

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Fernando Martinez, Director**  
Mining and Minerals Division



October 4, 2012

Mr. John DeJoia, Manager  
Roca Honda Resources, LLC  
4001 Office Court Drive, Suite 102  
Santa Fe, NM 87507

RE: Agency Comments, Roca Honda Mine Reclamation Plan - Revision 1, and Biological Survey of the Reuse Pipeline Route, Permit Application No. MK025RN

Dear Mr. DeJoia:

The Mining and Minerals Division ("MMD") has reviewed the Roca Honda Resources ("RHR") Reclamation Plan Revision 1 submittal that was dated May 25, 2012, which we received on June 4, 2012. We requested reviews and comments from the Environment Department ("NMED"), the Department of Game and Fish ("NMDGF"), and the Office of the State Engineer ("NMOSE") on July 6, 2012. RHR had addressed comments from each of these agencies in the May 25, 2012 submittal.

MMD has also reviewed the June 2012 Biological Survey of the Reuse Pipeline Route, which was dated July 9, 2012 and received in our office on July 12, 2012. MMD requested review and comments from NMDGF and the State Forestry Division ("NMSFD"), and invited comments from the Historical Preservation Division ("NMHPD") and NMED on July 18, 2012. We did not request comments from the Cibola National Forest, because RHR submitted the Biological Survey directly to that agency.

RHR's responses to the MMD's comments dated February 24, 2012 were comprehensive and adequate. However, both MMD and NMED have continuing concerns in regard to the need for a post mine radiological survey, and the potential for impacts resulting from discharge from the reuse pipeline.

MMD's reviews of the Reclamation Plan and the Biological Survey of the Reuse Pipeline Route generated the following comments:

19.10.6.603.C(1)(f):

Consistent with the December 28, 2011, and the September 24, 2012 comments by the Groundwater Quality Bureau at NMED, MMD requires a radiological survey of the facilities footprint, following removal of all structures, to assure protection of human health and safety.

This would include the areas around shafts and ore bays, beneath impoundments, the pipeline corridor, and the haulage routes within the permit area. The procedures used and the parameters tested should be consistent with the baseline radiological survey that was submitted by Roca Honda Resources in January 2011. The point being to demonstrate that the operation has not resulted in radiological conditions that may impact human health and safety beyond the conditions existing prior to mining. Please revise the response to 19.10.6.603.C(1)(f) NMAC, accordingly.

19.10.6.603.C, C(4), and F:

MMD must ensure that discharge of treated water is planned and conducted to assure protection of the environment, control erosion, and minimize change to the hydrologic balance in both the permit area and potentially affected areas.

(1) The September 2012 Mine Operations Plan, Figure 1-3, shows the reuse pipeline discharge point to be Laguna Polvedera, and the text on page 47 says that the discharge will be in the vicinity of Laguna Polvedera. The maps in the June 2012 Biological Survey of the Reuse Pipeline Route (Figure 1 and Figure 2) appear to indicate potential discharge locations into San Isidro Arroyo, Laguna Polvedera, and San Lucas Canyon. Laguna Polvedera is a desirable discharge point in MMD's view, as it would provide a stilling basin for energy dissipation. Discharge into San Isidro Arroyo would likely impact surface water control practices at the Lee Ranch Coal Mine. Please clarify the proposed reuse pipeline discharge location(s), and revise the appropriate maps, as necessary.

(Should the maps in the Biological Survey of the Reuse Pipeline Route require modification, please note that this is MMD's only comment regarding that submittal.)

(2) Discharge into either San Lucas Canyon or San Isidro Arroyo will potentially lead to erosion near the pipe outlet. The NMED Surface Water Quality Bureau ("SWQB") have expressed concerns in their attached comments of September 14, 2012. The portion of the SWQB comments relating to surveying the undisturbed arroyo(s) may apply more directly to the Baseline Data Report; the request for designed erosion control structures at any discharge point into an arroyo may apply more directly to the Mine Operations Plan; however, we are including them now to allow for timely action on the part of RHR. MMD agrees that a survey of the geomorphic character of any arroyo that may receive pipeline discharge, for a minimum distance of 200 yards downstream of the discharge location, is necessary. MMD requires a design for an erosion control structure at the pipe outlet for one or both arroyos, as appropriate.

