UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUN 12 2013

Mr. Joe Norrell
Acting Forest Supervisor
Cibola National Forest
2113 Osuna Road, NE
Albuquerque, NM 87113

Re: Draft Environmental Impact Statement For The Roca Honda Uranium Mine Project, Cibola National Forest, Cibola and McKinley, Counties, New Mexico

Dear Mr. Norrell:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the Draft Environmental Impact Statement (DEIS) prepared by the U.S. Forest Service (USFS).

Roca Honda Resources (RHR), LLC, has submitted a plan of operations to the USFS proposing to develop and conduct underground uranium mining operations at their mining claims on and near Jesus Mesa in the Mt. Taylor Ranger District of the Cibola National Forest in New Mexico. The proposed Federal action is to: (1) approve RHR's plan of operations with mitigations needed to protect other non-mineral surface resources consistent with the 1985 forest plan, regulations, and other applicable laws, and (2) approve a project-specific forest plan amendment to allow the Roca Honda project to deviate from the forest plan standards of management with regard to historic/cultural properties. According to the DEIS, the proposed underground uranium mine and surface support facilities would disturb 1,920 acres of land, and operations are expected to last 18 years, with a possible extension.

Based on our review, we have rated the DEIS as EO-3 ("Environmental Objections-Inadequate Information") (see enclosed "Summary of Rating Definitions and Follow-up Actions"). We have also enclosed more detailed technical comments for your consideration. We recommend that the DEIS be revised to address these comments and be made available for public comment in a supplemental or revised DEIS.

The "Environmental Objections" rating is based on the significant adverse impacts to groundwater quantity from the proposed mine. For example, as reported in the DEIS, maximum drawdown of the Westwater Canyon Member of the Morrison Formation would be 1,806 feet when mining actives are completed. One hundred years after mining ends, the proposed project would result in a 10 foot drawdown contour encompassing 17 square miles, with a 30 foot maximum drawdown at the mine itself. As a result, the groundwater wells and springs within a 17 mile radius have a high probability of becoming dry.

The "Inadequate Information" rating is because the DEIS does not provide detailed information on how USFS will ensure that funds will be available as long as they are needed to implement post-closure obligations. An adequate reclamation bond and post-closure funding mechanism are needed to ensure that the costs of reclaiming and managing the site after closure are funded by the mine operator for as long as necessary. Without this information, we cannot fully assess the potentially significant environmental impacts of the proposed project andwhether the project might result in a long term financial liability to the federal government in the future, e.g., under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). We recognize that the issue of financial assurance for mining on federal lands is important, and we look forward to continuing the national interagency dialogue on this subject to seek resolution between our agencies on this issue. In the meantime, EPA continues to believe that the adequacy of financial assurance is a critical element that needs to be disclosed during the NEPA process.

The DEIS also provides an inadequate analysis of the characterization and treatment of the waste rock. This is especially important, as the DEIS notes that following closure of the mine, the rebounding groundwater table would interact with waste rock used to backfill the mine. The geochemical make-up of the waste rock that will be stored on site and used to backfill the mine was not characterized and details of the methodology to be used is not discussed in the DEIS. As noted in the DEIS, the backfill has the potential to increase concentrations of uranium, and radium as well as selenium, sulfate, arsenic, molybdemum, vanadium and total dissolved solids in the groundwater. We are also concerned that there is a lack of analysis of potential leakage or seepage between aquifers which would potentially allow the transfer of contaminants from groundwater that interacts with the mine backfill once the pumping has stopped. In addition, we are concerned that the water quality monitoring and mitigation measures proposed in the DEIS are not sufficient. We are particularly concerned that the DEIS does not include a discussion of mitigation measures necessary to deal with groundwater contamination, should that occur.

In addition, EPA is concerned by the likely impact of the proposed uranium mining operations on tribal cultural resources and environmental justice communities. As the DEIS acknowledges, Mt. Taylor is sacred for the Acoma, Laguna, Zuni, Hopi, and Navajo Tribes. The sacred attributes of Mt. Taylor stem from the traditions, beliefs, practices, and social institutions that have been passed down through the generations since pre-history. Even with the proposed mitigation, the DEIS states that the project alternatives would cause significant adverse impacts to this important tribal cultural resource. We recommend that the USFS more thoroughly outline potential approaches to dealing with these concerns, in consultation with the relevant tribal governments.

