From: <PLuthiger@ramc.net>
To: "Robert Nelson" <RAN@nrc.gov>
Date: 6/15/05 7:29PM
Subject: Re: ACTION: Environmental Review RAI

Bob,
The attached file provides information on your request.
Will we be expecting any more comments (i.e., are we still on for a pre-July 1 approval)?

Peter

(See attached file: 6-15-05 Lined Pond Relocate EA RAI - RAM response.doc)

CC: <tfletcher@ramc.net>, <blaw@ramc.net>

Mail Envelope Properties (42B0B9D2.CB2 : 23 : 23730)

Subject: Re: ACTION: Environmental Review RAI
Creation Date: 6/15/05 7:19PM
From: <PLuthiger@ramc.net>

Created By: PLuthiger@ramc.net

Recipients
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RAN (Robert Nelson)

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MESSAGE	235	06/15/05 07:19PM	
6-15-05 Lined Pond Relocate EA RAI - RAM response.doc			39936
Mime.822	56208		

Options

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Concealed Subject:	No
Security:	Standard

RIO ALGOM MINING LLC
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
RIO ALGOM MINING, LLC
ENVIRONMENTAL REVIEW FOR
RELOCATION PLAN FOR LINED EVAPORATION PONDS

Rio Algom Mining LLC (RAM) provides the following information in response to comments received from NRC's Environmental Review Group.

1. Discussion: The proposed action needs to discuss the magnitude of the activity.

   Request: Please describe the magnitude of the activity using a number of different measures (e.g., approximately X million cubic yards of byproduct material, berm material, sub-liner soils, and other soils; approximate number of additional workers for duration of projects; approximate quantity of trucks and heavy equipment to be used on the project).

RAM Response

Section 4.3 of the Relocation Plan contains information pertaining to material quantities including volume estimates for sediment, berms, sub-liner materials and windblown contaminated soils. Table 4-3 of the Plan summarizes this information.

The project is anticipated to last approximately 12-24 months, depending on weather and material volumes. The contractor has projected a work force of 30 individuals will be needed to perform the relocation project in a safe and effective manner. Included within this total is a Project Manger and a full time Health and Safety Specialist. Wages for these 30 jobs are well above the average wage for the general population in the Grants/Milan area.

The contractor plans on using standard construction equipment (graders, dozers, water wagons, compactors, track hoes, loaders, etc..) for the majority of the project tasks. The one exception to this is the haul trucks that will be used to transport the consolidated pond sediments. Utilizing Caterpillar 773 Trucks, which can haul approximately 40 cubic yards per load, results in fewer trips and provides a safer transport option than typical over the road end dump trucks, especially during the dumping phase. Approximately 25-30 individual pieces of equipment will be available for use

on the project.

2. Discussion: The licensee needs to better descibe the alternatives to the proposed action.

Request: For the No Action Alternative, please describe any activities that would be conducted under this alternative and describe the "as-left" state of the site. For stabilization in place, please describe why the preferred alternative is more desirable.

RAM Response

There are four options that were evaluated for the project: 1)do nothing; 2)relocate the pond materials to an off site disposal facility; 3) in-situ disposal on Section 4; and 4) relocate the materials for disposal on Pond #2.

Option 1 is essentially not an option, as the licensee must comply with the reclamation requirements outlined within 10 CFR 40, Appendix A for disposition of byproduct material. In order to comply with this requirement an action must be performed.

Option 2 does not recognize that the Ambrosia Lake site has a licensed disposal location approved by NRC as Amendment #37 to the facility license. This fact, combined with logistical, geographical and economic factors associated with available off-site disposal options (i.e., Utah disposal sites), offsite disposal options were not evaluated. The key factor in this decision is that offsite disposal is the most expensive by far, and therefore, not a logical nor justified option to pursue.

The two alternatives RAM considered for closure of the Section 4 lined ponds were: closure in-situ, or the removal of all contaminated material from Section 4 to an existing, licensed disposal area operated by RAM (Pond 2). RAM has chosen the latter alternative even though the cost exceeds in-situ closure by $2 million.

This decision was reached because of regulatory preference and expediency. The Section 4 site is not currently a licensed disposal facility, whereas the Pond 2 location is so licensed. The Nuclear Regulatory Commission (NRC) and the New Mexico Environmental Department (NMED) have indicated their preference in relocation of the Section 4 pond materials to Pond 2 for the following reasons. First, the Pond 2 location has already been the subject of extensive groundwater modeling and stability characterization for 1,000 year flood conditions. Second, consolidation of the area of land to be deeded to the DOE for perpetual care into just one location from two, is also preferred by the DOE due to lower demands on its resources to monitor the site in perpetuity. Third, should in-situ closure of the Section 4 ponds have been chosen, the regulatory approval process for the licensing of Section 4 as a disposal site would likely have been extensive, lasting from one to five years. This delay is not justified based on the overall reclamation schedule for the site. Lastly, and possibly most important, the decision to relocate the materials eliminates future groundwater concerns that would remain if in-situ closure was pursued.

