CQ523

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Subject: NEPA Taskforce comments

09/23/02 04:23 PM
Please respond to
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Attatched as a Word file are Mineral Policy Center's comments.

Please contact me if you have any questions.

Thankyou,

- Dan Randolph

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NEPA Task Force.doc

CQ523

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Protecting Communities and the Environment

September 23, 2002

RE: Council On Environmental Quality Review of the National Environmental Policy Act

In response to the Council on Environmental Quality's (CEQ) request for input, this letter examines strengths and weaknesses in current NEPA practice on hardrock mining projects, and gives suggestions for improvements.

This letter addresses both the importance of agency compliance with and the need for improvements to the implementation of the National Environmental Policy Act (NEPA) in the permitting of hardrock mining operations. Currently, and for the past 30 years, NEPA allows individuals, organizations, tribes, and state and federal agencies to comment on the impacts a mining project may have on the environment impacted by a proposed project. NEPA and its accompanying regulations are critical for ensuring that the public has input into mining permit decisions and that those decisions are based upon adequate scientific review and analysis. However, the process could be improved in a number of ways to ensure better protection of the environment and communities impacted by mining proposals.

Importance of NEPA in Mining Related Decisions

NEPA plays a critical role in how mining related decisions affecting lands are made. Key to any discussion of NEPA is the manner in which it allows interested individuals and organizations, directly affected or merely interested as a matter of public policy or general concern over the management of our commonly held public lands, to become involved in the decisions that are made.

The NEPA process aids in the process of making decisions which deal with the impact mining has on an area for a period that reflects geologic time, rather than the biologic time we are accustomed to dealing with. Since people are unaccustomed to making decisions with such long-term implications, the NEPA requirements that the impacts be fully evaluated prior to making the decision, allows for impacts which are beyond our individual experience to be considered more accurately than would otherwise likely occur. Some of these type of issues are discussed below, including long-term monitoring and mitigation needs that can last in perpetuity. As the National Research Council (NRC) noted in its Hardrock Mining on Federal Lands report:

> Unlike many other kinds of industrial point-source emissions, releases from mining operations may take years to develop (e.g., acid drainage) and may continue for many years after a mining operation has closed. So

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> far, the success of modeling long-term water quality and quantity impacts has been fragmented, and the concordance of predicted and actual outcomes has not been adequately reviewed. (National Research Council, Hardrock Mining on Federal Lands, National Academy Press, Washington, D.C. 1999, pg. 107)

The issue of scientific uncertainty implicit in analyzing potential impacts of a decision that may not occur or end for decades or centuries is central to discussing NEPA as it relates to mining, and is discussed in detail below.

The importance of NEPA in mining related decisions affecting public lands is widely acknowledged. In the NRC report, Recommendation 9 specifically addresses this importance:

> **BLM and the Forest Service should continue to base their permitting decisions on the site-specific evaluation process provided by NEPA.** ... The intent of this recommendation is to retain the advantages of the current decision-making approach, which bases environmental protection and reclamation requirements on site-specific evaluations conducted pursuant to NEPA, ... The Committee believes that the NEPA process ... provide(s) the most useful and efficient framework for evaluating proposed mining activities for three reasons.
>
> First, the NEPA process provides the most comprehensive and integrated framework for undertaking these evaluations. The ... process includes the full range of environmental concerns, whether or not they are specifically addressed by some other regulatory program, as well as cultural and other concerns. It allows for clear identification of tradeoffs between ... values, and promotes a better understanding ... of the implications of the many decisions involved in the preparation and approval of a mine's operating plan. .... No other regulatory program provides such a comprehensive, integrated mechanism for decision making.
>
> Second, the NEPA process ensures that the decisions are based on careful analyses of site-specific conditions. ...
>
> Third, ... (T)he NEPA process allows the agencies to be responsive to (such) technological differences. ...
>
> For all these reasons, the Committee believes that the agencies should continue to rely to the maximum extent possible on the flexible, comprehensive NEPA evaluation process for making permitting decisions. (NRC, pgs. 108 – 110) (emphasis in original)

This endorsement of the NEPA process for mine permitting decisions is echoed in many parts of the current Administration's Department of the Interior October 30th, 2001 promulgation of the 43 CFR Part 3800; Final Rule and Proposed Rule. (Federal Register, Vol. 66, No. 210, 54834 – 54862):

> Section 3809.420(a)(4) requires operators to comply with NEPA, ... (pg. 54841)

> Some small mining operations ... have created significant environmental impacts or compliance problems. These problems could have been avoided or reduced if BLM had required the operator to submit a Plan of Operations and the plan had been subject to NEPA review. .... (pg. 54847)

> While some states have some permit review process, most do not have a comprehensive review process similar to NEPA. Other states may have permits geared towards specific media like air or water, but may not address concerns such as cultural resources, or may not always include a public involvement process. (pg. 54847)
> While Alternative 5 has the same notice/plan of operations threshold as the selected alternative, it does not contain the more specific Plan of Operations content or public notice and comment requirements. BLM believes these requirements are necessary for the
> identification, prevention, or mitigation, of environmental impacts associated with mining. (pg. 54847)

We share with the current Administration the belief stated twice in these references to NEPA; that, in order to avoid the worst types of mining impacts, the public must be fully involved in the permitting process.

Need for Improved Cumulative Impact Analyses:

One of the goals NEPA was meant to help achieve was a comprehensive decision making approach to Federal actions, so that long term and cumulative effects of unrelated decisions could be recognized, evaluated, and either avoided, mitigated, or accepted as the price to be paid for the federal action.

NEPA regulations define "cumulative impact" as:

> The 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 CFR §1508.7.

As interpreted by one court: An agency "may not go to the extreme of treating a project as an isolated 'single-shot' venture in the face of persuasive evidence that it is but one of several substantially similar operations." NRDC v. Callaway, 524 F.2d 79 (2nd Cir. 1975). In order to meet this requirement there is a need for improved cumulative impact analyses in most mine project EISs.

Two example EISs that lack sufficient Cumulative Impact Analyses are the Cortez Gold Mines' (Cortez Joint Venture) South Pipeline Project, (NV64-EIS98-141790), and Newmont Mining Corporation's South Operations Area Project Amendment ("SOAPA")(N16-81-009P).

South Pipeline Project:

The South Pipeline Project EIS evaluated an expansion of the Pipeline Project (originally approved in 1996), an open pit gold mine located in north central Nevada. The expansion would increase the size of the mine from 3,166 to 7,616 acres. Ground water pumping and disposal would increase up to 34,500 gallons per minute.

