TECHNICAL EVALUATION REPORT FOR
THE SOIL DECOMMISSIONING PLAN
FOR THE RIO ALGOM MINING LLC'S AMBROSIA LAKE FACILITY

DOCKET NO.:	40-8905
LICENSE NO.:	SUA-1473
SITE:	Former uranium mill site near Ambrosia Lake, New Mexico
DATE:	August 11, 2006
TECHNICAL REVIEWERS:	Elaine Brummett, Health Physicist Julia Barto, Health Physicist Michael Raddatz, Nuclear Process Engineer Robert Lukes, Health Physicist
PROJECT MANAGER:	Michael Raddatz

SUMMARY:

Rio Algom Mining LLC (RAM) submitted the "Closure Plan - Lined Evaporation Ponds," dated November 1, 2004 (the Plan). That Plan discussed the Section 4 Ponds that are two miles from the mill and Pond 9 that is near the main tailings impoundment (Pond 1). The U.S. Nuclear Regulatory Commission (NRC) staff's review resulted in a request for additional information (RAI) on 36 items dated December 22, 2004. A partial response, the document *Soil Decommissioning Plan* (Plan), was submitted by RAM's letter dated January 19, 2005. The submittal included the cost estimate for implementing this Plan for surety purposes. RAM also submitted responses to other Plan comments, on January 28, 2005, and requested approval of relocation of the pond materials to allow for excavation to begin. Approval of the Closure Plan (verification, final status survey plan) is conditional to approval of the Soil Decommissioning Plan.

The NRC staff's review of the Plan resulted in RAIs dated May 5, 2005, July 21, 2005, and July 25, 2006. In response to these comments, RAM provided responses dated June 15, 2005, July 15, 2005, September 27, 2005, and July 25, 2006. The revisions were reviewed and the staff recommends amending the license to reflect approval of the revised Lined Pond Closure and Soil Decommissioning Plans, as these plans will allow compliance with the applicable NRC regulations in 10 CFR Part 40 (§40.42 and Appendix A).

BACKGROUND:

The RAM mill tailings site is located in a valley in the southeastern part of McKinley County, New Mexico, 25 road miles (40 km) from Grants, New Mexico. The Philips Petroleum Ambrosia Mill is located 1 mile (1.6 km) to the east and was remediated under the Uranium Mill Tailings Radiation Control Act (UMTRCA) Title I by the U.S. Department of Energy (DOE). In addition, over 20 underground uranium mines exist in the valley. The RAM mill operated between 1958

and 1985, processing approximately 33 million tons of ore via the acid leach process. The mill was on stand-by status from 1986 until it and associated structures were demolished, beginning in 2003 and completed in February 2004. The ion-exchange units were used to extract uranium from mine water during the stand-by phase and the processed mine water was released into a nearby drainage channel.

Ponds 3 - 10

During operations, the mill tailings slurry was discharged to Ponds 1 and 2, while Pond 3 was a decant and seepage collection pond. Ponds 4 through 8 (unlined) were used for evaporation of liquid decanted from Ponds 1 and 2. Ponds 9 and 10 (lined) were constructed in 1976 for the same purpose.

The engineered earth and rock cover for Ponds 1 and 2 (now considered as Tailings Impoundments) were completed in 1999. The Plan states that Pond 3 is considered part of the main disposal cell (Impoundment 1) and is covered by those requirements. RAM stated that it intends to do radon flux measurements of Pond 3 following placement of all contaminated soils requiring disposal and the placement of a 1 foot cover. Calculations using the radon computer code indicate that the Pond 3 earthen cover design will reduce the radon flux to less than 7 $pCi/m^2 s$, which is below the regulatory standards of 20 $pCi/m^2 s$.

Section 10 of the Plan, *Decommissioning Cost Estimate and Surety Fund*, indicates that Ponds 4 through 6 were excavated 4 to 5 feet deep and the material was placed in Pond 3. The ponds were backfilled with soil from the borrow area**.** These ponds were backfilled for safety and environmental reasons. Pond 7 was excavated, contoured to grade, and seeded.

In 1988, RAM indicated that Pond 8 had been excavated to remove residues to meet the Ra-226 subsurface standard and covered with at least 6 inches of clean soil. However, the 1999 NRC confirmatory survey demonstrated that the area did not appear to meet the standard (surface sample contained 44 pCi/g Ra-226 and 2197 pCi/g Th-230, and subsurface 21 pCi/g and 1237 pCi/g, respectively). The previous approval of Pond 8 reclamation was withdrawn and RAM was directed to remediate the pond to meet applicable standards in a timely manner (NRC letter dated June 5, 2000).

