



*Working with Communities to Protect Their Land, Air, and Water*

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September 15, 2020

ATTN: Scott Distel  
Bureau of Land Management  
Planning and Environmental Coordinator  
50 Bastian Road, Battle Mountain, NV 89820

Re: Scoping comments on *Notice of Intent To Prepare an Environmental Impact Statement for the Proposed Gibellini Mine Project, Eureka, NV*

Great Basin Resource Watch (GBRW) considers the proposed vanadium mine as potentially a significant impact to the area, and should be studied in great detail. As a new mine there exists the opportunity if this project moves forward to initiate advanced procedures to mitigate the impacts. Thus, a thorough Environmental Impact Statement (EIS) will be instrumental in the development of this project.

GBRW has met with a concerned rancher who runs cattle in the adjacent valley to the east. It became clear to GBRW that this mine will change the character of the area, which is currently very quiet and dark at night. In addition, this is prime Nevada rangeland, which is a sustainable use of the land.

GBRW also notes that using a sulfuric acid heap leach proposed by American Vanadium US Inc. would be the first of its kind, and therefore GBRW recommends that the BLM take an especially close look at the impacts for the heap leach process.

#### Public Process

There were some components of the Gibellini scoping meeting on September 2<sup>nd</sup>, 2020, that positively contributed to the public engagement process and helped to mitigate shortcomings of the virtual format. We would like to see these components implemented in future public meetings for Gibellini as well. The first of these was that the moderator asked prior to question and answer that each attendee who comment to "please introduce yourself because we can't see each other." It would be most ideal if the virtual format supported participants being able to turn their cameras on if desired, so that they *could* see each other. This would alleviate that issue most satisfactorily. However, if that option is not chosen, articulating the importance of attendees' stating their presence is crucial. To improve upon that, it would be highly beneficial for individuals not commenting to still be asked to introduce themselves (either at the beginning in the chat while they wait for the presentation to start or as an option to include when they sign into the meeting itself). Furthermore, information regarding the number of attendees should not have to be prompted by the public but should be provided routinely at each meeting.

The other positive component at the September 2<sup>nd</sup> meeting was that the moderator was incredibly patient in waiting for questions to be asked and made it clear that he would be staying at

the meeting for fifteen minutes, regardless of whether or not he was receiving many questions, so that attendees had adequate time to ask questions. This made the space genuinely encouraging of participation (and allowed participants time to navigate the virtual format in order to be able to ask these questions). Furthermore, the moderator explicitly offered to go back to any slides in the presentation that attendees wanted to see or needed to see in order to ask their questions—making the information much more accessible and further supporting engagement from attendees.

Along with these positive components, there were still some areas in which the public engagement process should be improved upon for future Gibellini meetings. These mainly revolve around the settings chosen in the virtual platform for the September 2<sup>nd</sup> meeting. The platform set up so that all participants were muted and kept from being seen on the shared screen, which entirely prevented attendees from having awareness of other community members present.

Due to this, public attendees' presence was essentially made invisible through the virtual meeting's structure. Participants did not appear on the screen at all during the meeting, and only the names of attendees who asked questions ever became public. In order for an attendee's voice to be heard, their question first needed to be "accepted" virtually by the moderator. While moderators were free to speak and provide information or thoughts at any time, members of the public had to be given permission to do the same...which presents a clear inequity and opposition to the true spirit of genuine public process.

Furthermore, members of the public who did not have specific questions to ask during the meeting (or were unable to utilize the virtual tools in order to ask their questions) were not seen or heard at all. In itself, this likely discouraged public engagement and curbed collective learning ability—since feeling as if you are *a part* of a space contributes to your ability to actively and meaningfully engage with one. An invisible public is, in many ways, a marginalized public. Since community members are unable to feel and be included in a space as they would have been able to during previous times through the means of being physically present in the room (as the moderator did acknowledge and was empathetic about), other measures must thoughtfully be put in place in order to address this natural deficiency in the transition to virtual public meetings. A more transparent structure, where all attendees and moderators are given equal opportunity to be seen, heard, and understood is needed for future public meetings. As the process for Gibellini continues, the space for public engagement must intentionally be designed to be an equally shared and equally accessible—albeit virtual—one.

Scoping meetings, as a collective public process and a means for community members to come together to better understanding a proposed action, require an awareness of others that was clearly withheld from this virtual meeting. The value of scoping meetings comes not only as a means for community members to hear and engage with sources of knowledge from public agencies and the mining operator, but to share knowledge, concerns, and related lived experience with others in their community. At the September 2<sup>nd</sup> meeting, there was no way for attendees to engage directly with other members of the public. All information was one-sided and prevented a collective learning that comes from the conversational format that exists during in-person meetings.

A means for attendees to see one another, as well as have conversations or ask questions directly to one another, is a vital component of the public process that must be remedied and incorporated into future virtual meeting spaces. The best solution for this would be to allow all at-

tendees to have the choice to un-mute themselves and turn their computer cameras on (to be seen on the shared screen). If this is not possible, at the very least, there should be a sign-in sheet where attendees can see both who and how many others are present. Creation of the space in this way is needed for the process to stay accountable towards the public.

#### Water related issues

There needs to be an assessment of water use compared to available resources and existing water needs. It appears that dewatering will generally not be needed for this project; however, some perched water may be encountered. Any dewatering must be evaluated for impacts to flora and fauna as well as rangeland watering holes.

The mine is planning to lease water from Fish Creek Ranch at a usage of 500 gallons per minute. There needs to be a thorough investigation of how the springs and the species like the Tui Chub that depend on the spring will be affected by the loss of this water. There are also significant hayfields supported by the water from the springs that serve as important habitat for sage grouse.

