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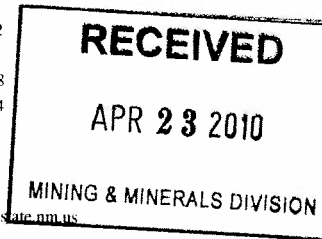
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STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

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April 20, 2010

James Hollen, Permit Lead
EMNRD Mining & Minerals Division
1220 South St. Francis Drive
Santa Fe NM 87505

Re: Roca Honda New Mine Permit Application No. MK025RN; NMDGF Project No.13122

Dear Mr. Hollen:

In response to your letter dated December 15, 2009, the New Mexico Department of Game & Fish (NMGF) has reviewed documents submitted in support of the above referenced permit application. In addition to the application itself, we were provided with a Baseline Data Report (BDR), Mine Operations Plan (MOP), and a Reclamation Plan. Roca Honda Resources, LLC, proposes to develop a new underground uranium mine located on Sections 9, 10 and 16, Township 13N, Range 8W, 2 to 3 miles northwest of the community of San Mateo in McKinley County, NM. Surface ownership is Cibola National Forest and the NM State Land Office. Current land use is grazing, as is the proposed post-mining land use. 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 in connection with this consultation request on May 12, 2009. Present at the site inspection were Rachel Jankowitz of NMDGF, Kathy Economy and Joe Vinson of MMD, Kurt Vollbrecht of the NM Environment Department, and five persons representing Strathmore Resources.

We have identified the following recommendations and need for additional information:

Baseline Data Report

Please add a list of Tables and Figures to the Table of Contents for Appendix 4-C.

Habitat types are reported inconsistently throughout Sections 4 and 5. For example, vegetation categories shown on Figure 4 of Appendix 4-C do not coincide with wildlife habitat types shown on Figure 5-1, Section 5. In particular, the area labeled Juniper-Savanna on Figure 4 coincides roughly with the area labeled Desert Grassland on Figure 5-1, whereas the area labeled Juniper-Savanna on Figure 5-1 has no apparent counterpart on Figure 4. Another example: 9 out of the 24 vegetation transects on Table 9 of Appendix 4-C are described as occurring across the arroyo tributary to San Mateo Creek, yet the results from those transects have apparently been lumped into one of the other vegetation types as they do not appear separately anywhere in the report. Results from the reference area are either not reported, or have been lumped together with project area results. We recommend that vegetation and habitat type stratification should be reviewed and standardized throughout the BDR. Please depict on Figure 15, Appendix 5-C all five habitat types described on pages 23-24.

The method chosen for calculating line transect point intercepts can result in cover values greater than %100, since multiple canopy hits at a given point are each counted separately. However it is not entirely clear how it is possible that basal cover for the ponderosa pine vegetation type (Table 16 of Appendix 4-C) totals >%100, whereas basal cover for the semi-stabilized dune vegetation type (Table 17, Appendix 4-C) totals <%100. The methods that were used to calculate basal and canopy cover in this report do not appear to conform with those described in the web reference cited on page 8 of Appendix 4-C (www.forestandrange.org).

Habitat associations have not been compiled for wildlife observed or captured during the surveys. Text at the bottom of Appendix 5-C, page 35, implies that a supplemental report will be forthcoming to include that information. Please also include in the supplemental report a map showing locations of pellet count stations, and quantitative information to support the conclusions reported at the bottom of page 37.

The pools of water occurring along drainages on the sides of Jesus Mesa, in Sections 10 and 16, may be potential habitat for the State Endangered wrinkled marshsnail (*Stagnicola caperata*), although the species has not previously been documented in McKinley County. Development of the proposed mine would not involve surface disturbance in the vicinity of the surface water occurrences; however, erosion control best management practices should be specified to prevent any impact to these special habitat features that might result from the Section 10 vent shaft located on the mesa above.