EPA appreciates the opportunity to review this DEIS, and we will continue to work with you to resolve the issues outlined in this letter. If you have any questions, please contact me or Rhonda Smith of my office at 214-665-8006 or by email at smith.rhonda@epa.gov for assistance.

Sincerely,

John Blevins
Director
Compliance Assurance and
Enforcement Division

Enclosures

EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE ROCA HONDA URANIUM MINE PROJECT, CIBOLA NATIONAL FOREST, CIBOLA AND MCKINLEY, COUNTIES, NEW MEXICO

Groundwater Resources

Groundwater Quality

The Draft EIS (DEIS) states that once active mining is discontinued and depressurization of wells ceases, the rebounding groundwater table would interact with waste rock used to backfill the mine. The geochemical composition of the waste rock that will be stored on site and used to backfill the mine was not characterized and details on the methodology to be used is not discussed in the DEIS. The DEIS states that the backfill has the potential to increase concentration of uranium and radium, as well as selenium, sulfate, arsenic, molybdenum, vanadium, and total dissolved solids in groundwater.

Recommendations:

The revised EIS should provide information on the geochemical composition of the waste rock prior to mining by obtaining and analyzing core samples drilled within the permit area and should characterize potential groundwater contamination from backfilling with these materials. Also, the revised EIS should provide information on the methodology that will be used to characterize the geochemical composition of the waste rock brought to the surface during the mining process.

The revised EIS should provide additional information regarding the feasibility to transport undetermined amounts of waste rock offsite.

The revised EIS should provide additional information regarding the flow and retention of water in the mine, and the hydrological models that will be used to predict flow and retention.

The revised EIS should thoroughly evaluate if there will be leakage or seepage between aquifers that would allow the transfer of contaminants from groundwater that interacts with the mine once the pumping has stopped.

The revised EIS should provide a discussion of monitoring water quality under the New Mexico Energy, Minerals and Natural Resources Department's (EMNRD) Mining and Minerals Division (MMD) authority and include commitments to mitigation measures necessary to address groundwater contamination, should that occur.

Groundwater Drawdown

Based on model simulations, the DEIS predicts that the water removed by the mine will cause a permanent loss of stored groundwater, primarily from the Westwater Canyon Member of the Morrison Formation. The DEIS states the water removed by the mine operation would not

berecharged for over 100 years. Because of this groundwater drawdown and extremely slow recovery, the groundwater wells and springs within a 17 mile radius have a high probability of becoming dry, with a long lasting adverse effect to the population and the environment that utilize the water. This is a long-term, significant adverse impact for the large area surrounding the mine.

Other adverse groundwater impacts from mining activities are predicted by the hydrological model. This model shows a hydraulic connection between perennial streams (San Juan River, Rio Puerco, Rio San Jose, etc.) and the Westwater Canyon Member of the Morrison Formation. This could effectively cause the streams to lose volume and possibly become dry.

Extended drought conditions and past, present, and future uses, have greatly stressed the area's groundwater resources. Aquifer drawdown can affect the biodiversity of the region by affecting surface and sub-surface hydrology, vegetation, wildlife, including rare and/or sensitive species, and soil conditions. Groundwater withdrawal is projected to continue and possibly accelerate if drought conditions persist.

Recommendations:

The revised EIS should thoroughly evaluate if there will be leakage or seepage between aquifers that would cause lower water levels and longer recovery times.

The revised EIS should consider a mitigation measure that would require RHR to provide water supplies to compensate for decreased groundwater levels.

The revised EIS should consider mitigation measures that would increase the mine's water efficiency, reduce water demand, and treat and reuse water.

Groundwater Monitoring Wells

The DEIS states that three monitoring wells were completed in Section 16 in 2007 and that Roca Honda proposes to construct an additional four monitoring wells in the unsaturated zone in Section 16, two monitoring wells in the south half of Section 9, and one in the southeast quarter of Section 10. Groundwater may still be in a transient state at the proposed mine site and the groundwater flow paths are likely to continue to change over the 18-20 years of mining.