In the South Pipeline Project FEIS, the BLM left out of the Cumulative Effects Study Area (CESA) areas directly connected to the operations of the Cortez Joint Venture (CJV). Just beyond the southwestern boundary of the Cumulative Effects Study Area, yet still within Crescent Valley's southern watershed, lies the Toiyabe Mine and open pit heap leach operation owned by the CJV. Just beyond the northwestern corner of the CESA lies the Hilltop deposit, a proven gold deposit belonging to CJV which has been actively explored under an environmental assessment. Just beyond the southeastern boundaries of the CESA lie CJV's Horse Canyon operations which include open pits, waste dumps (including one with an active AMD problem) and the exploration which has subsequently been proposed by CJV as the Pediment Project. Finally, the CJV has acquired control of the Buckhorn Mine properties through direct purchase or lease. This site is undergoing reclamation but includes several open pits, heap leach pads, and ongoing water quality problems. There is a known gold reserve at this site. We mention these areas because they are mining areas ignored in the cumulative impact assessment which are controlled by the CJV. Having been recently acquired (Toiyabe and Buckhorn have been acquired in the last five years), they obviously figure in the future plans of the CJV.

The boundaries as expressed in the FEIS do not reflect hydrology, wildlife use areas, or areas used by and important to the Western Shoshone. The failure to include the complete scope of the Cortez Joint Venture's operations underestimates the cumulative impact of the South Pipeline operation.

The BLM also ignored a pending land exchange(s) which involve all of CJV's operations in the Crescent Valley area (Pipeline/S. Pipeline, Cortez, Dean Ranch, Toiyabe and Buckhorn). The proposed transfer is of immense proportions. Transfer of these lands to CJV would effectively eliminate Federal regulation of CJV's operations. This would render the NEPA process both past and present as effectively moot. Mitigation required by the BLM and implemented as a result of the NEPA process could be meaningless after these lands leave Federal jurisdiction.

By narrowly defining the CESA, the BLM limited its own, and the public's, ability to understand the full impacts to the area of gold mining by just this one operator. Such a limitation serves to decrease the ability of the NEPA studies conducted from achieving the "comprehensive, integrated mechanism for decision making" noted by the NRC. By this it also undermines the ability for the process to "allow(s) for clear identification of tradeoffs between ... values, and promote(s) a better understanding ... of the implications of the many decisions involved in the preparation and approval of a mine's operating plan." (NRC, 109)

South Operations Area Project Amendment ("SOAPA"):

The SOAPA is a large expansion of Newmont's current gold mining operations in the Carlin Trend of northeast Nevada. The EIS evaluates a proposal to disturb over 1,390 additional acres, and continue groundwater pumping and the dewatering of local aquifers, streams, springs and seeps – up to 25,000 gallons per minute - for at least an additional 13 years. The resulting groundwater drawdown will extend at least 18 miles away from the mine pit, with maximum drawdown predicted for the next 50 years. The overall drawdown will last for hundreds of years, if not indefinitely.

The SOAPA FEIS limits its discussion of environmental impacts, alternatives, and other NEPA requirements to just the activities associated with the SOAPA Plan of Operations (POO). However, the SOAPA POO and the FEIS fail to acknowledge and analyze the impacts from a number of other Newmont mining operations that are directly interconnected with SOAPA. The BLM has recently completed the environmental reviews for these several of these mines and formal approval is imminent.

The first connected operation is Newmont's Pete Project. The Pete Project is a gold mining operation disturbing roughly 863 acres located approximately 7 miles to the northwest of SOAPA. According to the BLM's recently issued Environmental Assessment (EA), "Refractory ore produced from the Pete Project would be processed at existing Mill 5/6, located in Newmont's South Operations Area." Pete EA at 2-4. Over a 7-year lifespan, approximately 1.9 million tons of refractory ore will be sent to the SOAPA for processing.

The second interconnected Newmont mining operation is the Leeville Project. The Leeville Project is about 10 miles northwest of the SOAPA. The BLM recently issued a Final EIS for Leeville and a Record of Decision approving the Project is expected shortly. A total of 486 acres (453 public land) would be disturbed and the Leeville Project is expected to continue for 18 years. "Tailing material that would result from processing of the Leeville project ore would be managed at Newmont's tailing disposal facility in the South Operations Area." Leeville FEIS at 3-6.

Another interrelated Newmont operation is the company's North Operations Area located less than 15 miles north-northwest of SOAPA. Although it appears that ore or waste from that mine will not be transported to SOAPA, substantial ore from the Pete Project will be leached at the North Operations Area. "Oxide ore would be processed at the existing North Operations Area Leach facility." Pete EA at 2-4. Thus, the Pete Project is dependent on both the North and South (SOAPA) Operations Areas.

The only mention of the Pete Project, Leeville and North Operations Area in the SOAPA FEIS is a single-line inclusion of these operations in a generic map and listing of over 40 existing and reasonably foreseeable mining and exploration projects within the overall Carlin Trend. The SOAPA FEIS is devoid of any description of these other operations, their interconnected relationship to SOAPA, or the impacts from these operations. For example, the amount of air pollution resulting from the truck traffic to and from these operations is not discussed. Impacts to visual, scenic, and recreational resources from the ore and waste hauling are similarly omitted. This is in addition to the lack of any discussion of the impacts from these operations themselves in the SOAPA FEIS – or the cumulative on-site impacts from the additional ore and waste at the SOAPA site.

The BLM cannot claim that these other operations are speculative or will not occur. Indeed, the NEPA process for these mines is complete and approval of the Plans of Operation will likely occur in the near future.

Overall, it appears that, at least SOAPA, Pete, Leeville, and North Operations are in essence one comprehensive Carlin Trend Operation by Newmont, separated by Newmont's haul roads. As such, the impacts, alternatives, mitigations, and other NEPA requirements should have been reviewed in a comprehensive EIS. At a bare minimum, the SOAPA FEIS should have reviewed these operations.

"[A]n agency is required to consider more than one action in a single EIS if they are 'connected actions,' 'cumulative actions,' or 'similar actions.'" Northwest Resource Info. Ctr. v. National Marine Fisheries Service, 56 F.3d 1060, 1067 (9th Cir.1995). NEPA requires that proposals "which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement." 40 C.F.R. 1502.4(a). A NEPA document is also required to analyze the impacts of "[c]onnected actions." 40 C.F.R. 1508.25(a)(1). Thus, an agency is required to consider the full implications of each decision in light of other potential developments in the area and to prepare a comprehensive impact statement if several projects are significantly interdependent. Kleppe v. Sierra Club, 427 U.S. 390, 408, 96 S. Ct. 2718, 2730 (1976).

NEPA requires that an EIS analyze the combined effects of the proposed actions in sufficient detail to be "useful to the decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts." See City of Carmel-By-The-Sea v. U.S. Dept. of Transp., 123 F.3d 1142, 1160 (9th Cir.1997). As these two examples illustrate, there is a need for significant improvement in many mining project Cumulative Impact Analyses. By failing to properly evaluate the impacts of connected projects, the decisions which are based upon the NEPA analysis cannot be made with a full and complete picture of the impacts to the environment. In addition, the failure prevents the public's knowledge and ability to adequately comment on the real impacts of the interconnected actions.

