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## STATE OF NEW MEXICO DEPARTMENT OF GAME & FISH

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November 30, 2009

Holland Shepherd, Program Manager  
EMNRD Mining & Minerals Division  
1220 South St. Francis Drive  
Santa Fe NM 87505

Re: Roca Honda Mine Revised Sampling and Analysis Plan, Permit No.MK015RN; NMGF Project No.13065

Dear Mr. Shepherd:

In response to your letter dated October 28, 2009, the New Mexico Department of Game & Fish (NMGF) has reviewed the above referenced document, as well as the Response to Agency Comments by Strathmore Minerals Corp. dated October 16, 2009. The Sampling and Analysis Plan (SAP) is required to be submitted to the Director of MMD prior to baseline data collection under the New Mining Operations section of the NM Mining Act Rules (19.10.6.602 D(12)). In our letter to MMD dated May 13, 2009 (NMGF Project No.12658), we commented on Section 4, Vegetation, and Section 5, Wildlife, of the Roca Honda SAP. Strathmore's responses to those comments are addressed below (original NMGF comments italicized).

#### **Section 4 Vegetation**

**Introduction and Background.** *NMGF is in possession of the Wood, et al, 2006 report of their special status plant species survey of Section 16. We do not have a copy of the report of the Section 9 and 10 survey conducted that same year. Please provide a copy of that report.*

Strathmore's response that the information will be included with the Baseline Data Report accompanying their Mining Act permit application is acceptable.

**Figure 4.3 Transect Line Locations in the Reference Area.** *Please show vegetation types on the reference area map, corresponding to those delineated for the project area. Please identify the number of transects in each vegetation type at each location (project area and reference). Please add productivity exclosures in the reference area, or explain why none are there located there.*

The revised SAP states that a minimum 15 transects per vegetation type will be utilized. This should be an adequate number of transects, however Strathmore should provide an analysis of statistical sufficiency.

The response to comments also clarifies that the reference areas are meant to serve as control for the wildlife studies, and not for the vegetation data collection. There is no requirement in the Mining Act Rules to identify a vegetation reference area in the SAP, however a reference area is typically an element of the reclamation plan portion of a mine permit application (19.10.6.603), and logic suggests that similar data should be collected simultaneously in order to demonstrate

suitability of the selected location for that purpose. We request that MMD clarify the procedure and timing for establishment of a vegetation reference area for measuring success of Roca Honda Mine revegetation efforts at closeout.

**4.4.2.2 Data Collection and Analysis of Cover.** *Please explain how overlapping hits on the line intercept transects will be recorded and interpreted. Please record diameter at ground level in addition to height for juniper and pinyon trees. The project area supports a large number of apparently very old trees, and for these species diameter is a better index than height to approximate age of the tree. Please collect cores from a subset of measured trees and perform a site-specific correlation of diameter with age, for the purpose of documenting the extent of mature woodland as opposed to recent brush encroachment, and in view of the importance of large diameter pinyon and juniper for bat roost needs, particularly summer maternity roosts.*

The response to this comment is confusing. The response states that each species will be recorded where multiple species overlap, but does not demonstrate a method of calculating cover that precludes double-counting of cover layers. It also states that basal cover (bare ground, litter, etc) will be recorded at each point. However a laser monitoring device will apparently be employed, and we are not familiar with a laser device that counts more than one layer (the uppermost). NMGF requests that Strathmore provide more detail describing their point intercept methodology.

Regarding characterization of the age structure of the woodlands on the Roca Honda site, the response states that representative measurements will be taken of tree height, diameter at breast height (dbh), and number of stems. Observations will also be taken of the dimensions seen from aerial photos. Dbh is suitable for ponderosa pine, but the standard methods for aging or describing stand structure in pinyon-juniper are basal diameter (usually measured at "stump height", one foot above the ground), canopy projection (such as seen on aerial photography), and/or height, as correlated with age determined from representative core samples. Please provide a reference for the validity of measuring number of stems as a metric of community structure.

**4.8 Laboratory and Field Quality Assurance Plan.** *The personnel section of the QAP has been cut and pasted from the Wildlife section. Please replace wildlife biologist qualifications with qualifications specific to botany personnel.*

The change has been made as requested.