Recommendations:

Although the DEIS states that water quality information was collected in the vicinity of the proposed mine, the revised EIS should establish a water quality baseline (pre-mining) within the permit area. The revised EIS should provide data for all aquifers and water-bearing zones from the shallow Quarternary alluvium to the ore-bearing Westwater Canyon Member of the Morrison Formation, including the alluvial groundwater at the proposed mine within the San Mateo Creek drainage basin, as well as the proposed discharge area north of the proposed mine within the San Lucas Canyon drainage basin (San Lucas Arroyo or Laguna Polvadera). If there is no saturation in the alluvium at

these locations, then the nearest alluvium saturation in the anticipated down-gradient direction of these areas should be used for characterizing baseline groundwater quality. The revised EIS should consider requiring monitoring wells in each of the aquifers/zones at key upgradient and downgradient locations for long-term groundwater monitoring. For the Westwater Canyon Member, a minimum of six monitoring wells should be constructed around the perimeter of the site for monitoring groundwater (because the preferential flow paths that will be created by the mine workings will make the assessment of groundwater flow direction difficult).

The revised EIS should consider the need for a larger network of wells to monitor groundwater quality due to the extensive dewatering of the Westwater Canyon Member from other legacy uranium mines in the Grants Mining District.

Public Water System (PWS)

Under the Safe Drinking Water Act (SDWA), EPA sets legal limits on the levels of certain contaminants in drinking water. The legal limits reflect both the level that protects human health and the level that water systems can achieve using the best available technology. Besides prescribing these legal limits, EPA rules set water-testing schedules and methods that public water systems (PWSs) must follow. The DEIS does not identify or discuss potential impacts to regional PWSs from aquifer cross-contamination due to mining activities. EPA is concerned about public drinking supplies being affected by groundwater contamination and drawdown. We have identified approximately 136 groundwater wells associated with 36 PWS in the region of influence. Specifically, the Laguna Paguate system lies above the Morrison aquifer that could be affected by the proposed mine.

Recommendations:

The revised EIS should identify PWSs in the region, determine any connections between the Westwater Canyon Member and other aquifers that supply drinking water, and ensure there will be no aquifer cross-contamination. As stated above, the Laguna Paguate system lies above the Morrison aquifer and would be a system of concern.

Prior to approval of the mine operations plan, the USFS should require RHR to develop a sampling and monitoring schedule for the Laguna Paguate, including any additional PWS identified in the analysis that could be affected by mine activities. To establish a baseline, we recommend four quarterly samples (one sample per quarter for four quarters) be taken at the entry point to the distribution system and analyze samples for gross alpha, uranium, combined radium 226+228, and gross beta. Well depth should also be monitored. Results should be provided to the EPA, USFS, and the associated community and/or Tribe. Results should be reviewed and certified by a qualified third party consultant.

Aquifer Porosity Levels

Because of the long term dewatering (modeled for 13 years) and slow recovery, we are concerned that the aquifers will experience inelastic compaction and cementation of the pore

spaces, especially in the sandstone aquifers, which could have an adverse effect on the recovery of the original groundwater levels and could cause land subsidence. This could cause permanent damage to the porosity levels in the aquifers and their ability to recover to existing transmissivity levels through large areas of the aquifers. Three of the major aquifers, the Gallup Sandstone, the Dakota Sandstone, and the Westwater Canyon Member of the Morrison Formation are the listed as sandstone, which could have an adverse effect to the recovery of the original groundwater levels. The DEIS also states that the project will be using a "pressure grout" that will permanently fill pore space so that water cannot flow. In addition, cement will be used that would have a similar impact.

Recommendation:

The revised EIS should address the potential impacts from aquifer inelastic compaction and the use of pressure grout and cement.

Financial Assurance

The discussion of and commitment to financial assurance to ensure reclamation and post closure actions are performed in accordance with the approved reclamation plan in the DEIS is inadequate. Financial assurance is critical to the effectiveness of the reclamation, closure, and post-closure activities proposed for this project. Because the amount and viability of financial assurance are critical factors in determining the effectiveness of these activities, it is necessary to analyze them in an EIS to determine the significance of the impacts. This information is essential for an adequate analysis of the proposed project because it could make the difference between a project sufficiently managed over the long-term by the site operator versus an unfunded/under-funded contaminated site that becomes a liability for the Federal government, e.g., under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) program.