Recommendations:

1) Requirements for Cumulative Effects Study Areas (CESA) should be clarified. The clear intent must be to ensure a comprehensive decision making process that will recognize, evaluate, and either avoid, mitigate, or accept any long term and cumulative impacts of Federal decisions.
2) CESAs must be expansive enough to capture other actions in a common watershed, airshed, wildlife habitat area, or cultural area.
3) Federal Agencies must not allow mining company decisions to determine whether connected operations are treated as separate mines or as parts of a single operation. The company may make the decision to mine in a particular areas at different times, and may operationally give them separate names, however, for the purposes of NEPA, the Federal Agency must treat interconnected mining operations as such.

Need for Comprehensive NEPA Studies:

As noted above, one of NEPA's goals was to ensure a comprehensive decision making approach so that long term and cumulative effects of unrelated decisions could be recognized, evaluated, and either avoided, mitigated, or accepted as the price to be paid for the federal action. NEPA regulations define "cumulative impact" as:

> The 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 CFR §1508.7.

Under current practice, comprehensive regional, or programmatic, impact analyses are generally limited to situations where there is an explicit Federal Agency decision to undertake a regional program (such as the decision to open an area to oil and gas leasing, or change the nature of such a leasing program). Such a limitation does not allow for a comprehensive analysis of agency decisions when an area is increasingly dominated by nominally separate but regionally connected mining projects. Some instances of this type of regional impact are: the Carlin Trend, Crescent Valley, and Battle Mountain to Winnemucca regions of Northeast Nevada where gold mines dominate the landscape; the Globe-Miami/Superior/San Manuel region of Central – Southeast Arizona where there are many large copper mines; the Grants, New Mexico to La Sal, Utah - uranium belt of the Four Corners region; as well as others.

In cases such as these, there is a clear need for a larger evaluation of the impacts to the region of all the mine development. Impacts such as regional scale dewatering of aquifers and loss of springs and stream flow, loss of riparian and wildlife habitat, degradation of surface and ground water quality, and the loss of cultural, recreational, grazing, and other uses of the land, are often felt at the regional level, and are not fully covered in any one project's analysis. We therefore recommend that Federal Agencies be required to evaluate when there is a regional impact due to many projects, and then be required to undertake a larger regional analysis of the development as a whole on the region's environment.

There have been some instances where an agency has recognized a regional impact of several projects, and has undertaken limited studies of the cumulative impacts. One recent example is the Cumulative Impact Analysis Of Dewatering And Water Management Operations For The Betze Project, South Operations Area Project Amendment, And Leeville Project (Elko Field Office, Nevada BLM, April 2000). Such a study was clearly called for, due to the scale of dewatering of the upper Humbolt River and its tributaries by current and planned mining operations, which are predicted to dry up dozens of springs, several perennial stream reaches, and last for over 100 years. In the document a definition of "Interrelated Projects" is given for the purpose of the study:

> "Interrelated projects are defined in this document as those activities that could interact with water management operations of the individual projects in a manner that would result in cumulative impacts." (section 1.2)

A similar definition could be used to study the whole Humbolt River watershed, as well as similarly impacted air sheds, wildlife habitat, cultural and socio-economic regions.

Unfortunately, while the Cumulative Impact Analysis was released to the public, and has been referred to repeatedly in several subsequent NEPA documents, there was no opportunity for meaningful public comment. While several organizations, including other Federal and State agencies, commented, the document was released as a final product and no discussion of the adequacy of the study was conducted in a public manner. Thus, while done, the study failed to meet any NEPA requirements, rather relying on the individual NEPA studies which referred to it. Any studies done by an agency to evaluate the impacts on regional resources due mining should meet full NEPA standards of procedure.

NEPA is an action-forcing statute. Its sweeping commitment is to "prevent or eliminate damage to the environment and biosphere by focusing government and public attention on the environmental effects of proposed agency action." Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 371 (1989). It requires the federal agency to ensure "that the agency will inform the public that it has indeed considered environmental concerns in its decision making process." Baltimore Gas & Elec. Co. v. Natural Resources Defense Council, 462 U.S. 87, 97 (1983).

> NEPA ensures that a federal agency makes informed, carefully calculated decisions when acting in such a way as to affect the environment and also enables dissemination of relevant information to external audiences potentially affected by the agency's decision. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989))...NEPA documentation notifies the public and relevant government officials of the proposed action and its environmental consequences and informs the public that the acting agency has considered those consequences. Catron County Board of Commissioners v. U.S. Fish and Wildlife Service, 75 F.3d 1429, 1437 (10th Cir. 1996).

Recommendations:

1) Land Management Agencies should conduct NEPA analyses on a scale equal to that of the impacts from similar actions. As an example, since nearly the whole of the Humbolt River watershed is impacted by either some or all of the air, water, wildlife, cultural, and other impacts from large scale gold mining in the region, the BLM and the Forest Service should conduct an analysis that looks at these impacts in the comprehensive manner recognized as beneficial to proper decision making.
2) The benefits accrued to the public, land management agencies, and all other stakeholders, by the inclusive nature of a NEPA analysis should be utilized whenever projects are "interrelated" under a generalized form of the term used in the Cumulative Impact Analysis of the impacts to the hydrology of the Carlin Trend region discussed above.

Monitoring and Mitigation:

By their very nature, mining operations have huge and often very long lasting impacts to the environment. It is practically universal for mining project NEPA analyses, and the Record of Decision (ROD) that follows, to include various monitoring and mitigation measures. The monitoring and mitigation practices should be designed to ensure that:

a) Predictions of impacts are accurate.
b) Modifications to actions can be taken to prevent unforeseen impacts, or impacts of greater than predicted scale.
c) Mitigation of impacts fully meets the requirements of all laws, regulations, and contracts.
d) The action will meet all legal requirements of FLPMA, which mandates that the BLM "prevent unnecessary or undue degradation of the public lands," or the Organic Act and accompanying regulations, which mandate that the Forest Service "minimize" adverse impacts to national forest resources.
e) Requirements of the Operator by the Federal Agency (or other agencies) are properly carried out.
f) Disclose the extent of possible environmental impact from the proposal, and allow public discourse, and agency deliberation, about those impacts.

All of these points are central to the intent of the National Environmental Policy Act.

In our discussion we will utilize two primary examples of recent NEPA documents, the South Pipeline Project (NV063-EIS98-014), and the Crown Jewel Mine (Final Environmental Impact Statement, Crown Jewel Mine, U.S.D.A. Forest Service Jan. 1997; and Record of Decision for the Final Environmental Impact Statement, Crown Jewel Mine, U.S.D.A. Forest Service, Jan. 1997). The NEPA analyses conducted for these projects illustrate themes common to most, if not all, such analyses for large mine projects.

