State of New Mexico
Energy, Minerals and Natural Resources Department

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Mining and Minerals Division

January 14, 2025

Josh Leftwich
Laramide Resources Inc.
30 King Street West, Suite 3680, Box 99
Toronto, ON M5X 1B1
Canada

RE: Technical Comments on La Jara Mesa Mine, Permit No. CI008RN

Dear Mr. Leftwich,

The New Mexico Mining and Minerals Division (MMD) received an application from Laramide Resources for the New Mine Application La Jara Mesa Mine, Permit No. CI008RN submitted June 15, 2024.

On September 13, 2024, MMD deemed the submitted application was administratively complete which was followed by an agency site inspection with Laramide Resources on October 7, 2024. MMD has conducted a technical review of the Application and, in accordance with 19.10.6.605 NMAC, provided the Application to, and requested comments from, the New Mexico Environment Department (NMED), New Mexico Office of the State Engineer (NMOSE), New Mexico Department of Game and Fish (NMDG&F), New Mexico Historic Preservation Division (NMDCA), New Mexico Forestry Division (NMSFD), and the U.S. Forest Service.

Please review and respond to the attached technical comments from both MMD and Agencies within 90 days of receipt of this letter. If you have any questions regarding these comments, please contact me at (505) 216- 8945 or at samantha.rynas@emnrd.nm.gov.

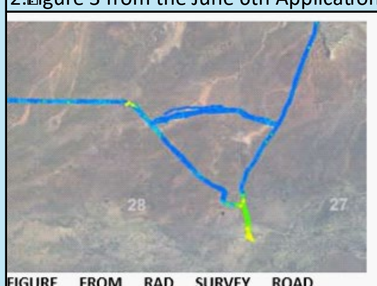
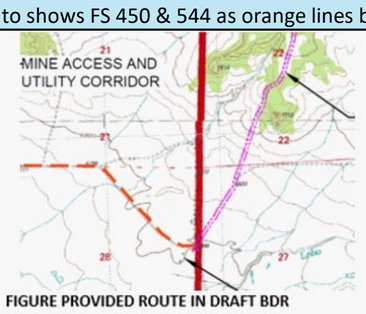
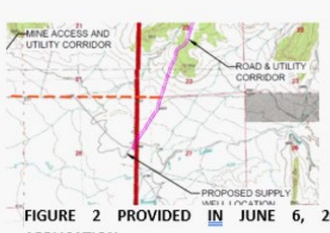
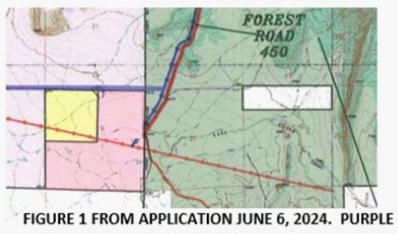
Sincerely,

Samantha Rynas, Permit Lead
Mining Act Reclamation Program ("MARP")
Mining and Minerals Division

Attachment A: Excel format of MMD & Agency Technical Comments
Attachment B: PDF format of Agency Technical Comments

CC: David (DJ) Ennis, Program Manager, MARP, MMD
Clint Chisler, Reclamation Specialist Supervisor, MARP, MMD
Mine File CI008RN

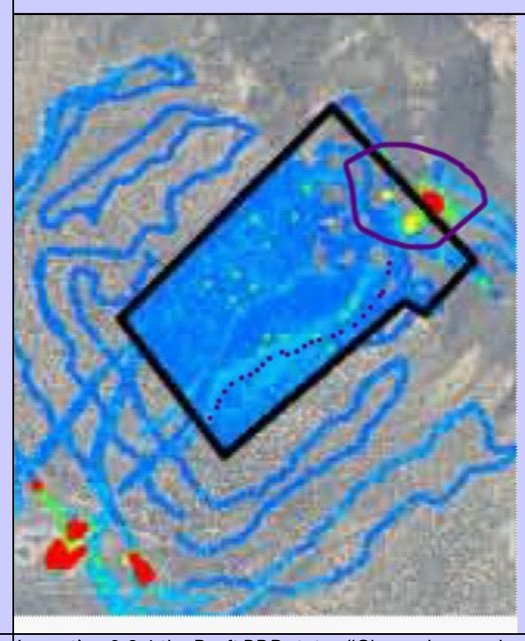
La Jara Mesa Mine Permit No. CI008RN	Operator: Laramide Resources	MMD Technical Comments: January 14, 2025

Comment #	Section	Subsection	MMD Comment
1	General		MMD will consider this “Draft BDR” a draft and moving forward please submit the revised "Draft BDR" in non-draft form as Version "0" with data from this draft BDR pulled forward into the Version 0 submittal. All future submittals of the BDR will be labeled as "V1…2…3". No Response is required for this comment.
2	General		A general observation on the data from the Draft Baseline Data Report, the majority of the data provided is from the 2012-time frame. Due to the data's age MMD will be requiring updates to the collected data. In the following comments MMD will call out what data will need to be updated. One area of major change affects multiple sections, the reclamation work done on the Taffy and Old Jara Mine sites. Significant clean-up & removal of materials as well as borrow material being used for cover, and seeding of these areas, would have changed baseline data for soils, vegetation, historical data, and Radiological survey. MMD is additionally providing Laramide with the below documents for their reference. 1. MMD Part 6 New Mining Operations Guidance 2. Guideline for Radiation Cleanup Criteria – Part 6 New Mining Operations (2016 Uranium Guidance) 3. Soil and Cover Material Handling and Suitability Guideline (2022) 4. Revegetation Guidance (2022) 5. Example Vegetation survey 6. Previous MMD/Agency Technical comments on the SAP (2010) 7. Copper Flat Hydrology (Surface and Ground water) Examples
3	General		A general observation on the application; often in the data collection, the road corridor and the escape raise are not included for site specific data collection. These areas are within the Permit Area and will be affected by mine operations, therefore data is needed from these units. In MMD's comments you will see specific requests for additional data collection in those areas. No response is required for this comment.
4	General	Draft BDR plates and Application dated June 6th, 2024	The Application materials dated June 6th and the Draft BDR from 2013 have multiple maps in both "plate" and "figure" naming conventions. Some of these materials are extremely similar (example: Plate 1 and Figure 1). Please consolidate the maps/figures/plates using a consistent naming convention; as well as ensure they are up to date.
5	General	Figure 2/3/4 of Application Dated June 6th, 2024	Proposed road bypass: Please update all figures to accurately and clearly depict the below: • Utility Corridor • Road re-routes • Forest Service roads 450 & 544 Examples: 1. The proposed re-route throughout the June 6 application, as well as figures in the Draft BDR shows a different road configuration (see examples below). 2. Figure 3 from the June 6th Application to shows FS 450 & 544 as orange lines but doesn’t  FIGURE FROM RAD SURVEY ROAD FOOTPRINT FROM DRAFT BDR  FIGURE PROVIDED ROUTE IN DRAFT BDR  FIGURE 2 PROVIDED IN JUNE 6, 2024 APPLICATION  FIGURE 1 FROM APPLICATION JUNE 6, 2024. PURPLE LINE SHOWS DIFFERENT ROAD FOOTPRINT FROM RAD.
6	General		Site access and Permit area: With the road re-route and change in supply well, will the section of road marked in blue still need be needed and upgraded? 