Recommendation:

The revised EIS should include a financial assurance estimate supported by site-specific information. The estimate should include surface reclamation costs and any long-term monitoring, operation, and maintenance costs that may be incurred.

Radon Exposure

The DEIS states that radon doses to people living or collecting wood in the vicinity of the mine would not exceed the safety standard of 10 mrem/year, the dose would be as high as 88 percent of the standard, i.e., 8.8 mrem/year. However, the DEIS does not provide the locations of vents and adits which can effect exposure or adequate information to verify the 8.8 mrm/yr predication. Without more detailed information and a reference to the standard deviation of that value, we cannot determine if the 10 mrem/yr threshold would be exceeded. In addition, there is little detailed discussion about the handling and transport of the radium residuals from the water treatment plant.

Recommendations:

The revised EIS should provide the underlying assumptions of the radon exposure modeling, and clarify whether there is a cumulative risk to people from spending time outdoors.

The revised EIS should discuss whether the effects of additional radiation exposure pathways, e.g., waste rock and ore transport, and radium residuals from the water treatment plant (exposure to ore and waste rock that emits radiation and exposure to fugitive dust), as well as incidental events of abnormal wind speeds, would increase the potential of residents in the area to be subjected to high radon doses, i.e., above the safety standard.

The revised EIS should address treating radium residuals from the mine water. Treating these volumes (8,000-9,000 gallons per minute) and concentrations has the potential to pose worker hazard and transportation issues. The revised EIS should include information about the disposition of the radium residuals and disclose that transporting radium residuals above specific thresholds will require shipping it as Class 7 radioactive material under U.S. Department of Transportation hazardous material regulations.

Background Radiation

Aerial gamma surveys conducted by EPA over the Grants Mining District in 2010 have shown elevated radiation levels at many legacy uranium mines. Reclamation and closure was previously completed at some of these mines pursuant to mine permits issued by the EMNRD's MMD. Surface reclamation of mine sites is administered by EMNRD under the New Mexico Mining Act (NMMA). However, NMMA regulations do not specify reclamation radiation cleanup standards for existing mines, and prior reclamation work was not intended to reduce radiation levels in surface soil. It is EPA's understanding that New Mexico's EMNRD is preparing guidance for permitting of new mines that includes a provision for reclamation plans to address reduction of radiation levels to background or near background levels. The guidance may also include a protocol for baseline radiochemical characterization of soil for uranium (total U-238), Ra-226, Ra-228, thorium (total Th-232) and gross alpha/beta.

Recommendation:

The revised EIS should include site specific sampling and analysis of soil, as well as sediment within surface drainage features (e.g., arroyos), at the mine site during the mine development phase to determine background radiation levels and concentrations of heavy metals as a baseline prior to mining.

Environmental Justice

General Issues

Uranium mining and milling legacy issues are well known and well documented within the Grants Mineral Belt in New Mexico that started as far back as the 1950s. The area has a history

of environmental degradation, and numerous and various health problems including high cancer rates.

The proposed mine could significantly impact quality of life for environmental justice communities in the region of interest, particularly communities of the Acoma, Laguna, Zuni, Hopi, and Navajo Tribes. These Tribes have raised many concerns regarding the proposed mining operations impacts to water quality, groundwater and surface water resources, as well as potential for contamination of the plant and animal communities.

Recommendation:

The revised EIS should include a commitment by the USFS to mitigation strategies outlined in the DEIS (pp. 413-414), many of which would involve tribal community members in proposed monitoring activities.

Human Health

As noted in the DEIS, all affected tribal communities expressed serious health concerns related to use of plants, animals, water, and minerals which are collected in the Mt. Taylor area for food, fuel, medicine, and ceremonial uses.

Recommendations:

The revised EIS should include a commitment by the USFS to the mitigation measures listed in the DEIS.

The revised EIS should include a further discussion regarding the contamination risks to tribal communities through exposure pathways and include commitments regarding health and safety mitigation measures.

The revised EIS should include a comprehensive analysis of potential health impacts, in consultation with local public health agencies, to better assess potential impacts to the population in the project area, including consideration of the impacts from legacy uranium mining and milling in the area.

