity under any of the action alternatives will result in . . . the extirpation of the Alton-Sink Valley greater sage-grouse lek and the Alton greater sage-grouse population.” FWS Letter to BLM (Jan. 27, 2012), attached as Exhibit 1. Each of the action alternatives considered in the SDEIS would still likely result in the death of the 30-40 birds that make up the Alton Sink-Valley population, which is the southernmost Greater Sage Grouse population in North America. As explained in an August 20, 2015 letter submitted to Interior Secretary Sally Jewell and BLM by thirty-six professors and scientists, “[t]his small population of birds breeds exclusively within the Alton-Sink Valley sage grouse lek. They also nest, raise their broods and winters in the Alton-sink area. The region in question is critical to the survival of this population.” Letter of Kenneth Able, Ph.D., et al. to Sally Jewell (Aug. 20, 2015), attached as Exhibit 2.

Putting a coal strip mine in the middle of habitat that this population of sage grouse relies on for their lek (a courtship display site), for breeding, for raising their young, and for wintering (SDEIS 4-285 to 4-287) is fundamentally incompatible with the survival of these birds. Even the impacts that BLM acknowledges are likely to occur are severe. In addition to physically destroying lands used by the birds, mining disrupts courtship behaviors, decreases nesting initiation and success rates, and may result in sage grouse being crushed by mining equipment.

SDEIS 4-288. BLM admits that this population of sage grouse are “highly susceptible to extirpation” from drought, disease, or habitat loss, SDEIS 3-88 to 3-89, and that any of the action alternatives considered would require an exemption from three provisions of BLM’s Kanab Field Office Resource Management Plan, which would otherwise preclude mining due to presence of sage grouse on the same lands that Alton Coal wants to mine. SDEIS 4-285. In one of many inconsistencies in its sage grouse analysis, BLM suggests that the Alton sage grouse population may be unusually tolerant of mining operations because birds have been seen flying over mining equipment and near roadsides, before noting that the population is “nonmigratory” and that the observations of birds near mining equipment “may just be a result of the birds having nowhere else to go.” SDEIS 4-286.

As explained below and in the expert report prepared by biologists at Wild Utah Project that is attached as Exhibit 3, in the SDEIS BLM fails to adequately analyze and disclose the impacts to sage grouse. Instead, BLM assumes that the project would receive a waiver from complying with BLM’s own Kanab Field Office RMP and relies on a vague, cursory, and hopeful off-site mitigation plan that fails to adhere to the best available science.

In summary, the shortcomings of the SDEIS action alternatives, from both scientific and legal standpoints, are:

- 1) BLM fails to disclose that the project would irreparably harm sage-grouse populations on lands designated Priority Areas for Conservation by the U.S. Fish & Wildlife Service (FWS) in 2013. The SDEIS and draft mitigation plan were not developed in accordance with the FWS’s Conservation Objectives Team (COT) Report (COT 2013). For surface mining within sage-grouse habitat, the COT Report recommends the maintenance of stable to increasing sage-grouse populations and no net loss of sage-grouse habitats in areas affected by mining. The COT Report recommends avoidance of new mining activity and/or any associated facilities within occupied habitats, including seasonal habitats; and avoidance of mining leases in sage-grouse habitats until other suitable habitats can be restored to habitats used by sage-grouse.
- 2) All but the “no action” alternative violate Kanab RMP sage-grouse protections against surface disturbance within ½ mile of leks, disruptive activities within 2 miles of leks, and surface disturbance in sage-grouse winter habitat. BLM’s argument presented in the SDEIS that a waiver to these stipulations is justified is not scientifically defensible, nor is it convincing. This simply illustrates that BLM would be willing to waive sage-grouse RMP protections for even the most damaging projects.
- 3) BLM has failed to disclose that although the proposed mine expansion would irreparably harm sage-grouse populations on lands designated Sage-grouse Management Areas in the State of Utah Plan, the State of Utah has objected to finding these lands unsuitable for strip mining, indicating that the State of Utah has no intention of rigorously enforcing sage-grouse conservation measures in its state plan.

- 4) BLM improperly relies on a proposed draft mitigation plan that is vague, short on specifics, and does not adhere to the best available science. Worse, it cannot live up to its claim to “cumulatively maintain or enhance sage-grouse habitat.” It is clear that this plan cannot guarantee the persistence of the sage-grouse population in the face of permitted impacts, and BLM never discloses that fact to the public or to decision makers.

BLM has failed to take the legally required “hard look” at the efficacy of sage grouse conservation measures, particularly those applied within Priority Areas for Conservation. The agency’s evaluation of the proposed Mitigation Plan and conservation measures in proposed alternatives ignores the best available science and fails to consider population trends for leks affected by past coal mining in the Alton area versus lek population trends for unaffected leks.

These problems with the SDEIS are directly relevant to decisions on federal sage-grouse plan amendments and also whether the listing of greater sage-grouse under the Endangered Species Act is warranted. It is surprising that BLM would issue a document that appears complicit with literally writing off the southern-most population of Greater sage-grouse in North America on the eve of the FWS’s final listing decision.

Additional errors and omissions relevant to sage grouse considerations are further explained below.

## 2. BLM Failed to Adequately Document Baseline Conditions.

As noted in the comments submitted by WildEarth Guardians and other conservation organization the SDEIS, under NEPA federal agencies must “describe the environment of the areas to be affected or created by the alternatives under consideration.” 40 C.F.R. §1502.15. In *Half Moon Bay Fisherman’s Marketing Ass’n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988), the Ninth Circuit concluded that “without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA.” The court further held that, “[t]he concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process.” *Id.*

In the SDEIS, BLM has failed to provide accurate baseline information relevant to sage grouse in two key respects. First, BLM declined to provide greater sage-grouse population data and trends over past decades for the lek located in the project area, as well as for other leks in this sage grouse population, despite the fact that these data should be readily available from the State of Utah Division of Wildlife Resources. Given several years of potential data and intense agency and public scrutiny, at minimum BLM should disclose how many sage grouse have been harassed, displaced, or killed by the existing operations at the Coal Hollow Mine that would be expanded under the proposed action. This information should be easy to obtain from the applicant, and BLM’s failure to provide that data is, at best, a flagrant omission. The public and

decision makers deserve to know what impacts past mining has had on the sage grouse that rely on this area, and if BLM does not have the answer, then the public and decision makers deserve to know why BLM has not asked the question or does not want to know the answer.

Second, BLM has failed to provide an adequate baseline on ambient noise levels with regard to sage grouse. BLM indicates that outdoor ambient noise levels were measured at seven locations. SDEIS at 3-9. The known sage-grouse lek was not one of them. According to SWCA, “No ambient sound level data have been gathered at the sage-grouse habitat and lek in and around the project mining tract” (Appendix E-17). The failure to gather ambient sound levels at the sage-grouse lek site represents a failure to gather baseline data pursuant to NEPA, particularly in light of the fact that consultants visited the vicinity of the project with sound equipment specifically to gather this type of data.

According to the noise modeling study, “sage-grouse located within a 5-km radius from Block C or the central processing equipment on the mining tract could be impacted at levels greater than the 40-dBA baseline sound levels expected at the lek.” (Appendix E-27). According to SWCA, “No ambient sound level data have been gathered at the sage-grouse habitat and lek in and around the project mining tract. Therefore, for conservatism, baseline conditions at the lek were assumed to be those of the lowest recorded Leq value for Bryce Canyon National Park, or 40.0 dBA (recorded at Riggs Spring B)” (Appendix E-17). This is an absurdly high figure, and completely inconsistent with the best available science. A 2015 field sound analysis by Skip Ambrose, one of the nation’s leading experts on noise and its impacts to sage-grouse, for the Greens Hollow Coal Tract in central Utah, provides an accurate assessment of baseline noise levels. This assessment represents the best available science, and in order to take the legally mandated ‘hard look’ at noise impacts to sage-grouse, the BLM must revise their impacts analysis to account for this new information. This field study found that the ambient sound level measured at dawn during the breeding season for sage-grouse was approximately 15 dBA.

Ambrose and Florian (2014) empirically found the baseline noise level in western Wyoming to be 15 dBA, and this was confirmed by Ambrose et al. (2014). This finding has also been corroborated elsewhere. Piquette et al. (2014) found that the average ambient noise at Gunnison sage-grouse leks in Colorado was 17.2 dBA. One would expect natural noise conditions in Utah to be at least as quiet as (if not quieter than) the Ambrose and Florian data. Thus the appropriate standard should limit noise to no more than 25 dBA at the edge of breeding, nesting, brood-rearing, and wintering habitats during their season of use by grouse.

Additionally, BLM Sensitive Species policy imposes further requirements to provide baseline information. For BLM Sensitive Species, the agency is responsible for “[d]etermining, to the extent practicable, the distribution, abundance, population condition, current threats, and habitat needs for sensitive species, and evaluating the significance of BLM-administered lands and actions undertaken by the BLM in conserving those species.” BLM Manual 6840.2(C)(1). Furthermore, the agency is responsible for “[m]onitoring populations and habitats of Bureau sensitive species to determine whether species management objectives are being met.” BLM

Manual 6840.2(C)(3). BLM must make up for the absence of ambient noise lek measurements and population status and trend data for BLM Sensitive Species by generating these data of its own accord where they are unavailable through Utah Division of Wildlife Resources, the applicant, or other external sources.

3. The Proposed Expansion Is Inconsistent with the BLM Kanab Field Office RMP.

Unsuitability Criterion number 15 states that, “[f]ederal lands which the surface management agency and the state jointly agree are habitat for resident species of fish, wildlife and plants of high interest to the state and which are essential for maintaining these priority wildlife and plant species shall be considered unsuitable.”

BLM and the Utah Division of Wildlife Resources have agreed that sage-grouse are of high interest to the state and that sage-grouse breeding, nesting and brood-rearing habitats in the Alton area are essential for maintaining resident populations of Greater sage-grouse (Frey et al. 2006, BLM 2008b, Appendix 6, Table A0-4, UDWR 2013).

Therefore, all documented sage-grouse breeding, nesting and brood-rearing habitats within the coal tract are unsuitable for surface coal mining. The Final SEIS must state this plainly and adjust proposed surface acreages of mining in the tract accordingly.

The treatment that Criterion 15 has received with regard to sage-grouse in the SDEIS is inadequate. The SDEIS in Section 1.7.1.2.2, refers to the original unsuitability analysis that was completed for the Kanab Field Office (BLM 2008, Appendix 6) and states:

The KFO RMP (BLM 2008b) includes the following decisions with regard to Greater Sage-Grouse habitat management:

- **SSS-54:** All surface-disturbing activities would be prohibited within 0.5 mile of Greater Sage-Grouse leks on a year-round basis. Oil and gas leasing would be open subject to major constraints (no surface occupancy).
- **SSS-55:** Allow no surface disturbing or otherwise disruptive activities within 2.0 miles of Greater Sage-Grouse leks from March 15 to July 15 to protect nesting and brood rearing habitat. Oil and gas leasing would be open subject to controlled surface use and timing stipulations.
- **SSS-56:** Allow no surface disturbing or otherwise disruptive activities in Greater Sage-Grouse winter habitat from December 1 to March 14. Oil and gas leasing would be open subject to controlled surface use and timing stipulations.

- **SSS-57:** Exceptions, modifications, or waivers to decisions SSS-54, SSS-55, and SSS-56 may be granted on a case-by-case basis.

As BLM explains:

As a result of decisions SSS-54, SSS-55, and SSS-56, a decision to lease would not be in conformance with the KFO RMP. However, for purposes of analysis in this EIS, it is assumed that an exception, modification, or waiver would be granted in the event of a lease per decision SSS-57.

SDEIS at 4-277 (emphasis added).

These reasonable limits on surface disturbances in and around sage grouse habitat set out in the Kanab Field Office RMP (SSS-54, SSS-55, SSS-56) have been in place for years and require temporal and spatial buffers for sage-grouse leks and winter habitat. Within these buffers no surface-disturbing activity may occur. SSS-57 states that an exemption, waiver, or modification may be granted for each RMP decision on a case-by-case basis.

According to Appendix 3 of the KFO RMP, in order for BLM to exempt, modify, or waive a stipulation, the environmental analysis document would have to show that:

- (1) The circumstances or relative resource values in the area had changed following issuance of the lease;
- (2) Less restrictive requirements could be developed to protect the resource of concern; and
- (3) Operations could be conducted without causing unacceptable impacts.

Kanab Field Office RMP at A3-2.

In a footnote in the SDEIS, BLM elaborates on the standards that determine when an exception may be granted:

The BLM Field Manager is responsible for approving any exception, modification, or waiver. For SSS-54, the operator must submit a plan that demonstrates that impacts from the proposed action can be adequately mitigated. For SSS-54, the Field Manager may modify the boundaries of the stipulation area if (1) portions of the area do not include lek sites, (2) the lek site(s) have been completely abandoned or destroyed, or (3) occupied lek site(s) occur outside the current defined area, as determined by the BLM. **For SSS-54, the Field Manager may grant a waiver if there are no active lek site(s) in the leasehold** and it is determined the site(s) have been completely abandoned or destroyed or occur outside current defined area, as determined by the BLM. For SSS-55 and SSS-56, the operator must submit a plan that demonstrates that impacts from the proposed action can be avoided, sufficiently minimized, or adequately mitigated for an exception to be granted. For SSS-55 and SSS-56, the Field Manager may modify the

boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM. For SSS-55 and SSS-56, the Field Manager may grant a waiver if it is determined the habitat no longer exists or has been destroyed.

SDEIS at 4-277 n.11 (emphasis added).

Because there is an active lek within the tract and documented active nesting and brood-rearing are occurring in the tract, a waiver cannot be granted under BLM's own rules. Here, as noted, BLM simply assumes that the applicant will receive a waiver without ever analyzing whether such a waiver is possible. Notably, not one of the three reasons to justify an exemption set out in the Kanab RMP exists for the proposed Alton coal mine expansion. As discussed elsewhere in these comments and in the attached expert report, the less restrictive requirements developed in the various action alternatives fail to "protect the resource" and will result in unacceptable impacts, including the likely extirpation of sage-grouse lek populations and interrupting of access of migratory populations to critical winter habitats.

Remarkably, given the generally rosy picture for sage grouse that the SDEIS paints elsewhere, BLM agrees that proposed restrictions and mitigation measures will not ensure the Alton sage-grouse population survives mining. In the only assessment of waiver criteria, BLM explains:

**Eliminating these protections** [the buffers and surface restrictions in SSS-54, SSS-55, and SSS-56] **could result in the short- or long-term displacement or loss of the local birds. Despite the requirements of the lease stipulations, suitable habitats may not be adequately available to prevent the loss or displacement of the existing breeding and wintering group(s).** If displacement occurs, it is unknown whether the grouse would return to the area in the long term, following reclamation. The long-term beneficial impacts from the vegetation treatments required by the lease stipulations are contingent upon the local sage-grouse breeding and wintering group(s) having persisted in the area.