South Pipeline Project: (for a description of the project see Cumulative Impacts Analysis section)

Monitoring and mitigation measures are central to most RODs. As stated in the ROD for the South Pipeline Project (NV063-EIS98-014):

"The decision .... is to select the Proposed Action Alternative ... analyzed in the .... (FEIS) and as modified with mitigation and monitoring requirements." ... "Monitoring procedures have been established to enhance baseline information and to refine mitigation measures." (ROD, pg. 2)

It is worth a quick review of example language in the ROD concerning these mitigation and monitoring requirements:

Mitigation Measure 4.4.3.3.1-4b: For the significant impacts to wells that are not predicted to occur until after the end of mining, the operational measure described above may not be available. For the post-mining delayed impacts of drawdown, the ground water flow model will be updated during the final year of dewatering using actual field data ..... to reevaluate drawdown predictions that would occur after the end of mining. Significant effects on wells with active water rights will be mitigated by one or more of the following measures, ... (ROD, pg. 7)

Pit Lake Water Quality Pit lake water quality modeling conservatively predicts that two (2) analytes may exceed Nevada water quality standards under the Proposed Action after approximately 200 to 250 years of evapoconcentration. .... Model simulations carried out beyond 250 years after the end of mining (greater than 800 years) indicate .... approximately 36 acre-feet per year is calculated to flow from the pit lake into the adjacent ground water. ... As a result of the inherent uncertainties in long-term model predictions, it is unknown whether seepage from the ultimate pit lake will occur. ... Long-term monitoring ... will be required to determine whether the pit lake has the potential to discharge to ground water. .... A long-term contingency fund has been established ... to provide for long-term monitoring and a program of mitigative or corrective actions should long-term monitoring indicate the need .... For example, pit lake water could be pumped to maintain the lake stage at an elevation below which outflow ... does not occur. (ROD, pgs. 7-8)

Mitigation Measure 4.4.3.3.1-9b: If ground water is degraded by infiltration through saline soils in the vadose zone, then mitigation measures will be undertaken. .... Alternative infiltrations sites may also be used.

A few things are clear from the mitigation measures above:

a) Since the impacts of a mine such as this are extremely long lasting, it is difficult to predict the success or failure of the currently discussed mitigation measures to actually prevent significant harm to the environment.
b) The modeling used to predict the long-term impacts is inexact, leading to large unknowns. (This issue is discussed further below, in the section dealing with scientific uncertainty.)
c) For actions which are predicted to have potentially significant impacts to water quality in the distant future, such as pit lake water quality in this case, the agency often relies on uncertain and vague mitigation measures. Not addressed, for example, are the uncertainties of consumptive water use patterns, pit lake use, or economic or legal structures able to carry out, much less enforce, mitigation measures 200, much less 800, years into the future.

d) Even in the case of more reasonable timeframes and less complex physical systems, it is common to base decisions upon uncertain mitigation measures, as shown in **Mitigation Measure 4.4.3.3.1-9b**.
e) In many instances, there is a form of tiered speculation in the EISs and accompanying RODs. This can be seen here where the BLM relies upon a long-term (in the hundreds of years) monitoring plans, which are vague in nature at the time of the decision, to determine if and what equally vague mitigation measures will be used if, and when needed.

Clearly, the mitigation measures discussed above do not meet the NEPA requirement for full, scientific, appraisal. Some courts have reached similar conclusions:

> The Forest Service's perfunctory description of mitigation measures is inconsistent with the "hard look" it is required to render under NEPA. "Mitigation must be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated." Carmel-By-The-Sea v. Dept. of Transportation, 123 F.3d 1142, 1154 (9th Cir. 1997) (quoting Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 353 (1989)).

> "A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA." Northwest Indian Cemetery Protective Association v. Peterson, 795 F.2d 688, 697 (9th Cir. 1986), rev'd on other grounds, 485 U.S. 439 (1988).

> It is also not clear whether any mitigating measures would in fact be adopted. Nor has the Forest Service provided an estimate of how effective the mitigation measures would be if adopted, or given a reasoned explanation as to why such an estimate is not possible. . . . The Forest Service's broad generalizations and vague references to mitigation measures ... do not constitute the detail as to mitigation measures that would be undertaken, and their effectiveness, that the Forest Service is required to provide. Neighbors of Cuddy Mountain v. U.S. Forest Service, 137 F.3d 1372, 1380-81 (9th Cir. 1998)

The reliance in NEPA documents upon monitoring and mitigation plans which are not actual, detailed and thus capable of being evaluated by the decision makers, other agencies, or interested members of the public, consistently fail to meet the "hard look" requirement mandated by, and central to, NEPA. Instead, it is common for the following statement by the BLM to better reflect NEPA practice: "Please note that the language used for all mitigation measures will not be final until the BLM issues the Record of Decision for the project." (Phoenix Project FEIS, Appendix C, Response 13-43) In fact, some statements in EISs are self-contradictory on this issue: "The BLM disagrees that the EIS does not adequately discuss potential mitigation measures. .... **Other** appropriate mitigation measures identified during the NEPA process will be prescribed as a condition in a Record of Decision issued by the BLM." (Phoenix Project FEIS, Appendix C, Response 13-50)

Crown Jewel Mine:

The Crown Jewel Mine EIS evaluated a proposal by Battle Mountain Gold Company for an open pit cyanide heap leach gold mine in north-central Washington. (Battle Mountain Gold Company was subsequently bought by Newmont Mining Corporation, which in July 2001 abandoned the project.

Crown Resources is currently evaluating an underground mine at the site.) The Forest Service issued an FEIS, and subsequently a ROD for the Crown Jewel Mine. The decision was challenged in Federal Court, and upheld in 1999. Below, we cite from the FEIS as well as briefs filed during the challenge to the Forest Service's ROD.

For our discussion of mitigation and monitoring, two separate water quality impacts are of the most serious concern: (1) the creation of a predicted toxic pit lake; and (2) the discharges from the lake to local streams. Water quality in the proposed pit lake was "predicted to exceed the Washington fresh water chronic criteria for cadmium, copper, lead, mercury, and selenium and the Washington fresh water acute criteria for silver and selenium." (FEIS 4-72.) In addition, "if untreated, 'water that fills and/or ultimately discharges from the open pit is expected to exceed Washington State's primary or secondary ground water criteria' for several heavy metals." (FA Brief 31.)

The FEIS lacked any substantive discussion of mitigation to prevent the creation of the toxic lake. Further, the agency provided only a listing of measures for mitigating the discharge of contaminated water from that pit lake.

The only discussion of mitigation with regard to the creation of the toxic pit lake was a reference to a nine-step process which would lead the operator from review of environmental impacts, through to 'clean closure' of the mine. The discussion did not provide the public with any credible or substantive mitigation measures, but merely described a process that would presumably identify such measures in the future. (FEIS at 2-124, -125). Thus, this FEIS included only a statement of intent to react to significant impacts when they occur, rather than evaluating how to meet the purpose and need of the project while limiting clearly predicted and significant impacts. Such an interpretation of NEPA effectively nullifies the very reason for NEPA, that is to ensure that impacts, and measures to limit them, are discussed in a public manner **before** the agency approves a ROD and FEIS.