There appears to be little surface expression of water, but a complete characterization of the surface waters and springs and an understanding of groundwater movement is needed. The depth to groundwater is very important especially given the nature of the leach operation that is envisioned.

To achieve this end, at least one year of monthly samples followed by quarterly samples should be taken to establish a baseline. We anticipate that water level data has been collected in every exploration bore hole.

The impact to local flora and fauna due to changes in water dynamics needs to be examined; for example, potential loss of springs or changes in the water table. Analysis must address the potential loss of riparian areas, and whether the springs are on wildlife migratory routes, and, if so, how migrations will be affected.

#### Status of metallurgical development of novel process and associated risks

The project proposes to use a novel sulfuric acid heap leach process to recover vanadium and byproduct metals (e.g. uranium). The process would essentially be a hybrid of conventional copper heap leaching technologies applied for the first time to both the type of ore (e.g. black shale) and for vanadium leaching and recovery purposes. In addition, it also involves approaches familiar to gold heap leaching in that the process has been developed thus far utilizing laboratory column tests. The proposal as we understand it would utilize the results from the column tests to scale up to commercial operations.

The overall proposal, given the necessary development steps, should be technically feasible provided key aspects, such as the agglomeration of the shale ore, are proven. However, it appears the proposal does not provide for typical steps in metallurgical development. The steps, discussed in *The progression of metallurgical testwork during heap leach design*<sup>ii</sup>, typically consist of subsequent phases of roll bottles, column tests and pilot heaps. The proposed project appears to bypass the large size columns (6m) and test heaps typical to heap leach design. In particular this raises concerns with respect to simulation of agglomeration, compaction and percolation relative to heap permeability which is problematic to simulate in small diameter column tests.

The EIS should identify and address the risks related to this project specific aspect. In particular it should address the risks related to project failure due to metallurgical issues and the potential for short-term and long-term water quality impacts. The EIS should address actions which might be necessary were the project to fail including emergency interim process fluid management and reclamation and closure activities potentially conducted by the BLM and NDEP on an unfinished or abandoned project.

#### Geochemistry Specific to Vanadium Occurrence at Gibellini

Based on the information provided in the Gibellini Vanadium Project Baseline Geochemistry Report (Schafer et al 2012) the occurrence of Vanadium in “black shale” at Gibellini is based on mineralization which is unique to this type of metals deposition and environmental degradation. For example, the vanadium mineralization is derived in part from organic complexes in kerogen and the zones described in the deposit are driven by oxidation of those vanadium complexes. However, the standard approaches to geochemical characterization are highly dependent on the oxidation of sulfides characteristic to metal sulfide ores such as for gold and copper and it is uncertain how applicable the approach is to geochemical characterization of vanadium deposits, particularly as it relates to potential water quality impacts.

The EIS should recognize the unique nature of this project in terms of geochemistry and describe how it is and is not comparable to more common metals mines geochemistry. The following comments provide more specific recommendations related to how geochemistry is addressed in the NEPA process.

#### Mineralization

The description discusses supergene weathering and alteration of vanadium from organic complexes into inorganic complexes together with enrichment leading to an oxidized zone, transition zone or enriched zone and primary unaltered zone. It would be helpful to explain what if any relationship these zones have to the PAG materials. In most discussions of PAG relative to gold or copper deposits it would be assumed that the risk of encountering PAG materials increases with depth as unaltered “sulfide” zones are encountered. However, it is unclear from the discussion if there is a similar association since the source of potential acid generation does not appear to be directly related to the vanadium mineralization.

#### Geochemical characterization testing program

The geochemistry of waste rock must be thoroughly analyzed for potential acid production, including crystallographic analysis to determine the extent of fracturing expected upon blasting. In this regard the full range of static and kinetic tests need to be performed. There must be a contingency plan of how to deal with an unexpected increase in acid generation in the waste rock piles and the heap leach pad as mining proceeds.

The EIS should address the following:

- Phase 2 static tests were conducted on 19 waste samples. How do the samples selected represent the various PAG waste, non-PAG waste and calcareous waste described elsewhere in the document.
- How do the four HCT's represent the various types of wastes?
- Why was NNP estimated and utilized as the primary basis and not ANP/AGP? Please provide a basis for the statement that "The NPR invariably becomes misleading at low carbonate and low sulfur levels, where the NNP is more appropriate for test interpretation."
- Why does the interpretation assume low sulfur equates to low risk of acid drainage despite suggestions otherwise in both the GARD Guide and Price 2009 (MEND)?
- Has testing been performed specific to high alkalinity calcareous material?

While it is accepted that site-specific criteria should be developed the EIS should provide explanation of the justification used for those criteria, particularly where they differ from common approaches recognized by existing BLM, EPA or other guidance (e.g. GARD Guide, Mend 2009, etc).

Humidity Cell Tests – as noted in the report the limited number of phase 2 static tests used as a basis for the HCTs suggests the entire spectrum of waste rock has not been represented and that none of the HCTs is PAG material.

BLM must also do a thorough analysis of the effects of activities within the broad cumulative impacts area including rights reserved under Public Water Reserve # 107. Due to the importance of these water rights, the EIS must catalogue each potentially affected water right and the ongoing and potential impacts from the proposed project plus reasonably foreseeable future activities/projects in the region.

