September 8, 2009

VIA FACSIMILE AND CERTIFIED MAIL/
RETURN RECEIPT REQUESTED

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RE:  
(1) 60-DAY NOTICE OF INTENT TO SUE FOR VIOLATIONS OF THE ENDANGERED SPECIES ACT IN CONNECTION WITH ARIZONA 1 URANIUM MINE OPERATIONS

(2) VIOLATIONS OF THE NATIONAL ENVIRONMENTAL POLICY ACT FOR FAILURE TO SUPPLEMENT ENVIRONMENTAL ANALYSIS OF THE ENVIRONMENTAL IMPACTS OF ARIZONA 1 URANIUM MINE OPERATIONS

(3) VIOLATIONS OF THE MINING LAW FOR FAILURE TO ESTABLISH VALID EXISTING RIGHTS IN SEGREGATED AREA AND REQUIRE A NEW PLAN OF OPERATIONS PRIOR TO ARIZONA 1 URANIUM MINE OPERATIONS

Dear Secretary Salazar, Directors Abbey, Hamilton, Kenna, Tuggle and Mr. Florence:

On behalf of the Center for Biological Diversity, Grand Canyon Trust and the Sierra Club, we formally notify you that these organizations intend to commence litigation against the U.S. Department of the Interior ("Interior Department") and the Bureau of Land Management ("BLM") for violations of the Endangered Species Act, 16 U.S.C. § 1531 et seq. ("ESA"), in connection with uranium mining operations at the Arizona 1 Mine ("Arizona 1" or "Mine").
This Mine is within the area recently segregated from mineral entry, and proposed for mineral withdrawal, by the Interior Department.¹

As set forth below, this letter is to notify you of these organizations' intent to sue under the ESA for failure to consider the effects of Arizona 1 mining operations to threatened and endangered species, as well as the effects of mining operations to critical habitat that has been designated pursuant to the ESA, since approval of mining operations was granted by BLM in the 1980s.² Although not required by law, this letter also details new information and circumstances warranting supplemental analysis pursuant to the National Environmental Policy Act, 42 U.S.C. § 4321, et seq. (NEPA”), and preparation of an Environmental Impact Statement (“EIS”). This letter is also to inform you that in light of the Interior Department’s Segregation Order, BLM cannot allow any operations to proceed without verifying that valid existing rights have been established for each mining claim associated with the Arizona 1 mine, among other requirements.

I. ORGANIZATIONS

A. Center for Biological Diversity

The Center for Biological Diversity is a non-profit corporation with over 225,000 members and online activists dedicated to the preservation, protection, and restoration of biodiversity and ecosystems throughout the world. The Center’s main office is located in Tucson, Arizona. The Center also has an office in Flagstaff, Arizona. The Center works to insure the long-term health and viability of animal and plant species across the United States and elsewhere, and to protect the habitat these species need to survive.

B. Grand Canyon Trust

Grand Canyon Trust is a non-profit corporation headquartered in Flagstaff, Arizona with over 3,500 members. The mission of the Grand Canyon Trust is to protect and restore the canyon country of the Colorado Plateau — its spectacular landscapes, flowing rivers, clean air, diversity of plants and animals, and areas of beauty and solitude. One of the Trust’s goals is to ensure that the Colorado Plateau is a region characterized by vast open spaces with restored, healthy ecosystems and habitat for all native fish, animals, and plants.

C. Sierra Club

The Sierra Club is a non-profit, public interest environmental organization with over 700,000 members, whose mission is to explore, enjoy and protect the planet. The Sierra Club has been active on uranium mining issues on the Arizona Strip since the 1980s and maintains a program to protect Grand Canyon with staff and offices located in Flagstaff, Arizona.

²Thus, this letter is provided pursuant to the 60-day notice requirement of the citizen suit provision of the ESA, to the extent such notice is deemed necessary by a court. See 16 U.S.C. § 1540(g).
II. BACKGROUND

The Arizona 1 Mine is located in Sections 22 and 23, T36N, R5W, Mojave County, Arizona, about 45 mi. southwest of Fredonia by unsurfaced road. A headframe, hoist, and compressor are in place. Arizona 1 consists of 10 unpatented mining claims encompassing approximately 207 acres.

The original plan of operations for uranium exploration activities at the Mine was submitted to BLM by then-claimant Energy Fuels Nuclear on September 11, 1984. BLM approved the plan on October 4, 1984 and issued a Decision Record (DR 84-165) and Environmental Assessment (EA 81-208). After drilling 21 exploratory holes, Energy Fuels Nuclear submitted a modified and expanded Plan of Operations to include uranium ore extraction. Corresponding to those modifications, in 1988 BLM published a final Environmental Assessment and Decision Record approving construction and ore extraction at the Arizona 1 Mine.

Work at the Arizona 1 Mine began in 1990 but ended in 1992, with the shaft at a depth of 1,254 feet. Energy Fuels was acquired by the Concord group in the early 1990s. Concord declared bankruptcy in 1995, and most of the Energy Fuels assets were acquired by International Uranium Corporation ("IUC") in 1997, and after a December 1, 2006 merger with Denison Mines Inc., IUC changed its name to Denison Mines Corp.

Following a long period of inactivity, in September 2009, the Arizona Department of Environmental Quality ("ADEQ") issued a Class II air quality permit to Denison Mines Corp for operations at the Arizona 1 Mine. The permit allows for underground mining of uranium ore at a production rate of 109,500 tons per year. The ore will be shipped to an off-site processing mill. If the ore cannot be shipped immediately to the mill, it will be placed in nearby stock piles within the Ore Stockpile Area ("OSA"). The OSA will encompass approximately one acre and can accommodate up to 9,680 tons of ore.

As noted above, on July 21, 2009, the Interior Department issued the Segregation Order (also "Order"), which stated that it was necessary in order to "protect the Grand Canyon watershed from adverse effects of locatable hardrock mineral exploration and mining" and to allow for additional time for "various studies and analysis." In a press release issued the day before the Order was issued, Interior Secretary Salazar stated that he was calling for a "two-year 'Time-Out'" from all new mining claims in the Arizona Strip near the Grand Canyon because "we have a responsibility to ensure we are developing our nation's resources in a way that protects local communities, treasured landscapes, and our watersheds." Despite the Order, during July and August 2009, Arizona Strip BLM District Manager Scott Florence indicated that Denison could commence ore extraction upon final issuance of the Class II air quality permit from ADEQ, without any further environmental review.

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3 Class II Permit No. 46700.
4 Id.
Yet, as explained in detail below, in the absence of new environmental reviews and validation of existing mining rights and preparation of a new plan of operations, any uranium ore mining at the Arizona 1 Mine and within the Arizona Strip will violate the ESA, NEPA, and the Mining Law of 1872, 30 U.S.C. § 22 et seq. Accordingly, BLM cannot allow any operations to commence or continue as proposed by Denison at this time.

III. VIOLATIONS OF THE ENDANGERED SPECIES ACT IN CONNECTION WITH RENEWED OPERATIONS AT THE ARIZONA 1 MINE

A. The Endangered Species Act

The Endangered Species Act was enacted in part to provide a “means whereby the ecosystems upon which endangered species and threatened species depend may be conserved ... [and] to provide a program for the conservation of such endangered species and threatened species ....”6 As interpreted by the Supreme Court, “[t]he plain intent of Congress in enacting [the ESA] was to halt and reverse the trend toward species extinction, whatever the cost.”7 Reflecting “a conscious decision by Congress to give endangered species priority over the ‘primary missions’ of federal agencies,” the ESA serves as an important check on agencies’ actions.8

Section 2(c) of the ESA establishes that it is “the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.”9 The ESA defines “conservation” to mean “the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary.”10 Similarly, section 7(a)(1) of the ESA directs that the Secretary review “other programs administered by him and utilize such programs in furtherance of the purposes of the Act.”11

The ESA vests primary responsibility for administering and enforcing the statute with the Secretaries of Commerce and Interior. The Secretaries of Commerce and Interior have delegated this responsibility to the Fisheries Division of the National Oceanic and Atmospheric Administration (“NOAA Fisheries”) and the U.S. Fish and Wildlife Service (“FWS”) (collectively “Services”).12

To ensure federal agencies fulfill the substantive purposes of the ESA section 7, the statute requires that they engage in consultation with the Services to “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species ... determined ... to be critical....”13 Additionally, section 7 requires that agencies

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8 Id. at 185.
12 50 C.F.R. §402.01(b). NOAA Fisheries is also known as National Marine Fisheries Service (“NMFS”).
"conference" with the Services on any action that is "likely to jeopardize the continued existence of any 'proposed' species or result in the destruction or adverse modification of proposed critical habitat."  