7	General	Figure 2, section 9.2.2	It is MMD's understanding that the proposed supply well (Elkins well B-01272) marked at this location is no longer relevant due to low production. Please provide an updated Well location and data associated with anticipated well quality and production. Additional data (i.e., modeling or pump testing) will be required to demonstrate the probable hydrologic consequences of well utilized for mine operations.
8	General	Figure 10 & Multiple maps	Between the SAP and the Draft BDR, many of the maps show two different boundaries of the permit area/design limit. The SAP mainly defines the Permit Area as a larger rectangle shape, versus the Draft BDR mostly depicts the area as a more narrowed "tear drop". The tear drop shape would be what MMD calls the design limit. MMD requests for clarity and consistency to keep both boundaries marked on the maps. Plate 2, “Conceptual Mine Layout Plan" from the Draft BDR is a good example of including both the Permit Area as well as the design limit. The Permit Area should be carefully considered by Laramide. For example, inclusion of a large drainage (Drainage B later in this document) parallel to the northwest edge of the Permit Area as drawn may require additional baseline data to be collected if this drainage will in fact be utilized in some way during mine operations or reclamation. This is not clear in the BDR; the “tear drop” disturbance does not appear to incorporate this drainage into any disturbance or design, yet it appears to be included in the Permit Area. Please consider and refine the Permit Area as needed for the agency’s consideration for baseline data collection.
9	General		MMD requests Laramide provide the GPS "SHP." files for the Permit Area boundary for MMD’s internal mapping and records.
10	Introduction	1.1	“The access road right-of-way and utility corridor would occupy approximately 30 acres of the total proposed Permit Area” Please include the expected width of the utility corridor as well.
11	Climate	2	MMD will require updated climate data to include the below. a. Updated to include 2024 data b. 10 years of data averages (precipitation, high/low temperature) c. Data from any additional weather stations (see MMD's below comment 13)
12	Climate	2	While the escape raise location is mentioned briefly, this location is a part of the Permit Area, MMD will require equivalent quantity/quality of data to be collected for this location.
13	Climate	2.3	While the Homestake mill is representative of the regional weather; MMD is requesting additional site-specific climate data due to the specific location of the mine site. MMD requests a new weather station or, at minimum, measurement of rainwater quantities on the Permit Area. The site-specific topography could increase orographic effects, as well as the concentration of precipitation from directly above the site would make data from a site like Homestake mill irrelevant. It is important to have site specific precipitation totals to accurately determine the potential water quantities on site to inform accurate storm water management and site stability.
14	Topography	3.0 (page 2)	The highlighted word "date" needs to be changed to reflect a date. Please also ensure the provided USGS map is the most up to date map.
15	Topography	3	MMD is has concerns of on-going erosion of the drainages flanking the North/South sides of the Permit area (Marked A and E). During site inspections USFS and NMED noted significant changes to the drainage E due to storm events. See NMED SWQ comment #1. MMD requests this data be included within this section.
16	Topography	3.0 Page 2/ Plate 2	While Plate 2 shows the proposed Mine layout (as requested in the Part 6 Guidance); Plate 1 is also applicable to meet this standard as that is the USGS map that includes the entire permit area. Please ensure this USGS map is the most current version and update this section to include Plate 1.
17	Vegetation	4	19.10.6.602.D(13)(c) Due to age of the data MMD will require the 1 year of vegetation data to be re-collected with the following parameters. Please review updated guidance documents and submit an amended sampling plan for MMD approval. Considerations to include: 1. Include both the proposed road access corridor as well as the escape raise locations. 2. Transects should avoid areas known to have been previously disturbed (where possible). MMD is providing an example Vegetation Survey for your reference.
18	Vegetation	4.2.1 & 4.3.1	Methods - Section 4.2 states methods will be described in section 4.2.1, however; no method of survey was described. 4.3.1 Results read as if an onsite transect was performed. No transect details are mapped or provided. Please submit all supporting methods and data used to perform and evaluate the vegetation data.
19	Vegetation	4.0	For consideration for the MORP: MMD will require Laramide to propose an undisturbed area(s) to be used going forward as reference vegetation areas.
20	Vegetation	4.2.3	In accordance with 19.10.6.602.D(13)(c) MMD will require Canopy Cover, Shrub Density and Production data. "The Forest Service does not provide data regarding shrub density"; while using Forest Service/TES data can supplement the baseline data, MMD rules require onsite vegetation
21	Vegetation	4.2.4	This section mentions a ground survey that was done in conjunction with a database search, and the following was also stated "results compared to the plants inventoried by the vegetation mapping, as described in Section 4.2.2.” It is unclear if the mapping performed was through an onsite field (ground) survey or only based on aerial photography or other means. For the new
22	Wildlife	5	MMD will require a new survey to include bird species, mammals, bats, and any other species potentially occurring in the area of potential impact (19.10.6.602.D(13)(d)). Please submit an amended sampling plan for MMD approval. 19.10.6.602.D.(13)(d) Expanded Wildlife Survey: While surveys were performed within the main Permit Area, the “affected area”/”area of potential impact” is not limited to the Permit Area. The escape raise and utility corridor were not included in the wildlife survey and are part of the Permit Area. New Wildlife data shall include: A. Escape raise B. Utility Corridor C. Expanded buffer around Permit Area: Area of potential impact D. Special habitat features: Basalt cliffs E. Spotted Bat Survey F. Grey Vireos Survey G. Considerations for Habitat Fragmentations
			The related comments were provided to Laramide in 2010 in the NM Dept. of Game and Fish & MMD SAP comments. These comments are still applicable.
			NM DGF:

			A picture containing text, indoor, screenshot **Description automatically generated**
23	Wildlife	5.3	**Characterization of site fauna.** The SAP does not include any mention pertaining to the methods in which proponents will gather information on reptile, amphibian, or small mammal communities of the project area. NMDGF concurs that opportunistic observations during bird and plant surveys should be adequate to document use of this relatively small area by medium to large size animals. **Raptor nest searches.** Baseline studies should include raptor nest searches of all cliff or rimrock habitat and any large trees within ½ mile of all proposed project facilities, including roads. The activity status of any nests which are found should be determined during the appropriate season. **MMD:** 19.10.6.602.D(13)(d)(3): 1. Protocol surveys must be conducted for Gray Vireos and Spotted Bats. Please commit to conducting the protocol surveys for these species, and specify when this work will be completed. 2. Raptor nest locations need to be mapped, and raptor breeding activity needs to be documented. Anticipated impacts to raptors from mining operations cannot be addressed without this information. Please commit to searching for, and mapping, all raptor nests within the permit area. Please commit to documenting raptor breeding activity annually. Raptor breeding pairs commonly establish alternative nest sites in relatively close proximity to one another. Alternative nest sites may be located adjacent to the permit area, and an extension of the nest search area to one mile beyond the proposed permit boundary may provide evidence that other nesting sites are available, and could mitigate nests disturbed by mining activity. Please commit to searching for and mapping raptor nests within one mile beyond the proposed permit boundary. 3. Please propose a plan for determining the presence, distribution and relative abundance of furbearers, small mammals and reptiles, and any key habitat areas that these animals may be using, within the proposed permit area.
24	Wildlife	5.3	Ensure up to date species lists are included in the BDR. •5.3.4 Faunal Threatened and Endangered Survey •5.3.4.1 Federally Listed Threatened and Endangered Wildlife Species •5.3.4.2 Forest Service Regional Foresters' Sensitive Species List
25	Wildlife	5.0	19.10.6.602.D(13)(d)(iv) does not seem to be adequately addressed in the current BDR. Please answer this section in more detail. For example: As noted in the NM DGF comment from 2010 Agency comment; impact of habitat fragmentation needs to be considered in this summary. Update this section to include habitat fragmentation impacts from the Permit Area, specifically the utility corridor.
26	Soil	6	Due to the length of time since the data for the Draft BDR was collected, MMD will require an amended soil sampling plan be submitted for MMD approval to reflect current data and recent activities in the area. Key updates and considerations include: 1. Updated Guidance and Data: •Incorporate the 2022 MMD Soil Guidance parameters into the analysis. For example - section 4.3 of the guidance, depth-to-bedrock data, is not currently addressed in the current submission. •Ensure up to date Geochemistry and reactivity testing in accordance with the most recent guidelines. 2. Reclamation Impact Assessment on the Soils: •Provide a detailed summary of reclamation work conducted in the vicinity and how it impacts baseline data, specifically regarding CERCLA uranium mine cleanup efforts at Taffy and Old Jara Mesa mine. This should include: •Types of borrow or cover materials used •Effectiveness of these materials as cover 1. Soil Sampling and Radiological Survey: •Conduct updated & expanded soil sampling to assess current conditions, especially considering potential impacts from nearby historic mines and the subsequent reclamation. •Having reviewed the RAD survey, additional sampling should be done to address findings from Section 13 (Radiological Survey) of the Draft BDR, which noted elevated radiation levels in the
27	Soils	6.3.3	Clarify if waste rock originating from adit development or development of the escape raise is being considered as an alternate cover material. If this waste rock is included as an alternate cover, please expand the soil section to include characterization for the escape raise waste rock as well.
28	Soils	6.3.3	Alternative Cover sources. While this section considers rock size and erodibility, compared to salvage soils, it does not address the waste rock's ability to support plant growth. 19.10.6.602.D.(13)(e) requires alternative cover to show suitability for vegetation. Any proposed alternative cover should be subjected to the same baseline characterization as the salvaged soils. MMD will require additional chemical composition of the waste rock to determine suitability as an alternate cover. Also see the 2016 Guidance for Meeting Radiation Criteria Levels and Reclamation at New Uranium Mining Operations for more details.

29	Soils	6	For future consideration for the MORP: 1. As stated in MMD's Soil Guidance from 2022 section 6, "Any proposed Cover Material that is not undisturbed native soil should be tested through a test-plot program to demonstrate how the seeded native plant community responds". MMD recommends incorporating this component into future plans (MORP). 2. Also include an analysis of the quantity/volume of available cover. 3. As stated in this Draft BDR; wind erodibility of the soils in map unit TES 105 is severe. The MORP should include an element of preventing wind erosion on the salvaged soil stockpiles.
30	Soils	6.3.3	As stated in MMD guidelines, please include laboratory detection limits.
31	Soils	6.3.3	Anomalies in data should be investigated further. See also MMD previous comment 2 regarding previous mining and subsequent reclamation potentially interfering with consistent & reliable soil
32	Orebody and Geology Desc.	7.5.2	MMD will require additional details on waste rock characterization and this section to be updated to the 2016 Guidelines. •Expand sampling for the metals/radioactive isotopes listed in the 2016 guidelines for analysis of waste rock to determine more accurate volumes of available material for use as cover. •See also related NMED GWQB comment regarding categorization in the August 12, 2010 Comments on the SAP (below).
			Section 7, Orebody and Geology In Section 7.2 it is stated that characterization of waste rock will be done in such a manner that "The number of samples of each unit is proportional to the expected volumes in the piles." A review of Table 7-1 indicates that over half the material (151,900 yd^3) will be derived from the Westwater Canyon Member. The number of samples proposed for the Westewater Canyon Member is five, the same number as that proposed for the Bluff Sandstone which will represent half as much waste rock material (86,600 yd^3) as the Westwater Canyon Member volume. Given the high volume of Westwater Canyon Member waste material being brought to the surface and the greater potential for contaminants within the Westewater Canyon Member relative to the other formation material brought to the surface, NMED recommends a much greater frequency of sampling this material. Further, it is indicated in Section 7.2.1 that a geologist will study core samples obtained during exploration and "…evaluate the core samples for uniformity and select sections that are representative of the formation". It is unclear how this will result in a selection of samples that represent any spatial variability that may be encountered during the excavation of inclines over 5000' in length. Further sampling and analysis is likely to be required during operations to characterize material as it is brought to the surface. Analytical requirements may include analysis such as EPA Method 1312 (SPLP) to determine the potential for leaching of metals. Although sampling of core will be representative of the material encountered during exploration activities, it is unclear if the existing core will be representative of the actual material removed during excavation of the inclines and escape raise, and during mine development.
			The MORP should expand further on how the La Jara mine will account for this volume of material needing to be stored in a protective manner versus the waste rock available for alternate cover. See also the below comment from the previous SAP comments in reference to escape raise waste
			MMD would have preferred that at least one sample be collected and analyzed from each of the geologic units anticipated to be stockpiled on-site (i.e. Tertiary basalt layer, ash tuff layer [Mesa Verde Group], Mancos Shale, and Dakota Sandstone). However, since the SAP states that core samples from these units were not retained, MMD recommends that the Mine Operation Plan include sampling and analysis of these units during excavation of the escape raise. MMD is not particularly concerned about the potential for these geologic units to create environmental contaminants through interaction with water once stockpiled, but believes it prudent to verify the anticipated innocuous nature of these materials.
33	Orebody and Geology Desc.	7.5.2.2	"There are a few anomalies in the ABA data." Anomalies in data should be investigated further. While Laramide considered a theoretical explanation, additional analysis does not appear to have
34	Orebody and Geology Desc.	Figure 6 from Application Dated June 6th 2024	In accordance with 19.10.6.602.D(13)(f): MMD is requiring comprehensive maps and supporting data. While Figure 6 shows geological formations, it is insufficient. MMD will need the below data. See also, NMED Ground Water Quality comments and OSE comments regarding geology/hydrology. Additionally, MMD is providing examples of Surface/Ground water hydrology baseline data for Laramide reference. •Cross sections depicting nature/depth of aquifers specific to the Permit Area and affected areas/areas of potential affect •Hydrology, groundwater quality data, and cross sections of the proposed extraction well location •Nearby springs •Well/borehole logs •Hydrology of recharge to springs in the vicinity. Below was a previous MMD comment that is still applicable as figure 6 from the June 6th application contains the same content: "The cross-section included in Figure 7-1 of the SAP is adequate for the SAP, but is too generalized (i.e. not to scale, too small) to incorporate into future documents like the BDR. It is MMD's opinion that scaled geologic cross-sections with increased geologic detail, based on actual geologic logs from within the project area, should be included for cross-sections presented in the BDR. The BDR should also include a plan view figure (or figures) showing the locations of the exploratory boreholes used to create the geologic cross-sections."
35	Orebody and Geology Desc.	Tables 7-3 and 7-4	Table 7-3 & 7-4 provides details on Metal Leaching and was compared to 1994 standards. Please ensure data is compared to the most recent WQCC standards.
			MMD is requiring an amended sampling plan be submitted for MMD review & subsequent surface water baseline data to be collected. See below for specific concerns to address in the amended sampling plan. 1. According to figure 8-4, Permit Area crosses the delineated watershed. Drainage E is considered part of the impacted watershed and shall be included in sampling and data. Annotated image below, red circle indicated where the Permit Area crosses the watershed. 2. Surface water should account for the entire affected area; including escape raise and utility corridor. 3. Test surface water quality from all three drainages existing in and leaving the Permit Area. See the below Annotated Surface water map. No data was collected for drainage "D" (see Figure 8-4), although this drainage specifically showed higher radioactive readings in the RAD survey (below). 4. Expanded water quality testing around the Permit Area (drainages A and E, as labeled below) to bracket the water quality around La Jara Mesa Mine to adequately evaluate affected areas versus non-affected areas. 5. Sampling additional areas near old La Jara mine footprint, shown with higher RAD survey readings.