SDEIS at 4-286 (emphasis added).

It is impossible to square this dire pronouncement with BLM's assertion elsewhere that the proposed mining and reclamation would be good for sage grouse and increase both habitat and the long-term population of the Alton sage grouse. SDEIS 4-279. Indeed, the candid assessment quoted above appears to be the only assessment of likely impacts in the entire SDEIS that recognizes that the continued existence of the Alton sage grouse population simply cannot be guaranteed based on hopeful, off-site vegetation treatments (which the SDEIS calls mitigation measures) that the mining company would be allowed to construct up to a year after the corresponding mining activity.

Based on the documented impacts and the legal requirement to protect sage-grouse found in BLM's own management plans, BLM must select the "no action" alternative. In the FEIS, BLM

should delete the statement assuming the project will receive a waiver from the stipulations outlined in the Kanab Field Office RMP and replace it with this sentence: “Consistent with the Kanab Field Office RMP, documented sage-grouse breeding, nesting and brood-rearing habitats within the coal tract are unsuitable for surface coal mining.”

Pursuant to FLPMA, project-level activities must be consistent with the relevant RMP; this is a non-discretionary requirement. The fact that the project itself cannot move forward without such a waiver, but the waiver cannot be legally granted, renders all action alternatives proposed in the SDEIS flatly illegal.

This finding of unsuitability is further supported by the BLM’s recently released *Report on National Greater Sage-Grouse Conservation Measures* (BLM Sage-grouse National Technical Team, 2011), which states that within Priority Sage-grouse Habitat the National Technical Team (NTT) recommends that the BLM “**find unsuitable all surface mining under the criteria set forth in 43 CFR 3461.5.**”

#### 4. The Proposed Mitigation Plan Is Inadequate.

As fully explained in the attached expert report of Wild Utah Project, the draft mitigation plan is vague, short on specifics, and does not adhere to the best available science. BLM continues to allow the applicant to rely on a variety of long-term, off-site mitigation measures that will be meaningless if the Alton population of sage-grouse is extirpated, which is a possible outcome of the proposed expansion. Moreover, BLM does not appear to have addressed two concerns expressed by the U.S. Fish & Wildlife Service: first, that habitat improvement measures be completed before destruction of the habitat currently used by the Alton sage-grouse population; and second, that the definition of mitigation success require that sage-grouse actually use the mitigation/treatment areas.

The proposed mitigation plan put forward by the applicant relies on off-site vegetation treatments that may make those areas more attractive to sage-grouse, in the hopes that sage-grouse eventually migrate to those areas. SDEIS at 4-287. Unfortunately, BLM plans to allow the timing of mitigation to be determined later at the permitting stage, with the caveat that off-site vegetation treatments would be completed no more than one year after the corresponding on-tract disturbance occurs. *Id.* The mitigation plans fails to explain where BLM expects sage grouse to go in the interim period, which could be up to 12 months long, between the time the applicant destroys the lands the sage grouse currently use, and the time when the applicant finishes creating mitigation habitat to make up for the lost, previously-occupied habitat. In its review of the Administrative Draft of the SDEIS, the Fish & Wildlife Service directed BLM to make the following change in the SDEIS: “Stipulate that no surface disturbance associated with mining activity will occur until refuge habitat for greater sage-grouse is fully functional and used by the species.” (USFWS 2013). BLM, evidently, did not concede the point.

Additionally, BLM apparently intends to consider mitigation successful even if sage grouse never actually use the areas in question. BLM makes two specious justifications for such a lax approach to mitigation success:

1. It is highly likely that treatments would be successful because of the requirement (as listed above) to prioritize off-tract vegetation treatments in areas where conifer removal can be done from an intact sagebrush understory in locations immediately adjacent to habitat occupied by sage-grouse . . . *Vegetation treatments meeting this requirement are highly likely to quickly increase the availability of sage-grouse habitat.*
2. Unpredictable environmental events, such as extreme drought or very harsh winter conditions, may preclude grouse individuals from using certain habitat, even if it meets all biological needs. *It is unreasonable to hold the selected lessee to a success criterion that may be out of its control.*

SDEIS at 4-280 (emphasis added).

BLM's first justification presents an unconvincing, circular line of reasoning. An analogy for not requiring that birds are using the treatment area because it is "highly likely" that they will use the treatment area, is that it is not necessary for a doctor to perform a follow-up assessment of a patient after receiving surgery or other medical procedure because it was "highly likely" that the procedure would be successful. This is absurd on its face, and it is no wonder the FWS is objecting to this definition of "mitigation success." Further, the second point offered for justification of the proposed definition of mitigation success is equally unconvincing and disappointing. It is just another way to ensure that Alton Coal Development is able to expand their operations with a virtual pass on meaningful mitigation. The BLM could be setting up a situation where birds are pushed off their current occupied habitat, and do not use the new habitat created, the population is extirpated, and the mining company is none-the-worse because it completed all the mitigation required of them.

There are several other flaws. Among many holes in the proposed mitigation plan, in Section 11 (Compensatory Mitigation Projects) on Page 26 of Appendix E (the Proposed Mitigation Plan), BLM states, "[a]ctions to improve habitat quality would focus on management activities that target the herbaceous understory (increasing grass height and cover for nesting females, increasing forb cover and insect density for brooding females, etc.)." There is no information provided, however, on just how applicant intends to increase grass height and cover, forb cover and insect density in these areas.

Similarly, page 30 of Appendix E refers to mesic and riparian habitat improvements as one of the types of mitigation efforts. Here BLM states, "this type of habitat improvement would include creating areas with saturated soils and little standing water," and "enhancing existing riparian habitat." Again, as with grass height and bug density, BLM provides no information on how it intends to create areas of saturated soils where none existed before, and what it means exactly by enhancing riparian habitat.

Critically, the draft mitigation plan does not go far enough to enable the BLM to grant itself exception to SSS-54, SSS-55 and SSS-56 decisions in the Kanab Field Office RMP, which would require that the BLM be able to show that the operations could be conducted without causing unacceptable impacts. Nor does this Mitigation plan allow the BLM to abide by IM 2012-043 which requires the agency to “cumulatively maintain or enhance sage-grouse habitat.”

In its 2013 review of the Administrative Draft of the SDEIS, the FWS explicitly stated, “[i]n its current form, we do not believe that the proposed mitigation plan for greater sage-grouse is sufficient to allow for a waiver of SSS-54, SSS-55, or SSS-56 in the event of a lease” USFWS Letter to BLM (2013) (emphasis added).

It is clear that the draft mitigation plan has not come far enough to overcome these shortcomings. The draft mitigation plan is woefully inadequate and cannot ensure either a sustainable or viable future for the Alton Greater sage-grouse population. BLM has given the applicant 3.5 years since the DEIS was published to come up with a mitigation plan capable of adequately protecting Alton sage grouse, and the applicant has failed. Given the impacts that even the applicant acknowledges will likely occur if mining goes forward, BLM must now uphold the original decision in the Kanab FO RMP that this area is unsuitable for coal mining.

The applicant’s underwhelming and ineffective mitigation plan is yet another compelling reason for the agency to select “no action” for this proposal, particularly given the applicant’s apparently poor track record on reclamation. According to the Salt Lake Tribune, the project proponent, Alton Coal Development Company, has shown a “pattern of missed deadlines and lax restoration projects.” Brian Maffly, *Strip mine owner with history of violations asks state to approve expansion*, Salt Lake Tribune (July 13, 2015). Available online at <http://www.sltrib.com/home/2718177-155/strip-mine-owner-with-history-of> (last visited September 10, 2015) Attached as Exhibit 4. As explained in the Salt Lake Tribune, “Alton Coal Development has deviated from the mining methods approved in its permits and failed to properly reseed reclamation areas, backfill mine pits in the time allotted, properly reconstruct Lower Robinson Creek and rehabilitate 355 acres of off-site sage grouse habitat, according to documents filed with the Utah Division of Oil, Gas and Mining (DOGGM).” *Id.* (emphasis added). This information further undermines BLM’s rosy assertion that mined-over lands will be fully-functioning sage grouse habitat within 15-20 years post-mining, particularly if reclamation is delayed due to operator noncompliance.

##### 5. BLM Failed to Adequately Consider Reasonable Alternatives.

The range of alternatives is “the heart of the environmental impact statement.” 40 C.F.R. § 1502.14. NEPA requires BLM to “rigorously explore and objectively evaluate” a range of alternatives to proposed federal actions. See 40 C.F.R. §§ 1502.14(a) and 1508.25(c). Formulation of alternatives during the NEPA disclosure and study process is at the heart of Congress’ choice of NEPA as the procedural method that guides federal agencies’ management of the public lands. See *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 299 (D.C. Cir.

1988) (citing *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976)).

In order to comply with its NEPA obligation, BLM must consider an alternative implementing key sage grouse protections recommended by the BLM's own National Technical Team (2011)(e.g., a 4-mile no surface disturbance buffer for leks within Core Areas). A 4-mile buffer was found by Holloran et al. (2007) to encompass 74% of nesting sage grouse in their western Wyoming study area. Limitations on the location of roads and noise levels as identified for Priority Habitats must also be considered in at least one alternative. Notably, the entire project area falls within a Priority Area for Conservation as designated by the U.S. Fish and Wildlife Service in 2013 (COT 2013).

Of the action alternatives that BLM evaluates in detail in the SDEIS, none would avoid or lessen impacts to the Alton sage-grouse population sufficiently to ensure the population's survival. In Section 2.4.2.3 on page 2-17 of chapter 2, the BLM outlines the timing restrictions that would be in place under Alternative C. In general, the BLM touts this alternative as being better for sage-grouse, without backing up that assertion. For example, the portion of the tract that would be excluded under this alternative, while containing some suitable sage-grouse habitat, is not the portion that is adjacent to the lek, which is in Block S. Thus, this aspect of Alternative C does not really do anything to further sage-grouse conservation in the project area.

The weak sage-grouse timing restrictions outlined on page 2-17 are similarly problematic. The section states that the "birds from this population use this portion of the tract during the nesting and brooding period. Under this alternative, no surface-disturbing activities would be allowed within **0.5 mile** of the lek during the lek establishment and strutting period (February 15–March 15)." First of all, the 0.5 mile buffer is very problematic with respect to the existing literature on disturbance buffers for greater sage-grouse. Currently, much of what is known about the tolerance of sage-grouse to forms of human development, and the measures of distance that this tolerance takes, derives from studies on oil, gas, and coalbed methane development. The impacts to sage-grouse from oil and gas development within **2 or 3 miles of a lek** include lower lek attendance (Walker et al. 2007), reduced breeding populations (Holloran 2005), lower nesting rates (and hence lower reproduction, Lyon 2000), hens traveling further distances to nest (Lyon 2003), and even the extirpation of breeding populations at active leks (Holloran 2005, Walker et al. 2007). In their recent decision document that found the sage-grouse warranted for federal ESA listing, USFWS (2010) stated, "based primarily on data documenting reduced fecundity (a combination of nesting, clutch size, nest success, juvenile survival, and other factors) in sage-grouse populations near roads, transmissions lines, and areas of oil and gas development/production..., development within **three to five miles** (or more) of active sage-grouse leks may have significant adverse impacts on the affected grouse population."

Since the USFWS listing decision came out, the BLM released its *Report on National Greater Sage-Grouse Conservation Measures* (BLM Sage-grouse National Technical Team, 2011). This report cites literature that demonstrates that impacts of energy development "as measured by

the number of males attending leks are most severe near the lek, remain discernible out to >4 miles (Holloran 2005, Walker et al. 2007, Tack 2009, Johnson et al. 2011), and often result in lek extirpations (Holloran 2005, Walker et al. 2007)”, and that while “all well-supported models in Walker et al. (2007) indicate a strong negative effect, estimated as proportion of development within either 0.5 miles or 2 miles, on lek persistence.... negative impacts within 4 miles were still apparent.” Based on the above examination of the literature, including that of the BLM’s NTT Report and the 2010 USFWS listing decision, it is critical that there be no surface occupancy restrictions for everywhere within 4 miles of the existing active lek (BLM NTT Report, p. 21), since 80-85% of all females nest within 4 miles of the lek (personal communication, Renee Chi, USFWS Salt Lake Office, January 2012, Holloran and Anderson 2005).

The discussion on page 2-17 goes on to state that “no surface-disturbing activities would be allowed in general under this alternative on Block S during the local sage-grouse's strutting, nesting and brooding period (March 15–July 15).” The obvious issue here is, if mining is allowed in this important nesting and brood-rearing area after July 15, and this includes mining that removes large swaths of soil and vegetation, what will the sage-grouse do **the following** March – July 15 when that habitat is essentially removed and/or completely destroyed? In this case, the timing restrictions become a fruitless, and completely moot point. BLM must address this obvious point, and at the very least be up front about the lack of any meaningful advantage it provides to sage-grouse. In doing so the BLM must reference its own recently released *Report on National Sage-Grouse Conservation Measures* (BLM Sage-Grouse National Technical Team 2011), which does not include timing restrictions on energy development during the breeding season because they do not prevent impacts of the development at other times of the year, during the production phase, or in other seasonal habitats that are crucial for population persistence (e.g., winter; Walker et al. 2007 cited in BLM SGNTT 2011). The report therefore recommends “excluding mineral development and other large scale disturbances from priority habitats...” (BLM NTT 2001, p. 21), and not bothering with unhelpful timing limitations.

Moreover, BLM includes in the SDEIS an alternative that was not in the original DEIS – Alternative K-1. Despite the fact that this alternative would result in somewhat less surface disturbance overall, it nonetheless offers a reasonable chance of driving the Alton greater sage-grouse population to extinction in the long-term, for all the same reasons given elsewhere in these comments that are common to all action alternatives.

## **B. Public Lands, Particularly Bryce Canyon National Park**

Public lands in Southern Utah are prized for their natural beauty, and in particular for their nationally famous stargazing opportunities and uncommonly dark night skies. Every year, Bryce Canyon National Park hosts approximately 1.4 million visitors, whose experiences at the park could be diminished by the proposed expansion onto BLM land.

The location of the park at the summit of the Grand Staircase and the exceptional clarity of the air and natural quiet provides unrivaled night sky observation, daytime views that extend more than 100 miles, and uncommonly quiet soundscapes.

Bryce Canyon National Park is one of the darkest publicly accessible places in North America. The altitude, clean air, and the absence of artificial light from the park and surrounding areas are all essential to the park's unparalleled nighttime experiences enjoyed by tens of thousands of Americans every year.