The project area includes suitable habitat for the State Threatened spotted bat (*Euderma maculatum*). This species roosts on cliffs and rock crevices, and is known to occur at Mount Taylor. The Roca Honda Wildlife Survey protocol for bats consisted of mist-netting over water on three occasions. Bats were caught on one survey effort and did not include any spotted bats. Due to the relative inefficiency of netting as a sampling method given the project

area habitat conditions, NMDGF recommends supplementary acoustic surveys targeted to evaluate the presence or absence of this Threatened species.

Two active Great Horned Owl nests and one active Red-tailed Hawk nest were documented at the project site. In order to avoid disturbing breeding raptors, observe a construction activity buffer of ½ mile for the Red-tailed Hawk nest (if active) and a ¼ mile buffer for the Great Horned Owl nests (if active), between the dates of February 1 and June 30. These spatial buffers can be reduced, for construction activities other than drilling or blasting, in the presence of intervening topographic or other visual barriers.

Mine Operations Plan.

Planned surface facilities include seven evaporation ponds, two settling ponds, one treated water reservoir, a stormwater detention pond, and an unspecified number of temporary drilling pits. The settling ponds, treated water reservoir, detention basin, and some of the evaporation ponds will be situated within fences constructed so as to exclude medium to large size terrestrial wildlife, as described on page 59. The bottom of these fences should be wrapped with a durable small mesh material, so as to exclude smaller wildlife. Impoundments containing substances at concentrations which may be harmful to wildlife should be netted over the top to exclude flying animals. A US Fish & Wildlife Service suggested netting design for long-term impoundments is shown at <http://www.r6.fws.gov/contaminants/contaminants1c.html>. NMDGF recommends the use of extruded, knit or woven material, which is less likely to ensnare wildlife and cause injury or death than monofilament netting material. Netting should be maintained taut around the frame. Steep-sided or lined impoundments which will contain only water or other inert materials, should be provided with ramps or rafts to allow the escape of wildlife which may become trapped. Drilling mud additives which contain detergents, acids, salts, surfactants, dispersants, or heavy metals are potentially harmful to wildlife, through lethal or sub-lethal ingestion toxicity, or by the mechanism of reducing or eliminating the insulating properties of fur or feathers. Drilling pits which will contain such additives should be covered or netted to exclude flying and terrestrial animals. If the pits will contain only water and inert ingredients such as bentonite and they are not to be covered or netted ramps should be installed to allow the escape of wildlife which may become trapped. If space allows, ramps may consist of sloping back one side of the pit to a 3:1 or greater horizontal:vertical ratio. Constructed ramps are commonly made from sheets of expanded metal for steel tanks, or constructed of packed earth for earthen pits. Ramps made of material with roughened surface texture can be used in the presence of smooth liners or other slippery substrate. To be effective, the escape mechanism must be intercepted by an animal swimming around the periphery of the tank or pit at any anticipated water level. NMDGF is available for consultation regarding netting or escape ramp options for any specific size and configuration of pit or impoundment. Above-ground tanks should also be covered, netted or provided with a means of escape. Standard barbed-wire fencing does not keep out wildlife.

The MOP specifies (on page 59) that trenching placement will be conducted using practices which conform with the enclosed NMDGF Trenching Guideline. The MOP also states that "Power lines and associated equipment such as transformers and substations will be built raptor-safe." NMDGF recommends that power lines should be aligned and constructed in conformance with the enclosed Powerline Guideline. In particular, Roca Honda Resources should follow the recommendations of the Avian Powerline Interaction Committee 2006 guidance for protecting birds from electrocution.

The project area includes important year-round habitat for mule deer and winter habitat for elk. These game species will be protected by the 15 mile-per-hour speed limit proposed in the MOP, which should be posted and enforced.

NMDGF recommends that ground-clearing should take place outside the general avian breeding season (April – August), to avoid possible violation of the Migratory Bird Treaty Act. Blasting and drilling should also be avoided during the nesting season to the extent feasible.