Section 7 consultation is required for "any action [that] may affect listed species or critical habitat."  

Under the ESA's implementing regulations, an agency "action" means "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas. Examples include, but are not limited to ... (d) actions directly or indirectly causing modifications to the land, water, or air."  

Through section 7 consultation, FWS determines whether a federal agency's action is likely to jeopardize terrestrial species or their critical habitats. This determination is made after FWS completes a biological assessment, biological opinion, or in some cases, both.  

If the biological opinion concludes that the agency's action is likely to jeopardize a species, then it may specify reasonable and prudent alternatives that will avoid jeopardy and allow the agency to proceed with the action. Additionally, FWS may "suggest modifications" to the action during the course of consultation to "avoid the likelihood of adverse effects" to the listed species even when not necessary to avoid jeopardy.  

Courts have repeatedly recognized the importance these procedural requirements play in ensuring that agencies carry out the substantive provisions and intent of the ESA. For example, in Thomas v. Peterson, the Ninth Circuit declared:  

[T]he strict substantive provisions of the ESA justify more stringent enforcement of its procedural requirements, because the procedural requirements are designed to ensure compliance with the substantive provisions.... If an [action] is allowed to proceed without substantial compliance with those procedural requirements, there can be no assurance that a violation of the ESA's substantive provisions will not result. The latter is, of course, impermissible.  

The requirements of section 7(a)(2) do not end with the receipt of the biological opinion. When an action is ongoing, the agency must in some circumstances reinitiate consultation. The ESA's implementing regulations provide as follows:  

[Re]initiation of formal consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If the amount or extent of taking specified in the incidental take statement is exceeded; (b) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not  

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14 50 C.F.R. § 402.10(a).  
16 50 C.F.R. § 402.02.  
19 50 C.F.R. § 402.13.  
20 Thomas v. Peterson, 753 F.2d 754, 764 (9th Cir. 1985) (emphasis in original).
considered in the biological opinion; or (d) If a new species is listed or critical habitat designated that may be affected by the identified action.\textsuperscript{21}

The duty to reconscult lies with both the action agency (here, BLM) and FWS.\textsuperscript{22}

B. To the extent BLM has never considered the effects of operations at the Arizona 1 Mine to threatened and endangered species and their critical habitat, BLM is in violation of the ESA for failure to ensure no jeopardy or adverse modification through section 7 consultation and the duty to consult.

It is not clear that BLM has ever satisfied its procedural duty under section 7(a)(2) of the ESA to consult regarding impacts to species or designated critical habitat, or its substantive obligation to ensure no jeopardy to these threatened and endangered species or adverse modification of their critical habitat from operations at the Arizona 1 Mine. Operations at the Mine have the potential to affect species that were listed at the time of the agency’s 1988 approval of operations, including but not limited to endangered Colorado River fish species like the Colorado pikeminnow, humpback chub, and bonytail. Thus, to the extent that the agencies have never considered, at all, the potential effects of Arizona 1 mining operations to listed species and/or critical habitat that may be affected, this letter serves to formally notify you of the organizations’ intent to enforce these violations of the ESA.\textsuperscript{23}

C. Assuming BLM engaged in ESA section 7 consultation over the effects of operations at the Arizona 1 Mine in the 1980s, reinitiation of section 7 ESA consultation is required for species that have been listed as threatened and endangered and critical habitat that has been designated since then, to ensure such operations do not jeopardize newly-listed species and recently-designated critical habitat.

In addition to potentially affecting threatened and endangered species that were listed at the time of BLM approval of operations at the Arizona 1 Mine in 1988, since that time, several species have been added to the lists of threatened or endangered species and critical habitat has been designated for threatened and endangered species that may be affected by mining operations at the Arizona 1 Mine as well. Thus, BLM and FWS must consult over the effects to such species by reinitiating ESA section 7 consultation from these and other uranium mining and exploration activities.

For example, the razorback sucker was once so plentiful that it was commonly used as food by early settlers, but has declined so steeply that it was listed as “endangered” in 1991.\textsuperscript{24} The remaining population of the razorback sucker occurs in Lake Mead downstream of Grand Canyon and “may extend upstream into lower Grand Canyon.”\textsuperscript{25} In addition, critical habitat for

\textsuperscript{21} 50 C.F.R. § 402.16.
\textsuperscript{22} Id.
\textsuperscript{23} See, e.g., Pacific Rivers Council v. Thomas, 30 F.3d 1050 (9th Cir. 1994) (holding that continuing agency action requires consultation under section 7(a)(2) of the ESA).
\textsuperscript{25} Id.
razorback sucker, Colorado pikeminnow, humpback chub, and bonytail chub was designated in 1994. The Southwestern willow flycatcher was listed as endangered under the ESA in 1995. Critical habitat was designated for the flycatcher in 1997 and again in 2005.

Uranium mining at the Arizona 1 Mine may affect the razorback sucker, critical habitat for the four Colorado River endangered fish species, and the Southwestern willow flycatcher in two primary ways. This is especially true when Arizona 1 is evaluated in accordance with ESA section 7 regulations and considered in combination with other past uranium mining and exploration activities and with future reasonably foreseeable uranium mining and exploration activities.

First, the species may be affected as a result of flood-induced water contamination. The EA for the Arizona 1 Mine notes that it is located in a flood-prone drainage, and that the “entire storm run-off from the watersheds above the mine yard runs north-northeast through the natural drainage directly through the proposed mine site and west of the county access road.” Although berms and ditches are intended to reduce the potential for flooding impacts, the EA explains how an accidental release of mine refuse, were it to occur, would flow into Hack Canyon and Kanab Creek, which in turn flows into the Colorado River. The EA states that such an event—which has occurred in the past—could result in effluent from the Arizona 1 Mine flowing into the Hack Canyon drainage, which is a major tributary to Kanab Creek.

Should such an event recur, the runoff from mining operations could contaminate razorback suckers and flycatchers, and the toxins it would carry—including uranium, selenium, ammonia, arsenic, molybdenum, aluminum, barium, copper, iron, lead, manganese, vanadium and zinc—could affect critical habitat for the sucker as well as for the three other endangered Colorado River fish species as well. Contamination could occur through discharge directly into surface water, into groundwater that is subsequently transported into seeps, springs and caves feeding Kanab Creek and Colorado River, or as dust transported by prevailing westerly or southwesterly winds into Hack Canyon and Kanab Creek and then by surface water into the Colorado River.

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26 59 Fed. Reg. at 13374. Critical habitat for the razorback sucker includes 275,840 acres and 1,724 river miles along the Colorado River including portions of the Colorado River at and downstream of the confluence of Kanab Creek. Id. Critical habitat for the Colorado pikeminnow includes 183,680 acres and 1,148 river miles of the Colorado River. Id. Critical habitat for the humpback chub includes 60,640 acres and 379 river miles of the Colorado River. Id. Critical habitat for the bonytail chub includes 49,920 acres and 312 river miles of the Colorado River. Id.
28 70 Fed. Reg. 60885 (Oct. 19, 2005). Critical habitat for the species currently includes 737 river miles and 120,824 acres of riparian area in the southwestern United States, including the Colorado River through Grand Canyon. Id.
29 EA at 70.
30 Id. at 71.
32 There is precedent for surface transport of uranium pollutants from mines in Hack Canyon into Kanab Creek and Grand Canyon National Park. A 1984 flash flood transported multiple tons of high grade uranium ore from mines in Hack Canyon into Kanab Creek and the Colorado River.
Selenium is an element of particular concern, as elevated selenium can be taken up directly from water by aquatic organisms, resulting in acute toxicity at relatively high concentrations, thereby bioaccumulating in the aquatic (and riparian) food chain. This can result in myriad adverse effects on fish populations, including impaired reproduction, deformities, reduced survival, and other problems. Selenium contamination in the upper Colorado River Basin has been implicated in the decline of endangered Colorado River fish in particular, and may be impeding their recovery by adversely affecting their reproduction and recruitment.