EPA also recommends USFS consider how further risk analysis of potential health impacts could be accomplished, in consultation with local public health agencies. In particular, EPA recommends consideration of a research and monitoring study to help address Tribal and community concerns about exposure pathways and consumptive uses. The following are guidelines and resources to consider:

- World Health Organization – Health Impact Assessment Short Guides
- International Finance Corporation's 2009 "Introduction to Health Impact Assessment"
- CDC – Healthy Places, Health Impact Assessment
- Inupiat Health and Proposed Alaskan Oil Development

Traditional Cultural Properties

The DEIS states that project would cause significant adverse impacts to tribal cultural resources and practices related to the sacred character of Mt. Taylor for the Acoma, Laguna, Zuni, Hopi and Navajo. The USFS conducted an eligibility determination of Mt. Taylor for the National Register of Historic Places (NRHP) as a traditional cultural property, and determined that Mt. Taylor is eligible for listing on the National Register of Historic Places. The DEIS also states that project would adversely impact Mt. Taylor and cause irreparable harm to surrounding tribes and their traditional cultural practice. Additionally, the DEIS states that Tribes have indicated their opposition to the project due to the adverse impacts to cultural, archaeological and natural resources.

Recommendation:

We appreciate the commitment to prepare a programmatic agreement under Section 106 of NHPA in consultation with the Advisory Council on Historic Preservation and the consulting parties. This programmatic agreement would define measures to be implemented to avoid, minimize, and mitigate adverse effects to historic properties, and to address impacts to other cultural resources and practices. While the adverse effects would remain, the mitigation measures would address these effects per 36 CFR Part 800. However, the impact to cultural resources overall and traditional cultural practices would remain significant. EPA recommends that the programmatic agreement be included in the revised EIS.

Tribal Consultation

Although the DEIS provides information regarding the concerns and issues raised by Tribes, it does not contain documentation of government-to-government consultation between the USFS and Tribal governments.

Recommendation:

The revised EIS should include all correspondence and communication with tribes to document consultation efforts, including the level of leadership engaged, and nature and extent of concerns the Tribes expressed.

Surface Water Resources

General Issues

Remote sensing and historical data may not locate all seeps and springs present in the project area.

Recommendation:

The revised EIS should provide a protocol for assessing impacts to seeps and springs that are detected following completion of the NEPA process during detailed project planning.

Clean Water Act Section 402 National Pollutant Discharge Elimination System (NPDES) Permit

The DEIS states that a Clean Water Act Section 402 NPDES permit may be required for discharges into waters of the United States.

Recommendations:

The revised EIS should clarify that if a NPDES permit is needed, it would be need to be issued prior to a discharge, not prior to the mine being developed.

The revised EIS should provide detailed information regarding the proposed discharge of treated wastewater, as well as information on the hydrology of the impacted area.

The revised EIS should discuss the fate of contaminants removed by the treatment plant, including quantity, method of transportation, and disposal location.

The revised EIS should specify the time period expected for surface stockpiles of non-ore materials, enriched in metals such as arsenic, molybdenum, selenium, uranium, and vanadium, all of which have the potential to cause storm water contamination.

The revised EIS should include a commitment that stormwater retention ponds will be double-lined.

The revised EIS should correct the heading in Table 15 (p. 158) to read "Surface Water Quality Standards" and note that the standards are technology-based standards applicable to the water treatment plant.

The revised EIS should clarify whether the destination of the treated water will be a water storage tank on private ranchland and then used for irrigation (DEIS, p. vi) or a stock pond on private ranchland (DEIS, p. 147).

Air Quality

Fugitive Dust Emissions

The DEIS lists air quality BMPs that state that water would be used to control fugitive dust emissions.

Recommendation:

Due to low water availability in the region, EPA recommends the revised EIS discuss the improved efficacy gained from chemical treatments that improve on the ability of water as a dust control agent (i.e., palliatives). In addition, the revised EIS should discuss the potential impacts of fugitive dust emissions to nearby communities, wildlife, vegetation, water quality, and aquatic resources.

Exposure to Traffic Emissions

The DEIS states on page 412, "[s]ince transportation routes have not yet been established for transportation of ore to the processing mill it may be necessary to complete a health risk assessment on receptors along the transportation corridor to model actual changes in air quality on human receptors once these routes have been established".

