



New Mexico Energy, Minerals and Natural Resources Department

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Governor

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Acting Division Director
Mining and Minerals



November 24, 2010

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

**RE: Review Comments and Request for Additional Information,
Part 6 New Mine Permit Application, Mine Operations Plan and Reclamation Plan,
Roca Honda Mine, Permit No. MK025RN – McKinley County, New Mexico**

Mr. DeJoia:

The New Mexico Mining and Minerals Division (MMD) has reviewed the Mine Operations Plan and the Reclamation Plan submittals included within your Permit Application Package (PAP), for a Regular New Mine Permit, submitted October 23, 2009, by Roca Honda Resources, LLC (RHR), pursuant to Part 6 of the New Mexico Mining Act Rules. In addition to the Permit Application, the October 23 PAP submittal also included a revised Sampling and Analysis Plan (SAP), Baseline Data Report, Mine Operation Plan and a Reclamation Plan. MMD provides herewith, only its review comments on the above referenced plans; RHR has already received comments from MMD and other reviewing agencies regarding the PAP and, MMD has accepted RHR's revised SAP. MMD requests that RHR address all comments for both the Mine Operation Plan and the Reclamation Plan, within revised submittals to MMD. It is our understanding that RHR plans to submit the plans to MMD by January 15, 2011, for further review and comment, following revision.

Should you have any questions, comments, or require additional information concerning this letter or any enclosures, please contact me at (505) 476-3436 or via email at: james.hollen@state.nm.us.

Sincerely,

James Hollen, Permit Lead
Mining Act Reclamation Program (MARP)
New Mexico Mining and Minerals Division



Mr. John DeJoia

**RE: Review Comments and Request for Additional Information,
Part 6 New Mine Permit Application, Mine Operations Plan and Reclamation Plan, Roca Honda Mine,
Permit No. MK025RN – McKinley County, New Mexico**

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Enclosures: MMD Comments on RHR's Mine Operations Plan and Reclamation Plan, November 2010

cc with enclosures: Chuck Thomas, Acting Division Director, MMD
Holland Shepherd, Program Manager, MARP/MMD
Kurt Vollbrecht, Mining Act Team Leader, NMED/MECS-GWQB
Diane Tafoya, Geologist, Cibola NF, U.S. Forest Service
Matthew Wunder, Ph.D., Chief, Conservation Services Division, NMDG&F
Mike Johnson, Chief, Hydrology Bureau, NMOSE
Michelle Ensey, Archaeologist, NMDCA/HPD
Mine File MK025RN

MINING AND MINERALS DIVISION COMMENTS
ON THE
ROCA HONDA URANIUM MINE
MINE OPERATION PLAN
NOVEMBER, 2010

- 1.) General Comment on Organization between the Mine Operation Plan and the Reclamation Plan

Comment: There appears to be quite a bit of discussion/information about the Mine Operation Plan in the Reclamation Plan, and vice versa. For example, Sections 5.4, 5.6 and 5.7 in the Mine Operation Plan appear to discuss erosion control and revegetation measures during reclamation. Instead, these sections should focus on erosion control and revegetation measures to be implemented only during operation of the mine. Operation of the mine is generally from construction of facilities to the end of the mine life. Reclamation is deconstruction and restorative grading, covering and seeding. Where appropriate, it would be acceptable in the Reclamation Plan to refer to and cross-reference the Mine Operation Plan rather than repeat details in both plans.

- 2.) Section 2.5, Waste Handling

Comment: How will temporary stockpiles be designed and placed to prevent mass movement? Will the stockpiles be designed to address a specific factor of safety? What type of geotechnical evaluation will be done to show that these stockpiles will be stable during operation? What is the estimated volume of each of the stockpiles?

- 3.) Section 3.2.1 Topsoil stockpiles

Comment: Topsoil needs to be stabilized and protected while acting as storage units. As indicated in the plan, they will need to be seeded with a temporary seed mixture, well marked and bermed (or some other BMP used) to prevent runoff loss of topsoil, or run-on contamination of topsoil. The seed mixture indicated as interim, provides a number of well adapted grass species, however, it should also contain some forbs that are legumes. Additionally, since the U.S. Forest Service is the land management agency, recommendations for a temporary seed mixture should come from them as well as Department of Game and Fish and the NM State Land Office.

4.) Section 3.3.4 Hydrologic Balance

Comment: This section needs to address hydrologic balance in regard to potential groundwater impacts from the mine. The mine will be pumping approximately 11.5 million gallons per day, once dewatering of the mine begins. The extent, duration and potential impacts from this activity must be identified. Additionally, as currently proposed in the Mine Operation Plan, the water will be taken out of the groundwater system and placed into the surface water system. What impacts will occur to the hydrologic balance as a result of these impacts? Keep in mind that the hydrologic balance is defined as an accounting of the inflow to outflow from, and storage in, a hydrologic unit. The hydrologic units would be aquifers associated with the mine pumping and the surface receiving channels.