The prospect of such contamination occurring is not at all speculative. Indeed, in 1984 a flash flood swept four tons of high grade uranium ore from mines in Hack Canyon downstream into Kanab Creek and the Colorado River. In considering the effects of uranium mining activities in Colorado, BLM has raised concerns about the threat of toxic contamination to the four endangered Colorado River fish species. BLM must apply the same approach to the effects of operations at the Arizona 1 Mine as well.

The second primary way in which operations at the Arizona 1 Mine may affect newly-listed species and newly-designated critical habitat is through low level radiation exposure from the cumulative impact of small amounts of uranium deposition over time (i.e., through dust deposition into streams and streambeds). Such depositions have been demonstrated to cause mutations in the germ cells of fish, producing not only breaks and rearrangements in the chromosomes of the cell nucleus but mutations of the genes within the chromosomes as well.

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34 Id.
35 Hamilton SJ. 1999. Hypothesis of historical effects from selenium on endangered fish in the Colorado River Basin. Human and Ecological Risk Assessment 5: 1153-1180. Such effects may not be limited to the four endangered Colorado River fish species. Runoff or discharge of water with very low concentrations of selenium can result in adverse impacts on many species of fish and fish-eating waterfowl and mammals. One study in waters downstream from uranium mining and milling operations in Canada found that in areas where water concentrations of selenium are very low, selenium has been incorporated into the food chain via primary producers, gradually built up in sediments and benthic biota, and reached levels that have the potential to cause reproductive impairment in fish. In addition, a short pulse event can quickly load an aquatic environment with selenium, and that selenium could then be conserved in the ecosystem for long periods of time. Maccawellott JR, Belknap AM, Janz DM. 2008. Accumulation of selenium in aquatic systems downstream of a uranium mining operation in northern Saskatchewan, Canada. Environmental Pollution xx: 1-7.
39 Thus, in considering the effects of the Uranium Leasing Program administered in the Uravan Mineral Belt by the Department of Energy, BLM has been clear that "water depletion and/or toxic discharges [resulting from uranium mining] may affect 4 species of Colorado River fish downstream ...." See Attachment A (Meeting/Telephorm Conference Record (Sep. 6, 2005)).
40 The majority of mutations are recessive. The vast majority of recessive mutations are deleterious or lethal in the "doubled" a single penetrating particle or quantum of energy passing through or near a gene produces ionization of
These potential effects must also be considered in the context of the extremely degraded baseline conditions in the Arizona 1 Mine area and downstream, as well as the incremental contribution that operations at the Arizona 1 Mine will have to such conditions. Past uranium mining on the Arizona Strip along the south rim and elsewhere in the Colorado River basin, in combination with oil and gas development and irrigation in areas with soils high in selenium, has already caused water quality problems in the Colorado River. Radionuclide concentrations in Salt, Horn and Kanab Creeks, in addition to the Little Colorado River, exceed levels deemed fit by the National Park Service for human bathing and consumption. These concentrations may be having deleterious impacts on fish.

Thus, to the extent that BLM previously engaged in ESA section 7 consultation to consider the effects of operations at the Arizona 1 Mine to threatened and endangered species and critical habitat, by allowing operations to re-commence at the Arizona 1 Mine now, without reinitiating ESA section 7 consultation, BLM will violate its procedural and substantive obligations under section 7(a)(2) of the ESA. BLM is required to ensure no jeopardy to newly-listed species – including but not limited to the razorback sucker and flycatcher – and to ensure no adverse modification of newly-designated critical habitat. In failing to consider the effects of Arizona 1 Mine operations and other uranium mining and exploration projects in the area to these newly-listed species and newly-designated critical habitat, BLM failed to meet its affirmative duties under the ESA.

**D. BLM will also unlawfully “take” listed species unless it satisfies its affirmative duties under section 7(a)(2) of the ESA.**

the atoms forming the gene. This ionization disrupts the chemical bonds among atoms in the gene molecule, thus changing its chemical structure and its subsequent effect on the development of cells and tissues. Similarly, the passage of ionizing particles or quanta through a chromosome breaks the chromosome thread, the fragments of which may rejoin, may join in new arrangements, or may fail to join and thus be lost in later cell divisions with consequent effects on the descendants of the cell. If produced in a reproductive cell, these changes may be inherited by subsequent generations of fish, potentially retarding the survival and recovery of the species.

41 See: http://www.nps.gov/grec/naturescience/waterquality.htm

42 BLM’s ESA section 7 violations are not necessarily limited to its failure to consider effects to the razorback sucker, flycatcher, and critical habitat for the four endangered Colorado River fish species. In addition to these species, mining operations may affect the Kanab ambersnail, a species that was listed as endangered in 1992, see 57 Fed. Reg. 44340 (Sep. 25, 1992), and which occurs downstream from mining operations. Mining operations may also affect the Mexican spotted owl, which was listed as threatened under the ESA in 1991, see 56 Fed. Reg. 14678 (Apr. 11, 1991), and received a critical habitat designation from FWS in 2004. See 69 Fed. Reg. 53181 (Aug. 31, 2004). Additionally, a population of California condor that occurs in Grand Canyon National Park was reintroduced in 1996, since BLM approved mining operations; condors are notoriously attracted to and threatened to myriad human activities, including those associated with uranium mining. 61 Fed. Reg. 54043 (Oct. 15, 1996). Accordingly, BLM is bound by ESA section 7(a)(2) to consider the effects of operations at the Arizona 1 Mine to all listed species, including those discussed above as well as the ambersnail, owl, and condor, and to designated critical habitat. With respect to the condor specifically, at a minimum BLM must “confer” with FWS to consider the effects of mining operations to the Grand Canyon population. See id.; 16 U.S.C. § 1536(a)(4).
The ESA also prohibits any "person" from "taking" threatened and endangered species. The ESA's definition of "take" provides as follows:

The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Absent compliance with ESA section 7's prohibitions against jeopardy and adverse modification and receipt of a valid incidental take statement, BLM's approval of Arizona 1 Mine operations will also be in violation of section 9 of the ESA.

IV. SUPPLEMENTARY NEPA ANALYSIS AND/OR PREPARATION OF AN EIS IS REQUIRED.

A. The National Environmental Policy Act

NEPA requires federal agencies to consider the environmental consequences of their actions. NEPA ensures that the agency will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to a larger audience to ensure the public can play a role in both the decisionmaking process and the implementation of the agency's decision. NEPA requires federal agencies to prepare a detailed environmental impact statement ("EIS") for any major federal action that may significantly affect the quality of the environment. An EIS must be prepared if there are substantial questions as to whether a proposed project may have a significant effect on the environment.

In determining the proper scope of a NEPA analysis, federal agencies must broadly consider the environmental impacts of their actions and related actions. Federal agencies must not only review the direct and indirect impacts of their actions, but also analyze the cumulative impacts. Indirect effects are those "caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable." Cumulative impacts include impacts of "other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." The Ninth Circuit Court of Appeals has specifically held that BLM must analyze the cumulative impacts of other ongoing or proposed mining activities in and near the region of a project under review. The agency may not simply list the names or acreages of the other operations, but must provide a "quantified assessment of

45 Cf. Bennett v. Spear, 520 U.S. 154, 170 (1997) ("The action agency is technically free to disregard the Biological Opinion and proceed with its proposed action, but it does so at its own peril (and that of its employees), for 'any person' who knowingly 'takes' an endangered or threatened species is subject to substantial civil and criminal penalties, including imprisonment.").
46 42 U.S.C. § 4331, et seq.
48 40 C.F.R. § 1508.8(b).
49 Id. § 1508.7.
50 Great Basin Mine Watch v. Hankins, 456 F.3d 955, 971-974 (9th Cir. 2006).
their combined environmental impacts." Thus, even if operations are not "connected actions," NEPA requires a full analysis of all "cumulative impacts."

In determining the significance of a proposed action, NEPA directs federal agencies to consider a number of "significance" factors, including: the unique characteristics of the geographic area such as proximity to park lands; the degree to which the environmental effects are likely to be highly controversial; the degree to which the environmental effects may be highly uncertain or involve unknown risks; the degree to which the action may establish a precedent for future actions with significant effects; whether the action may adversely affect an endangered or threatened species or their critical habitat; whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment; and whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

Regulations implementing NEPA also require federal agencies to prepare supplements to either draft or final EISs if there are "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." Thus, an agency that has prepared an EIS "cannot simply rest on the original document" and "must be alert to new information that may alter the results of the original environmental analysis, and continue to take a "hard look at the environmental effects of its planned action, even after a proposal has received initial approval."