For NEPA to be at all meaningful, the lead agency must make a credible scientific determination of the expected effectiveness of proposed measures to limit significant environmental impacts prior to making a decision. The degree of impact will be determined by the degree of success of the mitigation. Without clear scientific evaluation, neither the agency nor the public can adequately assess the environmental impacts of the project, a basic requirement of NEPA. "[O]mission of a reasonable complete discussion of possible mitigation measures would undermine the 'action-forcing' function of NEPA." Methow Valley, 490 U.S. at 352.

The National Research Council, in discussing monitoring at mine sites came to the same conclusion: "Care should be taken to assure that monitoring requirements are adequately comprehensive and include the necessary quality control measures and documentation to be credible to the public." (NRC, pg. 60) While not written as an observation on NEPA, the same need holds true if the NEPA process is to be credible to the public.

In the Crown Jewel FEIS, ROD, and court case, the Forest Service's core argument was that mitigation based primarily on monitoring was adequate because "if the monitoring data indicate that the pit lake will violate water quality standards, the company will be required to adopt the necessary waste water treatment methods in order to avoid violating state and federal law." (FA Brief 25, n.6). By waiting until a violation predicted by their own study actually occurs, the USFS would not be **minimizing** adverse impacts, but merely acting after the fact to hopefully repair the damage. By limiting the NEPA discussion of impacts to its decision to rely on unexamined and unevaluated solutions, the Forest Service clearly did not meet the need under NEPA for effects of governmental decisions on the human environment to be recognized, evaluated, and either avoided, mitigated, or accepted as the price to be paid for the federal action, **prior** to the decision actually being made.

Subsequent to the Forest Service's FEIS, ROD, and successful defense of the decision in both Federal Court and the 9th Circuit Court, the Washington State Pollution Control Hearings Board (PCHB) ruled against various water quality and quantity permits required by the proposed mine. Looking at largely the same issues with regard to mitigation of predicted or possible impacts, as had the Forest Service, the PCHB reached very different conclusions. It is instructive to look at some of the reasoning of the PCHB.

> 51. There is no dispute that the proposed mine will require significant mitigation of adverse impacts to … water quality. …
> 58. The proposed mitigation, … is not legally sufficient ... **The mitigation is therefore highly speculative and uncertain**. … The same is true for the pit lake. The response to predicted pollution in the pit lake is to construct a water treatment plant on top of a mountain that will have to be powered and maintained forever. We are unable to say what will ultimately happen with the waste rock piles. We know that they will pollute the environment. How or in what manner the applicant and state will respond to this pollution is unknown.
> 59. The only real assurance we have is the proposed bonding that the state may rely on to enforce environment laws in the future. This approach is tantamount to entering a busy interstate highway on an exit ramp against the traffic. The availability of insurance in that circumstance is no more comforting than the proposed bonding here. The focus of our environmental laws must be on preventing pollution and habitat degradation. It is not legally sufficient to proceed with the proposed mine without much more specific knowledge of the potential impacts from the development and **meaningful means of preventing and protecting against** the adverse consequences of the development. The long-term engineered solutions proposed in this case are legally insufficient.
> 61. The inadequacy of the mitigation plan rests primarily on the lack of information supporting the scheme. ... The **speculative and perpetual nature of mitigation proposed** here does not meet the requirements …
> 63. A § 401 Certification means that the state has **reasonable assurance** that there will be compliance with water quality laws. ...
> 64. … The … model predicts that the pit-lake will violate water quality standards. The contingent response to this is to construct a high-altitude water treatment plant that must be powered and maintained in perpetuity. **The long term speculative success of a permanent water treatment facility should not replace the protections afforded by our water quality laws.** Even more speculative is the projected pollution from the two waste rock facilities. …
> (PCHB 97-146 Final) (emphasis added throughout)

The standards of assessing and handling adverse environmental impacts required by the PCHB in this decision were not extreme:

> 63. ... Our water pollution laws do not mandate such stringent purity in waters of the state. … Water quality regulations recognize the impact of human activity and provide means to allow for reasonable compliance through measures such as mixing zones, … compliance schedules, … and, as in this case, alternate points of compliance, … It would be seemingly impossible to undertake any type of mining or construction without

> causing some disturbance … that might lead to a violation of water quality standards. It is therefore reasonable to establish time periods and boundaries within which a mining activity must come into compliance with applicable standards. (PCHB 97-146 Final)

These statements clearly demonstrate that the PCHB did not consider the Forest Service monitoring and mitigation plan to be adequate to comply with state legal requirements.

The Crown Jewel Mine FEIS illustrates yet another aspect of the need for adequate analysis of monitoring and mitigation aspects of a mine project, in order to meet the intent of NEPA. The USFS asserted in its court brief, "the FEIS contains a thorough and candid review of all of the potentially adverse effects of the Mine." FA Brief 22, n.4. However, the agency failed to recognize, let alone discuss, the additional environmental impacts which would be created by the very mitigation measures themselves. Any water treatment facilities needed would represent major mine components, with their own waste products and other adverse impacts.

The potential for large volumes of waste material to be generated by the water treatment facilities, potentially in-perpetuity, clearly could have significant environmental impacts through time. This particular failing is common to all mine projects that are predicted to require perpetual water treatment.

A rather spectacular example of this failure in NEPA analysis (for scale of the problem likely under the Proposed Action), is the proposed Phoenix Project in north central Nevada. (NV063-99-001P (NVN067930) 3809 NV063-EIS00-28 1790) Newmont Mining Corporation / Battle Mountain Gold proposes to take a site that is already producing a lot of acid mine drainage, and which will require perpetual water treatment, and mine nearly a billion tons of additional rock, the vast majority of which is extremely acid generating. The FEIS states that ground water contamination from the proposed action will likely continue for up to 20,000 years.

The proposed action relies on the mitigation measure of successfully collecting all polluted groundwater by pumping, followed by treatment with lime to neutralize the acidity. This would require continuous and involved management of the pumps and treatment plant for many thousands of years. Despite the massive requirements for lime that such a plan would require, and the massive amount of metal-laden sludge that would be generated through the life of the proposed treatment action, the FEIS did not contain **any** calculations as to the scale of either of these clearly significant impacts to the environment. Nor were either the sources for the lime (and associated impacts), or the sludge disposal method, location, and possibilities for leaching of metals, given even the slightest mention.

Recommendations:

1) In order to meet the clear intent of NEPA to ensure that impacts of federal actions are evaluated, and considered **prior** to the decision being made, monitoring and mitigation components of mining operations **must** be fully discussed and evaluated in the NEPA analysis.
2) Since federal decisions about mining operations often rely upon uncertain predictive models, the monitoring of those predictions is a central component of those decisions, and, as such, are fundamental components of the federal action that must be fully analyzed in the NEPA review process.