#### POO Reclamation Plan

The project proposal recognizes that heap closure can be highly influenced by the lack of closure experience with vanadium ores treated by sulfuric acid heap leach processes. The proposal presented in the POO is to neutralize/stabilize the material to produce an acceptable quality effluent that drains from the heap and can then be treated using passive treatment methods. While this is a desirable outcome, given the novel nature of the prior metallurgical process, high-clay characteristics of the ore, and the inherent difficulties in achieving rinsing from acid leach conditions, it is possible that difficulties could be experienced which would make this process more difficult or potentially non-implementable. This should be addressed in parallel with the consideration of the novel metallurgical process in the EIS since both would typically be addressed in a development program that would include larger diameter and height columns and test heaps where the issue of percolation and rinsing could be more adequately addressed.

Given the lack of proven examples of acid heap leach rinsing the EIS should consider alternatives such as were discussed in the presentation including not rinsing the heaps and focusing on source control and treatment as may be required. The EIS should address adaptive management planning approaches which might be utilized to identify actions which would be taken in the event the original planned actions are not successful. Part of the purpose of adaptive management planning would be to ensure that in the event the rinsing proposal were to not be suc-

Successful other methods would not be precluded from being implemented due to earlier decisions which assumed rinsing would succeed.

There must be a reclamation plan that includes how the operator will manage the occurrence of leaks in the waste water containment system; storage ponds, heap/leach, and waste rock. In particular GBRW notes the use of a sulfuric acid leach process. Other acid leaching operations in and out of Nevada have experienced long-term toxic drain down, with a very long trajectory to final reclamation. A detailed analysis needs to be done that examines the situation of liner failure of the leach pad during and at long times (through 60-80 years) and the impact on the groundwater. Since, this will be a first of its kind acid/vanadium leach pad special attention must be paid to how to reclaim this aspect of the mine.

A complete land restoration plan for all aspects of the mine needs to be detailed.

### Adaptive Waste Rock Management Plan

#### *Use of NAG PH Tests for potential acid generation characterization*

The proposed NAG pH test for PAG classification is based on principles common to Australia (AMIRA ARD Test Handbook, 2002) but less common to the U.S. According to AMIRA (2002) the NAG test should only be used as a stand-alone test after it has been calibrated for a particular site. The calibration should include comparing NAG with NNP test results and developing a good understanding of the sulphide and carbonate mineralogy. Specific methodologies are also required for evaluating material with high organic carbon content (GARD Guide Chapter 5.4.10) which could result from the organic keragen associated with the ore.

The EIS should address the need for calibration of NAG pH test results and assess the level of understanding of the sulphide and carbonate mineralogy at the site relative to its use. It is strongly recommended that additional analysis be done to demonstrate that the approaches being used for ABA accounting in general (NNP) and for this plan (NAG) would provide consistent if not improved results over using more standard approaches typical to US mines such as NPR and sulfur analysis.

### Wildlife

A full inventory of the loss of plant and animal species, examining both estimated numbers and variation of specie, needs to be done as a result of land disturbance and waste rock coverage. An understanding of migratory routes needs to be resolved, and the impacts of the loss of these migratory routes from the various land disturbances should be addressed. There needs to be particular emphasis on the impacts to migratory bird nesting sites and raptors. In some cases of migratory birds very limited nesting locations exist, thus there is the potential for the mine to seriously threaten such species. The degree to which the action may adversely affect an endangered or threatened species or its habitat must be addressed. In particular is the potential loss of Sage Grouse habitat. The BLM needs to examine how seasonal impacts to plant and animal species would be mitigated or avoided.

In addition to wildlife considerations, an analysis of the potential losses and changes to the grazing rangelands needs to be assessed. The range is currently diverse and supports sustainable grazing. BLM needs to address how this use of the land will be impacted by the project.

It should be noted that there is a significant mule deer/wild horse trailing area that affects popu-

lations in two districts. BLM has not even noted wild horses at all and the population will face significant impact.

### Lands Aspects

There also needs to be an analysis of whether the loss of scenic views will affect economic viability of the area.

The POO notes that much of the disturbance in is pinyon juniper woodland. BLM needs to assess the loss of pinyon pine for pin-nutting by properly consulting with the Duckwater Community. Pinyon pines typically take more than a generation to produce their first crop of pine nuts. The loss of mature pinyon needs to be evaluated with respect to cumulative losses of nut-nutting areas in the region.

### Air related issues

The Notice of Intent in the federal register does not contain many details of the proposed mine operation and the Plan of Operations was not supplied by the BLM during scoping, so it is not entirely clear all of the mine components including any roasting. In general, mercury emissions must be evaluated due to the high incidence of mercury in many mineral bearing ores in the Great Basin. Ore samples need to be analyzed for mercury content, and there should be a plan for continued ore testing for mercury as mining proceeds. There needs to be a mercury capture plan with anticipated mercury emissions. It is also necessary to analyze the environmental impacts, both local and regional, from expected mercury emissions. The EIS should contain a plan for minimizing the mercury emissions and the impact of the emissions to the surrounding area.

Vanadium compounds are known to be toxic, but in particular the pentavalent (vanadium +5) form, which occurs in the vanadium oxide product of the mine, has a high degree of toxicity. BLM needs to analyze the extent of dissemination of vanadium containing emissions for any portion of the operation, and the impact on wildlife, range cattle, and people in the region.

Analysis and mitigation plan of other gaseous emissions (such as sulfur oxides, nitrogen oxides, ozone, carbon dioxide, particulate matter, and lead) from any portions of the operation is also necessary.

The expected amount of airborne particles as dust from all aspects of the project needs to be determined with concentrations for varying wind factors. Impacts of the "dust" should be evaluated for inhalation health impacts, visibility impairment, and resettling on surface water and vegetation. In the case of resettling on surface water there should be a chemical analysis of the dust to determine whether the dust could have an adverse effect on the chemistry of the water. In general, there needs to be a plan for dust control.