New information and circumstances, including but not limited to that described below, warrants supplementary analysis (and an EIS) prior to re-opening the Arizona 1 Mine.

B. Significant new information relevant to hydrogeology raises the potential for groundwater contamination resulting from breccia pipe excavation at the Arizona 1 Mine and warrants preparation of a supplemental environmental review and/or an EIS.

New information relating to the hydrogeology of the Kanab Plateau is significant and provides a new context for consideration of potential impacts. This information requires preparation of a supplemental NEPA analysis and/or EIS.

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51 Id. at 972.
52 Id. at 971-974.
53 40 C.F.R. § 1508.27(b).
54 40 C.F.R. §1502.0(c)(1)(ii).
55 Friends of the Clearwater v. Dombeck, 222 F.3d 552, 557 (9th Cir. 2000) (quoting Marsh v. ONRC, 490 U.S. 360, 374 (1989)).
56 Such information includes the following studies:

For instance, there are several studies commencing in fall 2009 on the hydrogeology of the Kanab Plateau including spring flow and potential contamination from uranium. One study, to be conducted by U.S. Geological Society, will sample springs in the region to test for any indication of uranium contamination and will also collect spring samples in some areas as background data. This data is critical to determine the direct, indirect and cumulative impacts of potential future uranium mining activity in the region.\textsuperscript{38}

The potential contamination of groundwater and perched aquifers in the area of the Arizona 1 Mine is of particular concern. While the EA for the Arizona 1 Mine claims that drilling operations will not be so deep as to reach the aquifers, the information above demonstrates the potential for reaching groundwater at much lower drill levels than assumed by the 1988 EA. Moreover, such conclusions do not take into account critical new information available on perched aquifers nor the potential for mining operations to penetrate these perched aquifers found throughout the region. The presence of a sump pond at the Arizona 1 Mine, to capture fluids resulting from mine de-watering, substantiates the potential for mining activities to encounter and potentially contaminate groundwater. There is also concern about the connectivity between perched aquifers as well as the potential for the mine to serve as a vertical conduit between perched aquifers, which would otherwise be isolated from one another without the mine. As recorded in the Arizona Water Atlas (2007), Nyals Neimuth of the Arizona Department of Mines and Mineral Resources states in a personal communication that the water needed for mining on site would in fact come from "stormwater collection and/or shallow groundwater encountered in perched aquifers on site."\textsuperscript{39}

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\textsuperscript{37} 40 C.F.R. §1502.0(c)(ii).

\textsuperscript{38} The Kanab Plateau Basin is characterized by high plateaus, plains and incised canyons. The U.S. Geological Society has identified 181-190 springs (depending on the database reference) in the Kanab Plateau Basin. Of those, there are 39 major springs with a measured discharge of 10 gallons per minute (gpm) or greater at any time. According to the Arizona Water Atlas (2007), although direction of flow in this region is not certain, groundwater is known to exist in several aquifers composed of sandstone, limestone and shale formations. Water-bearing units in the vicinity of Pipe Spring National Monument include alluvium, Navajo Sandstone, the Kayenta and Moenave Formations, and the Shinarump Formation. Wells in the Kayenta Formation at Moccasin, had a recent water level of 87 feet below land surface, and one in "sedimentary rock" south of Fredonia and north of Kanab Creek with a recent water level of 611 feet. Within the aquifers, faults act as conduits for vertical and lateral groundwater movement. Major faults include the Toroweap and Sevier faults. Groundwater also occurs in recent stream alluvium, including the Cane Beds area west of Moccasin.

\textsuperscript{39} Arizona Water Atlas, Volume 6 (2007), Western Plateau Water Planning Area, at page 47.  

http://www.adwr.state.az.us/dwr/Content/Find_by_Program/Rural_Programs/content/water_atlas/v6/Vol_6_Ovevview.pdf
According to testimony provided by Dr. Abe Springer for the 2008 Congressional field hearing on the Grand Canyon Watershed Protection Act, there is potential for water quality impacts from uranium mining near the Grand Canyon, and these potential impacts have never been considered by BLM in connection with its approval of the Arizona 1 Mine. Indeed, in contrast to earlier assumptions about aquifer recharge and spring discharge, it appears that groundwater to aquifer to spring discharge can in fact occur on a much shorter timescale – in a matter of days or months, rather than hundreds to thousands of years. Dr. Springer points to numerous published academic studies which demonstrate rapid recharge of snow pack and rainfall through the karst limestone topography of the Kaibab Formation, into the underlying sedimentary strata, especially on the North Rim (Ross, 2005; Huntoon, 2000). Roaring Springs, a perennial spring on the Bright Angel Fault that provides municipal water supply for both the North Rim and South Rim facilities of GCNP, is said to recharge over a very small area of the mesa. According to Ross 2005, “rapid groundwater recharge through fault and fracture systems [which] may mean that land use occurring north of the park boundaries could significantly impact water quality.”

A number of new studies also demonstrate the seasonal variability of flow through the R-aquifer by sampling water at Roaring Springs. Brown 2008 shows connectivity between groundwater on the Kaibab Plateau with a number of North Rim springs. These researchers found that the North Rim springs are sourced from water recharged on the Kaibab Plateau that travels a minimum of 900 vertical meters through conduits, faults, and fractures before discharging from the R-aquifer, a deep unconfined karstic carbonate aquifer. This same study also demonstrates seasonality and location of recharge. Roaring Springs, found on the North Rim, was found to have a distinct seasonal variation in isotopic signature with summer values more depleted in 2H and more enriched in 18O than winter values.

C. The boom in new uranium development on the Arizona Strip and the potential for traffic accidents along haul routes are significant new circumstances that implicate the cumulative impacts of the Arizona 1 Mine.

Thousands of new uranium mining claims have been staked on BLM and National Forest land immediately north and south of Grand Canyon National Park in recent years. According to BLM records, the number of mining claims near Grand Canyon National Park increased from 110 to over 8000 between 2003 and 2008. This boom in uranium development on the Arizona Strip also warrants supplemental NEPA analysis and/or preparation of an EIS.

Indeed, since 2003, 72 uranium exploratory drilling or surface management projects have been initiated and 74 such projects have been authorized on the Arizona Strip District and none of these have been subject to cumulative effects analysis under NEPA. South of the Grand

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62 40 C.F.R. §1502.2(c)(1)(ii).

Canyon, the Kaibab National Forest has received plans of operations for exploratory drilling on the Tusayan Ranger District from VANE Minerals, DIR Explorations and Neutron Energy. The Tusayan Ranger District intends to authorize drilling on claims for which valid existing rights are established.64

In addition to requiring supplemental NEPA review and/or preparation of an EIS, these activities are also “similar” and “connected” and warrant analysis in a comprehensive analysis of their cumulative effects. Exploratory uranium drilling is similar in nature to operations at the Arizona 1 Mine because it is a necessary prerequisite to uranium mining. It is similar in geography because it would occur on the Kanab Plateau and within Grand Canyon’s watersheds that have been identified by the Committee on Natural Resources’ June 25, 2008 emergency resolution and the July 20, 2009 Segregation Order as a geographic unit encompassing common environmental concern relating to impacts of uranium exploration and mining. It is similar in timing because all of the aforementioned exploration has been proposed or authorized in the last five years, most of it since 2006. These exploration activities are therefore “similar” and “connected” actions under NEPA and must be considered in a new cumulative effects analysis.65

Similarly, since BLM’s 1988 analysis of the Arizona 1’s Mine’s effects, Denison submitted an incomplete plan of operations for a new mine, called the EZ Mine. The plan of operations proposes to mine three breccia pipes – EZ 1, EZ 2, and What – from one centralized mine shaft. This too is a similar and connected action, and also implicates cumulative impacts that must be considered in a new NEPA analysis. Uranium mining at the EZ mine is a similar action in nature to the Arizona 1 Mine because both mines would excavate uranium using similar methods. Both mines are owned by Denison Mines. They are similar in geography because they would occur on the Kanab Plateau and within Grand Canyon’s watersheds. They are similar in timing because all of the aforementioned-exploration has been proposed and/or authorized in the last five years, most of it since 2006. Therefore, these operations must be considered in a new cumulative effects analysis as well.