The proposed expansion specifically threatens three key resources within the park: air quality and scenic values, night skies, and natural soundscapes. As explained below, each of the action alternatives considered by BLM would result in adverse impacts to these resources. The cumulative impact of the mining operations would be to diminish the visitor experience in Bryce Canyon National Park enjoyed by millions of visitors each year so that one mining company can extract publicly-owned coal from publicly-owned lands. As explained by the National Park Service in recent comments on the SDEIS, these impacts include:

- **Air quality and scenic values:** the proposed mining will increase particulate matter and nitrogen oxide deposition, especially when combined with other regional emission sources. These emissions will degrade visibility and scenic values for visitors to Bryce Canyon National Park.
- **Soundscapes:** Blasting, mining, and transporting coal 24 hours per day will likely affect the visitor experience in Bryce Canyon National Park, and the impacts have been underestimated by BLM. The modeling analysis for blasting omitted meteorological conditions that occur in the area and would tend to increase the distance sound travels. In particular, the visitor experience on the Riggs Spring Loop Trail (a recommended wilderness area) will likely be impacted when the mine conducts blasting operations and there are temperature inversions or high winds from the direction of the mine – two meteorological conditions not analyzed in the model run.
- **Night skies:** It is likely that running a surface mine 24 hours a day will increase sky glow that will extend into Bryce Canyon National Park and adversely impact the park's night skies interpretive programs and visitor experiences in the park. Particulate matter from blasting, mining, coal stock piles, and truck transportation will also contribute to diminished darkness of night skies. Unfortunately, Yovimpa Point is both the darkest place in the park and the closest to the proposed mine. According to the DEIS, nighttime lighting at the mine would result in a ten percent increase in brightness one degree above the horizon at Yovimpa Point.

In the SDEIS, BLM states that light from all sources will not exceed 3,150,000 initial lumens. SDEIS Table 2.6.1. Yet if the mining operations generate that much light, the visitor experience at Yovimpa Point will be negatively affected. Moreover, the analysis in Appendix J (Impacts to Dark Night Skies) does not support a 3,150,000 lumens cap, and instead used 1,830,000 lumens, meaning

impacts to the park and the visitor experience there could be far worse than BLM disclosed to the public.

### C. Climate

Virtually the entire worldwide scientific community now agrees that a primarily human caused climate crisis will occur if worldwide emissions of greenhouse gases are not urgently and dramatically decreased. As early as 2009, the lead article in the *Lancet*, one of the world's most prestigious medical journals, written by 29 distinguished medical scientists called the climate consequences of the greenhouse gas phenomenon, "[t]he biggest global health threat of the 21st century," and noted that it will, "put the lives and wellbeing of billions of people at increased risk." The report goes on to state that, "[e]ven the most conservative estimates are profoundly disturbing and demand action. Less conservative climate scenarios are so catastrophic that adaptation might be unachievable."<sup>1</sup> In the SDEIS, BLM failed to take the required "hard look" at climate impacts by failing to use the tools available to it to analyze and disclose the impact of carbon emissions, by failing to address whether the proposed expansion is consistent with President Obama's national climate policies, and by failing to analyze the climate impact of cumulative and connected actions.

#### 1. BLM Must Use the Social Cost of Carbon to Disclose the Climate Impacts of the Proposal.

As the Department of Interior has recognized (and even calculated for coastal properties under National Park Service control), climate change will result in billions of dollars of economic harm. BLM cannot render a fair economic analysis of the proposal, nor fully understand its impacts, unless the economic costs of the damage of the CO<sub>2</sub> emissions from combustion of the coal produced are disclosed and considered.

The DSEIS estimates that the mining operation itself and the combustion of the coal produced would combine to emit 4.47 million metric tons of CO<sub>2</sub> per year which would represent only .015% of global emissions of CO<sub>2</sub> from fossil fuels. The implication is that this is inconsequential. However, if the sum total of the world's CO<sub>2</sub> emissions matters, then each contribution to that sum also matters. Calculating climate damage, and the sequelae from that climate damage in economic terms by cost per ton of CO<sub>2</sub>, then this proposed coal lease would result in damages to society anywhere from \$24.6 million to as much as \$7 billion annually. Bear in mind that does not include the economic costs of the adverse health outcomes from the pollution, nor other economic losses, like the loss of tourism related revenues and business opportunities. See infra section II.D.9 and the January 2012 comments submitted by Sierra Club and other organizations. Even at the lowest end of this range makes the project an overall economic

---

<sup>1</sup> Anthony Costello, Mustafa Abbas, Adriana Allen, Sarah Ball, Sarah Bell, Richard Bellamy, Sharon Friel, Nora Groce, Anne Johnson, Maria Kett, Maria Lee, Caren Levy, Mark Maslin, David McCoy, Bill McGuire, Hugh Montgomery, David Napier, Christina Pagel, Jinesh Patel, Jose Antonio Puppim de Oliveira, Nanneke Redclift, Hannah Rees, Daniel Rogger, Joanne Scott, Judith Stephenson, John Twigg, Jonathan Wolff, Craig Patterson\* *Managing the health effects of climate change*. *Lancet* 2009; 373: 1693–733.

liability because \$24.6 million exceeds the value of the projected state and federal royalties, wages and taxes.

In the SDEIS, BLM disclosed the amount of carbon dioxide (CO<sub>2</sub>) that would be released from burning the coal mined from the Alton expansion area and gave a cursory approximation of potential methane emissions that could occur. BLM, however, relied solely on the *amount* of climate emissions as a proxy for disclosing the *impact* of those emissions. BLM argued that the tools required for such an analysis do not exist, stating: “[a]t present, however, the climate change research community has not yet developed tools specifically intended for evaluating or quantifying end-point impacts attributable to the emissions of GHGs from a single source.” SDEIS at 4-313.

This is simply not true. The social cost of carbon – a tool created by federal agencies and generally accepted in the scientific community – could be used here, as it would allow BLM to quantify and disclose the harm caused by that the project’s CO<sub>2</sub> emissions, and perhaps the methane emissions as well.

The social cost of carbon is a method for estimating the damages associated with a small increase in CO<sub>2</sub> emissions, conventionally one metric ton, in a given year. U.S. Environmental Protection Agency (“EPA”), “Fact Sheet: Social Cost of Carbon” (Nov. 2013) at 1, available online at <http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf> (last viewed September 10, 2015). It is intended to capture various damages associated with climate disruption, including changes in net agricultural productivity, human health, property damages, and the value of ecosystem services, all of which climate change can degrade. Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (2013), attached as Exhibit 5, As such, the social cost of carbon includes not only socioeconomic harm but also harm to the environment.

BLM’s position that the scientific tools necessary to quantify climate harms from small, incremental additions of carbon dioxide do not exist is flatly unsupported – the social cost of carbon is just such a tool. NEPA specifically requires federal agencies to analyze and disclose the environmental effects of their actions, including “ecological . . . aesthetic, historic, cultural, economic [and] health” impacts. 40 C.F.R. § 1508.8. Where “information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known,” NEPA regulations direct agencies to evaluate a project’s impacts “based upon theoretical approaches or research methods generally accepted in the scientific community.” 40 C.F.R. § 1502.22(b)(4). The social cost of carbon is based on generally accepted research methods and years of peer-reviewed scientific and economic studies. As such, it is the best tool now available for agencies to use in predicting and analyzing the climate impacts of proposed federal actions. BLM’s failure to use the social cost of carbon thus violates the requirement that agencies use the generally accepted tools available to them in order to evaluate the impacts of their decisions.

This failure is far more than a mere flyspeck. Using any of the interagency working group’s (“IWG”) social cost of carbon (“SCC”) values demonstrates that the combustion of coal from the proposed expansion will likely result in massive economic damages associated with climate change. The updated interagency SCC estimates for 2020 are between \$12 and \$123, depending on the discount rate applied (in 2007\$).<sup>2</sup> The IWG does not instruct federal agencies which discount rate to use, suggesting the 3 percent discount rate (\$43 per ton of CO<sub>2</sub>) as the “central value,” but further emphasizing “the importance and value of including all four SCC values[;]” i.e., that the agency should use the range of values in developing NEPA alternatives.<sup>3</sup> Under any discount rate, the total climate impacts from the proposal will reach into the hundreds of millions of dollars, and this must be disclosed to the public and decision makers.

The agency’s obligation to analyze the costs associated with GHG emissions through NEPA was directly affirmed by the court in *High Country Conservation Advocates v. U.S. Forest Service*, 52 F. Supp. 3d 1174 (D.Colo. 2014). In his decision, Judge Jackson identified the IWG’s social cost of carbon protocol as a tool to “quantify a project’s contribution to costs associated with global climate change.” *Id.* at 1190. “The critical importance of [climate change] . . . tells me that a ‘hard look’ has to include a ‘hard look’ at whether this tool, however imprecise it might be, would contribute to a more informed assessment of the impacts than if it were simply ignored.” *Id.* at 1193. To fulfill this mandate, they agency must disclose the “ecological[,] . . . economic, [and] social” impacts of the proposed action. 40 C.F.R. § 1508.8(b).

Nor can the agency tout the benefits of coal mining without similarly disclosing the costs. See 40 C.F.R. § 1502.23. Here, BLM cites the economic benefits of the project—such as job creation or federal royalties—while failing to discuss the costs. SDEIS sec. 4.1.2. This type of misleading and one-sided analysis is expressly forbidden. See *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 446-47 (4th Cir. 1996) (“it is essential that the EIS not be based on misleading economic assumptions”); *Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983) (agency choosing to “trumpet” an action’s benefits has a duty to disclose its costs).

The social cost of carbon is a simple tool that is easy for federal agencies to use and easy for the public to understand. Putting a dollar figure on each ton of CO<sub>2</sub> emitted as a result of a federal project places climate impacts in a context that both decision makers and the public can readily comprehend. It is backed by years of peer reviewed scientific and economic research, it is designed to be updated to reflect the most up-to-date information, and it has already been used by federal agencies in both rulemaking decisions and project-level reviews under NEPA.

---

<sup>2</sup> See IWG, 2015 Update to 2013 Technical Support Document, available at: <https://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-tsd-final-july-2015.pdf>. 2013 Technical Support Document at 3 (including a table of revised SCC estimates from 2010-2050). To put these figures in perspective, in 2009 the British government used a range of \$41-\$124 per ton of CO<sub>2</sub>, with a central value of \$85 (during the same period, the 2010 TSD used a central value of \$21). The UK analysis used very different assumptions on damages, including a much lower discount rate of 1.4percent. The central value supports regulation four times as stringent as the U.S. central value.

<sup>3</sup> See 2013 TSD at 12.

Therefore, BLM must use the social cost of carbon to disclose the impacts of the coal mine expansion pursuant to NEPA.<sup>4</sup>

2. BLM Must Disclose the Project's Conflict with the President's Greenhouse Gas Emission Reduction Targets.

BLM must further analyze whether the proposed coal mine expansion would interfere with efforts to meet federal greenhouse gas emission reduction targets recently established by President Obama. As explained by the Council on Environmental Quality in its 2014 Draft Climate Guidance, federal agencies evaluating the climate impacts of their decisions should “incorporate by reference applicable agency emissions targets such as applicable Federal, state, tribal, or local goals for GHG emission reductions to provide a frame of reference and make it clear whether the emissions being discussed are consistent with such goals.” Council on Environmental Quality, “Revised Draft Guidance on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews,” 79 Fed. Reg. 77,802, 77,826 (Dec. 24, 2014). Although the CEQ Guidance is still in draft form, the Guidance itself makes clear that it does not set out any new legal obligations under NEPA, but rather explains and clarifies those obligations that already exist under the statute, regulations, and the case law interpreting the two. *Id.*

In particular, BLM must address whether the proposed expansion, and the additional coal combustion it facilitates, are in line with the goals of President Obama's Clean Power Plan. The Clean Power Plan, for example, calls for reducing power sector emissions to 30 percent below 2005 levels by 2030. Additionally, in November 2014 the President announced a joint U.S.-China agreement aimed at reducing climate pollution that calls for even more aggressively cutting net greenhouse gas emissions to 26-28 percent below 2005 levels by 2025. White House Fact Sheet, U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation (November 11, 2014), available online at <https://www.whitehouse.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>, (last visited September 10, 2015).

3. BLM Failed to Consider Cumulative Impacts to Climate.

In the SDEIS, BLM overlooked a number of potentially significant impacts, including impacts from similar and/or cumulative coal leasing and mining approvals in the same region that are under consideration by the U.S. Department of the Interior, including its agencies the BLM and the Office of Surface Mining Reclamation and Enforcement (“OSMRE”).

Under NEPA, an agency must analyze the impacts of “similar” and “cumulative” actions in the same NEPA document in order to adequately disclose impacts in an Environmental Impact

---

<sup>4</sup> For more on the utility and necessity of using the social cost of carbon in NEPA analysis, see letter of Center for Biological Diversity et al. to Council on Environmental Quality (Mar. 25, 2015) at 4-10, attached as Exhibit 6; N. Shoaff & M. Salmon, Sierra Club, “Incorporating the Social Cost of Carbon into National Environmental Policy Act Reviews for Federal Coal Leasing Decisions,” (April 2015), attached as Exhibit 7.

Statement (“EIS”). See 40 C.F.R. §§ 1508.25(a)(2) and (3). Federal courts have confirmed that climate impacts are included in the indirect and cumulative effects that agencies must consider under NEPA. *Center for Biological Diversity v. Nat’l Highway Transp. Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). Here, the SDEIS does not address the impacts of proposed coal leases and mining approvals under consideration by BLM and OSMRE throughout the western United States, including in Utah. Numerous coal leasing and mining approvals are not only similar in timing, but also similar in geography given their location in the western United States. These similar and cumulative leasing and mining proposals include, but are not limited to:

- The BLM’s proposal to offer for sale and issue the Flat Canyon coal lease (UTU-77114), a 42 million ton coal lease containing 2,692 acres in central Utah. The lease was approved for sale and issuance by the BLM in early 2002. See BLM, “Final Environmental Impact Statement for the Flat Canyon Federal Coal Lease Tract (UTU-77114),” website available at [http://www.blm.gov/ut/st/en/prog/energy/coal/flat\\_canyon\\_coal\\_project.print.html](http://www.blm.gov/ut/st/en/prog/energy/coal/flat_canyon_coal_project.print.html) (last accessed Sept. 9, 2015). The lease was issued on July 31, 2015.
- The BLM’s proposal to offer for sale and issuance the Greens Hollow coal lease (UTU-84102), a 60 million ton coal lease containing 6,175 acres in central Utah. The lease has been proposed by the BLM and a Supplemental EIS prepared, but it has not yet approved for sale and issuance. See BLM, “Greens Hollow EIS,” website available at <http://www.blm.gov/ut/st/en/fo/price/energy/coal.html> (last accessed Sept. 9, 2015).
- The BLM’s decision to offer for sale and issuance the Hay Creek II coal lease (WYW-172614), a 167 million ton coal lease containing 1,253 acres in the Powder River Basin of Wyoming. The lease was approved for sale and issuance by the BLM in 2013, although it has not yet been sold or issued. See BLM, “Hay Creek II Coal Lease Application,” website available at <http://www.blm.gov/wy/st/en/info/NEPA/documents/hpd/HayCreekII.html> (last accessed Sept. 9, 2015).
- The BLM’s decision to offer for sale and issuance the Maysdorf II South coal lease (WYW-180711), a 271 million ton coal lease containing 2,305 acres in the Powder River Basin of Wyoming. The lease was approved for sale and issuance by the BLM in 2013, although it has not yet been sold or issued. See BLM, “South Gillette Area Coal Leasing Project,” website available at <http://www.blm.gov/wy/st/en/info/NEPA/documents/hpd/SouthGillette.html> (last accessed Sept. 9, 2015).
- The BLM’s proposal to offer for sale and issuance the Spring Creek II coal lease (MTM-105485), a 198 million ton coal lease containing 1,602 acres in the Powder River Basin of Montana. The lease is currently under review by the BLM and was applied for in 2013. See Cloud Peak Energy, “Lease by Application,” available at [http://www.blm.gov/style/medialib/blm/mt/blm\\_programs/energy/coal.Par.60997.File.dat/CPE%20File%201%20Application.pdf](http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/coal.Par.60997.File.dat/CPE%20File%201%20Application.pdf) (last accessed Sept. 9, 2015); see also <http://thecoalfields.com/claims/mtm---105485> (last accessed Sept. 9, 2015).