### Uranium Processing

Especially since the Nuclear Regulatory Commission is not requiring a permit on the uranium production since it is a secondary product BLM must cover any aspects that would be required in the permit for analysis. BLM should assume that some uranium will escape recovery and end up in the final disposal location. This aspect must be analyzed in the EIS.

### Cultural/community

The project area must be surveyed for historical and archeological artifacts, and mitigation plans must be developed for any of these sites.

There also needs to be an assessment of how the various communities in the region will be affected in terms of lifestyle, economics, and overall quality of life. The Mount Hope area appears to be a pine nut harvesting region, much of which would be destroyed by the pit, waste rock piles, tailings ponds, and the other mine elements. The EIS should address how this cultural activity will be affected and how it will impact the seasonal pine nuts gathering.

In the American Indian Religious Freedom Act (AIRFA), Congress stated that “[i]t shall be the policy of the United States to protect and preserve for American Indians their inherent freedom to believe, express, and exercise the traditional religions.” 42 USC § 1996 (1982). The BLM must analyze the cumulative impact to the ability of Native Americans to fully practice the traditional religions within the study area. The analysis must include both known sacred and spiritual sites as well as traditional food and medicine gathering locations, which are important components of traditional practice.

The project is within land outlined in the Treaty of Ruby Valley, between the United States and the Western Shoshone Nation, so mineral rights were reserved and therefore continue to belong to the Western Shoshone Nation. The use of “gradual encroachment” is not a legally valid method of title transfer or extinguishment under existing federal law or recognized standards of human rights. Between February 20 and March 10, 2006 the United Nations Committee for the Elimination of Racial Discrimination, issued a decision of an “Early Warning and Urgent Action Procedure” handed down to the United States of America. The decision pertains to US lands and therefore BLM or Forest Service public lands on which the project may in part be located. The relevant aspect of this decision is that the U.S. is to “freeze any plan to privatize Western Shoshone ancestral lands for transfer to multinational extractive industries and energy developers, and desist from all activities planned and/or conducted on the ancestral lands of Western Shoshone or in relation to their natural resources, which are being carried out without consultation with and despite protests of the Western Shoshone peoples.” Thus, the project must seek consultation and permission from the Western Shoshone on their lands.

### Night Skies Protection

The Fish Creek Valley is a dark region in Nevada with spectacular night skies. Although not federally recognized anyone in the valley at night will note how dark is the valley and striking is the sky view. BLM needs to specifically analyze the affect of the added light from the mine at night, and there needs to be mitigation and alternatives that minimize the ambient light from the mine.

### Noise and Traffic

As with the dark skies, Fish Creek Valley is also very quiet, which is becoming less and less common. BLM needs to study, develop mitigation and potentially alternatives to the POO that minimizes noise from the 24/7 mining operation.

The mine will increase traffic and heavy load traffic with some shipments containing toxic and hazardous chemicals. This activity affects wildlife particularly sensitive species such as sage grouse. BLM much analyze this aspect and develop effective mitigations and alternative to ad-

dress negative affects.

### Financial Assurances

In addition to the reclamation bond BLM should plan to establish a long-term finding mechanism for pollutant management well past the standard 30 year closure period outline by the state of Nevada. The acid leach operation alone is likely to need active management drainage fluids for many decades and potentially over a hundred years.

### BLM Must Apply the Proper Regulatory Authorities Over the Project

BLM appears to be basing its review of the Project on the assumption that Nevada Lithium has statutory rights to conduct all of their proposed operations, based on the mere staking of claims under the 1872 Mining Law, 30 U.S.C. §§21-43. This includes the permanent waste rock and tailings dumps, which cover thousands of acres. BLM's position is wrong.

Rights to mine and possess lands containing valuable minerals “under the mining laws of the United States” do not extend to lands that do not contain such valuable minerals: “A claimant may not use the deposit present in one location to lend validity to an adjacent location. *See Waskey v. Hammer*, 223 U.S. 85, 91 (1912) (‘A discovery without the limits of the claim, no matter what its proximity, does not suffice.’); *Lombardo Turquoise Milling & Mining Co. v. Hemanes*, 430 F.Supp. 429, 443 (D. Nev. 1977).” *Center for Biological Diversity v. U.S. Fish and Wildlife Service*, ---F.Supp.3d---, 2019 WL3503330, \*11 (D. Ariz. 2019).

“The statute [1872 Mining Law] grants two rights, (1) the right to explore and purchase all valuable mineral deposits in lands belonging to the United States; and (2) the right to occupation and purchase of the lands in which valuable mineral deposits are found. ... [I]t is clear under both the mining law and the regulations that a discovery of valuable mineral is the sine qua non of an entry to initiate vested rights against the United States.” *Davis v. Nelson*, 329 F.2d 840, 844-45 (9<sup>th</sup> Cir. 1964). Thus, without the discovery of a valuable mineral deposit, the claimant does not have a statutory right to occupation of those lands.

Such statutory rights can only accrue to the company if these claims satisfy the requirements of the 1872 Mining Law for possessory rights. “A mining claimant has the right to possession of a claim only if he has made a mineral discovery on the claim.” *Lara v. Secretary of the Interior*, 820 F.2d 1535, 1537 (9<sup>th</sup> Cir. 1987). *See also* *Davis v. Nelson*, 329 F.2d at 845 (9<sup>th</sup> Cir. 1964)(“right to occupation and purchase of the lands” is limited to only those lands “in which valuable mineral deposits are found.”).