Recommendation:

EPA recommends the revised EIS include an assessment of receptors along the transportation corridor after routes have been established. This emphasis on the commitment to further study impacts will help to address community concerns regarding the potential effects from this proposed project. Depending on the outcome of the study, additional mitigation measures may be required to protect the environment and the communities affected.

Construction Air Pollutant Emissions Control Plan

Recommendations:

The revised EIS should consider the following mitigation measures as part of a construction air pollutant emissions control plan.

- Evaluate the use of available alternative engines and diesel fuels:
  - Diesel engines that meet the proposed EPA 2007 regulation of 0.01 g/bhp-hr (grams per brake horsepower hour)
  - Diesel engines outfitted with catalyzed diesel particulate filters and fueled with low sulfur (less than 15 ppm sulfur) fuel
  - Fueling on-site equipment, e.g., mining equipment, with lower sulfur highway diesel instead of off-road diesel fuel
- Install control equipment on diesel construction equipment (particulate filters/traps (DPTs), oxidizing soot filter, oxidation catalysts, and other appropriate control devices to the greatest extent that is technically feasible.) Different control devices may be used simultaneously.
- Establish idling limit (e.g., 5-10 minutes per hour).
- Prohibit any tampering with engines and require continuing adherence to manufacturers' recommendations.

<u>Waters of the U.S., Clean Water Act Section 404</u>

The DEIS states a pipeline would be constructed to transport water from the treatment plant to an offsite location. It states that Laguna Polvadera and San Lucas Arroyo would be utilized for overflow and that a National Pollution Discharge Elimination Permit would be required from EPA. However, no jurisdictional determination has been made for either Laguna Polvadera or San Lucas Arroyo. We note that the U.S. Army Corps of Engineers Albuquerque District (Corps) has been in communication with RHR and the Corps recommended pursuing a preliminary jurisdictional determination (PJD) for the project. In addition, Figures 33 and 34

show waterways within the project area and existing and proposed access roads. However, the DEIS does not characterize nor quantify impacts to these waterways from construction and operation.

Recommendations:

The revised EIS should discuss the process and results of the PJD and any comments received from the Corps.

The revised EIS should characterize each affected waterway and disclose impacts to those waterways from project construction, operation, closure, and reclamation.

Processing Facilities

The DEIS states that the ore produced from the proposed mine will not be milled onsite, however it does not state where the produced ore will be milled. The DEIS indicates that uranium milling would take place at an undetermined uranium mill at some distance from the mine, or out-of-state. However, we note that Strathmore Minerals Inc. submitted an amended Notice of Intent to the Nuclear Regulatory Commission (NRC) in January 2013 to file a license application for a new mill on T16N, R10W, Sec. 24, approximately 20 miles to the northwest of the proposed mine.

Recommendation:

The revised EIS should discuss the potential for milling at the Peña Ranch Mill or at other locations varying distances from the mine.

Alternatives

Uranium resources can be extracted from the ground using three mining methods: open pit, underground, and in-situ recovery (ISR) or in-situ leach (ISL). While we recognize that this is a proposal for an underground mine, our experience has shown that ISL and ISR methods can have less environmental impacts than an underground or open pit mine.

We also recognize that due to the depth to the ore at this site, ISL or IRL methods may not be feasible.

Recommendation:

We recommend the revised EIS address other mining methods that were considered at this site, and provide information as to why these alternatives were eliminated from detailed study.

Cumulative Impacts

Past, Present, and Reasonably Foreseeable Future Actions

The discussion of the former uranium mills in the Ambrosia Lake Sub-mining District (Ambrosia Lake Disposal Site and Rio Algom Mine and Mill Tailings Site) does not adequately characterize the mills impacts to groundwater. In these locations, tailing liquids seeping downward through the unlined tailing impoundments adversely impacted groundwater in the shallow alluvium and underlying bedrock aquifers by significantly re-saturating the aquifers and increasing concentrations of radionuclides and metals to above federal drinking water standards and New Mexico water quality standards. Also, the deeper bedrock aquifers were contaminated by the flow or migration of tailing seepage from the alluvium downward to the bedrock strata where they sub-cropped into the alluvium. Recharge of bedrock aquifers in this manner will likely occur with any significant increase in alluvium saturation resulting from mine water discharges or tailing seepage. Finally, contrary to what is stated in the DEIS, the alluvial groundwater is a current and potential source of drinking water downgradient of the mill sites.

