

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

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Deputy Cabinet Secretary

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Mining and Minerals Division



CERTIFIED MAIL – RETURN RECEIPT REQUEST

November 29, 2018

Mr. Michael Neumann, Sr. Project Consultant
Energy Fuels Resources, Inc.
225 Union Blvd., Suite 600
Lakewood, CO 80228

RE: Agency Comments, Roca Honda Mine - Baseline Date Report Revision 1 – Addendum 1
Permit Application No. MK025RN

Dear Mr. Neumann:

The Mining and Minerals Division (“MMD”) has reviewed the Roca Honda Resources (“RHR”) Baseline Data Report Revision 1 Addendum 1 submittal that was dated July 2018. MMD requested reviews and comments from the Environment Department (“NMED”), the Department of Game and Fish (“NMDGF”), the State Land Office (“NMSLO”), the Office of the State Engineer (“NMOSE”), NM Dept. of Cultural Affairs (“NMDCA”), NM State Forestry Dept. (“NMSFD”), and the Cibola National Forest (“USFS”) by letters dated August 10, 2018. We received comments from NMDGF, NMDCA, and NMED. Please address the questions and concerns contained in these letters and the additional comments and concerns from MMD below.

MMD Comments

General BDR Revision 1 (January 2011) Comments

1. Please provide a description of the ore body as required by 19.10.6.602 D (13) (f) NMAC that relates to the new addition in the permit boundary of Sect. 17 and 8.
2. Please provide updated surface and ground water information pursuant to 19.10.6.602 D (13) (g) NMAC that relates to the new addition in the permit boundary of Sect 17 and 8.
3. Please provide updated information for the new addition in the permit boundary of Sect 17 and 8 to address BDR information required by 19.10.6.602 D (13) (h), (i), and (j) NMAC.

4. Please keep in mind that the Mining Operation and Reclamation Plan, for the Roca Honda Mine, has not yet been updated for Sections 17 and 8. MMD advises that this been done when the Mining and Reclamation Plan is updated for the whole site.

BDR Revision 1, Addendum 1 (July 2018) Comments

Appendix A: Biological Studies

1. Please refer to the 26 October 2018 Comment Letter from NMDGF for comments on Appendix A.

Appendix B: Radiological Assessments

1. Please refer to NMED's 29 October 2018 for detailed comments to address on Appendix B.

Appendix C: Reuse Pipeline Route Survey and Design Criteria

1. Please update the Reuse Pipeline Route Survey and Design Criteria to reflect the final route and outfall locations.
2. Please update the Reuse Pipeline Route Design Criteria to reflect the maximum discharge volume planned to be discharged through the pipeline.
3. Please refer to NMED's 29 October 2018 for detailed comments to address on Appendix C.

Appendix E: Probable Hydrologic Consequences

1. Please refer to NMED's 29 October 2018 letter for detailed comments to address on Appendix E.

NMED Comments

1. Please review and respond to comments from NMED's 29 October 2018 letter including comments from the Mining Environmental Compliance Section, Surface Water Quality Bureau, and Air Quality Bureau.

NMDCA Comments

1. Please review and respond to comments from NMDCA included in their 02 October 2018 letter.

NMDGF Comments

1. Please review and respond to comments from NMDGF included in their 26 October 2018 letter.

Please respond to the MMD comments and the attached comments from other state agencies within 60 days of receipt of this letter. Please let me know if you would like to set up a meeting prior to the deadline to discuss these comments.

If you have any questions, please contact me at (505) 476-3413 or at clinton.chisler@state.nm.us.

Sincerely,



Clint Chisler
Permit Lead
Mining Act Reclamation Program ("MARF")

Enclosures:

The New Mexico Environment Department Ground Water Quality Bureau,
Surface Water Quality Bureau, and Air Quality Bureau Comment Letters
Department of Cultural Affairs Historic Preservation Division Comment Letter
State of New Mexico Department of Game & Fish Comment Letter

cc: Holland Shepherd, MARF
Mine File (MK025RN)



Susana Martinez
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
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October 2, 2018

Clint Chisler
Mining Act Reclamation Program
Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Regular New Mine Application, Addendum 1, Roca Honda Resources MK025RN (HPD log 108459)

Dear Mr. Chisler:

On behalf of the New Mexico State Historic Preservation Officer (SHPO), I want to thank the Mining and Minerals Division for providing us with the information for the Addendum to the Roca Honda Regular New Mine Permit, which we received on August 13, 2018 (HPD log 108459). The SHPO commented on the original Mine Operations Plan on February 27, 2012. s in response to the follow-up consultation for minimal impact exploration permit application received at the Historic Preservation Division (HPD) on May 11, 2018. The Addendum application indicates that additional area of potential effect on private land within Township 13 North, Range 8 West, Section 17 a portion of Section 8.