The Mining Law limits the permanent use and development of mining claims on public lands to only those lands that contain a “valuable mineral deposit.” “All valuable mineral deposits in lands belonging to the United States ... shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase.” 30 U.S.C. § 22. Only upon the discovery of a “valuable mineral deposit,” within the boundaries of each mining claim does the claimant have rights to permanently use and occupy those public lands.

“Thus, although a claimant may explore for mineral deposits before perfecting a mining claim, without a discovery, the claimant has no right to the property against the United States or an intervenor. 30 U.S.C. § 23 (mining claim perfected when there is a ‘discovery of the vein or lode’); *see also* *Cole v. Ralph*, 252 U.S. 286, 295–96 (1920).” *Freeman v. Dept. of Interior*, 37

F.Supp.3d 313, 319 (D.D.C. 2014). “If there is no valuable mineral deposit beneath the purported unpatented mining claims, the unpatented mining claims are completely *invalid* under the 1872 Mining Law, and no property rights attach to those invalid unpatented mining claims.” Center for Biological Diversity v. U.S. Fish and Wildlife Service, ---F.Supp.3d ---, 2019 WL3503330, \*5 (D. Ariz. 2019)(emphasis in original).

To satisfy the discovery requirement necessary for a valid mining claim, “the discovered deposits must be of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine.” U.S. v. Coleman, 390 U.S. 599, 602 (1968). This economic test for claim validity necessarily includes the consideration of all costs necessary to develop, process, transport, and market the mineral, including costs to protect public land and the environment. “[I]t must be shown that the mineral can be extracted, removed and marketed at a profit.” Id.

There is no evidence in the record that the mining claims covering the public lands proposed for the tailings, waste rock dumps, and other ancillary operations are valid under the Mining Law. BLM must inquire into whether the mining claims at the Project site are valid as a prerequisite for BLM to base its review/approval on any purported “rights” under the Mining Law.

Based on the proposed PoO, there is no evidence that the claims to be used for waste rock dumps, tailings waste facilities, and other non-extraction operations away from the mine pit are valid under the Mining Law. Based on the available record, these lands contain common varieties of rock that are not considered locatable minerals under federal mining law. Under the Surface Resources and Multiple Use Act of 1955, “common varieties” of minerals are not locatable (i.e., cannot be legitimately claimed) under the Mining Law. 30 U.S.C. § 611. BLM must determine whether the lands to be used for the waste rock dumps, the tailings facilities, and other non-extractive operations contain locatable minerals or common variety minerals.

Unless the company provides the necessary credible evidentiary support for the assertion of occupancy rights under the Mining Law on each claim, BLM must apply its special use permitting regulations. 43 C.F.R. Part 2900/2920 (Leases, Permits, Easements). Here, because the waste rock dumps, tailings facilities and other Project activities are not governed under any rights associated with the 1872 Mining Law as noted above, the agency must regulate all of these activities under Part 2900/2920, instead of Part 3809.

FLPMA requires BLM to “by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the [public] lands.” 43 U.S.C. § 1732(b). In addition, FLPMA mandates that: “the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.” 43 U.S.C. § 1701(a)(8).

FLPMA does, however, contain some limits on DOI/BLM authority over operations authorized by the 1872 Mining Law:

Except as provided in section 314, section 603, and subsection (f) of section 601 of this Act and in the last sentence of this paragraph, no provision of this section or any other section of this Act shall in any way amend the Mining Law of 1872 or **impair the rights of any locators or claims under that Act**, including, but not limited to, rights of ingress

and egress. In managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.

43 U.S.C. § 1732(b)(emphasis added).

Under FLPMA, DOI/BLM has full discretion and authority over operations proposed on public lands, including hardrock mining operations such as the Project, to “protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.” 43 U.S.C. § 1701(a)(8). However, such discretion/authority is limited to only “preventing unnecessary or undue degradation” of public resources if the application of that discretion/authority “impair[s] the rights of any locators or claims under that Act [the 1872 Mining Law].” 43 U.S.C. § 1732(b).

Here, as detailed above, neither the company nor BLM have attempted to show that the company has met the legal prerequisites of the Mining Law to have “rights” to the use and possession of its mining claims (e.g., no evidence that the claims covering all of the waste/tailings facilities contain the requisite valuable deposit of a locatable mineral). As such, there are no “rights” that can be “impaired” by BLM’s full discretionary authority over those aspects of the Project that do not have the necessary factual basis to support such rights.

BLM’s discretionary authority is implemented in part via BLM’s special use FLPMA regulations, which apply whenever activities are not “authorized” by other laws. “Any use not specifically authorized under other laws or regulations and not specifically forbidden by law may be authorized under this part.” 43 CFR § 2920.1-1. Thus, because the waste rock, tailings dump, and other ancillary facilities are not “authorized by the mining laws,” absent verified evidence that these uses satisfy the Mining Law’s prerequisite requirements, they are governed by Part 2900/2920, not Part 3809.

The Part 2920 FLPMA regulations require that:

- (b) Each land use authorization shall contain terms and conditions which shall:
  - (1) Carry out the purposes of applicable law and regulations issued thereunder;
  - (2) Minimize damage to scenic, cultural and aesthetic values, fish and wildlife habitat and otherwise protect the environment;
  - (3) Require compliance with air and water quality standards established pursuant to applicable Federal or State law; and
  - (4) Require compliance with State standards for public health and safety, environmental protection, siting, construction, operation and maintenance of, or for, such use if those standards are more stringent than applicable Federal standards.
- (c) Land use authorizations shall also contain such other terms and conditions as the authorized officer considers necessary to:
  - (1) Protect Federal property and economic interests;
  - (2) Manage efficiently the public lands which are subject to the use or adjacent to or occupied by such use;
  - (3) Protect lives and property;
  - (4) Protect the interests of individuals living in the general area of the use who rely on the fish, wildlife and other biotic resources of the area for subsistence purposes;
  - (5) Require the use to be located in an area which shall cause least damage to the environment, taking into consideration feasibility and other relevant factors; and
  - (6) Otherwise protect the public interest.