36	Surface Water	8	Picture 
37	Surface Water	8.3.2	In section 8.3.1 the Draft BDR states “Channel scour, head cutting, and redistribution of sediment were observed during field investigations” and in section 8.3.2, personnel visited surface water sites after rain event: “Sediment deposition buried the mounting tube at locations LJM-SW-02 and -03 from the August 2011 rainstorms (Attachment 8A, Photos 3 and 4)”. No specific details are provided on the scale of the specific rain event or impact of scouring on channels. Events such as this relate to MMD concerns on site specific rainfall and active changes to the channels and watershed delineation. See USFS comment #16.
38	Surface Water	8.3.4	In accordance to 19.10.6.602.D(13)(g)(i): Provide additional maps including: •Map of spring locations relative to the permit area. See previous MMD comment 34. •Watershed mapping: to include adjacent watersheds. The considered watershed was limited in size and did not include surrounding watersheds, or regional watersheds. Also see the prior 2010 NMED comment from the SAP that still remains. In Section 9.1.1 it is indicated that the hydrogeologic regime of the aquifers within the permit area will be described based on available published sources. In Section 9.1.3 it is indicated that an inventory of wells and springs within a one mile radius of the main facility will be conducted and water levels will be recorded of all existing wells documented through this investigation. No water quality sampling is proposed. NMED recommends that an inventory of wells and spring be based on the results of the hydrogeologic characterization of the area surrounding the proposed facilities and mine, rather than an arbitrary one mile radius from the main facility. Further, any wells or springs inventoried during this investigation should be sampled on a quarterly basis for one year to establish background conditions as required under the New Mexico Mining Act.
39	Surface Water	Page 8-6, Section 8.4	Probable Hydrologic Consequences. This section states that San Mateo Creek has no hydrologic connection with bedrock aquifers and would not be affected by water supply pumping from bedrock aquifers. As a clarification, explain how the San Mateo Creek waters have no hydrologic connection to bedrock aquifers with respect to potential recharge through faults and sub-cropping
40	Surface Water	Section 8.4	Probable Hydrological Consequences. Laramide should collect baseline data, such as flow rates, of nearby springs to determine any future impacts to potentially affected areas. OSE notes the conflicting data showing evidence of springs emanating from La Jara Mesa
41	Ground water	9	MMD is requiring an amended sampling plan & subsequent baseline data to be submitted. See below for specific concerns to address in the amended sampling plan. •Any new groundwater data for the region: for example, 2022 San Mateo Creek Basin Central Study Report •Updated wells
42	Ground water	Section 9.1	Page 9-1 states that “the proposed Permit Area is in unsaturated rocks, situated as much as 600 feet above the shallowest regional aquifer in the area.” This statement is contradicted by Section 9.2.2.3 which states that the estimated water depth in the Entrada Sandstone could be 320 feet beneath the Permit Area and is the aquifer for the Elkins well B-1272. Please clarify.
43	Ground water	Section 9.1	Page 9-1 states “the anticipated dry mine conditions is based on exploratory drilling at the site and research and study of regional groundwater conditions in the area.” Laramide shall provide data to demonstrate that the mine workings are anticipated to be dry. Data should include drill logs from representative boreholes demonstrating that little to no water was encountered in the units anticipated to be encountered during mine development and active mining/operations.
44	Ground water	Section 9.1	Page 9-1 and 9-2 state “the objectives of the groundwater baseline assessment included:…2) developing a baseline inventory of wells, springs and groundwater uses within 1 mile, or reasonable radius, from the surface facility portion of the proposed Permit Area (Plate 2).” There is no further data or discussion about the presence or absence of springs in the area except later in this section which reports numerous springs on the east side of the mesa. Please clarify and discuss the presence/absence of springs, where they are located relative to the Permit Area, and what the probable hydrologic consequences of pumping will have on known

45	Ground water	Page 9-3, Section 9.2.1	The statement "...the Gordon potentiometric surface provides a good indication of the groundwater flow direction in the proposed Permit Area, due to limited groundwater development" should be accompanied by data such as maps from this report demonstrating the potentiometric surface discussed here.
46	Ground water	Sections 9.2.1 and 9.2.2	Pages 9-3 and 9-4 state that the Entrada Sandstone is a potential water-bearing unit in the Permit Area. As discussed above, the Entrada is reportedly saturated 3 miles southwest in Elkins well B-1272. No discussion in the BDR is provided for wells B-1340 and B-1341 identified on Figure 9-1, however the NMOSE website contains applications to appropriate water from these locations and identifies the target depth to water as 300 feet. While B-1340 and B-1341 do not appear to have been drilled, the data implies that groundwater could be as shallow as 300 feet below ground surface below the Permit Area. MMD recommends drilling an exploratory borehole within the Permit Area to establish baseline conditions and depth to groundwater.
47	Ground water	Plate 3 Regional Geologic Map and Plate 4 Hydrogeologic Cross-Section	The resolution of this plate is poor and uses the geologic map from 1967. Please update this figure to increase resolution and use Cather (2011) as the basis. Several groundwater wells shown on Plate 3 and projected onto cross-section A-A' are not actually projected onto the cross-section. For example, well B01272 (Elkins well) is shown to be projected onto the cross-section but isn't shown on Plate 4. Please correct. Plate 4 has mixed measurement units: meters on the X-axis and feet on the Y-axis. Please use one measurement unit and calculate/identify the vertical exaggeration of the cross-section. Plate 4 shows the approximate location of the mine portal to be within the Bluff Sandstone, however Figure 6 (Site Geology) of the application shows the mine portal to be in unit Jm, Morrison
48	Ground water	Page 9-4, Section 9.2.2.1.	Quaternary Alluvium. This section dismisses the possibility that quaternary alluvium could yield a reliable source of water. Provide more analysis of whether the alluvium is a recharge source for
49	Ground water	9	19.10.6.602 D.(13) (g) "lithology and thickness of each geologic unit below the site indicating which units are water bearing, cross sections and potentiometric maps indicating the location of wells and ground water flow direction in the vicinity of the site, and references or sources for this information;" Table 9-1, Plate 4 and Figure 6 only partially satisfy this requirement. MMD will need additional mapping and data to support the expected ground water conditions, to include potentiometric maps. For example: General regional mapping was not provided (San Juan basin), •Data supporting depth to first aquifer, •No well data provided for areas.
50	Ground water	Plate 4	Update plate to reflect newest data and water levels. The date of the data collection should be included on maps.
51	Ground water	Plate 4	This plate is insufficient to determine the expected hydrology of the site. The alluvial base from the Mesa only accounts for a portion of the hydrology. No data is provided for the larger watershed footprint upslope from the site, or for the larger Rio San Jose Basin the project is located in.
52	Prior Exploration and Mining	10	Due to the length of time since BDR data was collected, reclamation of historic mines has occurred in the Permit vicinity since submittal. Please update this section to reflect activity in the area since this Draft BRD was submitted.
53	Prior Exploration and Mining	10	In accordance with 19.10.6.602.D(13)(h) Please provide a map including the following: La Jara Mesa Permit Boundary, the reclaimed footprint of the Historic Mines (Taffy, Zia, and Old La Jara). This can be included under Figure 4 from the June 6th Application. "Past Exploration
54	Prior Exploration and Mining	10	Cultural Resources Section; MMD will be utilizing the US Forest Service cultural resources process (section 106) to satisfy our requirements. This section will need to be updated to reflect on any changes occurring through the section 106 process.
55	Historic Places and Cultural Properties	11	Since the Draft BDR was submitted in 2013, the proposed permit area has since been designated as part of the Traditional Cultural Property Mt. Taylor. This section will need to be updated to reflect the TCP status and impacts, as well as any on-going section 106 updates.
56	Radiological Survey	13	MMD will require a new RAD survey to be conducted due to the time since collection and due to USFS/CERCLA activities occurring on and immediately adjacent to the Permit Area. An amended sampling plan will need to be submitted for MMD review.
57	Radiological Survey	13	As described in the Part 6 guidelines the Radiological survey should be comprised of the following: The proposed scope of work for the radiological survey should provide a baseline for radiochemical content and include a gamma-survey of the primary permit areas such as roads and facility locations as well as potential downstream affected areas. Bulk soil samples should be proposed for collection to verify field readings for analysis of uranium (total-238), radium 226, radium 228, thorium (total-232) and gross alpha/beta.
58	Radiological Survey	13	The RAD survey shall include all affected areas, including the expanded footprint of the expanded road. Due to Historic Reclamation on and surrounding the immediate area of the Permit Area it is important to gather complete data from the surrounding areas for accurate baseline data. As other pre-act mining activities historically have shown widespread contamination from things like wind-blown erosion, MMD believes it is prudent for Laramide to cover a broader landscape for the RAD survey to ensure accurate pre-disturbance RAD levels.
59	Radiological Survey	13	As previously mentioned, the below RAD survey footprint doesn't appear to be the same as the proposed road. When conducting the new RAD survey, ensure it covers the proposed road 