If there are anticipated impacts to existing water rights, is there a plan of replacement (as required by the Office of the State Engineer)?

5.) Section 5.1, Most Appropriate Technology and Best Management Practices

Comment: For the Mine Operation Plan, this section should briefly describe why the proposed mining technique of room and pillar is the most appropriate mining technology, for this location (as opposed to another type of mining technique), and what best management practices will be used during mining and surface processing of ore and waste. Best management practices that pertain to mine operation should include all non-erosion items such as housekeeping techniques, employee training, health and safety, use of spill kits, designated areas for fueling, designated areas for equipment repair, etc. Other best management practices related to erosion and stormwater control would be better discussed under the topic of Erosion Control (Section 5.6 of the Mine Operation Plan).

5.) Section 5.2, Contemporaneous Reclamation

Comment: The acts of contemporaneous reclamation associated with the Mine Operation Plan appear to be the occasional relocation of stockpiled material back into the mine workings, and the reclamation of mud pits/drill pits. The remainder of the discussion, in Sections 5.2.2 through 5.2.6 appears to be more appropriately located under the topic of Erosion Control (Section 5.6 of the Mine Operation Plan). Section 19.10.6.603.B NMAC, requires that contemporaneous reclamation be used to the maximum extent possible, and that it be consistent with the approved reclamation plan. The operation plan needs to specifically address this rule, or explain why contemporaneous reclamation is impracticable for this mine operation.

MINING AND MINERALS DIVISION COMMENTS
ON THE
ROCA HONDA URANIUM MINE
RECLAMATION PLAN
NOVEMBER 2010

- 1.) General Comment on Organization between the Reclamation Plan and the Mine Operation Plan

Comment: There appears to be quite a bit of discussion/information about the Mine Operation Plan in the Reclamation Plan, and vice versa. Where possible, details on the Reclamation Plan and the Mine Operation Plan should be kept separate to the maximum extent practicable. MMD realizes that there is some overlap between the documents; however, for clarity to the reviewer, the two should not co-mingle where feasible. For example, Section 3.0 page 24 of the Reclamation Plan discusses a temporary seed mix to stabilize soil stockpiles. These soil stockpiles will be present during the mine life, but will be returned as cover to the disturbed areas during final reclamation at the end of the mine life. Therefore, the temporary stabilization and seeding of these soil stockpiles is better described in the Mine Operation Plan, since the piles will be maintained during mine operation and will not be present during final reclamation. Where possible, the Reclamation Plan should only focus on the final reclamation activities (removal of buildings, foundations, infrastructure, final grading, etc.) and what the site will be like at the conclusion of mine operation. Where appropriate, it would be acceptable in the Reclamation Plan to refer to and cross-reference the Mine Operation Plan rather than repeat details in both plans.

- 2.) Section 2.1, Description of Proposed Reclamation Plan

Comment: This section indicates that a detailed reclamation plan will be provided after the receipt of comments and their resolution. The reclamation plan provided is very general in nature and lacks the type of detail necessary for this agency to approve it. The reclamation plan commits to meeting the regulatory requirements identified in the NM Mining Act Rules, for Part 6, but does not provide details addressing the specific steps to be followed in implementing the reclamation plan.

For example, specific information concerning the volume of topsoil, salvage of topsoil, and the reapplication of topsoils is missing. Additionally, there is no detailed revegetation plan within the reclamation plan. There is little detail concerning the need for soils amendments, or the

type, and related methodologies of soil amendments to be used. There is only general information concerning the type of reclamation criteria to be met, regarding revegetation of the site. Specific parameters for measuring revegetation success and the methodology need to be provided, as part of the reclamation plan. Additionally, reference areas need to be identified for post-reclamation success monitoring.

The reclamation plan provides only a very general site-wide regrading and re-contouring plan. A detailed comprehensive site-wide regrading and re-contouring plan needs to be provided. The plan should be based on the principles of geomorphic design. The plan submitted provides a start to this concept, but needs to provide more detail explaining how this is to be accomplished for various areas of the site.

3.) Section 2.0, Post Mining Land Use (PMLU)

Comment: This section indicates that the PMLU will be grazing. The section does not provide a description on how the PMLU of grazing will be achieved, and what criteria will be met at the end of mining to achieve this PMLU, i.e. a comparison of reclaimed areas versus reference areas for the grazing land goals.

4.) Section 2.1.1, Returning Non-Ore Material to the Mine Workings

Comment: This section indicates excavated non-ore material left on the surface will be returned to the mine workings. Pursuant to 19.10.6.602.(15).(j) NMAC, please explain how this material may or may not contribute to the generation to of acid or other toxic drainage, either underground or at the ground surface. Additionally, any material proposed for return to the mine workings for backfilling may have to be addressed through NMED's implementation of the New Mexico Water Quality Control Commission Regulations 20.6.2 NMAC. Please provide MMD with any information, regarding this subject that has already been or, will be provided to NMED.