As a variant to hauling the Section 4 pond contents to Pond 2, transportation in slurry form to Pond 2 by pipeline, with liquids returned to Section 4 for evaporation, was considered. The additional $2.5 million net cost of this pipeline alternative, resulted in this option being rejected when combined with plans to construct an overpass at the highway to eliminate the hazard to the public.

Table 1
Section 4 Lined Ponds Closure Approach
Options Analysis

Area of Review	Option		Comment
	3 In-Situ	4 Pond 2	
Cost to complete work	✓		Option 3 costs approximately $2 million less than Option 4.
Environmental Assessment		✓	The environmental assessment as a disposal location (Pond 2) has been completed (Amendment #37 to SUA-1473).
Geotechnical stability		✓	Geotechnical stability has been characterized for the Pond #2 area.
Groundwater protection		✓	Groundwater protection of the disposal area on Pond #2 has been evaluated in the license.
Reduced site footprint.		✓	Option 4 consolidates the disposal footprint into a single area within the approved Long-Term Stability Monitoring (LTSM) boundary.

3. Discussion: The licensee needs to provide more detail on how the proposed action will be performed and how the environmental impacts of these actions will be mitigated.

Request: Please describe: how the material will be consolidated in the ponds; how the material will be loaded and transported; what type of machinery will be used; and any hazards associated with transporting/exposure to this material.

Describe any increase in public highway traffic and increase in number of jobs relative to the local population.

Please describe how the dedicated haul roads will minimize the potential for traffic accidents.

RAM Response

Section 4.5 of the Plan discusses the relocation phase. Material consolidation consists of a two pronged process with the objective being to reduce overall material that requires relocation and to obtain a material that will be amenable to hauling. This consists of evaporation of pond liquids and consolidation of dry contaminated materials with the high moisture content pond sediments. Evaporation of liquids is being accomplished by pumping and/or diverting liquids that are present and accessible within the pond sediment material onto the crust layer present on the ponds in order to take advantage of the 50+ inch net evaporation loss due to the desert environment.

Pond sediment consolidation will be performed using heavy equipment such as loaders and trackhoes to mix the high moisture content with the low moisture content materials and allowing the material to dry out to the desired consistency for hauling. Depending on moisture content, multiple mixes may be needed. Upon achieving the desired consistency, the material will be stockpiled within the pond footprint until hauling commences.

Loading and hauling operations will utilize loaders and CAT 773 haul trucks. A dedicated road will be established to ensure safe travel between Section 4 and Pond 2. Graders and water wagons will be used as needed to maintain safe conditions on the haul road. Section 4.5.3 of the Plan discusses controls RAM intends to implement to ensure safe transport.

Hazards associated with this project consist of typical health and safety concerns typical to large construction projects (e.g., vehicle accidents, slips, falls, etc..). Due to the material being waste from a uranium mill facility, concerns involving exposure to radioactive materials must be addressed. Additional information regarding controls to be implemented to ensure the health and safety of workers, the public and the environment are effective is provided in previously submitted information associated with this action:

1. January 28, 2005 Response to RAI, Response to Section 4
2. January 28, 2005 Response to RAI, Response to Section 6
3. January 28, 2005 Response to RAI, Page 12-13
4. Lined Pond Relocation Plan v. 0.1, Section 4.5
5. Lined Pond Relocation Plan v. 0.1, Section 4.7
6. Lined Pond Relocation Plan v. 0.1, Section 4.8
7. Lined Pond Relocation Plan v. 0.1, Section 5
8. Lined Pond Relocation Plan v. 0.1, Appendix F
9. Lined Pond Relocation Plan v. 0.1, Appendix G

Increase in public highway traffic will be limited to contractor workers driving to and from work and any ancillary support services (deliveries, etc..) needed for the project. Section 4.8.3 of the Lined Pond Relocation Plan v. 0.1 discusses effects due to traffic.

As described above, the contractor has projected a work force of 30 individuals will be needed to perform the relocation project in a safe and effective manner. Included within this total is a Project Manger and a full time Health and Safety Specialist. Wages for these jobs are well the average wage for the general population in the Grants/Milan area.

The dedicated haul road results in ensuring traffic segregation so that only haul traffic is authorized on the road. The road design, including the highway crossing, will allow for safe travel for haul trucks as this eliminates the primary hazard of interacting with public traffic. A traffic management

plan will be implemented that is specific to the project that establishes expected work practices. Section 4.5.1, 4.8 and Appendix F of the Lined Pond Relocation Plan v. 0.1 provide additional discussion on the haul road and road crossing.