Electronic Transmission

MEMORANDUM

Date: November 22, 2024

To: David Ennis, Program Manager, Mining Act Reclamation Program

Through: Amber Rheubottom, Acting Mining Act Coordinator, Mining Environmental Compliance Section (MECS)

From: Alan Klatt and Eliza Martinez, Surface Water Quality Bureau (SWQB)
Sufi Mustafa, Air Quality Bureau (AQB)
Amber Rheubottom (MECS)

Subject: **New Mexico Environment Department (NMED) Comments, La Jara Mesa Project, Cibola County, New Mexico, Mining Act Permit No. CI008RN**

The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) September 24, 2024, requesting that NMED review and provide comments on the above-referenced MMD permitting action. Pursuant to the Mining Act, the is a new mine permit with tracking number CI008RN. MMD requested comments on the application within 60 days of receipt of the request for comments. NMED requested an extension to provide comments on November 22, 2024.

Background

Laramide Resources Inc. (Applicant) is requesting review of a 2013 draft Baseline Data Report (BDR) for the La Jara Mesa Project (LJMP).

Air Quality Bureau

The AQB comments are attached.

Surface Water Quality Bureau

The SWQB comments are attached.

Mining Environmental Compliance Section

MECS comments:

1. Section 2.0 – Climate data is collected from the Homestake mill. The Homestake Mill is in the open plain of the San Mateo Creek Basin, while the LJMP is on the foothills and approximately six miles away. NMED-MECS has observed significant differences in regional climate data at distances of one mile, as localized storms are common to the area. NMED-MECS recommends the LJMP install a weather station on-site for accurate climate data and or at minimum update the climate data for the period of 2013-2023.

2. Section 6.0 –

    a. Hot water extraction was performed to evaluate soil with respect to nutrients. Some horizons showed elevated arsenic, lead and copper. NMED-MECS recommends additional testing be done on these horizons at a new location in the project area to verify the presence of these potential contaminants. As part of the material characterization of a mine site, NMED-MECS requires meteoric water mobility procedure, or another approved method, to determine the leaching potential of site soils. NMED-MECS recommends testing of this nature be completed and submitted.

    b. The Summerville is the main geologic formation to be used as the stockpiled base for operations and the bedrock at the surface. Table 6-6 does not include the Summerville formation for waste rock testing. NMED-MECS recommends testing be performed on the Summerville formation.

3. Section 7.0 – Based on the geologic maps shown, the mine facilities will be placed on the Summerville formation. A description of this geologic unit is not present in the BDR. NMED-MECS recommends a detailed description of the Summerville formation be added to this section.

4. Section 9.0 –

    a. Water quality data for the region is sourced from Homestake Mining Company (HMC). As stated in Comment 1, the LJMP is a notable distance from HMC and in a different groundwater regime. HMC has impacts from current and historic regional mining and milling processes which most likely would not be similar to the site conditions at LJMP. NMED-MECS recommends LJMP locate another source of information closer to its location for water quality data for all aquifers proposed for use in the project.

    b. The BDR only contains a brief description of “unsaturated” as the water bearing potential for the operation. NMED-MECS recommends the inclusion of geologic and drilling logs from site drilling activities or other additional lines of direct evidence that supports this statement for all geologic units to be encountered at the LJMP.

    c. A more extensive description of the groundwater of the Summerville formation is needed in the BDR since it will be the geologic unit composing the base layer for site facilities. NMED-MECS recommends water quality analysis be found for this geologic unit.

    d. NMED-MECS recommends an updated search for wells in the region.

e. The New Mexico Administrative Code Standards for Ground Water, under 20.6.2.3103, have changed since the 2013 submittal, effective December 21, 2018. NMED-MECS recommends revising Table 9-2 with the current NMAC standards.

5. Section 13 –

a. At the time of radiological surveys, regional mines on neighboring United States Forest Service land have not been reclaimed. NMED-MECS recommends the site radiological survey be completed again to establish site background as described in the Joint Guidance for the Cleanup and Reclamation of Existing Uranium Mining Operations in New Mexico, March 2016.

b. In the new survey, NMED-MECS recommends expanding to the west and south of the red-outlined areas on Figure 2-7 and along the road in the section near highway 605 where existing elevated radiological impacts may be present.

NMED Summary Comment

NMED has determined the BDR could be improved by addressing the comments contained herein.

If you have any questions, please contact Amber Rheubottom at (505) 660-2379.

cc: Joseph Fox, Program Manager, NMED-MECS
Shelly Lemon, Bureau Chief, NMED-SWQB
Cindy Hollenberg, Acting Bureau Chief, NMED-AQB
Clint Chisler, EMNRD-MARP

Environment Department Internal Memorandum

DATE: November 12, 2024

TO: Amber Rheubottom, Mining Environmental Compliance Section, Ground Water Quality Bureau, New Mexico Environment Department

FROM: Eliza Martinez, Watershed Protection Section, Surface Water Quality Bureau, New Mexico Environment Department

SUBJECT: **Request for Review and Comments, La Jara Mesa Mine, New Mine, Cibola County, New Mexico Mining Act Permit No. CI008RN**

On September 27, 2024, the Surface Water Quality Bureau (SWQB) received a request for comments regarding the April 17, 2013 Draft Baseline Data Report (DBDR) for the La Jara Mesa Project which was re-submitted to the New Mexico Mining and Minerals Division on June 6, 2024 by Laramide Resources (USA) Inc. The proposed mine permit area is located within the Cibola Nation Forest at the approximate coordinates 35.27508° north, -107.76765° west in Cibola County, New Mexico. The estimated total disturbance area is 22 acres. Pursuant to 19.10.6.605.C New Mexico Administrative Code (NMAC), the SWQB is providing the following comments:

SWQB Comment #1: The SWQB recommends that the DBDR include representative cross-sectional and longitudinal surveys of the arroyos within the project area to describe their physical characteristics including width, depth, channel slope, and bank slope.

SWQB Comment #2: The SWQB recommends updating the 2013 DBDR to include current surface water quality data to reflect current surface water quality conditions.

SWQB Comment #3: The SWQB recommends including gross alpha and Radium 226 + 228 in surface water quality analyses.

SWQB Comment #4: Section 8.3.2, Baseline Surface Water Quality, of the DBDR says,

> "Metal concentrations were less than the relative New Mexico Water Quality Control Commission standards (20.6.2.3103 NMAC). The sample concentrations for cadmium, chromium, and mercury concentrations are below laboratory method detection limits."

The arroyos in the project area are subject to 20.6.4.13 and 20.6.4.98 NMAC and include designated uses for livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact. Section 8.3.2 of the DBDR should be revised to reference the correct surface water quality standards at 20.6.4 NMAC including those standards at 20.6.4.900 NMAC for livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact. The SWQB also recommends revising Table 8-4 of the DBDR so that it includes detection limits and the correct surface water quality standards at 20.6.4.900 NMAC.

For questions related to these comments, please contact Eliza Martinez, SWQB, at 505-819-8099.

Air Quality Requirements

The New Mexico Mining Act of 1993 states that "Nothing in the New Mexico Mining Act shall supersede current or future requirements and standards of any other applicable federal or state law." Thus, the applicant is expected to comply with all requirements of federal and state laws pertaining to air quality.

20.2.15 NMAC, *Pumice, Mica and Perlite Processing.* Including 20.2.15.110 NMAC, *Other*

Particulate Control: "The owner or operator of pumice, mica or perlite process equipment shall

not permit, cause, suffer or allow any material to be handled, transported, stored or disposed of or a building or road to be used, constructed, altered or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne."

Paragraph (1) of Subsection A of 20.2.72.200 NMAC, *Application for Construction, Modification, NSPS, and NESHAP - Permits and Revisions*, states that air quality permits must be obtained by:

"Any person constructing a stationary source which has a potential emission rate greater than 10 pounds per hour or 25 tons per year of any regulated air contaminant for which there is a National or New Mexico Ambient Air Quality Standard. If the specified threshold in this subsection is exceeded for any one regulated air contaminant, all regulated air contaminants with National or New Mexico Ambient Air Quality Standards emitted are subject to permit review."