Page 71 of the MOP asserts that vegetation community data presented in the Baseline Data Report "will be used as benchmarks for establishing revegetation success criteria". This statement appears to contradict the statement on page 72 that "The success of revegetation will be determined through comparison . . . of the reclaimed areas with reference areas." The same paragraph mentions technical guidance published by the US Department of Agriculture, but does not specify a particular referenced document. Please clarify whether revegetation success will be based on a technical or a reference area standard, and which data from the BDR will contribute to the standard.

Although no data that would indicate stand age composition (height, stem count, dbh or basal diameter) was presented in the BDR, the project area does include a high proportion of mature trees. These trees are an important habitat resource for cavity-nesting birds, tree-roosting bats, and an assortment of mammals. Table 8 of the BDR (Appendix 4-C, page 29) identifies 124 acres of Juniper-Ssavanna and 45 acres of various woodland classifications that will be directly affected by mining. The permit application should identify steps that will be taken to minimize removal of mature trees, and measures that will be taken to mitigate the loss of these important habitat features.

Reclamation Plan.

The project area includes important year-round habitat for mule deer and winter habitat for elk. Standard barbed-wire fencing does not keep out wildlife. The wire perimeter fences around reclaimed vegetation, described on page 9 of the Reclamation Plan, should be aligned and constructed in conformance with the enclosed Fencing Guideline, to minimize potential for injury to animals crossing the fence. Any concentration areas or travel corridors identified from pellet group studies should also be considered when designing the fences. NMDGF is available for consultation regarding appropriate site-specific fence design.

The BDR (Appendix 4-C, page 24) describes the occurrence of the following NM Department of Agriculture noxious weeds on the Roca Honda site: saltcedar, Canada thistle and musk thistle (field bindweed is not included on the latest update of the list, dated April 2009). The Reclamation Plan refers to weed control on page 26. NMDGF recommends that Roca Honda should prepare a Weed Control Plan, documenting the current locations, extent and intensity of weed infestation, and commit to specific actions that will be taken to monitor, eradicate, control or prevent their spread to new locations.

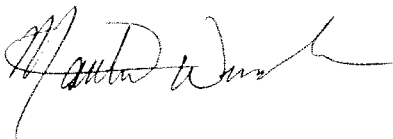
Please describe the type and amount of soil amendments that are proposed for the topsoil during revegetation (top of page 24).

Please identify and describe any down-gradient riparian or wetland areas that might be affected by mine operations, as mentioned on page 29-30, and explain how those areas will be "enhanced" by additional flow of treated mine water. Please describe modifications that will be made to San Mateo Creek, as mentioned on page 34.

The reclamation seed mix shown on Table 3-4, page 36, is heavily weighted to western wheatgrass and mountain brome, two cool-season species which do not currently occur at high levels on the project area. A mix with a greater proportion of grama grass is more likely to succeed at establishing a self-sustaining ecosystem.

Thank you for the opportunity to consult on this permit application. If there are any questions, please contact Rachel Jankowitz at 505-476-8159, or rjankowitz@state.nm.us.

Sincerely,



Matthew Wunder, Ph.D, Chief
Conservation Services Division

cc: Ecological Services Field Supervisor, USFWS
Brian Gleadle, NW Area Office Supervisor, NMGF
Kurt Vollbrecht, NMED Groundwater Quality Bureau
Diane Tafoya, Cibola National Forest