The Addendum indicates that the water reuse pipeline is being re-routed, south to the Rio San Jose, rather than north as previously planned. The new pipeline route crosses private lands, state trust lands, BLM land, and appears to be within NMDOT rights-of-way along NM State Highway 605.

According to the addendum the archaeological surveys associated with the pipeline route are being prepared and will be submitted to the Cibola National Forest and the SHPO for review when they are complete. We have been working closely with the Cibola National Forest for the Roca Honda undertaking and will advance the consultation under Section 106 of the National Historic Preservation Act.

Please do not hesitate to contact me if you have any questions regarding these comments. I can be reached by telephone at (505) 827-4225 or by email at bob.estes@state.nm.us.

Sincerely,

Bob Estes Ph.D.
HPD staff Archaeologist

GOVERNOR
Susana Martinez



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Michael B. Sloane

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Las Cruces
BOB RICKLEFS
Cimarron
THOMAS "DICK" SALOPEK
Las Cruces

26 October 2018

Clint Chisler, Permit Lead
Mining Act Reclamation Program
Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Regular New Mine Application, Baseline Data Report: Addendum 1, Roca Honda Resources, LLC, MK025RN; NMDGF No. 18599

Dear Mr. Chisler:

The Department of Game and Fish (Department) has reviewed the biological section of the Baseline Data Report. The document, submitted by Marron and Associates (Marron), is an addendum to the 2014 Biological Report that covers the proposed Section 17 Expansion Area and Pipeline Corridor. A site inspection is scheduled for 7 November 2018, after which the Department may have some additional recommendations.

Mining Expansion Area

The report states that the ground surveys of the proposed Section 17 Expansion Area were conducted between 25 and 27 August 2015, and that the raptor and golden eagle (*Aquila chrysaetos*) survey was conducted on 26 and 27 August 2015. Four species of raptors were observed: golden eagle, red-tailed hawk (*Buteo jamaicensis*), sharp-shinned hawk (*Accipiter striatus*), and American kestrel (*Falco sparverius*). The report also states that peregrine falcons (*Falco peregrinus*) were documented "only a few miles" to the southeast of the study area. The report states that no raptor nests were documented on the cliffs along Jesus Mesa located 0.15 mile east of the study area, although Marron indicates that these cliffs provide suitable habitat for nesting raptors. Young raptors typically fledge by August, and therefore the timing of the raptor survey was not sufficient to document active raptor nest sites, especially for species using cavities or ledges such as American kestrel, peregrine falcon, prairie falcon (*Falco mexicanus*), and great horned owl (*Bubo virginianus*). The Department recommends additional surveys with dates that would include March for golden eagles and great horned owls; and April, May, and June for songbirds and other raptors. Winter surveys are also recommended in order to document avian use of the study area during non-breeding seasons.

Gray vireos (*Vireo vicinor*) were heard calling in the northern portion of the study area, but no nest sites were identified. Gray vireo is state listed as Threatened and is considered a Species of Greatest Conservation need. As part of the avian use surveys, the Department also recommends conducting protocol surveys for gray vireo to determine if the species nests within the project area.

The Department has previously recommended that an acoustic monitoring survey be conducted for bats as part of the Roca Honda Sampling and Analysis Plan and Baseline Data Report. To date, this request has been repeatedly ignored. The Roca Honda permit area appears to contain high quality bat habitat, and a number of sensitive bat species could occur there including the state Threatened spotted bat (*Euderma maculatum*). This species was captured on 30 June 2006 and 5 June 2007 near an earthen stock tank approximately seven miles south of the proposed Roca Honda site (Geluso 2008), providing evidence of a reproducing population in the area. Spotted bats utilize vertical fissures in cliff faces for roosting, and the cliff faces along Jesus Mesa may provide important habitat for this species. In addition, any existing or future development of water sources, such as stock tanks or mining ponds, will serve to attract bats. Therefore, the Department reiterates the necessity to conduct bat surveys as part of the Baseline Data Report.