3) Significant impacts from mining operations may occur long after the operations have ceased, and may last for hundreds and even thousands of years. Therefore, the monitoring of impacts, and the mitigation of harm, must also continue for long periods of time. This aspect of mining operations must be explicitly recognized, analyzed, and evaluated in any NEPA analyses of mining proposals.
4) As critical components of a mining operation, and often of a nature that may have unique impacts to the environment, the impacts of the mitigation and monitoring plans must themselves be evaluated in the NEPA analysis.

5) Agencies often rely upon the efficacy of proposed mitigation measures to meet legally mandated standards, as such, the likely efficacy must nearly be as closely and critically analyzed as the mining operations themselves.

Scientific Uncertainty, Scientific Review, and Conflict of Interest

Scientific Uncertainty:

Due to the scale of modern mining's impacts, in both time and space, and the complex natural systems impacted, NEPA analyses of a mine's potential impacts must deal with the issue of scientific uncertainty. As stated in the NRC report:

> The models and tools needed to project and assess the consequences of changes in baseline conditions resulting from the activities proposed for the site include air quality emission factors and models, acid-generation prediction models, pit lake water quality models, and hydrological models, among others. Current models and tools have varying degrees of uncertainty and have been subjected to varying degrees of calibration and verification. (NRC, pg. 59)

The issue of scientific uncertainty as it relates to mining related decisions under NEPA, is itself complex. Included in the primary topics that need to be considered are: risk and risk assessment; the interrelated nature of degrees of uncertainty in various aspects of the overall assessment of a mine's impacts (e.g., how uncertainties in acid drainage generation, when connected to the uncertainties in bedrock fracturing complicate the inherent uncertainties in pollute transport, which affect the uncertainties around the long term effects a mine may have on aquatic systems in the larger region); and the uncertainties in how best to manage impacts that may last decades to hundreds or thousands of years. It is the goal of the NEPA analysis to present to the public, and the decisionmaking agency, an assessment of the impacts a mine may have, and techniques by which those impacts may be mitigated. At the heart of this is the manner in which the study discloses this uncertainty.

The NEPA analysis is not intended to present an argument either for or against a project as a whole or of any of it's component parts (or any of the alternatives or their component parts), but rather to provide to the public and the agency the best information that can be reasonably achieved. Unfortunately, it is exceedingly rare for EISs to discuss the uncertainties in the science discussed, or the implications on the predicted impacts should those predictions indeed be inaccurate.

"From an engineering or environmental perspective, risk can be defined as the mathematical product of the probability of an event occurring and the consequences of that event should it actually

occur." (MEND Manual, Vol. 1 – Summary, SENES Consultants Limited, March, 2001, pg. 1-7) Risk is often confused with just the probability component of it, as the claim that the "risk" of a large nuclear accident is less than getting hit by lightning. Yet, clearly a large nuclear accident has consequences much greater than a bolt of lightning (if not for the one struck, at least for society).

Large mines have the potential for massive environmental harm, as has been shown by the mines on the EPA's Mega-site Superfund list (the Summitville site in Colorado costing over $230 million total, the Butte – Silver Bow site in Montana costing over $250 million, the ////). Should the prediction that the Phoenix Project's pollution will be contained and treated be inaccurate, this site will be producing heavy metal contaminated water for many thousands of years. Clearly, while the likelihood of that failure can be debated, the consequences are large. Or in the case of the dewatering of the aquifers in the Carlin Trend area of the Humbolt River drainage, should the predictions that the Humbolt River will not be severely harmed, and that the tributaries that host remnant populations of Lahontan Cutthroat Trout will remain viable, are inaccurate, the whole middle and lower Humbolt River could be in jeopardy, as well as the economy and ecology of the whole region, for many decades. Again, the consequences of a failure in prediction are huge.

Risk assessment is a rapidly evolving science that is utilized by most heavy industries, as well as their investors and insurers. "These techniques can be applied to identify impacts or benefits associated with proposed actions, and determine the sensitivity of outcomes with respect to the underlying assumptions." (MEND Manual, Vol. 1 – Summary, SENES Consultants Limited, March, 2001, pg. 1-7)

Clearly, such an assessment would be helpful for the public and agencies wrestling with decisions that have the possibility to do as great harm as do many of today's large mines. Yet, risk assessment is not included in the NEPA process. While the scientists which do the work of predicting and modeling the likelihood of acid generation, or extent and duration of groundwater drawdown, may do sensitivity analysis on that work, it is not presented to the public or agencies in the NEPA documents. In some cases sensitivity analysis is conducted and is discussed in the background documents to an EIS, yet by not discussing this analysis in lay terms in the EIS, the public has limited ability to even be aware the uncertainty exists, or the ramifications it may pose.

The argument often presented to comments raised, is that "NEPA guidance states that EISs must be written for the lay public." (SOAPA FEIS, Appendix E, pg. 46, Response 32dd) Yet, since most of the lay public does not understand the extent or potential implications of the uncertainties, the lack of discussion in the EIS constitutes a serious misleading of the public. The lack of disclosure fails to allow the process "for clear identification of tradeoffs between … values, and promote(s) a better understanding … of the implications of the many decisions involved in the preparation and approval of a mine's operating plan." (NRC, 109) Lack of discussing uncertainty implies the existence of certainty, which is a deception in many cases.

The issue of scientific uncertainty is not just one of public confidence, but also of having the ability to make reasonable decisions when affecting such a magnitude of issues in both time and space as can a modern mine. "**Successful environmental protection is based on sound science.** Improvements are needed in the development of more accurate predictive models and tools and of more reliable prevention, protection, reclamation, and monitoring strategies at mine sites." (NRC, pg. 92; emphasis in original) "Regulatory agencies and the mining industry are not adequately addressing research needs related to the environmental aspects of hardrock mining and reclamation, including the uncertainty associated with predictive modeling." (NRC, pg. 106)

These statements by the National Research Council contrast sharply with the comments in recent EISs that deal with issues of huge complexity and consequence:

> "The BLM recognizes the uncertainties associated with the ground water flow model. However, as indicated above, the model provides an acceptable understanding of potential hydrologic effects that may be caused by the Phoenix Project." (Phoenix Project FEIS, Appendix C, Response 13-65)
>
> "The calibrated model has been accepted by the BLM as a reasonable representation for observed baseline conditions in the study area." (Phoenix Project FEIS, Appendix C, Response 13-67)

These statements also fail to meet NEPA regulations, which at 40 C.F.R. § 1502.22, impose three mandatory obligations on the BLM in the face of scientific uncertainty: (1) a duty to disclose the scientific uncertainty; (2) a duty to complete independent research and gather information if no adequate information exists (unless the costs are exorbitant or the means of obtaining the information are not known); and (3) a duty to evaluate the potential, reasonably foreseeable impacts in the absence of relevant information using a four-step process.