Moreover, increased traffic volume and the potential for traffic accidents along haul routes between the Arizona 1 Mine and the White Mesa Mill in Blanding, Utah is a significant new circumstance relevant to environmental concerns and that bears on the proposed action and its impacts. Millions of people a year drive from the Grand Canyon National Park through Kanab on their way to southern Utah’s national parks. The number of visitors to all of these national parks, and thus traffic volume, has increased dramatically since the environmental assessments for the Pinenut and Arizona 1 Mines were prepared in the mid-1980s.66

Haulage distance from Arizona 1 and Pinenut Mines to the White Mesa mill at Blanding, Utah, is more than 300 miles away. The route passes through the Kaibab Paiute reservation, Fredonia,

65 42 U.S.C. § 4332(C); 40 C.F.R. §§ 1508.7, 1508.8, 1508.25 (the scope of a proposed action must include connected, cumulative, and similar actions); Sierra Club v. Bosworth, 2007 U.S. App. LEXIS 28013 (9th Cir. 2007).
66 In 1986, at the time the Environmental Assessment for Canyon and Pinenut Mines were being prepared, the Grand Canyon National Park had 3,966,269 visitors in 1986, Zion National Park had 1,670,503 visitors and Bryce had 578,018. Grand Canyon National Park now has close to 5 million visitors per year, Zion NP has nearly 3 million, and Bryce NP has nearly 1.75 million visitors annually. Visitation at Arches National Park, just north of Blanding, has doubled since 1986 from 419,444 to 928,795 in 2008.
Page, across the Glen Canyon Dam, through the Navajo reservation, and through Bluff to Blanding. Beyond the motorists heading to these national parks, there are also hundreds of rafting groups driving through northern Arizona and southeastern Utah heading to Lee’s Ferry, Bluff and to Mexican Hat. This is a very large increase in the number of vehicles on the roads which will be shared with an undetermined number of trucks carrying radioactive ore. This increased volume in traffic is a significant new circumstance relevant to environmental concerns and which bears of the proposed action and its impacts.67

Southeastern Utah roads are already at critical capacity. According to a report by the Southeastern Utah Association of Local Governments:

[A]ddressing the issue of the high volume of traffic, especially commercial local and interstate truck traffic, on the district’s two-lane highways is also a high priority. Besides the current inadequacies of the district’s highways, continued economic development is discouraged because of the real and perceived problem of moving goods and materials to and from suppliers and market centers. Truck traffic, especially ... Hwy 191 through Moab (Grand County), Monticello, and Blanding (San Juan County) ... is a special concern.68

The roads in the area of Page, Arizona are also heavily travelled. U.S. Highway 89 is the primary access corridor for the City of Page, Lake Powell, and other popular recreational areas. The approximate daily traffic volume is 25,000 vehicles between Railhead Avenue and Smoke Rise Drive. US-89 is designated as a truck route. The highest truck volume of 46 percent is reported on US-89 between the City of Page and the Arizona-Utah border. On U.S. Highway 89A, an Average Daily Traffic (ADT) of 5,800 vehicles was reported at the junction at SR-389 south of Arizona/Utah State line. The highest truck volume of 12 percent is reported west of US-89.69

D. Designation of the Grand Canyon Parashant and Vermilion Cliffs National Monument are significant new circumstances relevant to environment concerns and bear on the proposed action’s potential impacts.

The designation of the Grand Canyon Parashant National Monument and Vermilion Cliffs National Monuments are also significant new circumstances that require a fresh look at the environmental impacts of the Arizona 1 Mine. Mining operations, including semi-trucks hauling uranium between the Arizona 1 Mine and the White Mesa uranium mill in Blanding, Utah, may directly, indirectly, and/or cumulatively impact objects protected by the monuments’ proclamations.70 This includes wildlife, whose range and habitat includes public lands within

67 NPS STATS: http://www.nature.nps.gov/stats/park.cfm.
69 Statewide Transportation Planning Framework - Northern Region - Existing and Future Conditions http://www.azdot.gov/PDF/Northern_WP2_ExistingRdSystem_2_4_1.pdf.
70 For example, the Grand Canyon-Parashant National Monument, objects identified in the Proclamation include, but are not limited to: Areas of importance to existing Indian tribes; Riparian corridors linking the plateau to the Colorado River corridor below, allowing wildlife movement and plant dispersal; Giant Mojave Yucca cacti; Diverse
and outside of the national monument. Increased tourist visitation to the Arizona Strip resulting from the new monument designation and overall tourism trends may increase passenger vehicle-haul truck encounters on dirt roads between the Arizona 1 Mine and Fredonia, increasing the potential for accidents, which was not and could not have been evaluated in environmental documents in the 1980s, including the Arizona 1 Mine EA. The designation of these national monuments therefore also warrants a thorough analysis to disclose all of the environmental consequences of the Arizona 1 Mine to the human environment and objects protected in the monument proclamations.

E. Significant controversy attending the potential impacts of uranium exploration and mining on the Arizona Strip is also a significant new circumstance bearing on the impacts of the proposed action.

See section IV(K) of this letter below.

F. New listings of threatened and endangered species and designations of critical habitat are significant new circumstances bearing on the impacts of the proposed action and its environmental impacts.

See section III of this letter above.

G. New information about the biological diversity of cave, seep, and spring and ecosystems in the Kanab Creek area of Grand Canyon is significant new information bearing on the proposed action and its environmental impacts.

Uranium mining at the Arizona 1 Mine has the potential to contaminate ground water and corresponding discharges at regional caves, seeps and springs. The information about the biological diversity of caves, seeps and springs also provides a new context for evaluating the potential impacts of groundwater contamination and warrants supplemental environmental review under NEPA.\footnote{See, for example, the following studies:}

\footnote{See, for example, the following studies:}


H. The Kaibab Paiute Tribe is now opposed to the transport of uranium ore across Tribal land.

Arizona State Road 389 (AZ 389) travels east from the Arizona Strip through the Kaibab Paiute reservation to Fredonia. If the Tribe prevents access to this road, trucks carrying uranium ore will have to utilize an entirely different northern route to get to Blanding. The impacts of a tribal objection to the use of AZ 389 and utilization of the northern route must be assessed.72

I. The California condor reintroduction program is a new circumstance warranting supplemental environmental review.

In 1996, FWS began a reintroduction program to establish a population of California condors in northern Arizona.\textsuperscript{73} A revised recovery plan for California condor was also completed in 1996.\textsuperscript{74} The purpose of the reintroduction is to achieve a primary recovery goal for this endangered species, the establishment of a second non-captive population, spatially disjunct from the non-captive population in southern California. The reintroduction area mostly consists of remote federal and Tribal lands, including portions of the BLM Arizona Strip District where the Arizona 1 Mine is located.\textsuperscript{75} Mining activities have the potential to harm or kill California condors, such as from collisions with vehicles or machinery or from condors drinking from sump ponds containing contaminated mine shaft water. The California condor reintroduction is therefore also a critical new circumstance for the Arizona 1 mine that warrants a thorough and detailed cumulative impacts analysis pursuant to NEPA.

J. The June 20, 2008 Segregation Order and the June 25, 2008 Emergency Resolution are new circumstances that also warrant a fresh look at the Arizona 1 Mine's environmental effects.

On June 25, 2008, the U.S. House of Representatives’ Committee on Natural Resources issued an Emergency Resolution. The Emergency Resolution compels the Secretary of the Interior to immediate withdraw over one million acres of federal land near Grand Canyon National Park. The emergency withdrawal is temporary. The withdrawal’s duration is for no more than three years. The Secretary of Interior determines the exact duration of the emergency withdrawal.

The Committee made several findings to support the Emergency Resolution. For instance, the Committee found that the international demand for uranium has escalated dramatically, and there are now more than 1,100 uranium mining claims within five miles of Grand Canyon National Park. The Committee found that management of public lands adjacent to Grand Canyon National Park has direct impacts endangered species, the quality of surface water and groundwater, air quality, archeological resources, recreational opportunities, and the health and safety of Park visitors and residents in the area. The Committee found that the U.S. Forest Service recently approved exploratory drilling for uranium at seven sites within three miles of Grand Canyon National Park, using a categorical exclusion under NEPA. The Committee found that uranium is radioactive when mined, producing radium, thorium and radon gas, and that exposure to these elements is known to cause cancer, kidney damage, and birth defects in humans. The Committee found that previous uranium mining operations near Grand Canyon National Park have left a legacy of debilitating illness and death among Native Peoples in the area, and resulted in contaminated soil and ground water that remains unremediated. For all these reasons, the Committee declared that an emergency situation exists regarding uranium mining on BLM and Forest Service lands near Grand Canyon National Park, and that extraordinary measures must be taken to preserve the values that would otherwise be lost absent the withdrawal.