## **Section 5 Wildlife**

**Permits.** *NMGF recommends that the project consultants obtain scientific and educational take permits from the state. While permits are not strictly required for this type of activity, if a state Threatened or Endangered species should be inadvertently destroyed during the survey work, it would be a violation of state law in the absence of a permit. Permit application forms can be found at <http://www.wildlife.state.nm.us/conservation/documents/wildlifeforscientificeducation.pdf>.*

The Response to Agency Comments states that scientific collection permits will be obtained, but we cannot find where the SAP has been revised to reflect this.

**Introduction and Background.** *NMGF is in possession of the Wood, et al, 2006 report of their special status wildlife species survey of Section 16. We do not have a copy of the report of the Section 9 and 10 survey conducted that same year. Please provide a copy of that report. Only those species with federal status were included in the 2006 report. There are a number of state listed and sensitive species for which are not included in the survey, notably the state Threatened gray vireo and spotted bat, for which habitat may be present on the project area. We enclose a list of special status species known to occur in McKinley and/or Cibola County. Please conduct targeted surveys for state species without federal status, especially the gray vireo and spotted bat.*

Strathmore contends that spotted bat was not a special status species at the time of their survey. Spotted bat has been on the NM Threatened list since 1988 and would have been included on any list of special status species obtained from NMGF. They also contend that gray vireo was included in their survey. Gray vireo is not included in the report which is in our

possession. Possibly there may have been an additional special status species survey of which we are not aware; hopefully this situation will become clear when the full set of reports is provided along with the Baseline Data Report. The SAP has been revised to include targeted protocol surveys for state special status species.

**Figure 5-1 Wildlife Habitat Types.** Please depict the “potential wetland riparian areas within and below the permit area”, referred to on Table 5-1, and briefly describe these areas in the text. Please also depict the “intermittent/topographic” habitat types (rock/ cliffside and arroyo/ drainages) as referred to in 5.4.2.2 Sampling Design, and describe their extent and nature in the text.

Strathmore’s response that the information will be included with the Baseline Data Report accompanying their Mining Act permit application is acceptable. Note that these might be considered “special or unique wildlife habitat features” as described in 19.10.6.D(13)(d)(i).

**5.4.1 Wildlife Species Inventory.** The surveys conducted in 2006 on Section 16 do not provide full baseline data regarding comprehensive lists of species and habitat types and associations. Surveys were conducted only in the fall and winter, and habitat associations are reported only for species with federal special status. Please complete similar transect surveys in the spring and summer seasons, and report habitat associations for all species observed. As noted above, we are not in possession of survey reports from Sections 9 and 10.

Strathmore’s response that the information will be included with the Baseline Data Report accompanying their Mining Act permit application is acceptable.

**5.4.2.3 Field Methodology.** Please provide detailed survey protocols for all species groups listed. Use federal or state standard protocols for special status species where available (NMGF can provide specific protocols for burrowing owl, raptors and gray vireo).

Please describe and identify the location of standing water where bat netting will take place, and any other wildlife-available waters on or near the permit area. Due to the potential presence of a number of sensitive and one Threatened bat species, the apparent presence of good roosting habitat (older junipers with dead branches and loose bark and deeply creviced vertical rock faces) and the limited availability of appropriate netting locations, NMGF recommends that netting surveys be supplemented with acoustic inventory techniques.

**Figure 5-2 Wildlife Survey and Transect Locations.** Please add survey stations for medium-large mammals and herpetofauna/ small mammals in Section 10, or explain why no survey stations are located there.

Strathmore responds that survey protocols and sampling locations will be provided in the Baseline Data Report. We believe the intent of requiring “methods of [data] collection” as part of an SAP (19.10.6.D(12)(a)(iii)), was to allow agency confirmation that the methods would be sufficient to meet the reporting requirements of 19.10.6.E (d) regarding the Baseline Data Report. In the absence of detailed information regarding methodology, NMGF is unable to make that determination.

In addition to bat acoustic surveys, we also recommend that a survey for raptor nests in suitable habitat within one mile of any proposed mine facilities should be added to the SAP.

Thank you for the opportunity for continued consultation on this permitting document. If there are any questions, please contact Rachel Jankowitz at 505-476-8159, or [rjankowitz@state.nm.us](mailto:rjankowitz@state.nm.us).

Sincerely,

Matthew Wunder, Chief  
Conservation Services Division

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