Pipeline

The proposed pipeline corridor is situated primarily along NM Highway 605 and was surveyed by Marron for golden eagles and other raptor species on 9 March and 12 May 2015; for gray vireo on 14 May and 9 July 2015; and for burrowing owl (*Athene cunicularia*) and Bendire's thrasher (*Toxostoma bendirei*) on 21 May and 24 June 2015. Species of management interested detected along the NM Highway 605 corridor during the nesting season included golden eagle, ferruginous hawk (*Buteo regalis*), peregrine falcon, prairie falcon, American kestrel, northern harrier (*Circus cyaneus*) and gray vireo. Any future pipeline construction along sections of NM Highway 605 that Marron has designated as potential nesting habitat should occur outside the primary migratory songbird breeding season of 15 April-1 September (plus 1 January-15 July in habitats for golden eagle and great horned owl; and 1 March-1 September for other raptor species). If pipeline construction activities during the breeding season cannot be avoided, the area should be surveyed for active nest sites, and adequate buffer zones should be established around any active nests (with birds or eggs present in the nesting territory). Buffer distances should be ≥ 100 feet from songbird and raven nests, 0.5 mile from golden eagle and ferruginous hawk nests, and 0.25 mile from other raptor nests. Active nests in trees or shrubs that that must be removed should be mitigated by qualified biologists or wildlife rehabilitators.

Thank you for the opportunity to review and comment on the Baseline Data Report. If you have any questions, please contact Ron Kellermueller, Mining and Energy Habitat Specialist, at (505) 476-8159 or ronald.kellermueller@state.nm.us.

Sincerely,



Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

cc: USFWS NMES Field Office

Literature Cited

Geluso, K. 2008. Spotted bats (*Euderma maculatum*) from Mt. Taylor, New Mexico. *Western North American Naturalist* 68:119-122.



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BUTCH TONGATE
Cabinet Secretary

J.C. BORREGO
Deputy Secretary

MEMORANDUM

Date: October 29, 2018

To: Holland Shepherd, Program Manager, Mining Act Reclamation Program

Through: Jeff Lewellin, Mining Act Team Leader, Mining Environmental Compliance Section

From: Amber Rheubottom, Mining Environmental Compliance Section
Alan Klatt, Surface Water Quality Bureau
Neal Butt, Air Quality Bureau

Subject: **NMED Comments, Roca Honda Resources, LLC, Baseline Data Report
Addendum 1, McKinley County, New Mexico, MMD Permit No.
MK025RN**

The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on August 10, 2018 requesting NMED review and provide comments on the above-referenced MMD permitting action. The Baseline Data Report (BDR), Addendum 1 compiles the results of various studies completed for the proposed expansion of the Roca Honda Mine permit area and the southern reuse pipeline to the BDR Revision 1. In accordance with 19.10.6.605 (C) NMAC (Permit Approval Requirements), NMED is providing comments within the prescribed 60-day period. NMED has the following comments.

Background

Roca Honda Resources, LLC, (Applicant) has applied for a Mining Act permit associated with a proposal to conduct underground uranium mining in T13N, R8W, Sections 9, 10, and 16. The BDR Addendum 1 proposes to expand the Mining Act permit area to include Section 17 (Lee Ranch) and a small portion of the southeast corner of Section 8. The location is in McKinley County, New Mexico approximately three miles northwest of San Mateo and 22 miles northeast of Grants, New Mexico. Sections 9 and 10 are National Forest System lands, which are open to mineral entry under the General Mining Law of 1872. Section 16 is land owned by the State of New Mexico. The entire project is subject to the regulatory jurisdiction of the State of New Mexico.

Air Quality Bureau

The Air Quality Bureau comments are attached under separate letterhead.

Surface Water Quality Bureau

The Surface Water Quality Bureau comments are attached under separate letterhead.

Mining Environmental Compliance Section

The Mining Environmental Compliance Section (MECS) of NMED has been providing comments associated with the various components of this mine permit application since May 29, 2009. MECS is providing the comments below for the Baseline Data Report Addendum I which was submitted to MMD on July 24, 2018.