Further, Paragraph (3) of this subsection states that air quality permits must be obtained by:

"Any person constructing or modifying any source or installing any equipment which is subject to 20.2.77 NMAC, *New Source Performance Standards*, 20.2.78 NMAC, *Emission Standards for Hazardous Air Pollutants*, or any other New Mexico Air Quality Control Regulation which contains emission limitations for any regulated air contaminant."

Also, Paragraph (1) of Subsection A of 20.2.73.200 NMAC, *Notice of Intent*, states that:

"Any owner or operator intending to construct a new stationary source which has a potential emission rate greater than 10 tons per year of any regulated air contaminant or 1 ton per year of lead shall file a notice of intent with the department."

The above is not intended to be an exhaustive list of all requirements that could apply. The applicant should be aware that this evaluation does not supersede the requirements of any current federal or state air quality requirement.

Fugitive Dust

Air emissions from this project should be evaluated to determine if an air quality permit is required pursuant to 20.2.72.200.A NMAC (e.g. 10 lb/hour or 25 TPY). Fugitive dust is a common problem at mining sites and this project will temporarily impact air quality as a result of these emissions. However, with the appropriate dust control measures in place, the increased levels should be minimal. Disturbed surface areas, within and adjacent to the project area, should be reclaimed to avoid long-term problems with erosion and fugitive dust. EPA's *Compilation of Air Pollutant Emission Factors, AP-42, "Miscellaneous Sources"* lists a variety of control strategies that can be included in a comprehensive facility dust control plan. A few possible control strategies are listed below:

Paved roads: covering of loads in trucks to eliminate truck spillage, paving of access areas to sites, vacuum sweeping, water flushing, and broom sweeping and flushing.

Material handling: wind speed reduction and wet suppression, including watering and application of surfactants (wet suppression should not confound track out problems).

Bulldozing: wet suppression of materials to "optimum moisture" for compaction.

Scraping: wet suppression of scraper travel routes.

Storage piles: enclosure or covering of piles, application of surfactants.

Miscellaneous fugitive dust sources: watering, application of surfactants or reduction of surface wind speed with windbreaks or source enclosures.

Recommendation

The Air Quality Bureau does not have any objection to this project.

This written evaluation does not supersede the applicability of any forthcoming state or federal regulations.

If you have any questions, please contact me at 505 629 6186.

MEMORANDUM

DATE: November 21, 2024

TO: Amber Rheubottom, Acting Mining Act Team Leader, Mining Environmental Compliance Section, NMED

FROM: Sufi Mustafa, Staff Manager, Air Dispersion Modeling and Emission Inventory Section, Air Quality Bureau.

Request for Review and Comment, La Jara Mesa Mine, New Mine, Cibola County, New Mexico Mining Act Permit No. CI008RN

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.

Details

Laramide Resources (USA) Inc. (Laramide) has submitted amended permit application to the New Mexico Mining and Minerals Division (MMD) to support a public notification in accordance with 19.10.9 NMAC; this includes the operational and reclamation plan for a small-scale underground uranium project with two distinct but integrated phases of operations: Phase 1 – Underground Development and Phase 2 – Underground Mine Production. Laramide will develop dual and parallel inclines and install or construct surface support facilities, such as a miner change house (dry), an administration office, a maintenance facility, a fuel storage area and explosive storage. An escape raise will also be added when the inclines are completed to further the overall safety of the operations. A total of approximately 16 acres will be needed for the portal and raise facilities. No on-site mill or associated tailings facilities are planned for the La Jara Mesa project site.

At a production rate of 500 tons per day and using 40 ton highway trucks, 12 to 13 truck loads of ore material would be hauled from the site on an average daily basis. There are no plans for on-site ore processing (milling) or mill tailings disposal.

Michelle Lujan Grisham,
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 NM.SHPO@dca.nm.gov

November 18, 2024

Ms. Samantha Rynas
Permit Lead
Mining Act Reclamation Program
Energy, Minerals and Natural Resources Department
Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505
samantha.rynas@emnrd.nm.gov

Via Email Only

RE: HPD Log #123506— Request for Review and Comment on the Draft Baseline Data Report; La Jara Mesa Mine, Laramide Resources (USA) Inc., Permit No. CI008RN

Dear Ms. Rynas:

Thank you for submitting the Draft Baseline Data Report for the La Jara Mesa Mine to the New Mexico State Historic Preservation Office (SHPO) for review and comment. The SHPO received the information on September 24, 2024, via email. The project was reviewed under 19.10.6.605.C NMAC. As you know, this office is also reviewing this project with the Cibola National Forest under Section 106 of the National Historic Preservation Act.

Based on my review, I have the following comments. The draft baseline data report (Section 11-i Historic Cultural Properties) does not address the results of testing at eight archaeological sites either eligible for inclusion for listing in the National Register of Historic Places (NRHP) or sites whose eligibility for listing was indeterminate pending the results of testing. The report will need to be updated to include information on the results of such testing.

The discussion of Traditional Cultural Properties (TCP) does not include a thorough discussion of the TCP and the anticipated adverse effects. Some discussion on ways to mitigate adverse effects would be warranted—including the Cibola National Forest's ongoing consultation with the tribes on effects to the TCP.

Two references are missing from the References section.

If you have any questions or concerns, please contact me at cortney.wands@dca.nm.gov.

Sincerely,

Cortney Wands

Cortney Wands
Archaeological Reviewer

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Melanie A. Kenderdine
Cabinet Secretary Designate

Benjamin Shelton
Acting Deputy Cabinet Secretary

Laura McCarthy, State Forester
Forestry Division

October 28, 2024

Samantha Rynas, Reclamation Specialist
Mining and Minerals Division
Energy, Minerals and Natural Resources Department (EMNRD)
1220 S. St. Francis Drive
Santa Fe, NM 87505

RE: Request for Agency Comments, Underground Development and Mine Production – La Jara Mesa Project, Cibola County, New Mexico, Permit Tracking No. CI008RN

Thank you for the opportunity to comment on the above-mentioned project. I do not anticipate any impacts to any New Mexico State Listed Endangered Plants, Federally Listed Endangered or Threatened plants, or other species of concern as a result of this exploratory drilling project.

It should be noted that a population of *Helianthus paradoxus* (Puzzle Sunflower), a state endangered plant, has been documented approximately 5-10 miles southwest of the project area near the San Jose Rio, on the north side of Interstate 40. Puzzle sunflowers typically occur on permanently saturated saline soils in desert wetlands, springs or seeps (ciénegas) or adjacent to riparian areas (3,300-6,600 ft). Additionally, *Puccinellia parishii* (Parish's Alkali Grass), a state endangered grass species, also associated with alkaline springs, seeps and wetlands, has been documented 5.5 miles northeast of La Jara Mesa, and west of the town of San Mateo.

While these two state endangered plants have not been documented within the project area, a botanical survey conducted by a person or private consulting company with expertise in the field of botany and qualified to identify state endangered plants (usually when plants are in flower or fruit) is recommended prior to disturbance if any permanently saturated (not seasonally wet) riparian or wetland areas are found within the project vicinity (if they will be impacted) or immediate project disturbance area. If state endangered plants are found, an incidental take permit will be required if plants are anticipated to be destroyed or harmed, or mitigation measures developed to minimize disturbance.

Please let me know if I can be of further help.

Sincerely,

Erika Rowe
Endangered Plant Program Coordinator
EMNRD-Forestry Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505
erika.rowe@emnrd.nm.gov
(505)699-6371 (Phone)
http://www.emnrd.state.nm.us/SFD/

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
Hydrology Bureau

MMD REVIEW MEMORANDUM

DATE: November 15, 2024

TO: Samantha Rynas, Reclamation Specialist, Mining and Minerals Division
Sharon Kindel, District Manager, Water Rights Division District 1 Office

THROUGH: Katie Zemlick, Ph.D., Chief, Hydrology Bureau KZ

FROM: Christopher Krambis, P.G., Senior Hydrologist, Hydrology Bureau CK

SUBJECT: La Jara Mesa Mine Project, Cibola County, New Mexico, CI008RN

KEYWORD: Laramide Resources (USA) Inc., Water Rights Division District 1, Bluewater Ground Water Basin, Grants, New Mexico, Morrison Formation, Bluff Sandstone, Summerville Formation, Todilto Limestone, Entrada Sandstone, Chinle Formation, San Andres Limestone

ID: MMD_2024_009_CI008RN

INTRODUCTION

On June 6, 2024, Laramide Resources (USA) Inc. (Laramide) amended their 2009 application for a permit to resume the La Jara Mesa Mine Project. The La Jara Mesa Mine Project is a new mine that will involve underground development to extract uranium ore. According to Laramide, the amended plans (Laramide, 2024) have not changed from the 2009 submittal to the Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals and Natural Resources Department (EMNRD).

On September 19, 2024, MMD submitted an agency comment request to the New Mexico Office of the State Engineer (NMOSE) Hydrology Bureau regarding potential hydrological and water rights impacts that may occur from implementation of the application. The 60-day deadline to provide comments is November 19, 2024. To prepare this memorandum, the Hydrology Bureau visited the site on October 8, 2024 during an Agency Site Inspection and reviewed the following application documents:

- Amended application (Laramide, 2024),
- Sections 7.0, 8.0 and 9.0 of the Draft Baseline Data Report (Golder, 2013),
- Sections 7.0, 8.0 and 9.0 of the Revised Sampling and Analysis Plan (Golder, 2009), and
- Relevant portions of the Draft Environmental Impact Statement for the La Jara Mesa Mine Project (USDA, 2012).

Application Materials

The following is based on the amended application (Laramide, 2024). The proposed La Jara Mesa Mine Project is located in the Ambrosia Lake Mining District on U.S. Forest Service land 10 miles north of Grants in Cibola County, New Mexico. Over 700 drill holes penetrated the various lithologies of the project site. Past and recent exploration work has revealed a lack of groundwater within the targeted mineralized area. At the La Jara Mesa Mine Project, the uranium ore zones are located within the Poison Canyon tongue of the Brushy Basin Member of the Morrison Formation approximately 650 to 700 feet vertically beneath the surface of La Jara Mesa. A portal site and surface facilities at the base of La Jara Mesa will occupy 16 acres of disturbance within a proposed total permit area of 107 acres. The uranium will be accessed from the portal via two 5,000-foot inclines and a 600-foot vertical escape raise. Ore is proposed to be extracted via room-and-pillar underground mining methods. On-site milling or associated tailings facilities are not planned. Uranium ore removed from the mine is to be trucked to a third-party mill.