5.) Section 2.1.4, Returning Shaft Excavation Material to the Mine Workings

Comment: This section indicates that material excavated from the shaft will be returned to the mine workings. Pursuant to 19.10.6.602.(15).(j) NMAC, please explain how this material may or may not contribute to the generation to of acid or other toxic drainage, either underground or at the ground surface. Additionally, any material proposed for return to the mine workings for backfilling may have to be addressed through NMED's implementation of the New Mexico Water Quality Control Commission Regulations 20.6.2 NMAC.

6.) Section 2.1.10, Regrade Site to Promote Positive Drainage and Slope Stability

Comment: Figures 2-1 through 2-6 should be provided at a larger scale, to provide more detail, and to better depict final contours. The maps should be provided at a scale of no smaller than 1 inch = 200 ft.

7.) Section 3.3.3, Regrading and Preservation of Cultural Resources

Comment: The reclamation plan briefly discusses the methodology to preserve cultural resources during reclamation; however the grading plan figures (Figure 2-1 through 2-6) appear to show earthwork over several of the cultural sites.

8.) Section 2.1.11, Remove Roads

Comment: A more detailed description of road reclamation is needed. What type of soil material will be applied to the roads, where will it be obtained, and to what thickness will it be applied?

9.) Section 2.2, Disturbed Area and Reclamation Schedule

Comment: Pursuant to 19.10.7.701 NMAC, reclamation should begin after 180 days after a cessation of mining, even if temporary, unless the operator applies for a standby permit. The reclamation schedule will require further discussion.

10.) Section 2.4, Acid and Other Toxic Drainage

Comment: The operator needs to provide a materials characterization report for all materials to be excavated from the mine, and that will be placed on the ground surface. The potential for acid mine drainage from iron sulfides found in mine wastes needs to be evaluated. Additionally, other toxic drainage might result from constituents found in the excavated materials such as, but not limited to: uranium, radium, barium, lead, molybdenum, selenium, vanadium, copper, lead, arsenic and zinc.

11.) Section 3.2, Contemporaneous Reclamation

Comment: The reclamation plan needs to identify those portions of the mine, which may no longer be needed for the operation, during the course of the mine life. The reclamation plan

and schedule must identify approximately when in the mining sequence these areas will no longer be needed, and what will constitute their permanent cessation. After cessation these areas must be reclaimed or addressed under a Standby permit.

12.) Section 3.2.1, Topsoil Stockpile

Comment: Topsoil salvage locations and depths must be identified in the final reclamation plan, along with the appropriate soil suitability analyses. A mass balance exercise needs to be addressed in the plan identifying where the topsoil will come from and the volume. The mass balance exercise needs to correspond to the amount of topsoil needed for reclaiming various portions of the site.

13.) Diversion Ditch Details

Comment: Please provide more detail concerning the type of diversion ditches that will be constructed around the base of the stockpiles.

14.) Section 3.2.2, Subsoil Stockpile

Comment: Identification of subsoils to be stockpile for use in reclamation also need to be further addressed in the reclamation plan. The location of the subsoils and their approximate volumes should be addressed, along with an evaluation of soil suitability.

15.) Section 3.3.5, Stream Diversions

Comment: It is unclear from this section what stream channel diversion(s) may be left at reclamation, or how they will be configured. Stream channel diversions must be identified on a map, and cross sections provided.

16.) Section 3.7, Revegetation

Comment: This section indicates that a "detailed revegetation plan will be included in the final Reclamation Plan, to be completed when the mine project design is completed." Additionally, this section indicates that reclamation costs will not be made available until these details of the reclamation plan are developed. The section provides a very general description of a revegetation plan. However, the details of a revegetation plan must be provided before approval can be granted. The operator must provide accurate topsoil depths for various

portions of the mine, to be reclaimed. A description of monitoring techniques to meet the success criteria should be provided in the Reclamation Plan.

Twelve (12) inches may not be enough cover for some areas of the site where more cover may be needed to address high levels of metals or radionuclides in stockpiled material.

A more robust seed mixture will be required including grasses, forbs, and shrubs. The seed mixture provided includes only grasses. The section indicates that this is a seed mixture recommended by the BLM; however, the federal lands that will be reclaimed are managed by the U.S. Forest Service. Forest Service input will be needed in developing a seed mixture for the area.

Only a reference area, north of the permit area, is identified as the area to be used for meeting revegetation standards. The area is not described in the reclamation plan, and has not been approved yet by MMD for the reference area. MMD will require more detailed information concerning this reference area, as well as alternate reference areas. MMD will require that the applicant provide sampling methodology information on reclaimed and reference areas as part of the revegetation plan.