NEW MEXICO DEPARTMENT OF GAME AND FISH

Power line Project Guidelines September 2003

- 1) TRANSMISSION LINE STRUCTURAL DESIGN All eagles, hawks, owls and vultures are protected under New Mexico state law (New Mexico Statutes Annotated, 1978, 17-2-14, as amended). Bald and golden eagles are also protected under federal law. Transmission lines **should be designed to prevent or minimize risk of electrocution of raptors**. A variety of alternatives were set forth in Olendorff et al. 1981 in *Suggested Practice for Raptor Protection on Power Lines: The State of the Art in 1981* (Raptor Research Report No.4, Raptor Research Foundation, Inc., St. Paul, Minnesota, 111 pages). This report was updated by the Avian Power Line Interaction Committee in 1996 as *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996* (Edison Electric Institute/Raptor Research Foundation, Washington, D.C.). A Copy of this report may be requested by calling the Raptor Research Foundation at (612) 437-4359.
- 2) LOCATION Existing roads, trails, and rights-of-way should be followed where possible. Roads and rights-of-way should avoid critical wildlife habitat, saddles, ridge tops, riparian, meadows, edges of meadows, and big game migration routes. Construction using helicopters should be considered in remote critical wildlife areas where construction of new roads would otherwise be necessary.
- 3) CLEARING Rights-of-way clearing should be selective, leaving shrubs and brush undisturbed where possible. Clearing should be avoided in riparian areas and on steep slopes. Brush and limbs should be piled at intervals to enhance wildlife habitat.
- 4) STRUCTURES Bridges and culverts should be designed so that fish passage is not impeded. Water hydrology and stream courses should remain unchanged. Special techniques and structures should be employed as necessary to minimize erosion and sedimentation to riparian areas (e.g., catch basins, raised culverts for roads runoff, water bars).
- 5) CLOSURES Roads and rights-of-way that provide access to critical wildlife areas should be designed for easy and effective closure. Gates should be installed at the onset of construction and closed immediately after completion of the project. Temporary roads should be obliterated and revegetated immediately after construction.
- 6) SCHEDULING Winter construction is preferred on critical big game summer range. Summer construction is preferred on big game winter range. No construction should be conducted in winter range from December 15-April 15. No construction should occur in elk calving areas from May 1-June 30. No

construction should occur in deer fawning areas from June 1-August 31 (northern New Mexico) or July 1-September 31 (southern New Mexico). No construction should occur in turkey nesting areas from April 15-June 30. Construction in big game migration areas should be restricted during migration.

- 7) SPECIAL CONSIDERATION FEATURES (Areas such as seeps, springs, wet meadows, marshes, wallows, salt licks and water development areas). Protect these features from damage during construction. No roads within 200 feet of feature. Remove debris from wildlife trails. Protect rock talus areas from disturbance by heavy equipment.
- 8) RIPARIAN AREAS AND FISHERIES Develop site-specific measures where appropriate. Maintain at least 100-foot buffer along streams. Debris left in streams and drainages may be detrimental or beneficial and should be assessed on a site-specific basis. Prevent siltation to streams. Fine sediment (less than 0.85 mm diameter) should remain at < 20% of spawning gravel in trout streams. In streams: maintain $\geq 80\%$ natural shade over water; maintain $\geq 80\%$ natural bank protection; composition of sand, silt, and clay should remain within 20% of natural levels.
- 9) FENCES Provide jumps or top rails on fences, or lay-down fences, within areas of high wildlife use (e.g., travel corridors). Bottom wire should be barbless and at least 16" above ground in antelope or deer habitat. Maximum fence height should be 42". Minimum spacing between top two wires should be 10". Do not use woven wire fencing.
- 10) REVEGETATION AND RESTORATION A reclamation plan is recommended for all short-term or long-term temporary surface disturbances. Stockpile topsoil at the time of original construction. When the disturbed area is no longer needed, re-contour the site to blend visually with surroundings, and return the drainage pattern as close as feasible to pre-existing conditions. For best results, topsoil should be spread to a minimum depth of 20 inches. Where no topsoil is available, or topsoil has been stored over one or more winters, amend with organic matter and fertilizer. Create furrows perpendicular to slope, if on a hillside. Seed with an appropriate certified weed-free mix of native grasses, forbs and shrubs beneficial to wildlife. In some cases seeding or transplant of woody species may be desirable.
Incremental revegetation is preferred in areas where work is conducted during spring and summer. Sections of right-of-way should be rehabilitated as construction is completed. Follow up by monitoring to assure no development of erosion problems and successful establishment of vegetation. Revegetated areas, which have not become established by the end of the growing season, should be treated to prevent erosion and site degradation (e.g., mulching, contouring, water bars).