- The BLM's proposal to offer for sale and issuance a 5,091 acre coal lease to expand the Oxbow Mine in Colorado (COC-07616). See <http://thecoalfields.com/claims/coc----076716> (last accessed Sept. 9, 2015).
- OSMRE's proposal to approve an expansion of the Colowyo coal mine in northwestern Colorado. The proposal would expand the mine by more than 16,000 acres and continue the life of the mine for 20-40 years. See OSM, "Colowyo Coal Mine Collom Permit Expansion Area Project Mining Plan Environmental Assessment," website available at <http://www.wrcc.osmre.gov/initiatives/colowyo/documentlibrary.shtm> (last accessed Sept. 9, 2015).
- OSMRE's proposal to approve an expansion of the Rosebud coal mine in the Powder River Basin of Montana. The proposal would expand the mine by more than 6,000 acres and continue the life of the mine for 19 years. See OSM, "Western Energy Company Rosebud Coal Mine Area F Project," website available at <http://www.wrcc.osmre.gov/initiatives/westernEnergy.shtm> (last accessed Sept. 9, 2015).

These are just some of the pending coal mining and leasing approvals pending before BLM and OSMRE. Taking into account additional coal lease modifications, lease readjustments, and past coal leasing and mining approvals, the impacts of these similar and cumulative actions are tremendous.

The failure of the SDEIS to analyze and assess these similar and cumulative actions is particularly troublesome from a climate standpoint. All of these actions are similar to the proposed action at hand, pose similar and cumulative impacts in terms of greenhouse gas emissions and climate impacts, particularly in terms of carbon costs. Despite the obvious and close connection, the SDEIS mentions no other coal leasing or mining decisions undertaken by BLM or OSMRE.

This is disturbing as the climate consequences of Interior-approved coal leasing and mining certainly warrant a broad review under NEPA. The SDEIS discloses that the reasonably foreseeable greenhouse gas emissions associated with mining the Alton coal lease would amount to 0.015% of all global emissions. See SDEIS at 4-42. If the proper scale of a climate analysis is global, as the SDEIS asserts, then the BLM is not only warranted, but compelled, to ensure it takes an expansive view of the similar and cumulative actions that are related on the impacts of mining at the Coal Hollow mine. Indeed, when it comes to other impacts, such as water quality, socioeconomic, and wildlife, BLM takes a much narrower view of the proper scope of analysis. The global scope of analysis for greenhouse gas emissions confirms BLM's intention to ensure a global analysis and in turn, this confirms that the scope of analysis necessarily should include similar and cumulative coal leasing and mining decisions proposed or approved by the U.S. Department of the Interior.

## D. Human Health

In the SDEIS, BLM has failed to take the required “hard look” at the human health impacts of the proposed coal mine expansion. As fully explained in the attached report from Utah Physicians for a Healthy Environment (UPHE), a volunteer organization of over 350 physicians and consultants from other scientific fields like toxicology, biology, engineering and ecology, the proposed expansion would cause severe and unacceptable risks of human health impacts in the state of Utah, many of which BLM has either glossed over or completely ignored in its supplemental review. UPHE’s report is attached as Exhibit 8.

### 1. Compliance With the NAAQS Is Not an Adequate Measure of Potential Human Health Impacts.

One of the most important functions of the NEPA process is to ascertain the likely health impacts of a proposed project. Determining whether a proposal will cause exceedances of the National Ambient Air Quality Standards (NAAQS) is not an adequate measure of the potential health impacts of the associated air pollution. BLM’s continued reliance on compliance with the NAAQS as a proxy for evaluating health impacts is seriously misleading, not based on the best available science, and must be corrected in order for BLM to give the public and decision makers an accurate assessment of the likely human health effects of the proposed coal mine expansion.

Hundreds of medical studies published in the last ten years demonstrate that there is no safe level of particulate pollution that humans can be exposed to. There is no threshold below which there is no health effect. Even levels that were once thought to be benign, including natural background levels, have been proven to have health consequences. In fact, studies have proven that when the signature health outcome of particulate air pollution, sudden cardiac death, is plotted against particulate concentrations, the steepest part of the curve is at the lowest concentrations.<sup>5</sup> In other words, per unit dose of exposure, particulate pollution well below the NAAQS has the greatest health impact.

Attached to these comments is a summary prepared by UPHE of the health impacts of air pollution, organized by organ systems. Attached as Exhibit 9. Bullet points of these impacts on the heart, lungs, brain, fetal and chromosomal development, cancer, birth outcomes and numerous other diseases under the category “miscellaneous” are given, followed by the references supporting these bullet points. There are **nearly 800 studies** referenced in total, all from well respected national and international medical journals, many of which establish that this broad array of health impacts are evident at particulate concentrations well below the NAAQS.

---

<sup>5</sup> Eugenia E. Calle and Michael J. Thun. C. Arden Pope, III, Richard T. Burnett, Daniel Krewski, Michael Jerrett, Yuanli Shi. *Circulation*.2009;120:941-948. Cardiovascular Mortality and Exposure to Airborne Fine Particulate Matter and Cigarette Smoke.

Despite the provisions of the Clean Air Act, the history of the EPA's establishment and periodic revisions of the NAAQS demonstrate a strong, indisputable political influence over that process. Throughout the last ten years there have been numerous examples where the recommendations of the EPA's Clean Air Scientific Advisory Committee (CASAC), the scientific experts on the health affects of air pollution, have not been adopted or have been "watered down" by the EPA itself, or other officials in the executive branch. This history alone contradicts the BLM's stated assumption that pollution below federal standards does not have health impacts.

In a letter to the EPA administrator on Sept. 29, 2006 the CASAC chastised the EPA's failure to accept their recommendation and reduce the PM2.5 standard below 15ug/m3.

*It is the CASAC's consensus scientific opinion that the decision to retain without change the annual PM2.5 standard does not provide an "adequate margin of safety ... requisite to protect the public health"...Significantly, we wish to point out that the CASAC's recommendations were consistent with the mainstream scientific advice that EPA received from virtually every major medical association and public health organization that provided their input to the Agency, including the American Medical Association, the American Thoracic Society, the American Lung Association, the American Academy of Pediatrics, the American College of Cardiology, the American Heart Association, the American Cancer Society, the American Public Health Association, and the National Association of Local Boards of Health. Indeed, to our knowledge there is no science, medical or public health group that disagrees with this very important aspect of the CASAC's recommendations.*

Since then the CASAC recommended that the annual and 24 hr PM2.5 standards be reduced even further, and the EPA adopted an annual standard of 12ug/m3. It is worth noting that 24 hr. standard for the World Health Organization is 10ug/m3.

The DSEIS mentions that there are "irreversible" and "irretrievable" environmental consequences. It distinguishes between the two and states that both must be evaluated. Although the DSEIS fails to mention an obligation to assess corresponding irreversible or irretrievable health consequences, in fact it is exactly in that same frame of reference that the health consequences should be determined.

Because air pollution mimicks first and second hand cigarette smoke in its physiologic perturbations, most of the diseases are the same or similar. A person who quits smoking may reduce his/her disease risk, but can never return to the state of risk that existed before they started smoking. Likewise those impacted by the air pollution of this proposed mine will not have just irretrievable, but also irreversible health impacts.

2. The Information Provided in the SDEIS Is Too Vague to Adequately Assess Emissions.

Under section 4.3.1, BLM makes the following statement:

*Emission controls would be implemented to reduce PM (fugitive dust) emissions during construction and ongoing production activities. Fugitive dust (PM10 and PM25) emissions from vehicles traveling on unpaved roads during the life of the mine would be controlled using water or a combination of a chemical suppressant and water. Most coal transfer points and processing activities during coal production would be enclosed and would limit fugitive emissions from these sources. To reduce windblown dust, portions of the site and overburden storage piles and coal storage piles would be watered prior to predicted high-wind events.*

There are so few specifics in this statement there is no confidence whatsoever that the mine operator will be required to adhere to any serious protocol that will restrain fugitive dust. Exactly what coal transfer points will be enclosed, how often will water be used for dust suppression, what threshold will be used to require an application of water and chemicals, what chemicals would be used and how much, what is the toxic profile of those chemicals, where will the water come from, how will the company be notified in advance of predicted high wind events, what will be the threshold for a "high wind" event, etc. etc. The fugitive emissions from this operation will vary tremendously depending how diligent the operator is. What mechanism will be established to monitor or enforce that diligence? What criteria will be used to determine whether the operator is sufficiently compliant?

If that kind of detailed analysis was applied, why is it not in the DSEIS so the public can evaluate its efficacy? If that analysis was not done how can anyone predict what the fugitive emissions from the mine will be?

These are not trivial questions. The fugitive dust control plan at the current Alton coal operation, required as part of the permit from the Utah Division of Oil, Gas and Mining, is vague to the point of being absurdly unenforceable. For example, "Stages 2 and 3" are to be implemented if Stage 1 measures are deemed unsatisfactory. Unsatisfactory to whom? The local residents? The health department? UDOGM? Executives of Alton Coal? This is already a serious problem because local residents are complaining of coal dust in their stores and homes. Stage 2 calls for covers on haul trucks, but Alton is not using covers on their haul trucks. How can the DSEIS make a determination of health impacts or compliance with the NAAQS when an eventual permit will end up so vague and unenforceable and result in widely varying emissions? The attached picture of an Alton coal truck illustrates the gross inadequacy of fugitive dust control by the operating company.

The omission of these kinds of details becomes even more important in examining the modeled emissions in Tables 4.5 and 4.7 which show that under some of the scenarios the NAAQS for

PM10 and NO2 are violated. One has every reason to suspect that the modeling of emissions did not assume the kind of poor dust control evident in the previously mentioned photograph and that the modeled emission underestimate the true emission of the mine.

There are no state monitoring stations anywhere near the near-field tract so there will be virtually no objective way to monitor the impact of the mine on any components of air pollution. This is of particular concern because with the modeled deterioration in air quality, people living in the near field tract will experience annual PM2.5 levels as high as some of the urban areas of the Wasatch Front. Based on the formula published by the American Heart Association correlating chronic PM2.5 with mortality rates show that the all-cause mortality rate in the area can be expected to increase by 6% because of the added particulate pollution from the mine.<sup>6</sup> If the modeling in the DSEIS overestimated the fugitive dust control actually adopted (as appears likely given the history of the company) that mortality rate would be further increased.

In other words, the deterioration of air quality in the near-field tract will lead to an increase in the number of deaths by at least 6%. That contradicts any claim by the BLM that public health will be adequately protected.

In table 4.5 in three of the four scenarios, the PM10 air modeling shows an exceedance of the current 24 hr NAAQS. Table 4.7 shows that with a 300 ft overburden scenario NO2 NAAQS will be exceeded. These values also contradict a claim that public health will be adequately protected.

Under alternatives B and C Tables 4.1, 4.2, 4.3, and 4.4 list modeled emissions. These tables do not mention known toxics in the fugitive dust that evidently were not considered in the DSEIS.

### 3. BLM Underestimated the True Health Impacts of the Project's Air Emissions.

By its own admission, BLM's emission inventory cited in section 2 of the SDEIS does not include secondarily formed PM2.5. Not because there won't be any formed, but because the modelers state that their formation is highly uncertain, and that "these chemical reactions are not considered to be near-field impacts, and they cannot be simulated with the recommended near- field model (AERMOD)." Furthermore, the emission inventory apparently does not consider any formation of ozone, stating "ozone formed secondarily from photochemical reactions occurs away from a source and is therefore, not regarded as a near field pollutant." Again that does not mean that ozone will not be formed, it only means the modelers can't assess how much.

---

<sup>6</sup> Brook R, Rajagopalan S, Pope CA, Brook J, Bhatnagar A, et al. AHA Scientific Statement: Particulate Matter Air Pollution and Cardiovascular Disease; An Update to the Scientific Statement From the American Heart Association. *Circulation*. 2010;121:2331-2378.

Because ozone and secondarily formed PM2.5 will both have health consequences no matter where they occur or what the pre-existing background concentrations will be, the BLM's supplemental DEIS, relying only on a "near field analysis" is inaccurate, incomplete, and underestimates the true health impacts of the project's emissions.

4. BLM Failed to Evaluate the Health Consequences of Microorganisms In Fugitive Dust.

Soils in the Western United States, and therefore fugitive dust from this mine, harbor significant concentrations of microorganisms like the fungal spores that cause Valley Fever (coccidiomycosis). Valley Fever is a difficult to diagnose, occasionally fatal disease caused by inhalation of these spores. The disease has quadrupled in occurrence in the last ten years in the Southwest. The American Academy of Microbiology estimates that 200,000 people per year contract the disease which is fatal in about one in 1,000 cases. People who are immunosuppressed, women who are pregnant and diabetics are particularly susceptible to serious courses of this disease.

Hotter temperatures allow the cocci a survival advantage over other microorganisms and more frequent and intense dust storms are the perfect delivery system for increasing this infectious disease among residents of the Western US. Dale Griffin, the USGS microbiologist, says one gram of desert soil can contain as many as one billion microorganisms. Fungi can travel long distances because the spore "housing" acts like a cocoon, protecting the fungus from environmental stresses. More than 140 different organisms have been identified as "hitchhiking on to dust particulates."<sup>7</sup> SARS, meningitis, influenza and foot and mouth disease are other infectious diseases that can be transmitted by dust.