(3) Please commit to conducting necessary maintenance and repairs to arroyo erosion control structures at the pipe outlet during mine operations, and to remove the erosion control structures and reclaim the geomorphic character of the undisturbed arroyo, to include seeding and mulching, when discharge to the arroyo is concluded.

19.10.6.603.G(1)(a):

On July 26, 2012, D. Clark (MMD), R. Jankowitz (NMDGF), K. Peil (Strathmore) and D. Lightfoot (SWCA) walked a good portion of the vegetation reference area that is proposed in Appendix B of the Reclamation Plan. We also looked at the proposed facilities area in Section 16. The western-most 14 or so acres of the proposed reference area, below the bluffs, have a high density of annual weeds, likely due to a feed supplement station located about 1000 ft south of the SW Section 16 corner. There is a deeply incised arroyo and breached tank in the central portion of the reference area. The eastern third of the reference area (juniper-savannah

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community) is in much better ecological condition than the shrub-grasslands to the west, although that area does contain some barren rock hilltops and outcrops, and at least one incised arroyo.

If the feed supplement station were moved further away, the condition of the western part of the reference area may recover over time; there is still a good perennial grass and shrub component to the vegetation. MMD proposes that relocating the supplement feed station further from the reference area would reduce impacts to the State section and the reference area. We understand that action would need to be approved by the landowner. Fencing of the reference area would be another means of controlling grazing impacts, and may be necessary, depending on future grazing practices and impacts. Should fencing of the reference area be warranted, MMD considers that a smaller reference area may be acceptable, limited to the approximate eastern third of the proposed reference area. Please add a commitment to Appendix B, to not conduct future reference sampling within the gullies or breached pond, or on the rock barrens within the reference area.

NMED, NMDGF, and NMOSE responses to MMD's requests for comments on the Reclamation Plan are attached. The NMDGF response to MMD's request for comments on the Biological Survey of the Reuse Pipeline Route is also attached. Please address the agency comments and revise each of the submittals, accordingly.

Thank you for your continued cooperation. Please contact me at (505) 476-3416 with questions or concerns.

Sincerely,



David L. Clark  
Coal Program Manager

Enclosures

Cc: with enclosures Fernando Martinez, MMD  
Matthew Wunder, NMDGF  
Kurt Vollbrecht, NMED  
Mike Johnson, NMOSE  
Michael Mariano, NMSLO  
Michelle Ensey, NMHPD  
Diane Tafoya, Cibola NF  
Mine File MK025RN





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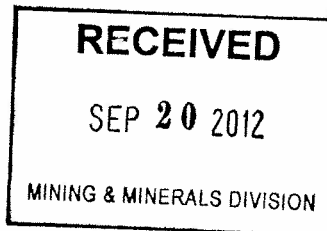
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September 13, 2012

David Clark, Coal Program Manager  
EMNRD Mining & Minerals Division  
1220 South St. Francis Drive  
Santa Fe NM 87505



*Roca Honda Mine Reclamation Plan – Revision 1, Permit Application ~~MK024RN~~; NMDGF  
Project No. 15195*

*MK025RN*

Dear Mr. Clark:

In response to your letter dated July 6, 2012, the New Mexico Department of Game and Fish (Department) has reviewed the above referenced document. The current version of the Reclamation Plan includes replacement pages added by the applicant in response to agency comments on a previous letter (NMDGF Project No. 13122 dated April 20, 2010). Roca Honda Resources, LLC, proposes to develop a new underground uranium mine located on Sections 9, 10 and 16, Township 13N, Range 8W, 2-3 miles northwest San Mateo in McKinley County, NM. Surface ownership is Cibola National Forest and the State Land Office. Current land use is grazing, as is the proposed land use post-mining. Proposed total surface disturbance is 183 acres, mostly located around the base of Jesus Mesa. In addition to the 500-foot sandstone walls of the mesa, habitat features on the project area include grama grasslands, scattered juniper with a major component of large mature trees, and a large unnamed arroyo running north-to-south through Section 16 with a saltbush shrub plant community in the bottom. A site visit was conducted on July 26, 2012 for the purpose of inspecting the proposed revegetation reference area. Proposed locations of major surface disturbance in Section 16 were also inspected.