- 1) Section 1.0 Introduction, page 1: NMED considers this report to be an integral component to the DP-1717 application package. The proposed change of the discharge location to the Rio San Jose, associated pipeline corridor, and inclusion of Section 17 and portions of Section 8 will require revision of the existing permit application and re-issuance of the public notice. NMED requests the submittal of a revised permit application to supplement the existing DP-1717 application package to include these facilities. Following the submittal of a revised permit application, NMED will coordinate with Roca Honda Resources (RHR) on the process for the public notice.
- 2) Section 1.0 Introduction, page 3: The figure provided shows multiple pipeline routes, however the accompanying text does not discuss the different routes. Please revise the text to explain the routes and submit a revised figure which notes them more clearly.
- 3) Appendix B, January 2016 ERG page 2: Please discuss the reliability of the statistics on Figure 2 for Mean Exposure Rate below 20 $\mu\text{r/h}$ as the R2 value is 0.817.
- 4) Appendix B, January 2016 ERG page 11: Please discuss how RHR intends to address the areas with elevated levels detected in the survey in the southern part of Section 17.
- 5) Appendix B, January 2014 ARCADIS-SENEC page 6 & 7: Please discuss how Energy Fuels intends to address the areas with elevated levels detected in the survey and the process for “documentation prior to future RHR mining operations”.
- 6) Appendix B, January 2014 ARCADIS-SENEC page 10 AND January 2016 ERG page 6: Please explain why the soil analytical suite for the 2016 report was Ra-226, Th-232, U-nat and the 2014 report was Ra-226, 228-Ra, 230-Th, U-nat, K-40. Specifically, please address why Ra-228 and K-40 were omitted from the 2016 report, and the Th radionuclide differed between the two surveys.
- 7) Appendix B: Considering the two studies presented herein, and the previous studies submitted by RHR, what is the site specific 95% confidence background level, to be achieved at the completion of mine activity. Please discuss any changes this number has undergone as a result of expanded baseline work presented to the coordinating agencies.
- 8) Appendix C, June 2015 Wilson & Company (Wilson) page 1 and Appendix E, October 2017 Rio San Jose Characterization (RSJ) Section 1.0 Introduction page 1 and January 2009 Discharge Permit Application (Application): The maximum capacity stated in Wilson is 4,500 GPM for the discharge pipeline, the RSJ states the maximum discharge volume is 5,920 GPM, and the Application states 8,000 GPM as a discharge volume. Please discuss the discrepancy of these values. Additionally, when the revised application is submitted (Comment 1) please state the appropriate proposed discharge volume.
- 9) Appendix E, 2017 Technical Memorandum: NMED would recommend RHR submit the Technical Memorandum to NMOSE for their review, considering NMOSE requirements pertaining to mine dewatering.
- 10) Appendix E, 2017 Technical Memorandum page 1: Dewatering was evaluated only for sections 9, 10, 16, and 17. A small portion of Section 8 is a part of this project, and it does not

appear this was included in the 2017 assessment. Please include a discussion regarding inclusion of Section 8 in the 2017 dewatering assessment.

11) Appendix E, 2017 Technical Memorandum, page 8: It is stated that public water supply in the Gallup will not be impacted by Roca Honda dewatering efforts. Were potential impacts to private wells evaluated?

12) Appendix E, 2017 Technical Memorandum, page 8 Please clarify what geologic unit "upper water-bearing sandstones" is referring to in paragraph 4.

13) Appendix E, October 2017 Rio San Jose Characterization, page 20: NMED agrees that additional alluvial characterization in the form of alluvial monitoring wells would be prudent considering the challenges in the characterization efforts presented herein. However, NMED had previously recommended, in a letter to RHR dated September 22, 2015, the installation of three new alluvial wells. NMED will evaluate the proposed alluvial monitoring program as a component of the DP-1717 permitting process.

14) Appendix E, October 2017 Rio San Jose Characterization, Field data sheets: Sites 1, 3, and 9 had greater Radiation scan values at depth than on the surface. Did these locations exhibit any other differences in soil properties with depth?

15) Appendix E, October 2017 Rio San Jose Characterization, Appendix E Figure 2: Does Roca Honda have any historic water quality data on Well 6535? If so, please provide this to NMED.

16) Appendix E, October 2017 Rio San Jose Characterization, Appendix E Table E.2: The line for Erigeron rhizomatus states Chinle is not in the project area, however the report introductions states Chinle is in the project area. Please discuss this discrepancy.

17) Appendix E, October 2017 Rio San Jose Characterization, Appendix H: Please provide a revised figure for the second full page photo which includes a photo description.

NMED Summary Comment

NMED will continue to provide review and comments within its regulatory jurisdiction of future submissions of documents by the Applicant as the New Mexico Mining Act permit process moves forward.