\textsuperscript{73} 61 Fed. Reg. 54043, 54060 (Oct. 16, 1996).
\textsuperscript{74} http://ecos.fws.gov/docs/recovery_plan/960425.pdf
\textsuperscript{75} 61 Fed. Reg. at 54060.
On July 20, 2009, the Interior Department issued the Segregation Order. In so doing, the agency recognized that Grand Canyon National Park is an iconic American landscape and World Heritage Site that encompasses 1.2 million acres on the Colorado Plateau; draws 4.4 million visitors each year; is home to numerous rare, endemic, and specially-protected plant and animal species; and contains vast archeological resources and sites of spiritual and cultural importance to American Indians. It also recognizes that the Colorado River and its tributaries that flow through the watersheds of Grand Canyon National Park supply water to agricultural, industrial, and municipal users, including the cities of Tucson, Phoenix, Las Vegas, Los Angeles, and San Diego.76

The Emergency Resolution and Segregation Order specifically recognize the threat of uranium exploration and mining in the area of Grand Canyon National Park, and the need to analyze the impacts from operations to the unique landscape and resources. As such, they are new circumstances that bear on the need to consider the effects of the Mine, as well as a new alternatives analysis, warranting supplementary analysis of its effects and alternatives and an EIS pursuant to NEPA.

K. Preparation of an EIS is required.

In determining whether or not the effects will be “significant,” or whether substantial questions exist as to the significance of the effects, NEPA’s implementing regulations require BLM to consider the “context” and “intensity” of the likely impacts. “Context” means “that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality.” 40 C.F.R. § 1508.27(b). Also, “[b]oth short- and long-term effects are relevant” for context. Id. “Intensity” means the “severity of impact” and is to be judged according to several criteria. Id.

When considered pursuant to NEPA’s significance criteria, it is clear that a full EIS that evaluates the impacts of uranium mining activities is warranted.77 Impacts from uranium exploration activities may be significant because they involve Grand Canyon National Park’s world-class cultural, archeological, and recreational resources.78 The impacts may also be significant because they may affect the water supply for several major cities in the Southwest, including Phoenix, Las Vegas, and Los Angeles.79 Federal agencies concluded that uranium mining and exploratory activities will likely affect a significant number of known resources central to the integrity of Grand Canyon National Park, including: hydrology in the area (including seeps, springs, and groundwater); wildlife (including endangered California condors and Mexican spotted owls); vegetation (noting that the “Grand Canyon supports the highest levels of diversity in both plant species and vegetative communities of any unit” in the National

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77 Also, if there are “substantial questions” that an agency action “may have a significant effect upon the environment, an EIS must be prepared.” Nat’l Parks & Conservation Ass’n v. Babbitt, 241 F.3d 722, 730, 736 (9th Cir. 2001); Ocean Advocates v. U.S. Army Corps of Eng’rs, 402 F.3d 846, 865 (9th Cir. 2005).
78 See 40 C.F.R. § 1508.27(b)(3) (agencies must consider “[u]nique characteristics of the geographic area such as proximity to historic or cultural resources, park lands” or “ecologically critical areas” in determining significance).
79 40 C.F.R. § 1508.27(b)(2) (agencies must consider “impacts to public health and safety”).
Park System); cultural resources (recognizing that mining activities can impact traditional cultural properties of the region’s Native American Tribes); nearby wilderness; the Grand Canyon viewed; and natural soundscapes.

Scientists have also expressed concern about the impacts of mining uranium from breccia pipes near Grand Canyon. Dr. Dave Kremer — a hydrology professor at the University of Nevada, Las Vegas who has written and instructed federal agencies on the likely effect of uranium mining on the hydrology in the area — drafted a comment letter to BLM regarding a 2008 rulemaking proposal addressing uranium mining surrounding the Grand Canyon.\(^{80}\) Dr. Kremer explained that “[b]ased on groundwater relationships in the area, your proposed action will produce serious and irrevocable damage to the ecosystems of the region.” He explained:

> [I]n my best profession judgment, your proposed action poses considerable and grave threat to the springs, creeks, and groundwater resources of the region. To give one example, past uranium mining in the area has exploited breccia pipes which serve as important recharge areas for the aquifers underlying this region. These collapse features historically have been conduits for recharging water containing some dissolved uranium in the aqueous phase. When the downward infiltrating and percolating water reaches zones of low oxygen, these reducing conditions produce precipitation of solid uranium. Exploitation of this deposited uranium, therefore, impacts the crucial zone of recharge to the groundwater systems that feed the springs, and in turn, on which many of the ecosystems of the region depend.\(^{81}\)

In July 2009 testimony presented to the House Committee on Natural Resources Subcommittee on National Parks, Forests and Public Lands, Dr. Kremer provided a more detailed description of the science underpinning those concerns:

> [S]cientific evidence suggests that the exploitation of uranium resources near the Grand Canyon will be intimately connected with the groundwater aquifers and springs in the region. The hydrologic impacts have a great potential to be negative to people and biotic systems. I believe that an assumption that uranium mining will have minimal impact on springs, people and ecosystems in the Grand Canyon is unreasonable, and is not supported by past investigations, research, and data.\(^{82}\)

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\(^{80}\) Comments submitted to BLM by Dr. David Kremer on BLM's proposed rule to remove its regulations regarding emergency withdrawals, 43 C.F.R. § 2310.5. 73 Fed. Reg. 60212 (Oct. 10, 2008).

\(^{81}\) Id.

\(^{82}\) Kremer, D. 2009. Testimony before the House Natural Resources Subcommittee on National Parks, Forests and Public Lands hearing on the Grand Canyon Watersheds Protection Act. The testimony goes on to state that [P]revious uranium mining in the Grand Canyon region estimates that this water usage would be, at a minimum, over 2.5 million gallons per year for one mine. There are many springs and seeps in the Grand Canyon that, according to the US Geological Survey and other investigators, have discharge similar to these amounts, or even much less. Some of these springs and seeps are ephemeral, and the biotic communities associated with them are very vulnerable to the abstraction of water and reduction of flow. Multiplying potential mining water use by the number of potential mine sites, coupled with the up-gradient location of potential mine sites, a majority of springs and seeps in the Grand Canyon could be eliminated and/or critically diminished in flow. The work of our research group at the University of Nevada, Las Vegas with environmental tracers (including stable and radiogenic isotopes, trace elements, chlorofluorocarbons, and uranium isotope disequilibrium measurements) shows compelling supporting evidence for existence of a hydrologic connection between the aquifers surrounding the Canyon and the springs.
The high level of public controversy attending the potential impacts of uranium mining near Grand Canyon National Park also warrants the preparation of an EIS. Agencies must prepare EISs whenever a federal action is “controversial,” that is, when there is a “substantial dispute [about] the size, nature, or effect of the major Federal action.” As discussed above, new information reveals strong public opposition to uranium mining around the Grand Canyon based on its past and potential future effects. For example, the Coconino County Board of Supervisors passed a Resolution on February 5, 2008 “opposing uranium development on lands in the proximity of the Grand Canyon National Park and its watersheds.” The County recognized that Grand Canyon National Park “is an economic engine whose 5 million visitors per year contribute significantly to the economy of Coconino County” and that prior uranium operations “have contaminated creeks and aquifers providing public drinking water.” Former Arizona Governor Janet Napolitano noted the “high level of public concern” relating to the impacts of uranium mining around Grand Canyon National Park, as did the Arizona Game and Fish Department in its aforementioned letter to Senator John McCain. The Navajo, Hualapai, Havasupai, Hopi, and Kaibab Piute tribes have also expressed opposition to uranium mining around Grand Canyon, as has the House Natural Resources Committee, based on uranium mining’s

within the Canyon (Goings, 1985; Zukosky, 1995; Fitzgerald, 1996; Ingraham et al., 2001). Also, the deep, drilled wells associated with projected mining operations throughout the Grand Canyon region, and the mine shafts themselves, have the potential to pierce smaller perched aquifers in the overlying Coconino Sandstone approximately one-quarter of the way down the Canyon vertically, which supplies water to springs higher up on the wall of the Canyon. In one uranium mine in the Grand Canyon region, a perched aquifer was encountered during exploratory drilling operations. Long-term downward drainage and water disruption potential of the mining operation was estimated to be over 1.3 million gallons per year. Piercing a perched aquifer would have the effect of draining the perched aquifer, and disrupting flow to springs issuing from the Coconino Sandstone-Hermit Shale contact and the underlying Supai Group.