SPECIES-SPECIFIC RECOMMENDATIONS

- 1) THREATENED AND ENDANGERED SPECIES Determine which state and/or federally listed species could occur in the project area. Sources of information include:

New Mexico Department of Game and Fish
PO Box 25112
Santa Fe, New Mexico 87504
(505) 476-8101 [State-listed wildlife]

New Mexico Department of Energy, Minerals and Natural Resources
Forestry Division
1220 St. Francis Dr.
Santa Fe, New Mexico 87505
(505) 476-3200 [State-listed plants]

U.S. Fish and Wildlife Service
New Mexico Ecological Services State Office
2105 Osuna, NE
Albuquerque, New Mexico 87113
(505) 346-2525 [Federally-listed plants and animals]

Contact the above agencies for assistance in determining presence or absence of threatened and endangered species and critical habitats. Work with these agencies to develop protective strategies.

- 2) DEER AND ELK Protect browse and forage plants.
- 3) TURKEY Identify and protect roost tree groups (winter roost trees are most critical). Roost tree groups can be described as:
- Large open topped trees ($\geq 13''$ dbh, $> 40'$ tall, especially ponderosa pine)
 - Canopy cover $> 55\%$;
 - Basal area > 100 ft²/ac.
 - Accessible from clearing directly up slope, not isolated from stand.
 - Provide nesting habitat in ponderosa pine or mixed conifer where practical by creating slash piles (10' diameter x 3' high) or leaving unlopped treetops. Nesting habitat should be within $\frac{1}{2}$ mile of dependable water.
- 4) RAPTORS Protect known nest tree groups. Protect perch and roost trees adjacent to cliffs, major ridges and openings.
- 5) BEAR Protect mast (oak & juniper) and forage plants. Leave large diameter dead or down trees for insect forage.

- 6) TREE SQUIRRELS Protect stands with high squirrel activity (e.g., nest trees, large middens). Protect trees with existing cavities.

- 7) NON-GAME BIRDS When abandoning or realigning old electric lines, leave 10% to 30% of the abandoned poles standing for perching and cavity nesting birds, especially in areas lacking natural snags. Numbers and location of poles to be left standing should be coordinated with the U.S Fish and Wildlife Service and New Mexico Department of Game and Fish. The taller the poles the better, but under existing lines, leaving four to ten feet of the old pole standing will provide useful habitat. If poles are still sound, artificial nesting cavities can be created. Heavily creosoted, potentially toxic poles should be cut at ground level and removed.

TRENCHING GUIDELINES

NEW MEXICO DEPARTMENT OF GAME AND FISH

September 2003

Open trenches and ditches can trap small mammals, amphibians and reptiles and can cause injury to large mammals. Periods of highest activity for many of these species include nighttime, summer months and wet weather. Implementing the following recommendations can minimize loss of wildlife.

- Keep trenching and back-filling crews close together, to minimize the amount of open trenches at any given time.
- Trench during the cooler months (October – March). However, there may be exceptions (e.g., critical wintering areas) that need to be assessed on a site-specific basis.
- Avoid leaving trenches open overnight. Where trenches cannot be back-filled immediately, escape ramps should be constructed at least every 90 meters. Escape ramps can be short lateral trenches or wooden planks sloping to the surface. The slope should be less than 45 degrees (1:1). Trenches that have been left open overnight should be inspected and animals removed prior to backfilling, especially where endangered species occur.

On a statewide basis there are numerous threatened, endangered or sensitive species potentially at risk by trenching operations. Project initiators should seek county species list to evaluate potential impact of projects. Risk to these species depends upon a wide variety of conditions at the trenching site, such as trench depth, side slope, soil characteristics, season, and precipitation events.