If you have any questions, please contact Jeff Lewellin at (505) 827-1049.

cc: Bruce Yurdin, Division Director, NMED-WPD
Shelly Lemon, Bureau Chief, SWQB
Liz Bisbey-Kuehn, Bureau Chief, AQB
Fernando Martinez, Division Director, EMNRD-MMD
Clint Chisler, Lead Staff, EMNRD-MMD
Kurt Vollbrecht, Program Manager, MECS



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BUTCH TONGATE
Cabinet Secretary

BRUCE YURDIN
Acting Deputy Secretary

MEMORANDUM

DATE: October 29, 2018

TO: Jeff Lewellin, Mining Act Team Leader
Mining Environmental Compliance Section
Ground Water Quality Bureau

FROM: Alan Klatt, Environmental Scientist & Specialist
Watershed Protection Section
Surface Water Quality Bureau

RE: **Request for Comments, Roca Honda Resources, LLC, Baseline Data Report, Addendum 1, McKinley County, MMD Permit No. MK025RN**

The New Mexico Surface Water Quality Bureau (SWQB) has completed its review of the report referenced above which includes the Final Rio San Jose Characterization Report titled "Report for Findings of Water Quality and Sediment Chemistry along the Rio San Jose" submitted by Roca Honda Resources (LLC) to the Minerals and Mining Division of the New Mexico Energy, Minerals and Natural Resources Department. The objective of the Baseline Data Report is to describe the environmental conditions as required under NMAC 19.10.6 for the proposed Roca Honda uranium mine. The proposed mine permit area has been expanded to include a total disturbance of 41.7-acres in Sections 8, 16, and 17 in Township 13 North, Range 8 West (T13N R8W), in McKinley County, New Mexico. The proposed mining permit includes a pipeline that is planned to convey treated mine discharge water approximately 23.7-miles to Milan, New Mexico which would continuously discharge to the Rio San Jose under a National Pollutant Discharge Elimination System (NPDES) permit at an estimated maximum annual rate of 5,900-gpm or 13.2-cfs with an average annual rate of 4,700-gpm over the 13-year mining period. Pursuant to the State of New Mexico Mining Rules, SWQB and has prepared the following comments:

Comment #1- PDF page 8 of the 2018 Baseline Data Report Addendum 1 reads:

"There are no perennial surface water occurrences within the mine expansion area, hence no baseline water quality data is presented."

The State of New Mexico protects non-perennial surface waters under 20.6.4 of the New Mexico Administrative Code (NMAC). SWQB is aware of the logistical challenges involved with sampling non-perennial waterbodies and requests that an attempt be made to collect surface water samples for a baseline water quality evaluation using ISCO samplers or similar automatic sampling equipment. In addition, SWQB recommends that physical or biological data be collected as part of the baseline data report. Examples of physical data include channel width, floodplain width, channel depth, channel slope, sinuosity, grain size distribution, percent canopy cover, etc. Data should be collected at the permit area and the potentially affected areas which includes San Rafael Canyon and the Rio San Jose.

Comment #2- PDF page 34 of the 2018 Baseline Data Report Addendum 1 reads:

“From the standpoint of the US Army Corps of engineers (and potential jurisdiction status of San Rafael canyon), it may be important to ground verify whether the San Rafael Canyon drainage dissipates before reaching San Mateo Creek, or somehow discharges flow into the unnamed drainage area that ultimately does flow into San Mateo Creek.”

SWQB recommends coordinating with the USACE to determine if San Rafael Canyon is a water of the U.S. However, regardless of the outcome of this determination, San Rafael Canyon retains its status as a surface water of the state. A surface water of the state includes tributaries that combine with other surface waters of the state by either surface or subsurface connections¹. The lower reach of San Rafael Canyon is located within an alluvial geologic unit² and has a close proximity to San Mateo Creek which likely supports a subsurface connection to San Mateo Creek due to the increased hydrologic conductivity associated with alluvial materials. As a surface water of the state, San Rafael Canyon is subject to New Mexico’s Antidegradation Policy and Implementation Plan (20.6.4.8 NMAC), General Criteria (20.6.4.13 NMAC), and Intermittent Waters (20.6.4.98 NMAC) with designated uses that include livestock watering, wildlife habitat, warmwater aquatic life, and primary contact. Mining related activities with the potential to adversely affect the chemical, physical, and biological characteristics of surface waters of the state should be conducted with Best Management Practices (BMPs) to protect and maintain existing water quality.

Comment #3- PDF page 122 and 129 of the 2018 Baseline Data Report Addendum 1 reads:

“Based on the data collected Sites 1, 3, 4, 5, 6, 7, 8, and 9 [at San Mateo Creek] meet the vegetation requirement for a wetland.”

“Based on the data collected Sites 1 and 2 [at Arroyo del Puerto] meet the vegetation requirement for a wetland.”