5. BLM Failed to Assess Potential Releases of Radioactive Elements.

Soils in Southern Utah are also known to contain residual radioactive isotopes from the era of nuclear bomb testing in Nevada.

In 2006 considerable controversy was raised and eventually wide spread public opposition was mounted in Utah against a federal government planned, non-nuclear bomb test in Nevada dubbed "Divine Strake". 10,000 letters of protest were written to the federal government, most expressing opposition to the likelihood of radioactive contaminated dust drifting into Utah. Divine Strake was cancelled due to public opposition and pressure from Utah's Governor Jon Huntsman. The more than twenty years of fugitive dust from this mine will likely release far more radioactive metals into the atmosphere than would have occurred from Divine Strake.

Over 900 nuclear bomb tests occurred at the Nevada test site in the mid 20th century. The DOE also conducted numerous "safety" experiments that did not produce nuclear explosions but did

---

<sup>7</sup> <http://www.dailyclimate.org/tdc-newsroom/valley-fever/Valley-Fever-blowin2019-on-a-hotter-wind>

create significant "surface contamination" with plutonium. Nuclear "rocket tests" added additional radioactive contamination. In terms of cumulative effects, the contamination from above ground testing along with the safety shots and cratering events left an estimated 27,000 acres (42 square miles) of surface soils contaminated at levels in excess of 40 pico curies per gram.<sup>8</sup>

Underground tests did not stop until 1992 and the US Dept. of Energy (DOE) admits that of the 723 underground tests that were detonated, at least 114 of them released significant radioactivity into the atmosphere. Other scientists think that number is much higher and in fact think that it is rare that underground testing does not release atmospheric radioactivity. Surface soil contamination from underground tests only added to the radioactivity levels mentioned above.

The DOE has stated that it is not possible to fully define the level of residual contamination that remains from the atmospheric testing program, but admits that radioactive isotopes that are still in Great Basin soil include americium, plutonium, uranium, cobalt, cesium, strontium, and europium.<sup>9</sup> Some of these radioactive elements are alpha-emitters, some of the most carcinogenic substances known. Illustrating this point: since 1943 the military has been aware of the extreme toxicity of uranium as a gas. In a document dated October 30, 1943 and declassified June 5, 1974, three major scientists from the Manhattan Project, Drs. James Conant, A. H. Compton, and H. C. Urey wrote to Brigadier General Leslie R. Groves, who was the head of the atom bomb project, concerning "Radioactive materials as a military weapon." In that document they stated:

As a gas warfare instrument the material (uranium) would be ground into particles of microscopic size to form dust and smoke and distributed by a ground-fired projectile, land vehicles, or aerial bombs. In this form it would be inhaled by personnel. The amount necessary to cause death to a person inhaling the material is extremely small. It has been estimated that one millionth of a gram accumulating in a person's body would be fatal. There are no known methods of treatment for such a casualty.

Uranium was also recommended as a permanent terrain contaminant which could be used to destroy populations by contaminating water supplies and agricultural land with radioactive dust.<sup>10</sup> One millionth of a gram of uranium yields 1,000 alpha particles per day, each alpha particle carries over 4 million electron volts, and it takes only 6-10 electron volts to break a DNA strand.

Some of these radioactive elements also bioconcentrate as they rise up the food chain,

---

<sup>8</sup> John B. Walker and Paul J. Liebendorfer. Long-Term Stewardship at the Nevada Test Site. 1998 Nevada Division of Environmental Protection Bureau of Federal Facilities.

<sup>9</sup> *Id.*

<sup>10</sup> <http://www.mindfully.org/Nucs/Groves-Memo-Manhattan30oct43.htm>.

reaching concentrations as much as thousands of times higher in meat and milk, including human breast milk. Humans reside at the top of the food chain, especially human embryos.

Once inside the human body these radioactive elements continue to bioconcentrate, accounting for their distinctive carcinogenic patterns and enhancing the toxicity of low dose exposures. Strontium concentrates in bone, bone marrow and teeth, resulting in bone cancers and leukemia. Cesium resembles potassium, which is ubiquitous in every cell. It concentrates in brain, muscle, ovary and testicles, leading to brain cancer, muscle cancers (rhabdomyosarcomas), ovarian and testicular cancer and, most importantly, can mutate genes in the eggs and sperm causing genetic diseases in future generations.

Plutonium is the most deadly of alpha emitters. If inhaled into the lung it is transported from the lung to thoracic lymph nodes where it can induce Hodgkins disease or lymphoma. Because it is an iron analogue it combines with the iron transporting proteins and concentrates in the liver, causing liver cancer, and the bone marrow causing bone cancer, leukemia, or multiple myeloma. It also concentrates in the testicles and ovaries where it can induce testicular or ovarian cancer, and/or mutate genes to induce genetic disease in future generations. Plutonium can cross the placental barrier which protects the embryo. Once lodged within the embryo, one alpha particle could kill a cell that would form the left side of the brain, or the right arm, like thalidomide did years ago. The half-life of plutonium is 24,400 years, so it can cause harm for 500,000 years; inducing cancers, congenital deformities, and genetic diseases for the rest of time, not only in humans, but in all life forms.

There is little doubt that current dust storms from the Great Basin already continue to deliver radioactive isotopes to the environment where millions of Utah residents live. A 2009 masters thesis study was conducted using soil samples from the Washington County area to determine if Cesium 137 still exists in the area in detectable amounts. 102 soil samples were collected and analyzed. Only one of the 102 soil samples did not have detectable amounts of Cesium. The author stated, "Several of the samples contained levels substantially higher than earlier estimates would have predicted. This leads us to conclude that doses to the public from the testing could also have been higher than earlier thought."<sup>11</sup> If Cesium 137 is that prevalent in soil in Washington County, then it can be assumed to be present in similar amounts in the soil in and around the Alton Coal Tract.

As with particulate air pollution, science has established that there is no safe level of radioactivity exposure. The National Academy of Sciences Biological Effects of Ionizing Radiation (BEIR) Report VII from 2005 states, "A comprehensive review of available biological and biophysical data supports a "linear-no-threshold" (LNT) risk model, that the risk of cancer proceeds in a linear fashion at lower doses without a threshold and that the smallest dose has the potential to cause a small increase in risk to humans."

Radiation damage is cumulative and each successive dose builds upon the cellular mutation

---

<sup>11</sup> <http://ir.library.oregonstate.edu/xmlui/handle/1957/9293>.

caused by the last. One mutation, in one gene, in a single cell, if unrepaired, can result in a fatal cancer. Many cancers, especially solid tumors, and other genetic diseases have a latency period of many decades. Utah residents are still showing up with new cancers from the original nuclear testing program decades ago.

Even small increases in risk per person become significant public health hazards in the aggregate, when large numbers of people are exposed. In other words, when millions of people are exposed to slightly increased risks, there will be thousands of new victims.

It should be emphasized that cancer is not the only health risk of radiation exposure. Cardiovascular disease causing heart attacks, strokes and diseases consequent to immunosuppression are all correlated to radiation exposure, as are any diseases related to chromosomal dysfunction, such as birth defects. Children are much more susceptible to radiation caused health affects and human embryos, especially during early gestation, are perhaps thousands of times more at risk for genetic mutations from radiation exposure than are adults. There are over 2,600 diseases described in the medical literature caused by genetic mutations. Mutated genes are passed down from generation to generation in perpetuity, impacting the health of future generations. The BLM's SDEIS makes no differentiation regarding risk among these vastly different population subsets or these thousands of diseases.

To summarize: the radioactive contamination from nuclear testing still present in Great Basin soil and dust has medical ramifications that will never cease. It will affect the health and viability of future generations forever; inducing epidemics of cancer, leukemia and genetic disease. If the BLM has made an actual assessment of concentrations of residual radioactive isotopes in the surface soil of the mine's anticipated affected landscape and/or if modeling has been done to assess public exposure to radioactivity from the ensuing dust, this information should be shared with the public.

The BLM may feel that this type of detailed radio-biological assessment maybe beyond the required scope of the DSEIS, but it is a very real factor in determining the health impacts of the Alton mine. An EIS that does not address this issue is likely ignoring the largest potential health threat from the mine's activity.

6. BLM's Estimate of Hazardous Air Pollutants Is Inadequate, Misleading, and Not Credible.

In Section 4.3.1 four tables are listed showing several different scenarios with each table showing varying numbers for PM10, PM2.5, NOx and VOCs reflecting differing amounts of mining activity. Nonetheless the amount of HAPs emissions, such as benzene, toluene and xylenes, stays the same in each table. The source of those HAPS would come from diesel emissions which would obviously vary according to the differing amounts of heavy equipment activity. The fact that the HAPs emissions do not vary through differing amounts of diesel combustion defies explanation and the credibility of the calculations.

Furthermore, the exact same amount of HAPs is listed for on-site scrapers and for on-site front end loaders and trucks in each table, even though throughout the four different tables the amount of PM emissions in each category vary by as much as 30%. This also defies explanation and erodes the credibility of the calculations.

In Section 4.3.2.6, the DSEIS also purports to address HAPs emissions. However, here the only acknowledged source of HAPs is the use of generators. It is bewildering and obviously inaccurate for the DSEIS to make statements like "the only quantifiable source of HAPs in the emissions inventory would be the generators needed to conduct mining operations." HAPs are obviously part of the emissions of all the diesel engines in the heavy equipment as were suggested in section 4.3.1.

The DSEIS does not address any of the heavy metal HAPs that will be part of these emissions inventory coming from several sources. They will be found in the diesel emissions adsorbed to particulate matter. They will also be part of the fugitive dust and coal dust emissions.

It has become increasingly apparent that surface soils throughout the world are steadily becoming more and more contaminated with heavy metals such as mercury. On a per weight basis mercury is considered the most toxic substance on earth after plutonium and the most toxic natural heavy metal. Mercury has become a ubiquitous contaminant of the global environment primarily because of industrial emissions from coal power plants and cement production plants. Even higher concentrations of mercury are also likely to be in surface soils in the affected area because it is released during the smelting phase of the numerous gold mine operations in Nevada. Utah already has a severe problem with mercury contamination of its waterways and advisories against eating fish from Utah's waters are present throughout the state. Some areas, such as the Southwest United States, appear to have specific climate conditions that allow them to receive more oxidized mercury from the upper atmosphere than other areas.<sup>12</sup>

Given their toxicity, the BLM should have made an assessment of mercury, arsenic and other, non-radioactive heavy metals in the soils that will be turned into dust by mine activities. The Aral Sea history proves the health consequences of dust borne heavy metal exposure.

Called one of the world's worst environmental disasters by the UN's Secretary General Ban Ki-Moon, the Aral Sea is now 10% of its original size because its inlet waters were diverted for irrigation. Due to increased dust storms generated in the now dry lake bed, respiratory illnesses, including drug resistant tuberculosis, brucellosis, cancer, digestive disorders, anemia, and infectious diseases are now common ailments in the region. Liver, kidney and eye problems can also be attributed to the toxic dust storms. There is an unusually high fatality rate amongst vulnerable parts of the population. There is a high child mortality rate of 75 in every 1,000 newborns and maternity death of 12 in every 1,000 women.

---

<sup>12</sup> <http://www.sciencedaily.com/releases/2011/12/111218150303.htm>.

In 2002 the UN estimated that winds carried an average of 200,000 tons of salt and toxic dust every day throughout the Aral Sea region and thousands of miles beyond, as far as Russia's arctic north. The dust is heavily polluted with herbicides, heavy metals, and salt.<sup>13</sup>

Average life expectancy in the Aral Sea region of Kazakhstan has declined from 64 to 51 years. Reproductive pathologies and adverse pregnancy outcomes are much higher than the rest of the former USSR and present-day Russia. 87% of newborn babies are anemic and 5% have birth defects.<sup>14</sup> Health authorities in the area are largely in agreement that the newly formed dust bowl and the toxic chemicals and heavy metals contained in the dust is the primary cause of these disturbing public health trends.

#### 7. BLM Ignored Health Costs of Fugitive Coal Dust.

Already home and business owners along the route of the trucks leaving the mine site are experiencing intolerable fugitive "coal dust" from the coal trucks (see January 2012 comments and exhibits submitted by Sierra Club et al). There is no mention in the DSEIS of evaluating this health impact on residents in the vicinity of the mine.

Coal dust harbors over 55 different toxic heavy metals and other contaminants known to be carcinogens, including mercury, uranium, thorium, arsenic, manganese, beryllium, chromium and cadmium.<sup>15</sup> A wide variety of studies show higher rates of disease outcomes among people exposed to coal dust, besides the miners themselves. Furthermore, residents exposed to the fugitive coal dust from haul trucks are exposed 24/7, as opposed to the mine workers who are only exposed occupationally. Moreover, children and the fetuses of pregnant women who live near the coal truck routes will be many times more vulnerable to the toxic effects of coal dust than the mine workers. There is no acknowledgement of this issue in the BLM's DSEIS.

#### 8. BLM Ignored Studies Showing Higher Rates of Adverse Health Outcomes in Communities Near Coal Mining.

Several epidemiologic studies demonstrate significantly higher rates of birth defects, low birth weight syndrome, chronic respiratory and kidney disease, cancer, hospitalizations, cardiovascular mortality, and overall mortality rates in communities near similar mining operations.<sup>16</sup> This is research deemed credible enough by the EPA to be used as the basis for its

---

<sup>13</sup> <http://www.columbia.edu/~tmt2120/impacts%20to%20life%20in%20the%20region.htm>;  
<http://www.reuters.com/article/2008/06/24/idUSL23248577>.

<sup>14</sup> Dr. Oral A. Ataniyazova, M.Sc., the Karakalpak Center for Reproductive Health. Health and Ecological Consequences of the Aral Sea Crisis and Environment, Uzbekistan. Prepared for the 3rd World Water Forum Regional Cooperation in Shared Water Resources in Central Asia. Kyoto, March 18, 2003.

<sup>15</sup> Paul R. Epstein, Jonathan J. Buonocore, Kevin Eckerle, Michael Hendryx, Benjamin M. Stout III, Richard Heinberg, Richard W. Clapp, Beverly May, Nancy L. Reinhart, Melissa M. Ahern, Samir K. Doshi, and Leslie Glustrom. 2011. Full cost accounting for the life cycle of coal in "Ecological Economics Reviews." Robert Costanza, Karin Limburg & Ida Kubiszewski, Eds. Ann. N.Y. Acad. Sci. 1219: 73–98.

<sup>16</sup> E.g., Ahern MM, Hendryx M, Conley J, et al. *The association between mountaintop mining and birth defects among live births in central Appalachia, 1996-2003*. Environ Res 2011 Aug; 111(6):838-46. Hendryx M, Wolfe L, Luo

issuing of guidance restricting large scale surface mining operations in Kentucky and West Virginia.