According to Laramide (2024), the La Jara Mesa Project will consist of two phases. Phase 1 will involve the development program when geologic exploration and construction of the two inclines, the raise and associated infrastructure take place over a two-year period. The results of Phase 1 will determine the feasibility of Phase 2. Phase 2 will consist of the underground mine production that will involve the mining of the uranium ore using the room and pillar technique. The duration of the La Jara Mesa Mine Project could continue for up to 20 years.

Groundwater

Potential water-bearing geologic units in the La Jara Mesa area include alluvium, Entrada Sandstone, Chinle Formation, and the San Andres Limestone and Glorieta Sandstone formations of the San Andres-Glorieta Aquifer (Golder, 2013). The most significant aquifer in the region is the San Andres-Glorieta Aquifer (Golder, 2013).

Geological exploration beneath La Jara Mesa revealed a lack of groundwater within the strata above and within the targeted ore body (Laramide, 2024). The proposed mine workings will be hundreds of feet above any regional aquifer (Golder, 2013). The mining operation is not expected to have impacts to aquifers in the Permit Area because the mine workings will be entirely in unsaturated rocks (Golder, 2009).

An offsite production well is proposed to supply water to the mine for drilling uses, for cooling and lubricating, for underground and surface dust control and for sanitary uses by the mine workers (Golder, 2009). Water requirements are estimated at approximately 34,500 gallons per day (gpd) during Phase 1 and at approximately 50,000 gpd for Phase 2 (USDA, 2012; Golder, 2013) or about 24 gallons per minute (gpm) and about 35 gpm, respectively.

Based on the documents reviewed, the initial plan to obtain water for Phase 1 was to use stock well B-01272 and in Phase 2 to use a newly installed supplemental well. According to NMOSE well records, B-01272 was drilled in May 1994 to a depth of 160 feet below land surface (fbls) with a screen between 70 and 160 fbls in the NW¼ of the SE¼ of Section 28 Township 12 North, Range 9 West. B-01272 is sealed with cement from 20 fbls to the land surface and appears to obtain water from sandstones between 70 and 155 fbls. The water-bearing sandstones are part of

the Entrada Sandstone formation (Golder, 2013). Depth to water and yield from this well was recorded by the driller to be at 70 fbls and 25 gpm, respectively.

Section 9.3 of the Draft Baseline Data Report (Golder, 2013) cites a drawdown analysis conducted on well B-01272 that indicates pumping from the Entrada Sandstone formation at 35 gpm for 20 years would induce about two feet of additional drawdown at the nearest pumping well located about 4700 feet away. The additional drawdown from the deeper San Andres-Glorieta Aquifer was determined to be about 0.15 feet at the nearest pumping well (Golder, 2013). The input data, method and the cited nearest pumping well in this analysis were not provided in the 2013 report by Golder.

Section 9.2.2.3 of the Draft Baseline Data Report (Golder, 2013) cites a water supply evaluation conducted by John Shomaker and Associates, Inc. (JSAI) on well B-01272 that shows the Entrada Sandstone has a transmissivity of 51.5 square feet per day (ft^2/d). The Hydrology Bureau used the NMOSE Inverse Theis Calculator by inputting the provided value of transmissivity (51.5 ft^2/d) for the Entrada Sandstone, the 35-gpm Phase 2 water supply requirement and the 20-year lifetime of the mine to check the results of the cited drawdown analysis. The Hydrology Bureau's evaluation shows that to obtain a two-foot drawdown at 4700 feet could only be achieved if the storativity/specific yield was set to 0.073596. While viable, a value of storativity with a reference was not found in any of the documents reviewed. Aquifer characteristics including storativity are required per NMAC 19.10.6.602 D.(13) (g) as outlined in Section 9.0 of the Draft Baseline Data Report (Golder, 2013). The Hydrology Bureau could not check the results of the drawdown analysis for the San Andres-Glorieta Aquifer because no details, specifically referenced values for transmissivity and storativity, were provided in the report for that aquifer.

Surface Water

Section 8.2.4 of the Revised Sampling and Analysis Plan (Golder, 2009) and Section 8.3.4 of the Draft Baseline Data Report (Golder, 2013) state that the closest springs to the proposed permit area include Pumice Springs and Cliff Springs about three miles to the southeast outside of the La Jara Mesa site drainage basin. Groundwater that is recharged from precipitation that falls on top of La Jara Mesa appears to flow to the north and east, as evidenced by the numerous springs located along the east side of the mesa (Golder, 2013). A review of the U.S. Geological Survey Lobo Springs and San Mateo 7½-minute quadrangle maps shows several additional springs emanating from the base of La Jara Mesa at various elevations to the south, the east and the north. This indicates saturation of various strata does exist beneath La Jara Mesa. However, over 700 drill holes that penetrated the various lithologies of the project site reveal a lack of groundwater in the mineralized area targeted by Laramide.

Other identified surface water features Lobo Creek located approximately 2.1 miles south of the site and unnamed ephemeral drainage channels (Golder, 2009, 2013). All of the springs and surface water features are located outside of the La Jara Mesa site drainage basin (Golder, 2009, 2013).

Site Inspection

During the October 8, 2024 site inspection, the Hydrology Bureau met with Mr. Mersch Ward of Laramide and Mr. Robert Newcomer, R.G. of Toltec Mesa Resources, LLC and inquired about

the status of the proposed water supply for the La Jara Mesa Mine Project. Both representatives confirmed that while the 2009 plans had not changed, JSAI indicated that well B-01272 no longer has sufficient yield to furnish the needs of the La Jara Mesa Mine Project and that Laramide is looking for other sources of water.

Mr. Newcomer believed the decline in well yield is due to the decline in the water level in the already thin Entrada Sandstone aquifer that B-01272 obtains groundwater from and not due to increased well losses from hard water mineralization of the well screen. The view that an insufficient yield referred to by Mr. Newcomer may be provided in the cited report by Golder (2013) "*Technical Memorandum Re: Evaluation of Elkins Well as a Supply Well For the Proposed La Jara Mesa Mine*", which was prepared for Mr. Ward on June 5, 2009 by JSAI. Laramide stated that it no longer considers the Entrada Sandstone formation as a reliable source of water for the La Jara Mesa Mine Project due to these findings.

The options Laramide is considering for their water supply include drilling the new well near B-01272 into deeper formations (e.g. the Chinle and/or the San Andres-Glorieta Aquifer), purchasing water from The Pueblo of Acoma Utility Authority, or trucking water in from another off-site source. Mr. Ward stated Laramide will determine the best option based on a cost effectiveness approach.

The option to drill the new well was proposed in the 2009 application as a supplemental well to well B-01272 for Phase 2 of the project. The proposed drill location is near B-01272, which was drilled within the NW¼ of the SE¼ of Section 28 Township 12 North, Range 9 West. Both Mr. Ward and Mr. Newcomer stated that the new well will be at the same location as the proposed supplemental well and will likely be drilled into the San Andres-Glorieta Aquifer, which is about 1,000 fbls at this location.

Much of the site inspection took place along Lobo Canyon and the top of La Jara Mesa. No surface water was observed in any of these locations during the site visit. Lobo Canyon appeared to be an ephemeral arroyo. The site visit appears to confirm the ephemeral nature of the surface water features of the area cited in the application documents.

COMMENTS

The Hydrology Bureau has prepared comments for MMD consideration regarding potential impacts to water rights of other ownership based on the review of the application documents, NMOSE well records and information obtained during the site inspection.

General Comments

Comment No. 1:
The La Jara Mesa Mine Project site lies within the Bluewater Underground Water Basin, which is partially closed to new groundwater diversions for irrigation, industrial and municipal uses. Order No. 60, which established this closure, is provided in the Appendix of this memorandum. (It should be noted that at the time of the order, Cibola County was part of Valencia County.) Plans for water supply sources need to consider the basin closure area, which is delineated on the NMOSE POD Locations website: https://gis.ose.state.nm.us/gisapps/ose_pod_locations/.

Comment No. 2:
The Hydrology Bureau cannot provide an independent drawdown analysis to evaluate potential impacts to existing water rights of other ownership at this time due to the ongoing evaluation by Laramide to determine the water supply source for the La Jara Mesa Mining Project.

Specific Comments

Comment No. 1:
Laramide should provide lithologic and/or drillers logs from licensed drillers of the exploration work to document the unsaturated nature of the explored strata beneath La Jara Mesa to assess whether or not the multitude of springs that emanate from the base of the mesa will be impacted by mining activities.

Comment No. 2:
Information regarding water rights, if any, that may be associated with the springs emanating from the base of La Jara Mesa should be provided by Laramide.

Comment No. 3:
Section 9.0 of the Draft Baseline Data Report (Golder, 2013) cites NMAC 19.10.6.602 D.(13) (g) for the required description of the aquifer characteristics, which includes transmissivity and storativity with references. However, storativity was not provided for the the Entrada Sandstone, and transmissivity and storativity were not provided for the Chinle and San Andres-Glorieta aquifers. These aquifer parameters should have been provided in the report text for all aquifers in consideration for water supply and for the drawdown analyses. Any analysis requested of the Hydrology Bureau in the future will require this information with relevant references.

Comment No. 4:
Section 9.2.2.3 of the Draft Baseline Data Report (Golder, 2013) cites a water supply evaluation conducted by JSAI on well B-01272 that shows the Entrada Sandstone has a transmissivity of 51.5

ft^2/d. The JSAI evaluation including the test data should be provided to complete an independent drawdown analysis.