43 C.F.R. § 2920.7(b).

These FLPMA requirements – to “protect the public interest,” to “Protect federal property,” and to “minimize damage to scenic, cultural and aesthetic values, fish and wildlife habitat and otherwise protect the environment,” are not found in the basic command to “prevent unnecessary or undue degradation” that applies to “operations authorized by the mining laws.” 43 C.F.R. § 3809.1(a).

Accordingly, BLM must fully consider the alternative of regulating (and/or potentially denying) these facilities under the Part 2920 regulations including any Environmentally Preferred Alternative and the No-Action Alternative.

Similarly, BLM can only approve access and other public land uses such as pipelines, transmission lines, etc, under FLPMA’s Title V Right-of-Way (ROW) provisions. Under FLPMA Title V, Section 504, the agency may grant a Right-of-Way (ROW) only if it “(4) will do no unnecessary damage to the environment.” 43 U.S.C. § 1764(a). Rights of way “shall be granted, issued or renewed ... consistent with ... any other applicable laws.” *Id.* § 1764(c). A right-of-way that “may have significant impact on the environment” requires submission of a plan of construction, operation, and rehabilitation of the right-of-way. *Id.* § 1764(d). A Title V SUP/ROW “shall contain terms and conditions which will ... (ii) minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment.” *Id.* § 1765(a). In addition, the ROW can only be issued if activities resulting from the ROW:

- (i) protect Federal property and economic interests; (ii) manage efficiently the lands which are subject to the right-of-way or adjacent thereto and protect the other lawful users of the lands adjacent to or traversed by such right-of-way; (iii) protect lives and property; (iv) protect the interests of individuals living in the general area traversed by the right-of-way who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes; (v) require location of the right-of-way along a route that will cause least damage to the environment, taking into consideration feasibility and other relevant factors; and (vi) otherwise protect the public interest in the lands traversed by the right-of-way or adjacent thereto.

FLPMA, § 1765(b).

At least three important potential substantive requirements flow from the FLPMA’s ROW provisions. First, BLM has a mandatory duty under Section 505(a) to impose conditions that “will minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment.” *Id.* §1765(a). The terms of this section do not limit “damage” specifically to the land within the ROW corridor. Rather, the repeated use of the expansive term “the environment” indicates that the overall effects of the ROW on cultural/historical, wildlife, environmental, scenic and aesthetic values must be evaluated and these resources protected. In addition, the obligation to impose terms and conditions that “protect Federal property and economic interests” in Section 505(b) requires that the USFS must impose conditions that protect not only the land crossed by the right-of-way, but **all** federal land affected by the approval of the ROW. This includes the federal waters and water rights that will be eliminated or significantly reduced by the project.

The requirements in Section 505(b) mandate a USFS determination as to what conditions are “necessary” to protect federal property and economic interests, as well as “otherwise **protect[ing] the public interest in the lands traversed by the right-of-way or adjacent thereto.**” (emphasis added). This means that the agency can only approve the ROW if it “protects the public interest in lands” not only upon which the road would traverse, but also lands and resources adjacent to and associated with the ROW. As noted herein, USFS would be unable to make a legitimate finding that industrial use of the lands served by the ROW, given the massive adverse impacts from the Mine, would “protect the public interest.”

Third, is the requirement that the right-of-way grants “do no unnecessary damage to the environment” and be “consistent with ... any other applicable laws,” *id.* §§ 1764(a)-(c). This means that a grant of a ROW supporting other activities must satisfy all applicable laws, regulations and policies, including FLPMA, the Endangered Species Act, Organic Act, NFMA, NHPA, Clean Water and Air Acts, all state and local laws, etc. The federal courts have repeatedly held that the federal land agency not only has the authority to consider the adverse impacts on lands and waters outside the immediate ROW corridor, it has an obligation to protect these resources under FLPMA. In County of Okanogan v. National Marine Fisheries Service, 347 F.3d 1081 (9<sup>th</sup> Cir. 2003), the court affirmed the agency’s imposition of mandatory minimum stream flows as a condition of granting a ROW for a water pipeline across public land. This was true even when the condition/requirement restricted or denied vested property rights (in that case, water rights). *Id.* at 1085-86.

Similar to the County of Okanogan and Colorado Trout Unlimited federal court decisions noted above, the Interior Department has held that the fact that a ROW applicant has a property right that may be adversely affected by the denial of the ROW does not override the agency’s duties to protect the “public interest.” In Kenneth Knight, 129 IBLA 182, 185 (1994), the BLM’s denial of the ROW was affirmed due not only to the direct impact of the water pipeline, but on the adverse effects of the removal of the water in the first place:

[T]he granting of the right-of-way and concomitant reduction of that resource, would, in all likelihood, adversely affect public land values, including grazing, wildlife, and riparian vegetation and wildlife habitat. The record is clear that, while construction of the improvements associated with the proposed right-of-way would have minimal immediate physical impact on the public lands, the effect of removal of water from those lands would be environmental degradation. Prevention of that degradation, by itself, justified BLM's rejection of the application.