This process must remain, and if fact be followed more closely if public confidence is to be maintained, and if the agency is to truly be capable of the 'reasoned approach' to decision making that NEPA requires.

What sometimes occurs is the selective use of uncertainty to argue for a particular decision. In the South Pipeline Project FEIS, the BLM admits, "the long-term predictions indicate that waters of the state (pit water and immediately adjacent ground water) would be degraded...." (South Pipeline FEIS, 6-99). However, the response to AA-13 goes on to note that: "It is uncertain if this constitutes a violation of NAC 445A.424 or NAC 445A.429...". Id. (NAC refers to Nevada Administrative Code). This uncertainty, we are told, stems from the "uncertainty of the long-term predictions...". (Id.).

The BLM here appears to be trying to have it both ways. When the models and studies are attacked for failing to adequately predict future impacts, the agency vigorously defends the modeling and underlying assumptions. However, when the studies reveal potential impacts that are problematic for Project approval, the BLM points to the inherent uncertainties which invariably affect long-term predictions. Under this view, predictions saying that there will be no acid mine drainage, air quality violations, etc., are similarly unusable by the BLM. Clearly, the BLM is not advocating that all long-term predictions that are "uncertain" cannot be used. If that were the case, then clearly no large mine could be permitted on public lands.

Scientific Review:

As noted above, the issues involved in reviewing a large mine project are complex and involve natural systems about which our current understanding is inexact, especially when making predictions into the hundreds or thousands of years. It is also very important to recognize that the predictions made in past NEPA documents of mine projects have lead much of the public to not trust the analysis itself.

One component which is clearly needed is an evaluation of the science used in an EIS, based not on just peer-review, but also by review of the track record of the science at actual mine sites. "Public confidence in the land management agencies is compromised if the public lacks the ability to track compliance with land use decisions." (NRC, pg. 88) The NRC went on to state: "So far, the success of modeling long-term water quality and quantity impacts has been fragmented, and **the**

concordance of predicted and actual outcomes has not been adequately reviewed." (NRC, pg. 107)

There are two critical components of the current system which often lead to real or perceived problems with the integrity of the scientific analysis in a NEPA document. The first is the use of outside consultants, almost always paid for by the mine proponent, to prepare the EIS itself. The second is the reliance on agency expert opinions without discussion of the basis for those opinions.

> The current use of consultants raises questions about potential conflicts of interest, for in many cases the consultants, although retained by the agency, are paid by the applicant and the applicant therefore retains at least a perceived role in directing the consultant. For instance, most environmental impact statements prepared to support decisions to permit new mining operations or substantial modifications of existing operations are prepared by third parties **selected by the agency and the applicant**, and paid for be the applicant. .... However, the relationship does create the appearance, if not the fact, of a potential conflict of interest. (NRC, pg. 74) (emphasis added)

There is indeed concern with this relationship, as the preparation of environmental review documents constitutes a major component of many consulting firms' business. Therefore, the degree to which they come to conclusions, and write documents, which successfully get projects permitted, regardless of the scientific validity or forthrightness of document writing involved, will increase the likelihood of their being retained for future work. There is arguably a 'captive industry' of environmental consultants, whose primary business is work paid for by industry, that allows the industry to proceed through the NEPA process as smoothly as possible.

The second aspect of scientific review, deals with agency expertise itself. In Idaho Sporting Congress, 137 F.3d 1146 (9th Cir. 1998), the court stated that where an agency relies on its own expert opinions, it must also provide the underlying data for that opinion. The court explained that:

> a successful challenge to the [agency's conclusions] would entail challenging [the agency expert's] expertise and opinions, yet, this is the type of challenge we have found impermissible under arbitrary and capricious review. Greenpeace Action v. Franklin, 14 F.3d 1324, 1333 (9th Cir. 1992) (finding that an agency is entitled to rely on its own scientific opinion of data). As a result, allowing the Forest Service to rely on expert opinion without hard data either vitiates a plaintiff's ability to challenge an agency action or results in the courts second guessing an agency's scientific conclusions. As both of these results are unacceptable, **we conclude that NEPA requires that the public receive the underlying environmental data from which the Forest Service expert derived her opinion**. In so finding, we note that NEPA's implementing regulations require agencies to "identify any methodologies used and [ ] make explicit reference by footnote to the scientific and other sources relied upon for conclusions" used in **any** EIS statement. 40 C.F.R. § 1502.24.

Therefore, statements such as "The calibrated model has been accepted by the BLM as a reasonable representation for observed baseline conditions in the study area" (Phoenix Project FEIS, Appendix C, Response 13-67), are not acceptable, although common. NEPA requires that "[a] gencies shall insure

the professional integrity, including scientific integrity, of the discussions and analysis in environmental impact statements." 40 CFR § 1502.24.

Both NEPA and the APA require that an agency's determinations be supported by factual information in the decision. "The agency must explicate fully its course of inquiry, it's analysis and it's reasoning." Dubois v. U.S. Department of Agriculture, 102 F.3d 1273, 1287 (1st Cir. 1996). An agency decision must always have a rational basis that is both stated in the written decision and demonstrated in the administrative record accompanying the decision. Kanawha & Hocking Coal & Coke Co., 112 IBLA 365, 368 (1990). The decision must be made in a "careful and systematic manner." Edward L. Johnson, 93 IBLA 391, 399 (1986). The record must demonstrate a "reasoned analysis of the factors involved, made in due regard for the public interest." Alvin R. Platz, 114 IBLA 8, 15-16 (1990).

Recommendations:

1) The risks posed by the proposed decision, as well as for the alternatives, must be included in lay, but accurate, terms in the NEPA document.
2) The risk assessment conducted to evaluate the scientific uncertainties involved must be included, also in lay but accurate terms, in the NEPA document.
3) The success or failures of similar modeling or predictive efforts at other mine sites must be presented in the NEPA document to allow full public awareness and evaluation of adequacy.
4) The current use of third party contractors, paid for and partially selected by the applicant, must be changed in order to recover public confidence in the validity of the science conducted and presented in the documents.
5) The CEQ Taskforce should evaluate options be insure there are no real or perceived conflicts of interest. Options could include having the federal agency be solely responsible for the selection, with the money needed to conduct the analysis being paid through the agency as well.
6) When an agency determines that a scientific argument is sufficient, it must explain the basis for this determination.
7) The use of uncertainty to justify the dismissal of an alternative, or to proceed when a violation of law is predicted, and yet to dismiss the uncertainty that a proposal will not meet legal requirements is clearly a double standard that must be prohibited.

Alternatives Analysis

The consideration of alternatives is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14 (1998). It is "absolutely essential to the NEPA process that the decisionmaker be provided with a detailed and careful analysis of the relative environmental merits and demerits of the proposed action and possible alternatives, a requirement that we have characterized as 'the linchpin of the entire impact statement.'" Natural Resources Defense Council v. Callaway, 524 F.2d 79, 92 (2d Cir. 1975). Moreover, "[t]he existence of a viable but unexamined alternative renders an environmental impact statement inadequate." Resources Ltd. v. Robertson, 35 F.3d 1300, 1307 (9th Cir. 1993) (quoting Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992)).