Comment No. 5:
Section 9.3 of the Draft Baseline Data Report (Golder, 2013) cites a drawdown analysis conducted for withdrawals from the Entrada Sandstone formation, the Chinle Formation and the San Andres-Glorieta aquifer. However, no specifics regarding these analyses were provided in this report. The cited drawdown analyses including the nearest pumping well should be provided. Any pending review requested of the Hydrology Bureau will require this information.

REFERENCES

Golder (2009) *Revised Sampling and Analysis Plan for The La Jara Mesa Project*. Mining Project No. 083-93385SA. 5200 Pasadena NE Suite C Albuquerque, New Mexico 87113: Golder Associates Inc.

Golder (2013) *La Jara Mesa Project Draft Baseline Data Report*. Baseline Data 083-9338SI. 5200 Pasadena Avenue N.E., Suite C, Albuquerque, NM 87113 USA: Golder Associates Inc., p. 502.

Laramide (2024) *Permit Application La Jara Mesa Project Cibola County, New Mexico*. Mining Permit Application. The Exchange Tower 130 King Street West, Suite 3680 Box 99 Toronto, Ontario, Canada M5X 1B1: Laramide Resources (USA) Inc., p. 38.

USDA (2012) *Draft Environmental Impact Statement for the La Jara Mesa Mine Project Mt. Taylor Ranger District, Cibola National Forest, Cibola County, New Mexico*. Environmental Impact Statement MB-R3-03-17. Cibola National Forest 2113 Osuna Road, NE Albuquerque, NM 87113: Forest Service, U.S. Department of Agriculture, p. 238.

APPENDICES

Appendix A

NMOSE ORDER #60

DECLARATION OF THE BLUEWATER UNDERGOUND WATER BASIN IN VALENCIA COUNTY, NEW MEXICO

DECLARATION OF THE BLUEWATER UNDERGROUND
WATER BASIN IN VALENCIA COUNTY, NEW MEXICO

Order #60

WHEREAS, the waters of underground streams, channels, artesian basins, reservoirs and lakes, having reasonably ascertainable boundaries are public waters and subject to appropriation for beneficial use in accordance with the Statutes and with rules and regulations formulated by the State Engineer of New Mexico, and

WHEREAS, all natural waters flowing in streams and watercourses, whether such be perennial, or torrential, within the limits of the State of New Mexico, belong to the public and are subject to appropriation for beneficial use, and

WHEREAS, there is known to exist an underground water basin in Valencia County in the State of New Mexico, the boundaries of which are reasonably ascertainable, and

WHEREAS, the surface and underground waters within the boundaries of this basin are interrelated, and

WHEREAS, the State Engineer has determined that surface and underground water supplies of the basin now appropriated or applied for are such that further appropriations will impair existing water rights from such sources,

NOW, THEREFORE, IT IS HEREBY DECLARED that the lands in Valencia County in the State of New Mexico, described hereinafter, comprise an underground water basin, subject to the New Mexico Statutes and the rules and regulations of the State Engineer:

TOWNSHIP	RANGE	SECTIONS
9 N.	9 W.	5 thru 8, incl.
9 N.	9 W.	17 thru 20, incl.
9 N.	9 W.	29 thru 32, incl.
9 N.	10 W.	All
10 N.	9 W.	4 thru 10, incl.
10 N.	8 W.	14 thru 23, incl., excepting the southeast portion of Section 14 and the east portion of Section 29 lying within the boundaries of the Acoma Pueblo Grant
10 N.	9 W.	27 thru 33, incl.
10 N.	10 W.	All
11 N.	9 W.	5 thru 8, incl.
11 N.	9 W.	17 thru 20, incl.

(continued)

TOWNSHIP	RANGE	SECTIONS
11 N.	9 W.	28 thru 33, incl.
11 N.	10 W.	All
11 N.	11 W.	1 thru 18, incl.
11 N.	11 W.	22 thru 27, incl.
11 N.	11 W.	34 thru 36, incl.
12 N.	9 W.	5 thru 8, incl.
12 N.	9 W.	17 thru 20, incl.
12 N.	9 W.	29 thru 32, incl.
12 N.	10 W.	All
12 N.	11 W.	All

IT IS FURTHER DECLARED AND ORDERED that said basin be and is hereby closed for an indefinite period of time to the granting of applications for new appropriations of the underground waters thereof for irrigation, industrial and municipal purposes. The State Engineer will consider applications to supplement surface water rights and applications to change point or method of diversion and place or method of use and may approve such applications provided existing rights will not be impaired thereby.

WITNESS my hand and official seal of my office this 21st day of May, A. D., 1956.

SEAL:

S. E. Reynolds
State Engineer

GOVERNOR
Michelle Lujan Grisham

DIRECTOR AND SECRETARY
TO THE COMMISSION
Michael B. Sloane

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way, Santa Fe, NM 87507

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12 November 2024

Samantha Rynas, Permit Lead
Mining Act Reclamation Program
Mining and Minerals Division (MMD)
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Draft Baseline Data Report, La Jara Mesa Mine, Laramide Resources (USA) Inc., Cibola County, New Mexico. Permit No. CI008RN; NMDGF No. NMERT-3837.

Dear Ms. Rynas,

The New Mexico Department of Game and Fish (Department) has reviewed the above referenced Draft Baseline Data Report (Report) submitted by Golder Associates Inc. (Golder) on behalf of Laramide Resources (USA) Inc. (Laramide) for the proposed La Jara Mesa uranium mine. Wildlife surveys included in the Report were conducted for Golder by Ecosystems Management Inc. (EMI). Laramide is proposing the development of an underground uranium mine on federal and private surface lands that would disturb up to 22 acres. Staff from the Department, MMD, New Mexico Environment Department, U.S. Forest Service (USFS), and Laramide conducted a site inspection on 7 October 2024.

In Section 5.3.4.2 Wildlife, the Report states that the USFS recommended "performing any vegetation removal (grubbing) for construction outside of the spring breeding season for the gray vireo *(Vireo vicinior)"*. The Department recommends that, in order to minimize the likelihood of adverse impacts to all migratory birds, ground disturbance and vegetation removal activities be conducted outside of the primary migratory bird breeding season. This season runs from 15 April - 1 September for upland songbirds; 1 March - 1 September for most raptors; and 1 January - 15 July for golden eagle (*Aquila chysaetos canadensis*) and great horned owl (*Bubo virginianus*). If ground disturbing and clearing activities must be conducted during the breeding season, the area should be surveyed for active nest sites (with birds or eggs present in the nesting territory) and avoid disturbing active nests until young have fledged. For active nests, establish adequate buffer zones to minimize disturbance to nesting birds. Buffer distances should be at least 100 feet from songbird and raven nests; 0.25 miles from most raptor nests; and 0.5 miles for ferruginous hawk (*Buteo regalis*), golden eagle, peregrine falcon (*Falco peregrinus*), and prairie falcon (*Falco mexicanus*) nests. Active nest sites in trees or shrubs that must be removed should be mitigated by qualified biologists or wildlife rehabilitators. Department biologists are available to consult on nest site mitigation and can facilitate contact with qualified personnel.

During the site inspection, Department staff observed a basalt cliff line below the top of La Jara Mesa. The cliff line provides nest substrate suitable for breeding raptor species. The surrounding habitat is also highly suitable for nesting golden eagles, prairie falcons, and red-tailed hawks *(Buteo jamaicensis)*. All three of these species were documented during the wildlife surveys conducted by EMI. The Department therefore recommends that Laramide conduct additional surveys designed specifically to locate raptor nest sites during the breeding season. The survey area should include, at minimum, a one-mile buffer zone around the proposed project area footprint.

Thank you for the opportunity to comment on the Report. If you have any questions, please contact Ron Kellermueller, Mining and Energy Habitat Specialist, at (505) 270-6612 or ronald.kellermueller@dgf.nm.gov.

Sincerely,

Virginia Seamster, Ph.D.
Assistant Chief, Ecological and Environmental Planning Section

cc: USFWS NMES Field Office

USDA United States Department of Agriculture
Forest Service
Cibola National Forest and National Grasslands
2113 Osuna Road NE
Albuquerque, NM 87113-1001
505-346-3900
Fax: 346-3901

File Code: 2810
Date: December 20, 2024

Samantha Rynas
Reclamation Specialist
Mining and Minerals Division
Mining Act Reclamation Program
1220 S. St. Francis Drive
Santa Fe, NM 87505

Dear Ms. Rynas,

The Cibola National Forest and National Grasslands (Cibola) received correspondence from the Mining and Minerals Division (MMD) dated September 24, 2024, requesting that the Cibola review and provide comments on the La Jara Mesa Project, Cibola County, New Mexico, Mining Act Permit No. CI008RN. Pursuant to the Mining Act, the is a new mine permit with tracking number CI008RN. MMD requested comments on the 2013 Baseline Data Report (BDR) submitted by Laramide Resource Ltd. (Laramide) within 60 days of receipt of the request for comments. The Cibola requested a 30-day extension to provide comments.

The Cibola's comments on the BDR are listed below in order of resource section:

1. **Section 2.0** – It was stated that Site-specific climate data for the baseline period (January 1, 2011, through December 31, 2011) was collected from the Homestake Mill weather station. The Cibola recommends that Laramide install a weather station on-site for accurate climate data, specifically wind speed and direction. Since the project is entirely on National Forest System (NFS) lands, Laramide will need this to be permitted by the Cibola. We are willing to work with Laramide to complete this.

2. **Section 4.3.4.1** – The Cibola confirms the information is still correct for listed plants.

3. **Section 4.3.4.2** – The Regional Forester's Sensitive Species (RFSS) list is now obsolete. The RFSS has been replaced by Species of Conservation Concern (SCC) and is a different list of species. SCC do not require analysis, just a land use plan compliance check.

4. **Section 4.0** – *Table 4-6.* 'Sensitive' is no longer a status for the Cibola. The designation has been replaced by 'Species of Conservation Concern', which have different criteria. For plants, the Cibola's SCC list includes Zuni milkvetch (*Astragalus accumbens*), villous groundcover milkvetch (*Astragalus humistratus*), Sivinski's fleabane (*Erigeron sivinskii*), and Sandia Mountain alumroot (*Heuchera pulchella*).