1 <http://164.64.110.134/parts/title20/20.006.0004.html>

2 Green, G.N., Jones, G.E., and Anderson, O.J., 1997, The Digital Geologic Map of New Mexico in ARC/INFO Format: U.S. Geological Survey Open-File Report 97-0052, 9 p., scale 1:500,000.

Wetlands are surface waters of the state and are defined in 20.6.4 NMAC as:

“areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions in New Mexico.”

The state definition does not require all three wetland attributes (i.e. hydric soils, hydrophytic plants, and supporting hydrology) to be present at the same time for an area to be classified as a wetland. Therefore, the sites that meet the vegetation requirement for a wetland would be a surface water of the state subject to 20.6.4 NMAC. The General Criteria under 20.6.4.13 NMAC includes standards for suspended or settleable solids, oil and grease, toxic pollutants, total dissolved solids, as well as additional criteria not listed here. Mining related activities in these areas should be conducted with Best Management Practices (BMPs) to prevent, “...any water contaminant [to discharge] in such quantity and of such duration as may with reasonable probability from injuring human health, animal or plant life or property, or unreasonably interfering with the public welfare or the use of property.” (20.6.4.13 NMAC)

Comment #4 - PDF page 243 of the 2018 Baseline Data Report Addendum 1 reads:

“It appears that areas in the potential discharge area may have been radiologically impacted from previous historical uranium recovery related activities...It is further suggested that some modest additional characterization (gamma surveys and soil sampling, e.g.) be conducted at and in the vicinity of the identified impacted areas to further identify the potential for inherited radiological impacts at this site.”

SWQB agrees with the suggestion for additional radiological surveying and recommends surveying upstream and downstream of the discharge outfall location to provide additional data on background conditions.

Comment #5- PDF page 5 of the “RSJ [Rio San Jose] data available HydroScience Summary” reads:

“The agency [NMED SWQB] re-sampled in 2011, and although there does not appear to be a report associated with this sampling event, the data are available and have been obtained.”

The State of New Mexico *Clean Water Act §303(d)/§305(b) Integrated Report (IR)* is a biennial report developed by the NMED-SWQB that is based on water quality monitoring data assessment results. The IR is designed to serve as a source of basic information on water quality and water pollution control programs in New Mexico. The IR is organized into watersheds and “assessment units,” i.e., waterbodies or stream reaches with assumed homogeneous water quality. The Rio San Jose has two assessment units, which are split between non-perennial and perennial portions and described in more detail below.

Assessment Unit: Rio San Jose (Grants BNSF railroad crossing to the headwaters):

This assessment unit is non-perennial. The *List of Assessed Waters* (Appendix A of the IR) reports this assessment unit as Category 3A – insufficient data to determine whether or not the Rio San Jose (Grants BNSF railroad crossing to the headwaters) is in support of its designated uses³. The *NMED-SWQB Water Quality Survey Summary Report*⁴ explains in the summary that water quality data were not collected (in many reaches including this one) due to dry flow conditions at the time of sampling.

Assessment Unit: Rio San Jose (non-tribal HWY 117 to Grants BNSF RR crossing):

This assessment unit is perennial and downstream of both the Rio San Jose (Grants BNSF railroad crossing to the headwaters) assessment unit and the proposed discharge location for the Roca Honda Mine. The IR's *Assessment Rationale*⁵ houses additional details on the history of various assessment conclusions. According to the *Assessment Rationale*, the Rio San Jose (non-tribal HWY 117 to Grants BNSF RR crossing) was listed as impaired for dissolved arsenic following the 2011 survey; however, arsenic was re-assessed using only the downstream station (36RSanJo111.0). Station 36RSanJo111.0 had zero of seven (0/7) arsenic exceedences, therefore the arsenic impairment listing was removed. The Rio San Jose (non-tribal HWY 117 to Grants BNSF RR crossing) is currently in full support of its designated uses.

Comment #6 – PDF page 19 of the “Report for Findings of Water Quality and Sediment Chemistry along the Rio San Jose” reads:

“There are very low levels of radionuclides in the surface water samples collected at all sites.”

The gross alpha result of 32.3 pCi/L collected from site RSJ #7 on 9/1/2015 converts to an adjusted gross alpha value of 16.22 pCi/L following the NMED-SWQB Comprehensive Assessment Listing Methodology⁶ conversion procedure. An adjusted gross alpha value of 16.22 pCi/L exceeds the water quality standard for Livestock Watering which is 15 pCi/L. (see 20.6.4.900 NMAC)

Comment #7 – PDF page 20 of the “Report for Findings of Water Quality and Sediment Chemistry along the Rio San Jose” reads:

“The sample collected from RSJ #8 (near the old wastewater treatment plant discharge) contained detectable amounts of bis(2-chlorethyl)ether and phenol... the source of those contaminants is not known but could be associated with the upstream Grants chlorinated solvents Superfund site.”

