Rio Algom
Docket Number 40-8905
License Number SUA-1473
Request for Additional Information

RAI #1

A. Description of Deficiency

NRC staff reviewed the *Section 4 Ponds Area Environmental Report, Ambrosia Lake,* August 16, 2018 (ML18236A644), Section 3.0 "Land Use," describes the Ambrosia Lake mine district as rural and sparsely populated. It also describes, according to a 2018 land use survey that land use within 2 miles of the Ambrosia Lake Facility is limited to grazing land and utilities. Although RAML stated that the land is limited to grazing and utilities within a 2-mile radius around the facility, this description is to general to describe the Section 4 Pond area, particularly after remediation.

B. Basis for Request

10 CFR 51.30, *Environmental assessment*, outlines the information that should be provided by RAML for the NRC staff to assess the environmental impacts of the proposed action and prepare an EA.

NUREG-1748, Section 6.2.1.2, *Proposed Action*, describes the information that should be contained in the Environmental Report, including the "current state of the site or facility."

The Environmental Assessment should provide sufficient evidence and analysis of for NRC staff to complete its NEPA review.

C. Request for Additional Information

The Environmental Report (ER) for the Section 4 Ponds License Amendment should be supplemented in accordance with the guidance in NUREG-1748. Specifically, the ER should include relevant information regarding the current physical condition of the Section 4 ponds, whether they are located within the owner-controlled area, and whether they are currently fenced off, whether they will be used for grazing in the future.

RAI #2

A. Description of the Deficiency

NRC staff reviewed the Section 4 Ponds Area Environmental Report, Ambrosia Lake, August 16, 2018 (ML18236A644), Section 1.1 "Purpose and Need for the Proposed Action," which referenced that releasing the former Section 4 ponds area from SUA-1473 and removing radiological regulatory controls from the property would allow the area to be considered for future beneficial use by RAML, other industrial users, ranchers, or other entities. NRC staff could not determine from the information provided if RAML plans to retain control of the property (Section 4 Ponds), transfer, or to sell the property.

B. Basis for Request

10 CFR 51.30, *Environmental assessment*, outlines the information that should be provided by RAML for the NRC staff to assess the environmental impacts of the proposed action and prepare an EA.

NUREG-1748, Section 6.3.1, *Land Use*, describes the information that should be contained in the Environmental Report, including the "land-use plans including current, future, and proposed (those which have been formally proposed by the appropriate governing body in a written forma and are being actively pursued by officials of the jurisdiction) plans."

The Environmental Assessment should provide sufficient evidence and analysis of for NRC staff to complete its NEPA review.

C. Request for Additional Information

What are the known future plans for the former Section 4 ponds area, if any? Please provide clarification as to whether RAML will turn over the site, including Section 4 Ponds area, to the Department of Energy (DOE) for Long Term Surveillance Planning (LTSP), if that has been planned at this time.

RAI #3

A. Description of the Deficiency

NRC staff reviewed the *Section 4 Ponds Area Environmental Report, Ambrosia Lake,* August 16, 2018 (ML18236A644), Section 8.1 "Meteorology and Climate," and Section 8.2, "Air Quality." Table 8.1, Climate Summary for Grants, NM shows mean wind speeds ranging from 6.9 to 10.4 miles per hour throughout the year. Section 8.2 states that a 2017 risk assessment has demonstrated that radiation doses to the public from the airborne emission of radionuclides from the former Section 4 ponds, and airborne emission of radionuclides from Section 4 ponds are as low as reasonably achievable. While the NRC staff understands that RAML has completed cleanup activity in the Section 4 ponds area and airborne emission of radionuclides from Section 4 ponds are as low as reasonably achievable , RAML's plans to avoid recontamination from the remainder of the site (less Section 4 Ponds area) are not explained.

B. Basis for Request

10 CFR 51.21 and NUREG-1748

The Environmental Assessment should provide sufficient evidence and analysis of impacts to support a determination of a finding of no significant impact.

C. Request for Additional Information

1) Describe what measures are being taken to avoid recontamination (e.g., windblown recontamination, groundwater recontamination, etc.) of the Section 4 ponds area.

2) If windblown recontamination is a possibility, please provide information about prevailing winds direction in and around the Section 4 ponds area.

RAI #4

A. Description of Deficiency

NRC staff reviewed the Section 4 Ponds Area Environmental Report, Ambrosia Lake, August 16, 2018 (ML18236A644) and the Final Radiological Condition and Dose Assessment for the Section 4 Ponds Rio Algom Mining Ambrosia Lake Facility, November 2017 (RAML, 2017a, ML17340A484). The dose assessment input assumes zero concentration of radioactive contaminants in the groundwater.

B. Basis for Request

10 CFR 40 Appendix A Criteria and guidance in NUREG 1620 and NUREG-1757. The Final Status Survey and dose assessment should provide sufficient evidence and analysis to support the safety case.

C. Request for Additional Information

1. Provide any information or groundwater quality data from the monitoring wells associated with Discharge Permit 71 in the alluvium beneath the Section 4 Ponds that supports the assumption of zero contamination (both radioactive and non-radioactive hazardous contaminants). The information may additionally include an assessment of contaminant concentrations in the alluvial sediments below the ponds that may reflect on the possibility of groundwater contamination. The wells associated with Discharge Permit 71 included those removed during reclamation (MW-1 through MW-21) and those at the southwestern boundary of the site (RAML, 2018, Figure 6.3).

2. Provide supporting information that the sandstone units in the lower Mancos (TRA, TRB, TRC) were not contaminated from leakage through the evaporation ponds during operations. These three sandstone layers are the uppermost bedrock units below the permeable alluvium for portions of the Section 4 Pond area. Staff notes a reference to the excavation including pond material, liner, and one foot of soil (RAML, 2017a, page 3). A description of the liner was not found, and the Soil Decommissioning Plan (RAML, 2017b, ML17340A486) mentioned the temporary placement of the excavated material on the northern portion of the Section 4 Pond area in 2004.

3. Clarify that the statement “[r]adionuclide concentrations in groundwater were assumed to be zero, as were the solubility limit and leach rate” (RAML, 2017b, page 7) means that that the solubility limit and leach rate models were not selected for the determination of the release rate. Staff notes that non-zero input values of distribution coefficient inputs (RAML, 2017b, Table 3.3) for RESRAD imply that the release rate selected was the sorption model.