Previous Department comments on the Reclamation Plan, in regards to fencing, soil amendments and seed mix, have been fully addressed in the new submittal. Although the reference area graphic (Figure 3-3) has not been revised, the text now specifies, as recommended, that mature pinyon-juniper woodland on the mesa top not be included in any reference vegetation transects. A Weed Control Plan has been added as Appendix C. Noxious weeds are currently present on the permit area in very limited locations. Mining activity, as with other forms of land development, will lead to conditions that may facilitate the spread of weeds through surface disturbance and increased vehicle traffic. If the project goes forward, the applicant should be required or encouraged to take aggressive eradication efforts to preclude future infestations, using the physical and/or chemical methods identified in Appendix C. In addition, constructed detention ponds should be closely monitored for tamarisk, the establishment of which can often be traced to dirt stock tanks.

On page 37, the Reclamation Plan states that "(s)ome of the arroyos that transect the operational area may be armored or straightened". We could find no description of these proposed channel alterations in the Mine Operations Plan. Such alterations could affect the site hydrologic balance and should be specifically described in the permit application.

Thank you for the opportunity to comment on this permit application document. If there are any questions, please contact Rachel Jankowitz, Mining Habitat Specialist at 505-476-8159, or [rjankowitz@state.nm.us](mailto:rjankowitz@state.nm.us).

Sincerely,



Matthew Wunder, Chief  
Conservation Services Division

cc: USFWS NMES Field Office  
Ellen Heilhecker, NW Area Habitat Specialist, NMGF  
Kurt Vollbrecht, NMED Groundwater Quality Bureau



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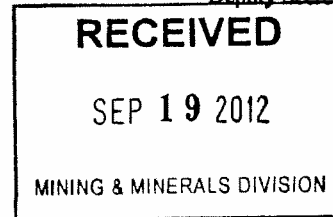


DAVID MARTIN  
Secretary

BUTCH TONGATE  
Deputy Secretary

**MEMORANDUM**

DATE: September 14, 2012  
TO: David L. Clark, Manager, Coal Program  
FROM: Kurt Vollbrecht, NMED Ground Water Quality Bureau  
Neal Schaeffer, NMED Surface Water Quality Bureau



*KV*

**RE: Comments on Roca Honda Resources, LLC, Response to Comments, Reclamation Plan Revision 1, Roca Honda Mine Permit No. MK025RN**

The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on July 13, 2012 requesting that NMED review and provide comments on the Roca Honda Resources (RHR) Reclamation Plan-Revision 1 Response to Comments referenced above. MMD requested comments be submitted within 60 days of receipt. NMED requested and received an extension of time until September 14, 2012 to provide comments.

**NMED GWQB Comments**

In response to several GWQB comments regarding the proposed reclamation plan (Item No. 12 and Item No. 14 of the RHR table) RHR indicates that a separate closure plan will be submitted to comply with the requirements of the Water Quality Control Commission (WQCC) Regulations. It is not NMED's intent to require a separate closure plan when the existing reclamation plan can be modified slightly to meet the intent of both the New Mexico Mining Act and the WQCC Regulations. As previously stated, following removal of all structures, stockpiles and equipment from the site, the footprint of the facility must be surveyed to insure that no remaining contamination exists. At a minimum, the areas around shafts, beneath impoundments, the pipeline corridor, and the haul road corridor must be surveyed to insure no contaminants remain at levels in excess of background concentrations. This sampling protocol will insure that the requirements of both the Mining Act and the WQCC Regulations are met. NMED requests that MMD require RHR to include a sampling proposal in the reclamation plan to insure proper clean up criteria are met following cessation of mining and reclamation.