3 <https://www.env.nm.gov/swqb/303d-305b/2016-2018/index.html>

4 <https://www.env.nm.gov/swqb/MAS/surveys/RioPuerco-Zuni-PuercoRiverWQSurveyReport02-27-14.pdf>

5 <https://www.env.nm.gov/wp-content/uploads/2018/03/Assessment-Rationale-ROD.pdf>

6 <https://www.env.nm.gov/wp-content/uploads/2017/03/FINAL-2018-Main-CALM.pdf>

- The reported bis(2-chlorethyl)ether (BCEE) value of 3.89 mg/L is roughly 4 orders of magnitude greater than the water quality standard for human health-organism only (HH-OO) which is 5.3 µg/L. Downstream tribal water quality standards may have uses and criteria not identified in the State’s water quality standards. BCEE is a mobile chemical compound and known carcinogen.
- From a SWQB correspondence with GWQB-Superfund Oversight Section, the Grants Chlorinated Solvent Site is unlikely to be the contributing source for the BCEE and Phenols. An extensive Remedial Investigation to document the nature and extent of the site contamination did not identify BCEE or Phenols as Contaminants of Concern.
- Appendix B on page 45 reports the same concentrations of Bis(2-chloroethyl)ether (BCEE) and phenol from site RSJ #6 on 5/27/2015 and site RSJ #7 on 5/27/2015. SWQB recommends verifying the accuracy of these values and re-sampling to help verify results (see Comment #9). The reported units of mg/L should also be verified.

Comment #8 – PDF page 21 of the “Report for Findings of Water Quality and Sediment Chemistry along the Rio San Jose” reads:

“RHR proposes... developing a water chemistry monitoring program in two existing wells installed within the RSJ alluvium farther downstream where the alluvium is thicker. The pueblos of Acoma and Laguna both have existing wells near and downstream of Horace Spring. RHR proposes commencing baseline monitoring of one well from each pueblo at least a year prior to the anticipated first discharge into the RSJ from the Roca Honda Mine... Monitoring for constituents of concern would continue biannually for as long as RHR discharges water into the pipeline.”

In addition to a monitoring plan for monitoring wells mentioned above, SWQB recommends developing and implementing a similar monitoring plan for surface water in the Rio San Jose.

Comment #9

The Workplan, Sampling Analysis Plan, and the Baseline Data Report do not appear to specify the number of repeat water quality sampling events nor does it appear to discuss how the number of repeat water quality sampling events was determined. A single water quality sample for a single location is typically insufficient to accurately characterize the environmental condition of surface water due to seasonal and interannual variability. SWQB recommends repeat sampling over at least three seasons, if possible, to characterize the existing environmental conditions pursuant to NMAC 19.10.6.602 D. (13) (g) (ii).

Comment #10 – In a response letter from Roca Honda Resources (RHR) to the U.S. Forest Service concerning the Dewatering Discharge Plan that is part of the Baseline Data Report, RHR states:

“There is no potential for discharge to result in stream bank changes downstream. The RHR discharge will be small and will have no tractive power, because the channel is adapted to much larger storm flows between 100s or even 1000s of cfs. The projected maximum annual discharge rate of slightly less than 6,000 gpm is approximately 13 cfs which is a very small fraction of the existing channel capacity. In comparison, the newly reconstructed channel is designed to accommodate 2500 cfs with two feet of freeboard (Wilson and Company, Village of Milan, Milan Farms Master Plan).”

The portion of the Rio San Jose at the proposed discharge location has been substantially re-engineered and widened; however, directly below the proposed discharge location at the Stanley Avenue bridge, the Rio San Jose has a much narrower channel width. The discharge associated with 1.5 year recurrence interval is commonly referred to as the bank-full discharge. This discharge has been routinely related to the formation, maintenance, and dimensions of channels. The USGS gaging station 8343000, approximately 3 miles downstream of the proposed discharge location, has 56-years of recorded annual peak flows between the years 1950 and 2011. The 1.5 year recurrence interval for this period of record is 34 cfs. An increase of 13 cfs to the discharge associated with the 1.5 year recurrence interval represents a 38% increase in discharge. Furthermore, between 1990 and 2012 only 0.24% of the days reported a mean daily discharge of 13 cfs or greater. In this context, SWQB considers the continual estimated discharge of 13 cfs over the period of 13 years to be a significant change to the hydrologic regime with the potential to alter channel dimensions. SWQB’s recommendations under Comment #1 will help determine if any geomorphic changes occur as a result of the proposed project.