See 40 C.F.R. § 1508.27(b)(4).

Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1212 (9th Cir. 1998).

Coconino County Resolution NO. 2008-09 RESOLUTION OF THE COCONINO COUNTY BOARD OF SUPERVISORS OPPOSING URANIUM DEVELOPMENT IN THE VICINITY OF THOSE PORTIONS OF GRAND CANYON NATIONAL PARK AND ITS WATERSHEDS THAT LIE WITHIN COCONINO COUNTY. Id.

Letter from Arizona Governor Janet Napolitano to Department of Interior Secretary Dirk Kempthorne (March 6, 2008).

Letter from Arizona Game and Fish Department to Senator John McCain (March 17, 2008).


The House Committee on Natural Resources’ rationale for passing its 25 June 2008 Emergency Resolution ordering the Secretary of Interior to withdraw over 1 million acres from mineral entry cites the potential for “direct impacts on sensitive habitat, listed and endangered species, groundwater, air quality, archeological resources, recreational opportunities, and the health and safety of visitors and residents near the park” from proposed uranium mining.
potential impacts. The Metropolitan Water District of Southern California\textsuperscript{95} and Southern Nevada Water Authority have also expressed concern about the impacts of proposed uranium mining on Colorado River water quality and the need for comprehensive environmental impact statements.\textsuperscript{96} Thus, every level of government has expressed concern about or opposition to uranium mining near Grand Canyon.\textsuperscript{97} When multiple parties are highly critical an agency’s decision and dispute an agency’s stale and unsubstantiated conclusion of no significant impact, this is “precisely the type of ‘controversial’ action for which an EIS must be prepared.”\textsuperscript{98} Based on the fact that proposed uranium mining has generated such significant controversy and opposition, and because that controversy is directly focused on the potential environmental impacts of the uranium mining, BLM is required to prepare an EIS prior to renewed uranium ore extraction occurs at the Arizona 1 Mine.\textsuperscript{99}

Uranium mining also requires the preparation of an EIS because it is related to other new uranium mining claims, exploration projects, and uranium mines that can be reasonably expected to have individually and cumulatively significant impacts. Environmental impacts are significant due to the cumulative impacts of extensive exploratory uranium projects in this region. NEPA requires agencies to assess the cumulative impacts, which include impacts of “other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”\textsuperscript{100} A cumulative impact analysis must provide a “useful analysis” that includes a detailed and quantified evaluation of cumulative impacts to allow for informed decision-making and public disclosure.\textsuperscript{101} The NEPA obligation to consider cumulative impacts extends to all “present” and “reasonably foreseeable” future projects, including when a project is part of larger program or an identifiable series of projects.\textsuperscript{102}

Here, as noted by the Arizona Governor and as discussed earlier in this letter, there are several thousand new potential uranium projects in the region -- with thousands of new uranium claims, several dozen initiated or authorized new exploration projects and several mining operations for which plans of operation have been submitted -- including the Arizona 1, Pinenut, and EZ 1, 2, What, and Canyon mines -- and yet, no cumulative impacts analysis of these activities has ever

\textsuperscript{95} Letter from Jeffrey Nighlinger, General Manager for Metropolitan Water District of Southern California to Interior Secretary Kempthorne (Mar. 25, 2008).
\textsuperscript{96} Letter from Pat Mulroy, General Manager for Southern Nevada Water Authority to Interior Secretary Dirk Kempthorne (June 16, 2008).
\textsuperscript{97} When BLM issued its proposed rule to repeal the regulation that requires the Secretary of Interior to withdraw lands when directed by Congress, the controversy over potential impacts to the Grand Canyon and Colorado River again surfaced in comments submitted by the Arizona Governor; Senator Bingaman; the Metropolitan Water District of Southern California; Congressmen Grijalva; and a number of environmental organizations.
\textsuperscript{98} Sierra Club v. U.S. Forest Serv., 843 F.2d 1190, 1193 (9th Cir. 1988). In California v. Norton, the Ninth Circuit noted that proposed lease suspensions were the subject of public controversy, as made evident by letters from the Governor of California and both Senators expressing strong opposition. California v. Norton, 311 F.3d 1162, 1176 (9th Cir. 2002) (noting history of oil spills).
\textsuperscript{99} See California v. Norton, 311 F.3d at 1176.
\textsuperscript{100} 40 C.F.R. \S 1508.7.
\textsuperscript{101} Kern v. U.S. Bureau of Land Mgmt., 284 F.3d 1062, 1066 (9th Cir. 2002); Ocean Advocates, 361 F.3d at 1118.
\textsuperscript{102} Blue Mountains, 161 F.3d at 1214-15 (requiring Forest Service to consider cumulative impacts of all logging projects set forth in regional strategy in NEPA document for first project); Kern, 284 F.3d at 1076; Hall v. Norton, 266 F.3d 969, 978 (9th Cir. 2001) (finding cumulative analysis on land exchange for one development failed to consider impacts from other developments potentially subject to land exchanges).
been prepared. Federal courts have held that the potential for significant cumulative impacts that were not reviewed in an original NEPA document warrants preparation of a new EIS.\textsuperscript{103} In light of the additional uranium operations and other cumulative impacts that have occurred (or will be occurring) since the 1988 EA, BLM must prepare an EIS for the Arizona 1 Mine.

V. MINING OPERATIONS MAY NOT COMMENCE OR CONTINUE IN THE NEWLY-SEGREGATED LANDS WITHOUT VERIFICATION OF CLAIM VALIDITY.

Because the Mine is within the newly-segregated lands covered by the Segregation Order, no operations may commence or continue without verification that each of the mining claims to be utilized by the operations were valid on the date of segregation. As stated in the Department’s July 20, 2009 News Release, only operations on “valid pre-existing claims” may continue or commence. Under the Mining Law, this requires that claimants have discovered a “valuable mineral deposit” on each claim on the date of segregation. Although the company began operations in 1990 under the belief that its claims were valid, it quickly stopped operations in 1992 and never produced any valuable ore. In any event, because claim validity needs to be established on the date of segregation (July 20, 2009), this verification of “valid existing rights” must occur prior to any resumption of operations.

As the Interior Department has stated:

[W]here a mining claim occupies land that is subsequently withdrawn from mining location, the validity of the claim must be tested by the value of the mineral deposit as of the date of the withdrawal as well as at the date of determination. If the claim was not supported by a qualifying discovery of a valuable mineral deposit at the time of withdrawal, the land was not excepted from the effect of the withdrawal, and the claim could not thereafter become valid even though the value of the deposit subsequently increased due to a change in the market value of the mineral.\textsuperscript{104}

In another case, the Department held:

[I]f a mining claim is not supported by a discovery at the time of withdrawal (even though there may have been a valid discovery at some prior time), the claim would not then be a valid existing mining claim and the land so occupied would not be excepted from the force and effect of a withdrawal.\textsuperscript{105}

In addition:

\textsuperscript{103} Friends of the Clearwater v. Dornbeck, 222 F.3d 552, 557 (9th Cir. 2000); Sierra Club v. Bosworth, 465 F. Supp. 2d 931, 936-37 (N.D. Cal. 2006).


When lands are withdrawn from entry under the Mining Law, the Mining Law’s authorization for citizens to explore for and develop minerals on those public lands terminates. “Where the Government subsequently withdraws the land from mineral entry and location, permission to prospect is thereby revoked and only claims then supported by a discovery are protected from the withdrawal.”

Notably, the requirement for claim validity verification applies to lands segregated from mineral entry, as well as lands that may later be withdrawn. FLPMA authorizes the Department to segregate lands. Interior Department regulations implement this. In an analogous situation, the National Park Service filed an application to withdraw an area of land from mining location, stating that “the effect of this withdrawal application was to segregate the public land from mining location, and to require the contestees to show that the millsite claims were valid as of the date of the segregation.”

As one recent court decision stated:

If a mining claim is located on public lands that are later withdrawn or segregated from entry to explore for minerals (such as pursuant to an environmental law), the government has the authority to examine all claims within the withdrawn land to determine if they are valid.