Uranium Mills, Ambrosia Lake Disposal Site

The description of the Ambrosia Lake Disposal Site does not adequately describe the site or the impacts to groundwater from tailing seepage at the tailing impoundment (disposal cell). The description also incorrectly states that the uppermost aquifer (alluvium, sandstone and weathered bedrock) is not a current or potential source of drinking water because of its low yield.

Recommendations:

The revised EIS should include the following information regarding the Ambrosia Lake Disposal Site:

- The 91 acre tailing disposal cell is unlined
- The shallow alluvium was significantly re-saturated and impacted by mine water discharged from the nearby Ann Lee Mine and tailing seepage from the unlined disposal cell
- Tailing seepage and mine water discharges in the underlying alluvium contaminated the Tres Hermanos-C Sandstone of the Lower Mancos Shale, which subcrops into the alluvium beneath the western side of the disposal cell
- Groundwater in the Tres Hermanos-C Sandstone is recharged mostly from seepage from alluvium in the subcrop area
- Concentrations of uranium, selenium, molybdenum and other contaminants and activities of combined radium 226/228 and gross alpha exceeded groundwater standards in the alluvial and Tres Hermanos-C groundwater.

Algom Mine and Mill Tailings Site (Ambrosia Lake Area)

Similar to the previous comment, the description of the Rio Algom Mine and Mill Tailings Site does not adequately describe the site or the impacts to groundwater from tailing seepage at the tailing impoundment.

Recommendations:

The revised EIS should include the following information:

- There are several water management structures at the site, including tailing impoundments nos. 1 and 2, and a decantation pond no. 3 that were built in 1958 and evaporation ponds nos. 4-10 that were built in 1976
- Evaporation ponds 9 and 10 were lined
- Seepage from the tailing impoundments, decantation pond and evaporation ponds 4-6 significantly re-saturated and impacted the alluvium of the Arroyo del Puerto
- Seepage from the impoundments and evaporation ponds 7 and 8 has recharged and impacted the Tres Hermanos – B Sandstone within the Lower Mancos Shale and the Dakota Sandstone underlying the Mancos Shale
- Rio Algom constructed interceptor trenches to collect seepage in 1983 under the direction of NMED
- Rio Algom developed a Corrective Action Program (CAP) in 1986 under the direction of the NRC after the NRC assumed jurisdiction for the site; the CAP included pump and treat to abate groundwater contamination
- The pump and treat system was discontinued after a petition for Alternate Concentration Limits (ACLs) by Rio Algom was granted by the NRC in 2005; for Uranium, the approved ACL of 1.6 mg/L for the Dakota and Tres Hermanos – B sandstone aquifers exceeds the federal drinking water standard (0.03 mg/L MCL) by five times and the approved ACL of 23.0 mg/L for the alluvium exceeds the standard by two orders of magnitude
- Rio Algom is currently being directed by NMED to investigate potential contamination to sediments within the Arroyo del Puerto in and around the mill site and the underlying groundwater, including groundwater in the alluvium

Wildlife

The U.S. Fish and Wildlife Service website for the Southwest Region indicates that there is critical habitat for the Mexican spotted owl designated on Mt. Taylor less than three miles from the proposed project area. The critical habitat is labeled as CP-1 on the following website: http://www.fws.gov/southwest/es/MSO_CH_map12.html

Recommendation:

The direct, indirect, and/or cumulative effects to the Mexican spotted owl designated critical habitat should be disclosed in the revised DEIS.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The DEIS notes that the proposed project must comply with NESHAP's (40 CFR 61) Subpart B - National Emission Standards for Radon Emissions From Underground Uranium Mines. The owner operator of the mine will need to apply for, and receive approval to construct pursuant to

40 CFR parts 61.06, 61.07, and 61.08. Please coordinate with Mr. George P. Brozowski, Regional Health Physicist, EPA, Mail Code 6PD-T, 1445 Ross Avenue, Dallas, Texas 75202, regarding reports, applications, submittals, and other communications regarding the relevant NESHAPs.

Summary of Rating Definitions and Follow-up Action

Environmental Impact of the Action

LO--Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC–Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3–Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.