1994 WL 481924 at \*3.

The Interior Department has ruled that pipelines and associated infrastructure, including those across public land related to a mining operation, are not covered by statutory rights under the Mining Law. “[A] right-of-way must be obtained prior to transportation of water across Federal lands for mining.” Far West Exploration, Inc., 100 IBLA 306, 308 n. 4 (1988) *citing* Desert Survivors, 96 IBLA 193 (1987). See also Alanco Environmental Resources Corp., 145 IBLA 289, 297 (1998) (“construction of a road, was subject not

only to authorization under 43 C.F.R. Subpart 3809, but also to issuance of a right-of-way under 43 C.F.R. Part 2800.”); Wayne D. Klump, 130 IBLA 98, 100 (1995) (“Regardless of his right of access across the public lands to his mining claims and of his prior water rights, use of the public lands must be in compliance with the requirements of the relevant statutes and regulations [FLPMA Title V and ROW regulations].”).

The Interior Board of Land Appeals has expressly rejected the argument that rights under the mining laws apply to pipelines and roads associated with water delivery:

Clearly, FLPMA repealed or amended previous acts and Title V now requires that BLM approve a right-of-way application prior to the transportation of water across public land for mining purposes. See 43 U.S.C. § 1761 (1982). As was the case prior to passage of Title V of FLPMA, however, approval of such an application remains a discretionary matter and the Secretary has broad discretion regarding the amount of information he may require from an applicant for a right-of-way grant prior to accepting the application for consideration. Bumble Bee Seafoods, Inc., 65 IBLA 391 (1982). A decision approving a right-of-way application must be made upon a reasoned analysis of the factors involved in the right-of-way, with due regard for the public interest. See East Canyon Irrigation Co., 47 IBLA 155 (1980).

BLM apparently contends that a mining claimant does not need a right-of-way to convey water from land outside the claim for use on the claim. It asserts that such use is encompassed in the implied rights of access which a mining claimant possesses under the mining laws. Such an assertion cannot be credited.

The implied right of access to mining claims never embraced the right to convey water from outside the claim for use on the claim. This latter right emanated from an express statutory grant in the 1866 mining act. See 30 U.S.C. § 51 (1970) and 43 U.S.C. § 661 (1970). In enacting FLPMA, Congress repealed the 1866 grant of a right-of-way for the construction of ditches and canals (see § 706(a) of FLPMA, 90 Stat. 2793) and provided, in section 501(a)(1), 43 U.S.C. § 1761(a)(1), for the grant of a right-of-way for the conveyance of water under new procedures. In effect, Congress substituted one statutory procedure for another. **There is simply no authority for the assertion that mining claimants need not obtain a right-of-way under Title V for conveyance of water from lands outside the claim onto the claim.**

Desert Survivors, 96 IBLA 193, 196 (1987)(emphasis added). See also Far West Exploration, 100 IBLA 306, 309, n. 4 (1988)(“a right-of-way must be obtained prior to transportation of water across Federal lands for mining.”). The same analysis applies to water, tailings, and power either delivered to, or conveyed from, the project sites. The leading treatise on federal natural resources law confirms this rule: “Rights-of-way must be explicitly applied for and granted; approvals of mining plans or other operational plans do not implicitly confer a right-of-way.” Coggins and Glicksman, PUBLIC NATURAL RESOURCES LAW, §15.21.

Lastly, BLM must comply with the financial requirements of the FLPMA regarding ROW applications and approvals, as well as for Special Use Permits. At a minimum, BLM must obtain “Fair Market Value” (FMV) for the use of federal land and resources. FLPMA requires that “the United States receive fair market value of the use of the public lands and their resources.” 43 U.S.C. §1701(a)(9). “The holder of a right-of-way shall pay in advance the fair market value thereof, as determined by the Secretary granting, issuing, or renewing such right-of-way.” 43

U.S.C. §1764(g). In addition, Nevada Lithium must fully “reimburse the United States for all reasonable administrative and other costs incurred in processing an application for such right-of-way and in inspection and monitoring of such construction, operation, and termination of the facility pursuant to such right-of-way.” *Id.*

### Cumulative Impacts

The EIS should also examine how the various impacts of this mine will add to the collective impacts of other ecosystem disturbing projects in the region. For example, could mercury emissions from the mine when taken together with other mercury sources in the region result in mercury exceedence according to the Clean Air Act. Or, does the mine disturbance further impair the regional ecosystem resulting in seriously threatening fauna and/or flora. The cumulative impact analysis needs to address cultural traditions as well, such as the pine nut harvest.

A cumulative impact is “the impact on the environment which results from incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” (40 CFR § 1508.7.) This definition is critical to determining the proper area to be studied in a cumulative impact assessment.

### Additional NEPA, FLPMA, and Other Requirements

NEPA requires BLM to fully analyze all mitigation measures, their effectiveness, and any impacts that might result from their implementation. NEPA regulations require that an EIS: (1) “include appropriate mitigation measures not already included in the proposed action or alternatives,” 40 CFR § 1502.14(f); and (2) “include discussions of: . . . Means to mitigate adverse environmental impacts (if not already covered under 1502.14(f)).” 40 CFR § 1502.16(h). NEPA requires that BLM review mitigation measures as part of the NEPA process -- not in some future decision shielded from public review. 40 CFR § 1502.16(h). This includes mitigation for all potentially affected resources such as air and water quality, wildlife, cultural, recreation, visual, etc.