In this case, BLM should perform a mineral examination to verify that each claim to be utilized by the Mine was valid on the date of segregation (and remains valid). The fact that the claimant may assert that it had discovered a valuable mineral deposit back in the late 1980s (which the relevant evidence shows is not the case) does not mean that all claims were valid on the segregation date. At a minimum, prices and costs have fluctuated greatly since the 1980s, which are the central element of the discovery equation.

As the federal courts have uniformly held, changed economic conditions can render a mineral claim invalid, even though it may have been valid at one point in the past. Public land should not be allowed to become “perpetually incumbered and occupied by a private occupant just because, at one time, he had a valuable mine.”

Therefore, even if at one time there was a valid mineral prospect on claimed land, changed economic conditions can destroy the validity of continued occupation of a purported claim. Mulkern v. Hammitt, 326 F.2d 896, 898 (9th Cir. 1964). Even a

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108 See 43 C.F.R. § 3809.100; see also BLM IM No. 2003-242 (emphasis added) (“The BLM policy is that validity examinations are not automatically performed when a mining plan of operations is filed, unless the mining operation is within an area that is withdrawn or segregated.”)
111 Mulkern v. Hammitt, 326 F.2d 896, 898 (9th Cir. 1964).
continued holding of the land for several years with little or no exploitation can raise a presumption that the original claim has been destroyed. United States v. Zweifel, 508 F.2d 1150, 1156 n. 5 (10th Cir. 1975). 112

In this case, in particular, the fact that the claimant abandoned operations in the early 1990s “raises a presumption” that the claims are no longer valid. Under the Mining Law, claim validity “cannot be based upon a discovery which existed only at some previous time.” 113 As explicitly stated by the IBLA:

[T]hat a discovery of a valuable mineral deposit does not, by itself, create a vested right to patent is made clear when one considers cases where a discovery is made and then lost. Thus, even though a claimant may have made a discovery and actually mined material from that claim, until a patent application has been perfected and the equitable title has vested, a claimant runs the risk of losing his discovery if the deposit is exhausted or if a material change in market conditions renders it unreasonable to expect that the mineral can be mined at a profit. See, e.g., Rest v. Humboldt Placer Mining Co., 371 U.S. at 336; Multiple Use, Inc. v. Morton, 353 F. Supp. 184, 193 (D. Ariz. 1972), aff’d, 504 F.2d 448 (9th Cir. 1974); U.S. v. Mavros, 122 IBLA 297, 302 (1992). 114

In this case, the fact that previous claimants abandoned their operations is telling.

[.]If mining claimants have held claims for several years and have attempted little or no development or operations, a presumption is raised that the claimants have failed to discover valuable mineral deposits or that the market value of the discovered minerals was not sufficient to justify the costs of extraction. See, e.g., U.S. v. Humboldt Placer Mining Co., 8 IBLA 407 (1972); U.S. v. Ruddock, 52 L.D. 313 (1927); Castle v. Womble, 19 L.D. 455 (1894). 115

The Interior Department has clearly adopted this reasoning:

[.]Failure to undertake actual operations may be used as evidence that no prudent man would be justified in so doing. For instance, if mining claimants have held claims for several years and have attempted little or no development of actual operations, a presumption may be raised that there has been no discovery of a valuable mineral deposit. This was the case in Cameron v. United States, where six years had elapsed from the date of location to the date of hearing. ... [T]he most persuasive evidence as to what a man of ordinary prudence would do with a particular mining claim is what men have, in fact, done or are doing, not what a witness is willing to state that a prudent man would do. A third standard is that money expended on further exploration or further research, but not on initiation of actual operations, is evidence only that further

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expansion or research may be justified; it is not evidence that the mineral exposed is valuable, or that prudent men would be justified in initiating actual operations. 116

The Interior Department’s past positions on such issues also firmly supports the view that the lack of mineral development for a period, and, even worse in this case, where a mining operation has actually been shut down due lack of adequate economic return, evidences a lack of a discovery. 117

VI. MINING OPERATIONS MAY NOT COMMENCE OR CONTINUE WITHOUT THE PREPARATION AND APPROVAL OF A NEW PLAN OF OPERATIONS.

Lastly, the fact that BLM initially approved the Arizona 1 Mine in 1988 does not mean that the Segregation Order is not applicable to these operations. At a minimum, the original approval of the plan of operations is no longer valid. As BLM regulations state: “Your plan of operations remains in effect as long as you are conducting operations.” 118 Here, it is undisputed that the claimants have not “conducted operations” for many, many years. The Arizona 1 Mine’s plan of operations is no longer in effect. As such, a new plan of operations must be prepared and approved and BLM cannot rely on the original approvals of the plan of operations to avoid the claim validity requirements implemented by the Segregation Order.

In addition, the fact that BLM cannot rely on the previous plan of operations approval implicates the agencies duties under NEPA and the ESA as detailed above. For example, the claim validity requirement is clearly a “changed circumstance” that warrants a new NEPA analysis.

NEPA obliges an agency to revisit its alternatives analysis, including a true no action alternative, whenever there are changed circumstances that affect the factors relevant to the development and evaluation of alternatives. 119

Here, due to the new requirement that operations may not proceed on invalid claims (a situation which under BLM policy did not exist in 1988 when the last NEPA analysis was completed), BLM’s obligation to now deny any operations on invalid claims in the segregated area warrants a new alternatives analysis in the new EIS attending a new plan of operations.

VII. CONCLUSION

As detailed above, commencing operation of the Arizona 1 Mine requires consultation pursuant to section 7 of the ESA, supplemental NEPA review and/or preparation of an EIS, and validation of existing rights for all claims associated with the Arizona 1 Mine pursuant to the Mining Law of 1872.

117 See U.S. v. Milton Wichern, 35 IBLA 240 (1978) (quoting U.S. v. Flurry, A-30887 (March 5, 1968) (“...the most persuasive evidence as to what a man of ordinary prudence would do with a particular mining claim is what men have, in fact, done or are doing, not what a witness is willing to state that a prudent man would do.”); see also Rocky Mtn. Min. L. Found., American Law of Mining § 35.14[2][c] (2d ed. 1993) and cases referenced.
118 43 C.F.R. § 3809.423 (emphasis added).
Please do not hesitate to contact us with questions about this letter, and thank you for your consideration.

Respectfully,

[Signature]

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cc: VIA CERTIFIED MAIL/RETURN RECEIPT REQUESTED
Eric Holder, U.S. Attorney General
U.S. Department of Justice
950 Pennsylvania Avenue, NW
Washington, DC 20530-0001
Date 9/6/05  Time 11:45am

DOE ID Number 61514  Location Address 2597 B3/4 Rd; Bldg 938; Rm 247

Between Ron Lambeth  of BLM, Grand Junction  Phone 970-244-3013

Brendan Monahan  of BLM, Grand Junction  Phone  

and Linda Sheader  of Battelle/Stoller  Phone 970-248-6711

Subject:
Species of concern and habitat issues for Uranium Lease Management Program EA draft

Summary:
- Outlaw and Calamity Mesas contain pinon-juniper habitat; canyons and flat mesas
- Plants of concern: Astragalus naturitensis; Astragalus rafaelensis; also, Pediomelum aromaticum occurs north of Unaweep Canyon and has a small potential to occur in the area
- Activities may disturb excellent quality habitat (p/j)
- Mammals: Townsend’s big-eared bat, fringed myotis, and spotted bats (all BLM sensitive); winter range for mule deer and elk; not critical range, but access to sites may pass through critical range, which lies to the north and the south of Calamity Mesa, particularly for deer.
- Birds: bald eagles occur in the area, but they wouldn’t be expected to make appreciable use of the habitat on the lease tracts; foraging area for the Northern goshawk, but no appreciable affect because not a nesting area; sage grouse have no habitat in the area
- Fish: water depletion and/or toxic discharges may affect 4 species of endangered Colorado River fish downstream (pike minnow, razorback chub, humpback chub, bonytail chub) and three species of sensitive fish (roundtail chub, flannelmouth sucker and bluemouth sucker). Non-sensitive fish, rainbow trout, may be affected in the area and downstream.
- Reptiles: Midget faded rattlesnakes (BLM sensitive) can be expected to occur in abandoned mines or other structures.
- No insects occur in area
Follow-Up Action Required:

Include comments and concerns in EA

File:

cc:  ______  ______  ______