9. BLM's Economic Analysis Ignored the Economic Consequences of Human Health Impacts That Will Result from the Project's Air Emissions.

The DSEIS identifies positive economic contributions of the mine, such as royalties, wages and taxes, but fails to acknowledge any economic liabilities to the project. We will leave the cost of the adverse impact on tourism and increased road maintenance to others, but there is no mention whatsoever in the DSEIS of the economic consequences of the health impacts from the air pollution.

As alluded to before, even if this project complied with all NAAQS standards it would still create chronic disease and mortality impacts. The economic cost of increased mortality from coal mining in Appalachia, using the EPA's accepted Value of a Statistical Life (VSL), demonstrates a negative economic impact of coal mining in Appalachia several times greater than the economic benefit.<sup>17</sup> There is no reason to think that the calculations would be significantly different for the Alton Coal mine. For the BLM to make a detailed estimate of the economic positives without even acknowledging what is likely to be even greater economic liabilities demonstrates another inadequacy of this draft.

### E. Air Quality

As fully explained in the attached comments prepared by air quality expert Megan Williams, BLM's evaluation of impacts to air quality is inadequate and does not comply with NEPA, FLPMA, the Clean Air Act or these statutes' implementing regulations. As noted above, in preparing the SDEIS BLM chose not to respond to issues raised during the 2011-2012 public comment process. It is apparent, however, that BLM has largely failed to address the following

---

J, et al. *Self-Reported Cancer Rates in Two Rural Areas of West Virginia with and Without Mountaintop Coal Mining*. J Community Health 2011 Jul 24. Zullig KJ, Hendryx M. *Health-related quality of life among central Appalachian residents in mountaintop mining counties*. Am J Public Health 2011 May; 101(5):848-53. Hendryx M, Fedorko E. *The relationship between toxics release inventory discharges and mortality rates in rural and urban areas of the United States*. J Rural Health 2011 Sep; 7(4):358-66.

Esch L, Hendryx M. *Chronic cardiovascular disease mortality in mountaintop mining areas of central Appalachian states*. J Rural Health 2011 Sep; 27(4):350-7. Hendryx M, Fedorko E, Anesetti-Rothermel A. *A geographical information system-based analysis of cancer mortality and population exposure to coal mining activities in West Virginia, United States of America*. Geospat Health 2010 May; 4(2):243-56. Hendryx M, Zullig KJ. *Higher coronary heart disease and heart attack morbidity in Appalachian coal mining regions*. Prev Med 2009 Nov; 49(5):355-9. Hendryx M. *Mortality from heart, respiratory, and kidney disease in coal mining areas of Appalachia*. Int Arch Occup Environ Health 2009 Jan; 82(2):243-9. Hendryx M, Ahern MM. *Relations between health indicators and residential proximity to coal mining in West Virginia*. Am J Public Health 2008 Apr; 98(4):669-71.

<sup>17</sup> Hendryx M, Ahern MM. *Mortality in Appalachian coal mining regions: the value of statistical life lost*. Public Health Rep 2009 Jul-Aug; 124(4):541-50.

points outlined in the expert report of Ms. Williams, which was included as part of our 2012 comments on the DEIS and is attached hereto as Exhibit 10.

- BLM’s failure to adequately describe background conditions;
- Both action alternatives would result in further exceedances of National Ambient Air Quality Standards;
- BLM’s failure to model for 1-hour NO<sub>2</sub>;
- Inadequate treatment of visibility issues;
- Lack of enforceable mitigation measures;
- Under-predicting impacts from the coal haul road; and
- Failure to fully analyze cumulative impacts.

Without such an analysis, BLM cannot know what the impacts of the mining activities proposed in the SDEIS will be on air quality, human health and the natural environment.

#### **F. Colorado Pikeminnow**

##### **1. BLM Failed to Analyze and Disclose Impacts of Connected Actions and Indirect Impacts Related to Coal Combustion.**

As noted, NEPA requires that federal agencies, prior to taking major action, to prepare an Environmental Impact Statement that takes a “hard look” at the environmental effects – direct, indirect, and cumulative – of the agency’s proposed action. 42 U.S.C. § 4332(2)(C); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989); *New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 713 (10th Cir. 2009). “Effects” include “Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” 40 C.F.R. § 1508.8.<sup>18</sup>

##### **2. Coal Combustion Is a Plainly Foreseeable, Indirect Effect of Coal Mining.**

Agencies must analyze coal combustion impacts from mine expansion decisions when “(1) ‘but for’ the proposed expansion, the coal-combustion impacts would not occur and (2) the coal-combustion impacts are reasonably foreseeable.” *Diné Citizens Against Ruining Our Environment v. U.S. Office of Surface Mining Reclamation and Enforcement*, No. 12-cv-01275, slip op. at 13 (D. Colo. March 2, 2015) (citing 40 U.S.C. § 1508.8, *Utahns for Better Transp. v. U.S. Dep’t of Transp.*, 305 F.3d 1152, 1176 (10<sup>th</sup> Cir. 2002)).

---

<sup>18</sup> “Effects” and “impacts” are used synonymously in the Council on Environmental Quality’s regulations implementing NEPA. 40 C.F.R. § 1508.8.

Coal combustion is the natural consequence of the proposed coal leasing. The SDEIS acknowledges that coal the Alton Coal Tract contains approximately 3,581 surface acres and 44.9 million tons of recoverable coal reserves, and that the purpose and need for the proposed action is to respond to a lease by application (LBA) from Alton Coal Development to lease and develop those federal coal reserves. SDEIS at 1-1. Alton Coal Development's neighboring Coal Hollow Mine delivers coal mined from the Alton Coal Tract for combustion at the Intermountain Power Project, a coal-fired power plant near Delta, Utah.<sup>19</sup> The foreseeable uses of Alton Tract coal, however, are not disclosed in the SDEIS, apart from a general disclosure that it is intended for transport to a rail loadout facility. *See, e.g.*, SDEIS at 4-313.

The SDEIS acknowledges that coal combustion is a natural consequence of coal mining when it analyzes, inadequately, the potential impacts of greenhouse gas emissions from coal combustion that would result from the proposed mining. SDEIS at 4-313. However, the SDEIS lacks an analysis of other coal combustion pollution, such the impacts of combustion at Intermountain Power Project, combustion at other domestic coal-fired power plants, or export. Where impacts of power plant operations are readily determinable and combustion pollution is foreseeable, the potential impacts of that combustion on the environment must be analyzed and disclosed through the NEPA process for coal mining proposals.

Here, BLM's effects analysis, found in Chapter 4 of the SDEIS, omits *any* discussion combustion pollution other than greenhouse gasses, and it particularly omits any discussion of mercury or selenium pollution. *See* SDEIS Chapter 4, Section 4.18. BLM cannot avoid analyzing reasonably foreseeable impacts from major federal actions with significant environmental impacts by disavowing, or simply ignoring, the foreseeable and intended result of those actions. The failure to even attempt to disclose mercury, selenium, and other emissions associated with coal combustion is particularly disconcerting because coal combustion is the sole and readily predictable purpose and consequence of coal mining.

Burning Alton coal, whether at the Intermountain Power Project or elsewhere, will have readily foreseeable effects that the BLM largely ignored. Uncertainty regarding the precise destination of mined coal does not entitle the agency to ignore entirely the fact that combustion is the intended result of coal mining, and that consideration of various combustion scenarios (at IPP, through sale on the domestic market, or through export) is a reasonable approach in the face of uncertainty. Combustion impacts include not only emissions of greenhouse gases contributing to global climate change, but also emission of hazardous air pollutants including mercury and selenium that are deposited proximate to the power plant and pose risks to both human health and the survival of endangered and other native fish in the Colorado River, Green River and White River. In fact, the SDEIS entirely omits *any* discussion of impacts to the federally endangered Colorado pikeminnow, razorback sucker, and humpback chub, which occur within

---

<sup>19</sup> *See* Energy Information Administration, Coal Data Browser, data for shipments from Coal Hollow Mine, UT (last accessed September 9, 2015), *available at* <http://www.eia.gov/beta/coal/data/browser/#/shipments/mine/4202519/?freq=A&pin=>.

and have designated critical habitat in each of the aforementioned rivers, and it omits *any* discussion of the known and ongoing threat to those species posed by mercury and selenium deposited from coal combustion. SDEIS at 4.18.1.

Even if the proposed Alton tract does not change the rate of combustion at Intermountain or elsewhere, it will result in the combustion of an additional 49 million tons of coal, *see* DSEIS at 4-94. Absent approval of the lease, this 49 million tons of coal would not be burnt, at Intermountain or elsewhere. Because mercury accumulates in the environment and organisms, the relevant concern is not the rate of combustion but the total pollutant contribution. As Judge Kane recently explained in *Diné Care*:

A recent Ninth Circuit case illustrates the significance of this distinction. In *South Fork Band Council of Western Shoshone of Nevada v. U.S. Department of Interior*, the court rejected BLM's argument that the "status quo rule" obviated the need to consider the indirect effects of a proposed mining expansion project.<sup>15</sup> 588 F.3d 718 (9th Cir. 2009). In that case, BLM argued, as Respondents do here, that because the proposed expansion of mining operations would not result in any change in the rate of ancillary operations, it need not consider the effects of those ancillary operations in its NEPA analysis. *Id.* at 725. The Ninth Circuit flatly rejected this argument, noting that BLM's approval of the proposed mine expansion would result in an additional ten years of ancillary operations, along with the attendant environmental impacts. *Id.* at 726.

This distinction is particularly relevant with regards to the deleterious impacts of combustion-related mercury deposition in the area of the Four Corners Power Plant. Even though, as Respondents argue, the effects related to ambient air quality concentrations of pollutants are most closely related to the rate of emissions, Transcript of Oral Argument (Feb. 18, 2015) at 38-39, the primary impacts of mercury are not associated with its ambient concentration in the air but with its deposition from the atmosphere. *Id.* at 42. Although Respondents attempt to downplay the significance of mercury emissions from the Four Corners Power Plant, *id.* (noting that the Four Corners Power Plant accounts for 1% of mercury deposition in the San Juan River basin), the record reveals that even microscopic changes in the amount of mercury deposition can have significant impacts on threatened and endangered species in the area impacted by the Four Corners Power Plant. *See* AR 1-2-14-1990 (concluding that a .1% increase in mercury deposition in the basin is likely to jeopardize the continued existence of the Colorado pikeminnow). Given the potentially significant impacts of mercury pollution, OSM's failure to discuss or analyze the deleterious impacts of combustion-related mercury deposition in the area of the Four Corners Power Plant is troubling. At a minimum, it renders OSM's analysis of the indirect effects of the proposed mine expansion insufficient.

OSM's approval of the Permit Revision Application, even if it does not alter the rate of combustion at Four Corners Power Plant, will result in the combustion of an additional 12.7 million tons of coal. The "status quo rule" does not excuse OSM's failure to consider the cumulative impact of this additional coal combustion, which would not occur but for OSM's approval of the proposed expansion.

*Diné Care*, No. 12-cv-01275, slip op. at 17-18.

3. BLM Failed to Disclose Regional Emissions Impacts from Mercury and Other Hazardous Pollutants.

In the SDEIS, BLM failed to analyze or disclose impacts from hazardous pollutants, particularly mercury that will be released and deposited when the coal is burned. See SDEIS Chapter 4. Instead, it effectively ignored those impacts.

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.<sup>20</sup> 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.<sup>21</sup> 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.<sup>22</sup> Some of the highest levels of mercury concentration in fish tissue within the entire region of the Upper Colorado River Basins occur in Colorado pikeminnow in the Middle Green River, located in close proximity to the Intermountain Power Project which, according to the Energy Information Administration, currently burns approximately 750,000 tons per year of coal from the adjoining Coal Hollow Mine.

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 Green River is critical to the long-term survival and recovery of the Colorado pikeminnow, constituting the largest target population for the potential downlisting and delisting of the species.<sup>23</sup>

---

<sup>20</sup> Winfield Wright and Koren Nydick, *Sources of Atmospheric Mercury Concentrations and Wet Deposition at Mesa Verde National Park, Southwestern Colorado, 2002-08* (Mountain Studies Institute Report 2010-03) ("MSI Report")

<sup>21</sup> U.S. Fish and Wildlife Service, Biological Opinion for the Four Corners Power Plant and Navajo Mine Energy Project 72-73 (April 8, 2015) ("FCPP/NM BiOp").

<sup>22</sup> See MSI Report.

<sup>23</sup> U.S. Fish and Wildlife Service, Colorado pikeminnow (*Ptychocheilus lucius*) Recovery Goals at 44 (2002).

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 – FWS considered the effects of atmospheric mercury deposition to endangered and threatened species including the Colorado pikeminnow.<sup>24</sup> Using a threshold for adverse effects of 0.2 mg/kg WW, 64 percent of San Juan Colorado pikeminnow experience reproductive impairment due to mercury presently.<sup>25</sup> 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.<sup>26</sup> For this reason, FWS’s draft Desert Rock biological opinion predicted 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.”<sup>27</sup> The just-issued Four Corners/Navajo Mine Biological Opinion sets a substantially higher threshold for mercury concentrations that would lead to population-level impairment in the San Juan (0.7 mg/kg as opposed to 0.2 mg/kg),<sup>28</sup> but clearly reaffirms the substantial scientific certainty that mercury accumulation poses severe behavioral, reproductive, and survival risks to fish including Colorado pikeminnow, razorback sucker, and humpback chub.<sup>29</sup> That same Biological Opinion, however, indicates baseline levels of 0.77 mg of mercury per kg of fish muscle tissue present in Colorado pikeminnow in the Middle Green and .95 mg of mercury per kg of fish muscle tissue in the White River – baseline levels sufficient to endanger population survival even under the elevated threshold of the Four Corners BiOp.<sup>30</sup> Selenium levels in Middle Green fish are similarly dangerously high, averaging 1.0 mg/kg.<sup>31</sup>

**Average and range of baseline mercury (Hg mg/kg WW) and selenium (Se mg/kg WW) in Colorado pikeminnow and razorback sucker muscle tissues in the Upper Colorado River Basin.**<sup>32</sup>

River Basin and Species	Average Hg in Muscle Tissue (min - max)	Average Se in Muscle Tissue (min - max)
San Juan River Colorado pikeminnow > 400 mm TL	0.37 (0.31 - 0.43)	0.8 (0.6 – 0.9)
San Juan River Razorback sucker > 400 mm TL	0.12 (0.04 – 0.24)	0.8 (0.4 – 1.4)
Middle Green River Colorado pikeminnow	0.77 (0.68 - 0.87)	1.0 (0.9 – 1.1)
Upper Colorado River Colorado pikeminnow	0.60 (0.31 – 1.04)	1.9 (0.9 – 2.2)
White River Colorado pikeminnow	0.95 (0.43 – 1.83)	0.9 (0.6 – 1.2)
Yampa River Colorado pikeminnow	0.49 (0.44 – 0.53)	0.6 (0.4 – 0.7)

<sup>24</sup> See U.S. Fish and Wildlife Service, Draft Biological Opinion for the Desert Rock Energy Project 106 (Oct. 15, 2009).