The final cost estimate for reclamation should include the costs associated with the proposed sampling and analysis plan.

The proposed reclamation plan, including a proposed sampling and analysis plan following closure will be incorporated, along with these comments and associated revisions, in the administrative record for DP-1717 for the Roca Honda Mine.

### **NMED SWQB Comments**

SWQB believes that the Roca Honda Resources response to previous SWQB comments is inadequate. Additionally, RHR plans have changed significantly since first submittal, and SWQB is concerned that final plans now are inadequately documented. SWQB has difficulty reviewing documents with so many significant revisions, and requests final comprehensive plans for baseline data collection, operations, and reclamation.

Reference is made to the "Roca Honda Resources Response to Agency 02-24-2012 Comments of Roca Honda Project Reclamation Plan, Revision 1, August 2011, MK025RN" (May, 2012), pages 13 – 15:

22. SWQB recommends that Roca Honda Resources survey and document natural channel dimensions as part of their baseline data collection. This information should inform recontouring, such as the proper width, depth, slope, and meander pattern of surface water courses. This approach should strive for natural channel stability, to minimize the potential for accelerated fluvial erosion after reclamation. Section 3.3.5 approaches this topic, but with inadequate detail.

#### **RHR Response:**

RHR has surveyed and dimensions of the portions of the arroyos that it proposes to modify or otherwise reroute as part of its mining operations and include the information in its Mine Operations Plan and design drawings. The information will be utilized to approximate the design and construction of the re-established channel segments at reclamation. The language in Section 3.3.5 has been modified and a replacement page 39 provided.

1. SWQB believes that mine-dewatering discharges are a legitimate part of mine operations. We understand that RHR has not surveyed surface water channels that may receive significant volumes of water. These channels should be surveyed to describe their pre-mining shape (cross-section, longitudinal-section, and plan view). This should be addressed in both final baseline monitoring plans and final operational plans.

2. SWQB remains concerned that proposed mine-dewatering discharges could destabilize surface water channels, resulting in unnecessary erosion. We raised these concerns with RHR during a site visit, when RHR planned to discharge to a tributary to San Mateo Creek. RHR responded with intent to conduct such surveying in that tributary. Since then, the location of this discharge has changed (see below), but RHR apparently no longer intends to conduct this surveying at the



new discharge locations. SWQB requests that MMD require a survey of the arroyo associated with the proposed NPDES outfall for a minimum distance of 200 yards downstream from the discharge location. In addition, SWQB requests that RHR submit a design for erosion control structures to be constructed at the outfall to minimize the potential for erosion of the arroyo at the outfall.

24. At this time, SWQB is particularly concerned about the location(s) of the discharges of pumped discharges waters. These discharges might significantly alter the shape of the channel and floodplains, the floodplain functioning (perhaps associated with vegetation changes), and sediment transport (such as selective transport and deposition of fine-grained soils). Such changes might cause physical destabilization of downstream reaches. SWQB notes that although the project site contains no perennial streams or wetlands, the proposed pumped-water discharge may create both.

Response:

The comment is noted. However, RHR believes that this is not a subject germane to the Reclamation Plan of the mine permit area required by the Mining Act. This may be a more appropriate comment for the NMED's review of the Discharge Plan application, its NPDES permit application and/or the Environmental Impact Statement being prepared by the US Forest Service for RHR's project proposal.

Our response notwithstanding, please note that Section 4.0, page 46 of RHR's Mine Operations Plan, Revision 1 describes how and where RHR proposes to discharge the mine water. Briefly, RHR will construct a 20 inch pipeline to a location approximately eight miles northeast of the mine site, to private property in the vicinity of Laguna Polvadera. Under normal circumstances, a local rancher will then pick up the water and re-use all of the water for irrigation. In the event that water is discharged to the arroyo, it may be discharged into San Lucas Arroyo near this same location. RHR has applied for an NPDES Permit to cover this possibility.