   The Zuni milkvetch is the only one that occurs in Cibola County. The following species listed as 'Sensitive' in Table 4-6 have no Forest Service designation: Chaco milkvetch (*Astragalus micromerius*), Arizona leatherflower (*Clematis hirsutissima var. hirsutissima*), and Parish's alkali grass (*Puccinellia parishii*). They do not require

analysis as Forest Service 'Sensitive' species. The Forest Service Status column should be updated to reflect the current SCC species and remove the status for previous RFSS species listed in the table as 'Sensitive'.

5. **Section 5.3.4** – The Cibola no longer has Management Indicator Species (MIS) designated and is now obsolete. MIS has been replaced with Focal Species, which have different criteria. We now have Focal Species, which include Grace's Warbler (Setophaga graciae) and Ash-throated Flycatcher (Myiarchus cinerascens).

6. **Section 5.3.4.1** – The Cibola confirms the information is still correct.

7. **Section 5.3.4.2** – The Regional Forester's Sensitive Species (RFSS) list is now obsolete. The RFSS has been replaced by Species of Conservation Concern (SCC), which have different criteria, and are a different list of species. SCC don't require analysis under NEPA, just a land use plan compliance check.

8. **Section 5.0** – *Table 5-3*. Gunnison's prairie dog is not a Candidate. It has no protection under the Endangered Species Act. Zuni bluehead sucker is not a Candidate. It is listed as Endangered under the Endangered Species Act.

   The following species are listed as SCC and should be reflected in this table:

Species	**Scientific Name**	**Type**
Pale Townsend's Big-eared Bat	*Corynorhinus townsendii*	Mammal
Arizona Myotis	*Myotis occultus*	Mammal
Gunnison's Prairie Dog	*Cynomys gunnisoni*	Mammal
Rocky Mountain Bighorn Sheep	*Ovis canadensis*	Mammal
Northern Goshawk	*Accipiter gentilis*	Bird
Burrowing Owl	*Athene cunicularia*	Bird
Juniper Titmouse	*Baeolophus ridgewayi*	Bird
Red-faced Warbler	*Cardellina rubrifrons*	Bird
Grace's Warbler	*Setophaga graciae*	Bird
American Peregrine Falcon	*Falco peregrinus*	Bird
Loggerhead Shrike	*Lanius ludovicianus*	Bird
Lewis's Woodpecker	*Melanerpes lewis*	Bird
Bendire's Thrasher	*Toxostoma bendirei*	Bird
Gray Vireo	*Vireo vicinior*	Bird
Northern Leopard Frog	*Lithobates pipiens*	Amphibian
Rio Grande Sucker	*Catostomus plebeius*	Fish
Rio Grande Chub	*Gila pandora*	Fish
Dumont's Fairy Shrimp	*Streptocephalus henridumontis*	Crustacean

9. **Section 6.0** – Further description on why 100 cm was the limit of the soil descriptions is needed. If 100 cm captures the soil horizons, then this is acceptable but needs to be described. A pedon extends down to the lower limit of a soil. It extends through all

genetic horizons and, if the genetic horizons are thin, into the upper part of the underlying material. The pedon includes the rooting zone of most native perennial plants. For purposes of most soil surveys, a practical lower limit of the pedon is bedrock or a depth of about 2 meters, whichever is shallower (Soil Survey Manual, No.18, USDA Handbook, 1993).

10. **Section 6.0** – Reliance on gully exposures for soil profiles skews the results to those soils associated with gullies and may not be representative. Please justify that using gully exposures is representative of the soils in the project area.

11. **Section 8.0** – Please include the 12-digit HUC boundary of Lobo Creek (130202070305) in addition to the larger 10-digit HUC of San Mateo Creek (1302020703). Lower San Matero Creek (HUC130202070306) could also be of interest. This is the scale most often used when planning and assessing watershed conditions. There is also a map of the smaller catchments on OpenEnviroMap that are useful for showing drainage from smaller areas of the proposed action. In addition, the use of available lidar imagery would show that the ephemeral drainages do have a connection to San Mateo Creek during higher flows. It is likely the mobility of the sand fields/dunes removes the evidence of this flow periodically.

12. **Section 8.0** – It is unclear what the area of interest is for this report. Is it the HUC10 watershed, San Mateo Creek, the smaller HUC12 Lobo Creek or does it vary by feature. Please describe rationale behind the chosen area of interest.

13. **Section 8.0** – It is requested that water quality of storm flows in the ephemeral channels be collected for another year. Explain the flows that occurred during the sampling and available discharge information.

14. **Section 8.0** – It is unclear what is meant on page 8-3 that the channels are in moderate to poor condition. What metrics or methods was used to determine this? Examples of stream channel stability assessment methods include Rosgen 2001 – A Stream Channel Stability Assessment.

    Methodology (Rosgen_2001_Channel_Stability.pdf_ and Pfankuch, D.J., 1975. Stream Reach Inventory and Channel Stability Evaluation. USFS/USDA.

15. **Section 8.0** – In the discussion of channels, it would be good to establish a system of identification so that the discussion of channels is clear as to which one is being discussed. The narrative is difficult to visualize. It could be linked to the sites selected for water quality sampling or another example would be to label the channels on a map and reference the label.

16. **Section 8.0** – A discussion of the discharge of the flows in the various channels would be informative. What magnitude of flows are expected from these channels? Climate change is expected to increase extreme events. Are there points where the flow from one ephemeral channel will move to another? Are there locations where the roads could capture flows? Are there head cuts which could migrate into the project area? The methodology is reasonable.

17. **Section 8.0** – There are additional springs in the HUC12 Lobo Creek watershed. There are also riparian areas and perennial stream sections. Because an area of interest is not explained, it is unclear whether these features could be of interest to project assessment. Lobo Creek has perennial portions.

18. **Section 8.0** – There is a surface water permit (SP-04250) which could be associated with Pumice Spring.

19. **Section 8.0** – In the last paragraph of section 8.3.4, there is a reference to the "La Jara Mesa proposed Permit Area watershed". It is unclear what the boundary of this watershed is. Is this the watershed of interest? If so, why and use this as a reference for the rest of the report. This could be helpful for the last section, 8.4 Probable Hydrologic Consequences.

20. **Section 8.0** – Probable Hydrologic Consequences does not discuss all the various features in the area of interest specifically the channels and discharge, stability of channels, and other features. The rationale for the no hydrologic consequence is not explained clearly. Why is San Matero Creek not hydrologically connected? Are the springs connected? If not explain the reasoning. Are the flows in the channels expected to stay the same? What about the water quality? More information and connecting the features to the probable hydrologic consequences is needed to support the statements in **Section 8.4**.

21. **Section 9.0** – Has any new groundwater data been collected and reviewed since the April 2013 Draft Baseline Data Report? If so, please provide.

22. **Section 9.0** – Is spring data based only on NHD or was a survey conducted? This question applies to **Section 7.0** and **Section 8.0** as well.

23. **Section 9.2** – The Plan of Operations (Laramide, 2008) is referenced when describing the site's hydrogeologic regime. Please provide more information about the outcomes of the exploration drilling program. Specifically, please provide the locations and depths of exploration boreholes described in Laramide 2008. Which lithologies did they penetrate?

24. **Section 9.2.1** – There are numerous springs located along the south side of the mesa. There are faults and contacts in the area. If some springs are present because of faulting, they could be fed partly or wholly from deeper aquifers and could be impacted by pumping. Springs present at contacts could be fed by recharge and could suggest a south flow in this area in contrast to the east and west flow suggested in **Section 9.2.1**. Flow should be measured at the springs on the south side of the mesa and water chemistry or isotope analysis to determine water source at selected springs on south and east sides of the mesa.

25. **Section 9.3** – Describe or cite method used to calculate drawdown.

26. **Section 9.3** – Please describe rationale on three miles being used for effects on surface water.

27. **Section 9.0** – *Figure 5 (Site Geology).* Is there data that reveal the character of the faults located downgradient of the mineralized zone?

28. **Section 10.0** – Did the exploration drilling program have drill logs documented? If so, that information would be beneficial to include as attachments.

29. **Section 11.0** – The Cibola has specific responsibilities to consider effects to historic properties under Section 106 of the National Historic Preservation Act (NHPA). Because the Cibola will use its effects analysis under Section 106 to consider potential impacts to cultural and historic resources and uses, a review of this section was not completed by Cibola personnel. A reminder that archaeological survey locations are confidential and not available to the public.

30. **Section 12.2** – Please make the corrections: The proposed escape raise would be located within 8,145-acre La Jara pasture (no. 001) of the 40,632-acre El Rito Grazing allotment. The proposed surface facilities and road and utility corridor would be within the 5,468-acre Rincon pasture (no. 006), which is also in the El Rito Grazing allotment. There are two permitees that graze 130 cattle on one pasture and 133 head of cattle the other, for a total of 263 head of cattle this allotment.

31. **Section 13.0** – Given the proximity of the proposed La Jara Mesa Mine project area to the legacy uranium Taffy Mine above the project area, it is recommended to expand the radiological surveys to include the Taffy Mine. This will separate the disturbance from the proposed La Jara Mesa Mine to the background radon that may be residual from the Taffy Mine and its disturbance.

The Cibola appreciates the opportunity to review and comment on the 2013 Baseline Data Report submitted by Laramide. Feel free to reach out to Cibola geologist, Jenna Padilla, for any questions. She can be reached at jenna.padilla@usda.gov.

Sincerely,

YOLYNDA BEGAY
Deputy Forest Supervisor

Electronic Cc: David “DJ” Ennis (MMD), Hiedi McRoberts (USFS), Jenna Padilla (USFS), Christa Osborn (USFS), Jay Turner (USFS), Livia Crowley (USFS), Jeff Cervantes (USFS), Andrea Chavez (USFS), Joseph Jaffa-Martinez (USFS), Naomi DeLay (USFS)