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* at 3.

<sup>27</sup> *Id.* at 120 (emphasis added).

<sup>28</sup> FCPP/NM BiOp at 116.

<sup>29</sup> FCPP/NM BiOp at 81-94.

<sup>30</sup> *Id.* at 76 Table 3.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

Regardless of whether or not Alton's contribution to mercury releases from Intermountain Power Plant and/or other plants will cause jeopardy to the Colorado pikeminnow under the ESA – a question that has not even been addressed - the agencies cannot ignore this significant impact due to minor uncertainty regarding the precise destination and combustion conditions for Alton coal. *See Northwest Env'tl Defense Ctr. v. NMFS*, 647 F. Supp. 2d 1221, 1247 (D. Or. 2009) ("Clearly, there can be a significant impact on a species [under NEPA] even if its existence is not jeopardized.") (quotation omitted).

## **G. Water Resources**

The SDEIS, like the 2011 DEIS, fails to provide full and accurate information with regard to the impacts to water resources that will occur as a result of the proposed mining project. Specifically, the SDEIS presents incomplete and/or inaccurate descriptions of surface and groundwater resources that are found on the site. Given the inadequate baseline description of the extent and nature of the ground and surface water resources on the site, it is perhaps not surprising that BLM fails to adequately disclose the impacts to these resources. Further, BLM fails to adequately assess impacts to wetlands, flood plains, and alluvial fans that are or may be found on the proposed mine expansion area. Finally, BLM fails to provide adequate information on subsidence impacts that are likely in the area proposed for underground mining. Without this information, BLM cannot rely on the SDEIS to support its decision to approve the mining project. In addition to these comments, we are submitting an expert report prepared by hydrologist Elliott Lips that explains in detail the deficiencies in the SDEIS with regard to the analysis of water quality impacts. Attached as Exhibit 11.

### **1. BLM Failed To Adequately Describe Water Resources at the Site.**

Without complete and accurate descriptions of the surface and groundwater resources, BLM cannot evaluate the potential impacts from the proposed action. As discussed in detail below, BLM's understanding of the surface water quantity and quality within the track comes largely from data gathered in conjunction with the permitting of the Coal Hollow Mine. Very little data exists for other parts of the tract. Similarly, the description of the ground water quantity and quality is based almost entirely on data from the Coal Hollow Mine permit area and immediate surroundings.

Almost all of the descriptions of the surface and groundwater resources (both quantity and quality) in the SDEIS (Section 3.16) are from three sources: Peterson Hydrologic (2007, updated in 2008), Peterson Hydrologic (2013), and Frontier Corporation USA, (2012).

Peterson Hydrologic (2007, updated in 2008) was included as an appendix to the UDOGM permit application for the 630-acre proposed Coal Hollow Mine. The significance of this document is that it contains a description of the seep and spring survey and a map showing that the limits of the survey were approximately one half mile outside the Coal Hollow Mine permit boundary. Frontier (2012) identified additional seeps in the tract, but the SDEIS fails to contain

the results of a comprehensive seep and spring inventory over the entire tract. As such, BLM cannot support their conclusions or interpretations regarding the presence of groundwater within the tract, or locations where groundwater discharges to the surface.

Beginning on Page 3-100 and continuing throughout the SDEIS, BLM references Peterson Hydrologic (2013) for descriptions of the surface water quantity and quality. However, Peterson Hydrologic (2013) contains data for only **two** sampling events, September 2012 and March 2013. Two sampling events are insufficient to characterize the surface water resources within the tract.

Examination of Map 3.17 (Watershed and Groundwater Monitoring) reveals that there are only **two** groundwater-monitoring wells in the entire 3,581-acre tract, and that these are in the Coal Hollow Mine Permit area. Rather than obtaining data from groundwater monitoring wells, BLM instead relies on “first-order approximations” of groundwater resources and published sources on the regional hydrogeology. As such, none of the sources references in the SDEIS, and relied upon by the BLM, provide information on ground-water resources or aquifer properties obtained from drill holes; and only a very small portion of the tract has been surveyed for seeps and springs.

Specific examples of BLM’s failure to provide complete and accurate descriptions of the water resources are as follows:

- a. The DEIS (Page 3-108) incorrectly states that Lower Robinson Creek (LRC) is a losing stream. This contradicts earlier statements in the SDEIS where the flow in LRC at monitoring station SW-5 is described as being derived from the seepage of alluvial ground water. In addition, data in the UDOGM Water Quality Database indicate numerous times when LRC is dry at monitoring station SW-101 and has measurable flows downstream at SW-5, thus indicating that it is a gaining stream. Furthermore, the fact that LRC is a gaining stream was observed and documented on May 11, 2010 by Hydrogeologist Elliott W. Lips, P.G.<sup>33</sup> BLM’s failure to understand the nature of flow in LRC illustrates the fundamental and significant lack of understanding of the relationship between surface and groundwater in the tract.
- b. The SDEIS references Doelling and Graham, 1972 for descriptions of the water resources within the tract. This publication contains only three paragraphs on water resources in the entire Alton Coal Field and only reported on two wells that were attempted by Nevada Power Company to develop up to 1,500 gpm from the Navajo Sandstone. As such, this publication provides no information on groundwater resources in alluvial aquifers or bedrock aquifers within the tract that could be impacted from the proposed actions.

---

<sup>33</sup> Direct testimony of Elliott W. Lips before the Board of Oil, Gas and Mining: Utah Chapter of the Sierra Club, Southern Utah Wilderness Alliance, Natural Resources Defense Council, and National Parks Conservation Association v. Division of Oil, Gas and Mining, Request for Agency Action regarding the Alton Coal Mine, June 2010.

- c. The SDEIS (Page 3-124) states that, based on estimates provided by Petersen (Personal Communication 2010), approximately 10,000 acre-feet of groundwater are available in the zone (generally alluvial sediments) from which groundwater resources would be extracted for use in mining operations on the tract. BLM is apparently aware of this shortcoming, and therefore refers to this as a “first-order approximation”. However, the SDEIS provides no other source of information, or data on the actual amount of groundwater in the alluvial groundwater system. Without site-specific investigations and data collection within the tract, there is no basis for the SDEIS’s estimated quantity of groundwater that would be extracted for use in mining operations. In fact, BLM acknowledges this and states, “...the rate at which recharge to the alluvial groundwater system occurs has not been determined.” (Page 4-209).
- d. The SDEIS (Page 3-112) states that the complex geology and structure (faults and folds) of the Alton Coal Field forms a complex hydrogeologic setting vertically and laterally across and adjacent to the tract. This is an accurate statement and underscores the need for site-specific investigations of groundwater resources within the tract including drill holes and seep and spring surveys. The BLM cannot provide a complete and accurate description of the groundwater resources based on extrapolation of regional characterizations and information obtained from the Coal Hollow Mine.
- e. The SDEIS (Page 3-127) states that there are approximately 57 acres of floodplains and terraces within the tract. However, this estimate is based on only a reconnaissance-level survey of the area for alluvial valley floors (AVF) and was not intended to specifically determine the location and extent of floodplains (Peterson Hydrologic, 2011; Appendix F). Notably, the estimate of the floodplains did not include collecting or analyzing detailed geologic, geomorphic, or hydrologic data. Without these data and analysis, the BLM cannot fully and accurately state which areas are flood plains and thus cannot insure compliance with EO 11988.
- f. The SDEIS (Page 3-127 to 3-128) discusses potential AVFs in and around the tract based on a reconnaissance-level survey conducted by Peterson Hydrologic (2011). This survey is insufficient to determine the actual presence of AVF, and does not provide the geologic or hydrologic data that is necessary to determine potential impacts to the AVF from mining operations. Specifically, the reconnaissance-level survey did not include subsurface characterization of alluvial sediments, soil moisture characterizations, alluvial ground water characterizations, baseline hydrologic information on groundwater and surface-water quantity and quality, detailed geomorphologic studies, detailed vegetative studies, or detailed evaluation of the agricultural potential of the land (Peterson Hydrologic, 2011).

The SDEIS (Page 3-127) acknowledges that the detailed, site-specific studies described above, and necessary to determine the presence of AVF, typically involves the collection and analysis of large amounts of data. The only explanation provided in the SDEIS for not conducting the studies is that they are not necessary until the permitting stage when detailed mine plans are known. If the BLM does not have sufficient information on the mining operations to evaluate potential impacts to AVF, then this information should be obtained.

2. BLM Failed to Provide an Accurate and Complete Analysis of the Adverse Impacts to Water Resources.

BLM's failure to accurately and completely analyze adverse impacts to the water resources stems from two fundamental flaws in the SDEIS.

First, BLM passes the responsibility of assessing adverse impacts to other regulatory agencies, particularly the Utah Division of Oil Gas and Mining (DOG M). BLM states that "As part of the permitting process, a full analysis of potential impacts associated with underground and/or surface-mining operations would be performed." SDEIS 4-193. In other words, BLM acknowledges that did not analyze these potential impacts in the SDEIS. Elsewhere in the SDEIS, BLM states "The potential for mine-related activities to impact Kanab Creek surface-water hydrology in this are would be evaluated during the permitting of these lands through the DOGM" (SDEIS at 4-202); "Potential impacts to the hydrologic regime associated with the discharge of mine waters would also be regulated by DOGM" (SDEIS at 4-203); "Impacts to the hydrologic balance that could result from the use of the designated water source(s) would be evaluated and regulated during the permitting process by DOGM." (SDEIS at 4-209); "...Further investigation of the recharge areas, groundwater flow paths, and discharge mechanisms for these springs would be performed as part of the mine permitting process through DOGM." (SDEIS at 4-211).

Second, as discussed above, the SDEIS fails to contain complete and accurate descriptions of the existing surface and groundwater resources, and therefore cannot possibly assess the impacts accurately or completely. Specific examples of this are provided below.

- a. The SDEIS (Page 4-194) states that impacts to surface-water hydrology in this section are assessed by estimating the total annual runoff from the tract that would be collected in ponds. The DEIS goes on to state that water would not be released from these ponds; therefore it is assumed that the ponds would be 100% effective at controlling sediment. Water would be lost only to evaporation or infiltration.

Assessing impacts to surface water hydrology based on only changes in annual total runoff fails to consider impacts that would occur as a result of changes in either

seasonal flow, in-stream flow, or peak flow – each of which are critical components to the surface water hydrology and maintaining proper stream function.

BLM's assumption that there would not be releases of water from ponds is completely at odds with the current practices at the Coal Hollow Mine where outfalls from sediment ponds are discharged directly to Lower Robinson Creek and Sink Valley Wash<sup>34</sup>. In fact BLM (Page 4-200) acknowledges that discharges have occurred from the Coal Hollow Mine and that the water has exceeded UPDES effluent limits for total iron and total suspended sediments, and that TDS concentrations have been as high as 1,820 mg/L (Page 4-205).

- b. The SDEIS (Page 4-199) states that pit disturbance and centralized facilities make up 1.4% of the total drainage area upstream of the USGS gauge on Kanab Creek downstream of the tract. It was assumed that the same percentage of flow at the gauge was generated on those areas of the tract. This is an invalid and unsupported assumption. In fact there is no data in the SDEIS upon which the BLM can attempt to correlate the percentage of disturbed land in the tract and the flow at a gauge located approximately 20 miles downstream and that collects water from a drainage area of 198 square miles. This assumption ignores not only basic principles of watershed hydrology (a higher percentage of surface water flow is generated in the upper reaches of a drainage basin), it also ignores information presented elsewhere in the SDEIS on consumptive use and loss of water in Kanab Creek in, near, and downstream of the tract.
- c. The SDEIS fails to evaluate the potential impacts from loss of surface water to evaporation from the ponds. On Page 4-199, BLM states that "...If there is an active groundwater flowpath from the groundwater beneath the pond to a surface discharge locations..." In other words, BLM has insufficient data and analysis to even know if there is a connection between groundwater and surface water in the tract. As such, BLM cannot possibly evaluate impacts to either the surface water resources or the groundwater resources. As discussed above, there have been no wells drilled in the tract outside of the Coal Hollow Mine permit area in order to investigate the occurrence of ground water. Furthermore, as discussed above, the seep and spring survey was limited to an area approximately one half mile outside of the Coal Hollow Mine permit area.
- d. The SDEIS (Page 4-199) states that under the proposed action, no direct adverse impacts to surface-water quality are likely because runoff from disturbed areas on the tract would be captured in retention ponds, which do not release water into downstream receiving waters. As discussed above, this is an erroneous assumption

---

<sup>34</sup> UPDES Coal Mine General Permit Coverage No, UTG040027 for the Alton Coal Development - Coal Hollow Mine Site near Alton, Utah: September 26, 2011.

and contradicts the practices at the Coal Hollow Mine. As such, BLM completely fails to evaluate direct adverse impacts to surface-water quality.

Similarly, BLM assessment of indirect impacts on surface-water quality is fatally flawed because of their assumption of the amount of surface water they assume will be retained in ponds.

- e. BLM has previously acknowledged that deposition of coal dust and fugitive dust along the coal haul transportation route would lead to a small increase in fine particles (suspended solids) in streams because fugitive dust and coal dust are themselves fine particles (DEIS, Page 4-126). Under the proposed action, there are 13.8 miles of perennial and intermittent stream within 100 feet of the coal haul transportation route. In addition, the route would cross known stream drainages (perennial and intermittent) 118 times. In spite of BLM acknowledging the deposition of the coal dust along the transportation route, and in spite of the fact that there are currently coal haul trucks on this route from the Coal Hollow Mine and thus there is the ability to assess the impacts to the streams, the SDEIS provides no analysis of actual impacts to the streams.
- f. BLM assumes that water use for mining operations would be approximately 25 acre-feet per year, or approximately 625 acre-feet over the projected mine life. In addition, loss of groundwater from mining pits due to evaporation would be up to 116 acre-feet per year, or up to 2,900 acre-feet under the proposed action (Pages 4-203, 4-209).

BLM does not know the source of the approximate 3,525 acre-feet of groundwater that will be lost under the proposed action. The SDEIS (Page 4-209) states "... If the source of this water is the Sink Valley alluvial groundwater system..." [Emphasis added]. BLM just assumes that the source of this water is the Sink Valley alluvial groundwater system that is further assumed to contain 10,000 acre-feet of groundwater. As discussed above, the assumed 10,000 acre-feet estimate is not based on any data obtained from surface or subsurface investigation within the tract, and is only a first order approximation. As such, it is mere speculation. Without data, the BLM can not accurately state with any measure of scientific validity what percent of the available water resources the 3,525 acre-feet loss represents, and thus can not analyze adverse impacts to the ground-water resources. In fact, BLM goes on to state that "... Because the rate of recharge to the alluvial groundwater system is not known, it is not known whether the long-term extraction...would result in significant depletion of the alluvial groundwater storage in Sink Valley." (Page 4-209).