Under NEPA, the DEIS must also fully review all direct, indirect, and cumulative environmental impacts of the Project. 40 C.F.R. §§ 1502.16, 1508.8, 1508.25(c). Direct effects are caused by the action and occur at the same time and place as the proposed project. *Id.* § 1508.8(a). Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. *Id.* § 1508.8(b). Types of impacts include “effects on natural resources and on the components, structures, and functioning of affected ecosystems,” as well as “aesthetic, historic, cultural, economic, social or health [effects].” *Id.* Cumulative effects are defined as:

[T]he impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.7.

The DEIS must provide any meaningful analysis of the cumulative impacts of all past, present,

and reasonably foreseeable future activities/actions. In its cumulative impact analysis, an agency must take a “hard look” at all actions:

[A]nalysis of cumulative impacts must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment. . . . Without such information, neither the courts nor the public . . . can be assured that the [agency] provided the hard look that it is required to provide.

*Te-Moak Tribe of Western Shoshone v. U.S. Dep’t of Interior*, 608 F.3d 592, 603 (9th Cir. 2010) (rejecting EA for mineral exploration that had failed to include detailed analysis of impacts from nearby proposed mining operations).

The Ninth Circuit has repeatedly faulted the federal land agencies’ failures to fully review the cumulative impacts of mining projects. In the most recent case, vacating BLM’s approval of a mine, the court stated that “in a cumulative impact analysis, an agency must take a ‘hard look’ at all actions that may combine with the action under consideration to affect the environment.” *Great Basin Resource Watch v. BLM*, 844 F.3d 1095, 1104 (9th Cir. 2016) (emphasis in original) (quoting *Te-Moak Tribe*). BLM violated NEPA because it “did not ‘identify and discuss the impacts that will be caused by each successive project, including how the combination of those various impacts is expected to affect the environment.’” *Id.* at 1105, quoting *Great Basin Mine Watch*, 456 F.3d 973-74.

In *Great Basin Mine Watch*, the Ninth Circuit required “mine-specific . . . cumulative data,” a “quantified assessment of their [other projects] combined environmental impacts,” and “objective quantification of the impacts” from other existing and proposed mining operations in the region. *Id.* at 972-74. The agency cannot “merely list other [projects] in the area without detailing impacts from each one.” *Id.* at 972. See also *ONRC v. Goodman*, 505 F.3d 884, 893 (9th Cir. 2007).

In addition to the fundamental cumulative impacts review requirements noted above, NEPA regulations also require that the agency obtain the missing “quantitative assessment” information. 40 C.F.R. § 1502.22. “If there is ‘essential’ information at the plan- or site-specific development and production stage, [the agency] will be required to perform the analysis under § 1502.22(b).” *Native Village of Point Hope v. Jewell*, 740 F.3d 489, 499 (9th Cir. 2014). Here, the adverse impacts from the Project when added to other past, present, or reasonably foreseeable future actions is clearly essential to BLM’s determination (and duty to ensure) that the projects comply with all legal requirements and minimizes all adverse environmental impacts.

Under NEPA, BLM must also fully analyze the baseline conditions of all potentially affected resources. BLM is required to “describe the environment of the areas to be affected or created by the alternatives under consideration.” 40 CFR § 1502.15. The establishment of the baseline conditions of the affected environment is a fundamental requirement of the NEPA process. “Without establishing the baseline conditions which exist . . . before a project begins, there is simply no way to determine what effect the project will have on the environment, and consequently, no way to comply with NEPA.” *Great Basin Resource Watch*, 844 F.3d at 1101, quoting *Half Moon Bay Fisherman's Mktg. Ass'n. v. Carlucci*, 857 F.2d 505, 510 (9th Cir.1988). “[W]ithout [baseline] data, an agency cannot carefully consider information about significant environment impacts. Thus, the agency fails to consider an important aspect of the problem, re-

sulting in an arbitrary and capricious decision.” *N. Plains Resource Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1085 (9th Cir.2011). This includes the requirement to fully analyze for public review the quality and quantity of ground and surface waters, wildlife, recreation, cultural, air quality, and all potentially affected resources.

FLPMA and BLM mining regulations require that all activities on public land comply with all environmental protection standards, including air and water quality standards. See, e.g., 43 CFR § 3809.5 (definition of “Unnecessary of Undue Degradation” prohibited under FLPMA includes “fail[ure] to comply with one or more of the following: ... Federal and state laws related to environmental protection.”); § 3809.420(b)(4) (listing Performance Standards that must be met, including the requirement that “All operators shall comply with applicable Federal and state air quality standards, including the Clean Air Act (42 U.S.C. 1857 et seq.).”

The same is true for operations that are not specifically authorized by the 1872 Mining Law (such as the waste and tailings facilities discussed above) which are properly governed by DOI/BLM’s FLPMA special use regulations : “(b) Each land use authorization shall contain terms and conditions which shall: ... (3) Require compliance with air and water quality standards established pursuant to applicable Federal or State law.” 43 C.F.R. §2920.7(b)(3). NEPA requires that: “Environmental impact statements shall state how alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of the Act [NEPA] and other environmental laws and policies.” 40 C.F.R. § 1502.2(d).

Thank you for the opportunity to submit these comments. Please feel free to contact John Hadder if you have any questions or concerns.

Sincerely,

A handwritten signature in black ink that reads "John Hadder". The signature is written in a cursive style with a large, looping initial "J".

John Hadder

Kevin Emmerich  
Basin and Range Watch

Laura Leigh  
Wild Horse Eduction

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<sup>i</sup>Chemical Engineering, April 1, 2013.

<sup>ii</sup>ROBERTSON, S.W. and VAN STADEN, P.J. The progression of metallurgical testwork during heap leach design. Hydrometallurgy Conference 2009, The Southern African Institute of Mining and Metallurgy, 2009.