1. These RHR comments are the first written mention we've seen of the new discharge location and design; and we are especially concerned about the potential for channel erosion from a pipe that is only 20-inches diameter. SWQB believes that the new discharge plan should be documented clearly, including describing any discharges to watercourses, characterizing expected channel erosion and necessary stabilization, and characterizing existing channel morphology pursuant to identifying any future, unexpected erosion. As mentioned in the first paragraph, we are not able to review the existing menagerie of plans and revisions, and we request a final set of plans (baseline monitoring, operations, and reclamation).

2. The above RHR response is incorrect: SWQB concerns regarding erosion likely will not be addressed in any Discharge Plan (which is concerned with potential groundwater impacts), NPDES permit application (which is concerned with water quality, not channel morphology), or EIS (which merely describes potential impacts, not regulation of them). SWQB believes that these channel morphology concerns should be addressed in Mining Act permit because these potential impacts are a result of the mining activity.

Mr. David L. Clark  
September 14, 2012  
Page 4

If you have any questions, please contact Kurt Vollbrecht at 827-0195.

Cc: Jerry Schoepner, Chief, NMED GWQB  
James Hogan, Acting Chief, NMED SWQB  
Diane Tafoya, U. S. Forest Service, Cibola National Forest, 2113 Osuna Road NE, Suite  
A, Abq, NM 87113-1001

**Clark, David, EMNRD**

---

**From:** Myers, Kevin, OSE  
**Sent:** Thursday, September 27, 2012 10:16 AM  
**To:** Clark, David, EMNRD  
**Cc:** Johnson, Mike S., OSE  
**Subject:** Roca Honda Resources MMD No. MK025RN OSE response to request for 2nd Review of Reclamation Plan Rev. 1

Dave,

NMOSE Hydrology has reviewed Roca Honda Resources (RHR) Reclamation Plan- Revision 1 as part of MMD permit no. MK025RN.

This review included replacement pages dated May 2012 and RHR responses to comments dated May 29, 2012.

NMOSE has no further comments on the RHR Reclamation Plan – Revision 1.

If you have any questions about the about, contact me.

Kevin Myers, Hydrologist  
Hydrology Bureau - NM OSE  
P.O. Box 25102  
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MINING & MINERALS DIVISION

*Biological Survey Report, Reuse Pipeline Route, Roca Honda Mine, Permit Application MK025RN;  
NMDGF Project No. 15222*

Dear Mr. Clark:

In response to your letter dated July 18, 2012, the New Mexico Department of Game and Fish (Department) has reviewed the above referenced document. The purpose of the reuse pipeline is to transport treated mine dewatering water from the site of the proposed Roca Honda underground uranium mine to the Laguna Polvadera impoundment, and will be used for irrigating private ranch land. A route alignment approximately 7 miles in length was surveyed to supplement the Baseline Data Report submitted as part of the mine permit application. The route is located on U.S. Forest Service (USFS) and private land in McKinley County. No site inspection was conducted by Department staff in connection with this consultation request.

The Department concurs with the conclusion of the survey that there is potential on the project area for occurrence of two state-listed threatened species and eight USFS sensitive species. The report does not include a description of proposed project activities. It is our understanding that a pipeline 24 inches or less in diameter will be laid on the surface. If that is the case, disturbance of wildlife or habitat is likely to be minimal. If the pipeline will be buried, other construction (i.e. support structures) is needed, or if larger or multiple line are used, then additional pre-construction surveys or mitigation measures might be recommended.

Thank you for the opportunity to comment on this Biological Survey Report. If there are any questions, please contact Rachel Jankowitz, Mining Habitat Specialist at 505-476-8159 or [rjankowitz@state.nm.us](mailto:rjankowitz@state.nm.us).

Sincerely,

Matt Wunder, Ph.D.  
Chief, Conservation Services Division

MW/rj

■ USFWS NMES Field Office  
[REDACTED]  
Donald Auer, Habitat Manager, NMDGF  
Kurt Vollbrecht, NMED Groundwater Quality Bureau

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