- g. BLM has failed to evaluate potential impacts to groundwater resources in Block NW. The SDEIS (Page 4-211) states "...The precise groundwater flow paths that convey the groundwater from recharge area to the spring locations is not known.

Consequently, it is not known whether mining in surrounding areas in Block NW could intercept these groundwater flow paths.”

3. BLM Failed to Provide an Accurate and Complete Analysis of the Adverse Impacts to Riparian Areas, Flood Plains, and Alluvial Valley Floors.

As to riparian areas, the SDEIS states, “[t]he impacts from disturbance or removal of riparian areas would depend on the quality of the existing habitat and the reclamation that followed the disturbance. Impacts could include loss of native vegetation, loss of wildlife habitat, and destabilization of the associated stream banks, loss of habitat for fish and other aquatic life, lowering the water table, and erosion.” SDEIS at 4-213. However, the SDEIS does not provide: 1) data on the existing riparian vegetation (only a list of species), 2) data or analysis of the potential for destabilization of the associated stream banks, 3) data or analysis of existing wildlife, fish, or other aquatic life, 4) data or analysis of the potential for lowering the water table, or 5) data or analysis of the potential for erosion.

The SDEIS classifies Lower Robinson Creek as “Functional – At Risk” according to the Proper Functioning Condition Assessment. SDEIS at 3-112. According to BLM, a riparian-wetland area is considered to be in proper functioning condition when adequate vegetation, landform, or large woody debris is present to: dissipate stream energy associated with high water flow, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid floodplain development; improve flood-water retention and ground-water recharge; develop root masses that stabilize stream banks against cutting action; develop diverse ponding and channel characteristics *to provide* the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; support greater biodiversity. “Functional – At Risk is defined by BLM (1998) as riparian-wetland areas that are in functional condition, but an existing soil, water, or vegetation attribute makes them susceptible to degradation.

First, the SDEIS does not specify which attribute (soil, water, or vegetation) led to the classification of Lower Robinson Creek as Functional – At Risk. Without this specific and detailed information, the BLM cannot assess the impacts of the proposed mining operation and determine whether there will be degradation to Lower Robinson Creek.

Second, the SDEIS (Page 4-207) states that under the proposed action, approximately 0.49 miles of Robinson Creek would be relocated from the tract and diverted into a new manmade channel. BLM states that “because Robinson Creek is currently ranked as ‘Functional – At Risk,’ if the stream is rerouted through a properly sized and designed channel, the relocation could result in a more stable channel in many areas and therefore less sediment transport during high flows.” (Page 4-207) The BLM thus assumes that the mining operations would actually improve the condition of Lower Robinson Creek. This is unsupported by any data or analysis on why Lower Robinson Creek is ranked as Functional – At Risk, and therefore BLM cannot assume that the condition would improve. Even if the relocated portion of Lower Robinson Creek did have

less sediment transport during high flows (only assumed), the BLM has not considered the impact to any other portions of Lower Robinson Creek in the tract that would be impacted. Finally, assuming that sediment transport was reduced in the relocated portion, BLM has not evaluated the effect of this change in the sediment load on the reaches of Lower Robinson Creek up stream and down stream of the relocated portion.

As to alluvial valley floors, the SDEIS states “[g]roundwater availability is not a significant factor in the essential hydrologic functions of any these probable AVFs (there is no groundwater-derived baseflow component of discharge in Sink Valley Wash that flows to the probable AVF in lower Sink Valley Wash) (Petersen Hydrologic 2008).” SDEIS at 4-127. [sic]

There are several important flaws in BLM’s reasoning. First, as discussed above, the BLM cannot state how many acres of flood plains or AVFs are present in the tract because there has only been a reconnaissance-level survey that did not include subsurface characterization of alluvial sediments, soil moisture characterizations, alluvial ground water characterizations, baseline hydrologic information on ground water and surface-water quantity and quality, detailed geomorphologic studies, detailed vegetative studies, or detailed evaluation of the agricultural potential of the land. Without these detailed studies, BLM cannot evaluate the potential impacts to the AVFs.

Second, BLM’s assumption that ground water is not thought to be a significant factor in the essential hydrologic function of the AVFs is not supported by any data or analysis. In fact, given the documented interception of ground water from the shallow alluvial aquifer as a result of pit excavation at the Coal Hollow Mine, it is likely that even if the AVFs in the tract are located in the no-coal zone there could be adverse impacts that result from the removal of this water. The BLM fails to evaluate this impact.

Third, Peterson (2008) noted areas of appreciable alluvial groundwater discharges in central Sink Valley, under artesian conditions. BLM fails to consider this information in the evaluation of the AVF in Sink valley, particularly the potential impact that mining could have on lowering the water table down gradient of the mining area.

#### 4. BLM Failed to Provide a Complete and Accurate Analysis of the Impacts Caused by Subsidence.

The SDEIS states that 613 acres in the tract would be affected by subsidence through underground mining, and an additional 166 acres outside the tract that would be disturbed through ground movement associated with coal removal. SDEIS at 4-198. The SDEIS acknowledges that subsidence impacts may include potential changes to surface drainages, deterioration of surface-water quality, cause fissures, pits, or cracks which could lead to partial or complete loss of surface water, and changes in groundwater levels, flows, and quality. SDEIS at 200, 208.

However, the SDEIS completely fails to even attempt to analyze the impacts to surface and/or groundwater resources in and adjacent to the tract as a result of anticipated subsidence. For example, the SDEIS contains no analysis of changes to surface drainages, deterioration of surface-water quality, partial or complete loss of surface water, or changes in groundwater levels, flows, or groundwater quality that could occur from subsidence within or near the tract.

In fact, the BLM cannot fully and accurately evaluate the potential impacts related to subsidence because, as discussed in detail above, the SDEIS contains incomplete and incorrect information on the existing water resources. For example, BLM states, “In the absence of appreciable groundwater or surface-water resources in the area, there is no significant potential for the underground mining activities to impact important overlying groundwater or surface-water resources.” SDEIS at 4-208. However, there are several flaws in this statement:

- a. BLM apparently dismisses any potential impacts to surface-water resources with the erroneous statement that “[t]here are no perennial or intermittent surface-water drainages present in areas overlying or adjacent to the underground mine areas.” SDEIS at 4-200. This is a gross misrepresentation by BLM. Examination of Map 1.2 shows the areas of underground mining in Block C. The base map for Map 1.2 is the U.S. Geological Survey topographic map, at a scale of 1:24,000. On the base map the U.S. Geological Survey has mapped several drainages in Sections 17, 18, 19, and 20 that are shown by the topographic contours. Furthermore, the U.S. Geological Survey has identified and mapped four intermittent streams (blue lines with three dots) in the bottoms of the drainage basins. It is clear that BLM has failed to consider the potential impacts to surface-water resources, because it incorrectly claims that there are no intermittent streams that can be impacted.
- b. Similarly, BLM dismisses any potential impacts to groundwater resources from subsidence because “[n]o springs or seeps with measurable discharge have been identified in the underground mining area in Block C (Frontier Corporation USA, 2012).” SDEIS at 4-208. The study conducted by Frontier Corporation USA was a “Wetland and Stream Delineation Technical Report,” prepared by a wetland ecologist and two wetland scientists. As discussed above, the SDEIS does not contain the results of a comprehensive seep and spring inventory for the track that was conducted by a qualified hydrologist or geologist. As such, BLM cannot assume that there are no seeps or springs in the underground mining area.
- c. BLM has no basis for dismissing potential subsidence-related impacts to groundwater resources in the track because the SDEIS presents virtually no data or analysis of groundwater in the underground mine areas. As shown on Map 3.17, and as discussed above, the SDEIS contains no information from groundwater wells in the underground mine area except two wells on the Coal Hollow Mine Lease area adjacent to Robinson Creek. Apparently there have been no subsurface investigations for groundwater in Sections 17, 18, 19, or the northern half of 20.

## H. Cultural Resources

Our organizations fully support the recommendation of the Hopi Tribe, which has consistently called on BLM to reject the proposed mine expansion in favor of the “no action” alternative. Under the action alternatives considered in the SDEIS, 29 (Alternative K-1), 69 (Alternative B) or 75 (Alternative C) cultural archeological sites that are eligible for listing in the National Register would be completely or partially destroyed.

As it did in 2012, the Hopi Tribe recently recommended BLM select the “no action” alternative because of what the Tribe considers to be unacceptable impacts to tribal cultural resources. As fully explained in the Hopi Tribe letter to BLM dated July 6, 2015, the Hopi Tribe reviewed the new information in the SDEIS and concluded that the proposed mining’s impacts on cultural resources are unacceptable and that the proposed mitigation is inadequate. The Hopi Tribe letter then concludes, “we support the No Action alternative in this [SDEIS]. This proposal is based on obsolete energy sources and archaic land management laws and policies based on private and corporate profit through the exploitation of public lands.” Leigh J. Kuwanwisiwma, Director Hopi Cultural Preservation Office Letter to BLM (July 6, 2015) (emphasis added), attached as Exhibit 12.

### III. BLM FAILED TO CONSIDER A REASONABLE RANGE OF ALTERNATIVES.

As noted, NEPA requires that federal agencies “provide full and fair discussion of significant environmental impacts of the proposed actions and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. 1502.1.

The Ninth Circuit has previously stated that “the alternatives analysis is naturally the ‘heart of the environmental impact statement.’” *Oregon Natural Desert Ass’n v. Bureau of Land Mgmt.*, 625 F.3d 1092, 1100 (9th Cir. 2010) (quoting 40 C.F.R. Part 1502.14). BLM must therefore “rigorously explore and objectively evaluate all reasonable alternatives” and the “existence of a viable but unexamined alternative renders an [EIS] inadequate.” *Id.* While an EIS does not need to examine every conceivable alternative, “the existence of a viable but unexamined alternative renders an [EIS] inadequate.” *Id.*

While NEPA “does not require agencies to analyze the environmental consequences of alternatives it has in good faith rejected as too remote, speculative, or impractical or ineffective,” it does require the development of “information sufficient to permit a reasoned choice of alternatives as far as environmental aspects are concerned.” *Colo. Env’tl Coal.*, 85 F.3d at 1174 (quotations and alteration omitted). See also *New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 708 (10<sup>th</sup> Cir. 2009).

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 v. U.S. Fish and Wildlife Serv.*, 611 F.3d 692, 712 (10th Cir. 2010) (quoting *Metcalf v.*

*Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000)); *see also* 40 C.F.R. Part 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.”).

The SDEIS describes four alternatives: the applicant’s preferred alternative, two similar mining proposals with slightly reduced acreage and seasonal limitations, and a “no action” alternative. Each of the proposed action alternatives evaluates primarily surface mining activity, with limited underground mining in certain areas of the mine. In doing so, the SDEIS falls far short of meeting NEPA’s mandate to rigorously explore all reasonable alternatives. In addition to the sage grouse alternative described earlier (*see supra* section II.A.5.) and the reasonable, unexplored alternatives put forward in our January 2012 comments, here BLM failed to consider any alternatives that would protect air quality, adequately safeguard the Alton sage grouse population, impose fewer impacts on nearby towns by considering a different transportation route, and failed to consider an alternative with fewer impacts to night sky.

Although the SDEIS notes authorizing mining exclusively by underground methods has been proposed, BLM rejects such an alternative without detailed consideration. SDEIS 2-38. In doing so, BLM missed an opportunity to look closely at an alternative that could prevent impacts to sage grouse and night sky – impacts that are both significant and avoidable.

#### **IV. CONCLUSION**

For all of the reasons explained above, we again call on BLM to reject the proposed expansion of the Alton coal mine. We urge BLM to select the “no action” alternative, as it is the only option that adequately protects an important population of Greater sage-grouse, maintains the exceptional air quality and dark night skies enjoyed in Bryce Canyon National Park, and is consistent with the President’s climate objectives.

Thank you for the opportunity to comment on the SDEIS.

Sincerely,

[signature blocks on following pages]

Nathaniel Shoaff  
Staff Attorney  
Sierra Club Environmental Law Program  
85 Second Street, Second Floor  
San Francisco, CA 94105  
(415) 977-5610  
nathaniel.shoaff@sierraclub.org

Stephen Bloch  
Attorney  
Southern Utah Wilderness Alliance  
425 East 100 South  
Salt Lake City, Utah 84111  
(801) 428 3981  
steve@suwa.org

Tim Wagner, Executive Director  
Brian Moench, President  
Utah Physicians for a Healthy Environment  
423 W. 800 S., Ste, A108  
Salt Lake City, UT 84101  
(801) 502-5450  
twagneruphe@gmail.com

Allison Jones  
Executive Director  
Wild Utah Project  
824 South 400 West, Suite B-117  
Salt Lake City, UT 84101  
(801) 328-3550  
allison@wildutahproject.org

Michael Saul  
Senior Attorney  
Center for Biological Diversity  
1536 Wynkoop Street, Suite 421  
Denver, CO 80202  
(303) 915-8308  
msaul@biologicaldiversity.org

Jeremy Nichols  
Climate and Energy Program Director  
WildEarth Guardians  
1536 Wynkoop, Suite 301  
Denver, CO 80202  
(303) 437-7663  
jnichols@wildearthguardians.org

Sharon Buccino  
Director, Land & Wildlife Program  
Natural Resources Defense Council  
11152 15<sup>th</sup> St. NW  
Washington, DC 20005  
(202) 289-6868  
sbuccino@nrdc.org

Anne Mariah Tapp  
Energy Program Director  
Grand Canyon Trust  
2601 North Fort Valley Rd.  
Flagstaff, AZ 86001  
(512) 565-9906  
annemariahtapp@gmail.com

Kathy Van Dame  
Policy Coordinator  
Wasatch Clean Air Coalition  
1148 East 6600 South  
Salt Lake City, Utah 84121  
(801) 261-5989  
dvd.kvd@juno.com

Marissa Knodel  
Climate Campaigner  
Friends of the Earth  
1100 15th Street NW, 11th Floor  
Washington, DC 20005  
(202) 222-0629  
Mknodel@foe.org

Matt Pacenza  
Executive Director  
HEAL Utah  
824 South 400 West  
Suite B111  
Salt Lake City, Utah 84101  
(801) 355-5055  
matt@healutah.org

Ingrid Griffiee  
Civic Engagement Liaison  
Utah Moms For Clean Air  
(503) 707 4375  
ikgriffiee@gmail.com

Ashley Miller  
Program Manager  
Breathe Utah  
P.O. Box 522435  
Salt Lake City, Utah 84152  
(435) 414-0495  
ashley@breatheutah.org