Comment #11 – In a response letter from RHR to the U.S. Forest Service concerning the Dewatering Discharge Plan that is part of the Baseline Data Report, RHR states:

“There is no potential for discharge to liberate contaminants that could affect the quality of water that issues from Horace Spring. Analysis of sediment samples obtained by EFR [Energy Fuels Resources] in 2015 from the Rio San Jose streambed, from the proposed discharge point to the eastern boundary of the City of Grants, confirms that there are no contaminants of concern present in the streambed.”

Sediment samples were collected at depths of 0.5 and 1.5 feet. The thickness of alluvial material and the depth to bedrock below the Rio San Jose was reported by RHR to be 24 feet. The statement above would be greatly supported by sediment samples collected and analyzed from the bedrock contact as initially proposed by RHR and previously commented on by NMED in the Work Plan.

Comment #12 – PDF page 6 of the “Rio San Jose Characterization Work Plan – Revision 1” reads:

“The treated mine water will be discharged under a National Pollutant Discharge Elimination System (NPDES) permit and will be treated to meet effluent limitations

specified in the permit by the U.S. EPA. The discharged treated mine water will also meet New Mexico Water Quality Control Commission (WQCC) standards as set forth in NMAC Section 20.6.2.3103, human health standards for groundwater.”

Through correspondence between SWQB and Energy Fuels, it is the understanding of SWQB that the U.S. Environmental Protection Agency is waiting for the U.S. Forest Service to issue a Final Environmental Impact Statement prior to their review of the NPDES permit application. As a part of the NPDES permitting program under Section 402 of the Clean Water Act (CWA), SWQB will conduct a CWA Section 401 review pursuant to NMAC 20.6.2.2001 to ensure the federally permitted activities comply with applicable state surface water quality standards established under 20.6.4 NMAC, including the antidegradation policy and the statewide water quality management plan.

If you have any questions related to these comments, please contact me at 505-827-0388.



SUSANA MARTINEZ
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BUTCH TONGATE
Cabinet Secretary
JUAN CARLOS BORREGO
Deputy Cabinet Secretary

MEMORANDUM

DATE: August 16, 2018

TO: Jeff Lewellin, Mining Act Team Leader
Mining Environmental Compliance Section, Ground Water Quality Bureau

FROM: Neal Butt, Environmental Analyst
Control Strategies Section, Air Quality Bureau

RE: Request for Comments, Roca Honda Resources, LLC, Baseline Data Report,
Addendum 1, McKinley County, MMD Permit No. MK025RN

The New Mexico Air Quality Bureau (AQB) has completed its review of the above-mentioned mining project. Pursuant to the New Mexico Mining Act Rules, the AQB provides the following comments.

Air Quality Permitting History

The AQB has not issued any air quality permits for this operation.

Details

The New Mexico Mining and Minerals Division (MMD) received the technical report, *Roca Honda Mine Baseline Data Report Addendum July 2018 Addendum 1*, from Roca Honda Resources, LLC (RHR) (cover letter dated July 24, 2018), in reference to a new mine permit for the proposed Roca Honda uranium mine near San Mateo, New Mexico.

RHR first applied for a new mine permit in 2009. Since that time the proposed mine permit area has been expanded to include an additional section (Section 17) and one quarter-quarter section (Section 8) of private land in Township 13 North, Range 8 West, in McKinley County, New Mexico. In addition, the proposed water reuse pipeline is now planned to convey treated mine discharge water to the Rio San Jose near Milan, New Mexico, rather than northerly to San Lucas Draw as previously planned. This addendum presents the results of baseline studies conducted of the mine expansion areas and along the length of the planned southern reuse pipeline route. The proposed mine permit area now includes approximately 2,600 acres; all of Sections 9, 10, 16, 17 and the SE 1/4 SE 1/4 of Section 8.

Recommendation

The AQB previously provided comments on February 16, 2010 and September 1, 2011 and has no additional comments regarding the additional information provided by RHR.

The applicant is expected to comply with all requirements of federal and state laws pertaining to air quality. This written evaluation does not supersede the applicability of any forthcoming state or federal regulations.

If you have any questions, please contact me at (505) 476-4317.