According to the CEQ:

> In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative.
>
> An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. (Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18026, 18027 (March 23, 1981))

These statements by the CEQ and the courts make clear that the inclusion of alternatives in detailed analysis is a central component that can not be lightly handled.

Unfortunately, the practice of agencies in mining related EISs is other than the one expounded above. In the SOAPA FEIS discussed above, the BLM's cursory dismissal of several alternatives is unsupported by any scientific evidence. BLM simply listed a few reasons why the alternatives were "technically infeasible" without providing any analysis. Such is the all too customary practice.

In the South Pipeline Project FEIS, discussed above, the FEIS really only considered one approach: Cortez Gold Mining's proposal. The BLM created the illusion of alternatives in the FEIS by presenting variations of the company's proposal. The BLM perpetuated the illusion by adding an "Agency preferred alternative" to the FEIS, which again was simply the applicant's plan combined with various mitigation and other requirements. During the process, the only alternative that received serious consideration was the one proposed by the company.

By doing so, the agencies misapprehend the whole idea of an EIS. NEPA cannot be satisfied by analyzing alternatives that are merely versions of each other. The point of NEPA's alternatives analysis is to compare the environmental impacts to public lands of different approaches to public land use.

A common rational for rejecting alternatives, or even analyzing them, is the claim of economic infeasibility. All too often, there is no analysis of the economics used to justify this assertion. At a minimum, a full analysis of the reasons for rejecting reasonable alternatives on economic grounds should be included. To satisfy NEPA, "[t]he agency must explicate fully its course of inquiry, its analysis and its reasoning." Dubois v. U.S. Department of Agriculture, 102 F.3d 1273, 1287 (1st Cir. 1996). There is generally no showing that the agency has made a complete and independent analysis of the "cost" factors involved in rejecting various alternatives.

> Numerous courts have rejected this approach:
> "NEPA requires, where economic analysis forms the basis of choosing among alternatives that the analysis not be misleading, biased or incomplete. Oregon Natural Resources Council v. Marsh, 832 F.2d at 1499; Johnson v. Davis, 698 F.2d 1088, 1094 (10th Cir. 1983). **To present a full and unbiased picture of proposed alternatives, the EIS must disclose both benefits and costs.** California v. Block, 690 F.2d at 764 [emphasis added]."

Another approach seen in mine project EISs is the selective use of uncertainty to disregard alternatives. The heart of this issue is discussed above in the section on scientific uncertainty, but is relevant here as well. Again, in South Pipeline FEIS, the BLM rejects a partial pit backfill alternative due to modeled/predicted water quality impacts. Yet elsewhere, as discussed above, they defend permitting actions predicted to not meet state legal requirements due to the uncertainty in those predictions. An agency cannot pick and choose what modeling or prediction results it can rely on, nor

can it dismiss a reasonable alternative due to uncertainty when the same uncertainty holds for the Preferred Alternative.

Lastly, alternatives are sometimes rejected as 'not meeting the purpose and need' for the project. However, the purpose and need stated for most mine projects is some version of the following from the SOAPA FEIS:

> Newmont's purpose ... is to use its existing work force, mining and milling equipment, and ore-processing facilities, to produce gold.... Gold is an established commodity with international markets. ... The need for the project is to recover as much of the mineral deposit as is technically and economically possible, ...to meet this demand. (SOAPA FEIS, pg. 1-3)

With a purpose and need defined by an applicant's desires, and by the Federal Agency stating as it's purpose and need, that of the company, it is clear that 'not meeting the purpose and need' for the project could mean anything which the company deems unacceptable. This is clearly not the same as meeting the needs of the public at large, which is the mandate of the Federal Agencies. While the General Mining Law may put constraints on the decisionmaker, it does not put constraints on NEPA. We would argue that the true purpose and need for the SOAPA analysis is to respond to the application, under the General Mining Law, for an expansion of existing facilities.

Recommendations:

1) The need to evaluate reasonable alternatives is central to NEPA; as such this need, and its broad application should be strengthened.
2) When terms such as 'economic infeasibility', 'technical infeasibility', and 'uncertainties', are use for alternative dismissal they must be given full and detailed justification.

The Federal Agencies must define the purpose and need of projects from their full mandate to manage the public lands for the benefit of the public, not by the intent of the applicant.

Other Considerations

Bonding:

It is common for bonding calculations and justifications to be omitted from NEPA review on mining projects.

The preamble to the year 2000 revised 3809 regulations specifically anticipates that the amount and adequacy of the financial assurance be subject to the NEPA process. "BLM will respond to comments made on the reclamation cost estimate at the same time and manner as they respond to comments made on the NEPA analysis of the plan of operations." 65 Fed. Reg. at 70045 (Nov. 21, 2000). Although the current Administration substantially revised the 3809 regulations after their initial revision in 2000, the preamble and requirements for bonding and public review were unchanged. "BLM ... has concluded that we should retain the financial guarantee provisions of the 2000 regulations to ensure that sound financial guarantees will exist." 66 Fed. Reg. 32571, 32573 (June 15, 2001).

Yet, an FEIS released after the 2001 regulations for the SOAPA project, does not contain the required financial assurance (or bond) amount. Further, there is no evidence in the FEIS or ROD that

BLM conducted the required independent review of the adequacy of any financial assurance or bond that would be required. The only mention of full bonding is a simple statement that "[b]efore any surface disturbing activities are initiated, Newmont shall provide good and sufficient financial surety for post-mine closure reclamation to BLM, in a manner consistent with the regulations for the Nevada Division of Environmental Protection governing financial surety for reclamation (NRS and NRC 519A)." ROD at Mitigation ¶ 8. However, neither the ROD nor the FEIS contain any analysis as to BLM's review of the supposed bond amount – nor whether such a bond would meet BLM standards in addition to Nevada standards. Such a delayed review of financial assurance bypasses public review, comment, and appeal rights under NEPA.

Bond amounts, and the rationale for those amounts, must be included in the NEPA documents in order for the public to be allowed to comment, since it is the public that will be directly harmed should the bond be insufficient should the operator abandon the site.

Conclusions

NEPA provides a critical opportunity for public oversight of and comment on decisions regarding hardrock mining on federal lands. The need for this oversight and comment has been explicitly recognized by the current Administration. While there are areas in which the land management agencies, as well as other regulatory agencies, fail to meet the intent and mandate of NEPA adequately, the overall program is working.

Mineral Policy Center urges the CEQ NEPA Taskforce to proceed with caution, for the risk of harm to the public interest is large.

Thank you for the opportunity to comment. If you have any questions, please contact Dan Randolph, at 970-382-0421.

Respectfully,

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