Ponds 9 and 10 were constructed in 1976, and included a liner. These ponds were used for the evaporation of liquids decanted from Impoundments 1 and 2. Pond 10 was removed from service in 1984 and allowed to dry out. The accumulated sediments and liner material were relocated to Pond 2. The area was cleaned down to bedrock, and then received 3 feet of fill. The area was sampled in 1994 for Ra-226, and RAM concluded that the 15 pCi/g plus background clean-up level was achieved. Those samples were archived and were re-analyzed. Elevated Th-230 and uranium are likely present in the samples for Ponds 9 and 10. Therefore, RAM proposes to use Alternate Release Criteria (ARC).

Pond 10 Characterization

RAM submitted 18 soil samples to General Engineering Laboratories for analysis of uranium-238, thorium-230 and radium-226. These samples were archived samples from the 1994 sampling program on Pond 10 that was limited to radium-226 analysis. Figure 1 identifies the sample locations that were included in this re-analysis phase.

A total of 12 samples were analyzed from the 0-to-6 inch layer; and 6 samples from the 6-to-12 inch level were also sent for analysis. Table 1 provides the analytical results received from the lab for the samples. Some uranium-238 results were not provided by the laboratory due to interferences associated with definitively identifying energy peaks for isotopes with low gamma energy.

Table 1

Pond 10 Analytical Results

Location	Depth (inches)	U-238 (pCi/g)	Th-230 (pCi/g)	Ra-226 (pCi/g)
E2-B4	0-6	ND	332	3.19
E3-B2	0-6	ND	298	4.45
F1-A3	0-6	ND	376	3.2
F3-D5	0-6	ND	269	3.24
G1-C3	0-6	ND	1230	17.2
G2-B3	0-6	ND	325	3.58
G2-E5	0-6	ND	244	3.98
H4-C1	0-6	5.77	58.7	1.89
I1-A4	0-6	110	232	3.4
I2-A5	0-6	ND	1490	14.6
I2-E2	0-6	2.74	1050	7.6
I3-D3	0-6	2.72	210	3.71
D3-D3	6-12	0.948	68.6	8.98
E3-B2	6-12	ND	414	5.82
F2-A2	6-12	ND	1570	17.8
G2-E5	6-12	ND	621	4.78
I2-A5	6-12	ND	5030	14
J4-B1	6-12	1.82	773	11.8

Note:

' ND ' represents sample results for uranium reported by laboratory that exhibited interferences in the low gamma energy spectrum region resulting in rejection of data.

RAM indicated in past Responses to RAIs that as reclamation efforts in Pond 10 proceeded, bedrock was encountered at shallow depths in most areas hampering clean-up activities. The shallow bedrock made sampling difficult and resulted in fewer samples being collected at the 6 -

12-inch depth. Additional excavation would have essentially been in bedrock. Since any further clean-up would have been into underlying bedrock, further excavation was deemed impractical as equipment being used would likely have been damaged. Additionally, the language in the Criterion 6 standard applies to concentrations in unconsolidated soils, and NRC communicated to RAM that NRC does not envision requiring a licensee to excavate bedrock.

Review of the analytical results above indicate that the radium-226 concentrations appear to conform to the Criterion 6 concentrations. The results for Pond 10 are indicative of the same condition which was observed within the other evaporation ponds on the site where concentrations of other radionuclides remain elevated at depth. These factors, combined with the fact that NRC required RAM to develop and submit a new soil decommissioning plan for the site. ARC were approved for Pond 10 as a practical solution that is protective of human health and the environment. Other proposed ARC areas are described within the Soil Plan.

A dose assessment will be completed for Pond 10 to demonstrate that the contribution to the Total Effective Dose Equivalent (TEDE) at the site is small. The Pond 10 dose assessment will account for site-specific information regarding the source term, including the following: critical group, scenario, and pathways identification and selection; the conceptual model; and calculations and input parameters. The Pond 10 dose assessment will be completed solely with respect to dose received due to pathways related to 11e.(2) byproduct material in subsurface soil.

Ponds 11 Through 21 (a.k.a., “Section 4 Ponds")

The lined Section 4 Ponds, 2 miles (3 km) northwest of the mill site, were built in 1976 (Ponds 11-15) and 1979 (Ponds 16-21) for evaporation of wastewater streams including the ion exchange backwash solutions and acidic decant solutions. The solutions were piped from the mill area to the Section 4 Ponds which had an evaporative area of 256 acres.

Windblown Tailings

RAM submitted a tailings control plan that was approved by NRC on February 3, 1988 (Amendment 7, License Condition 27). In a letter dated September 5, 1998, NRC staff noted some problems with this plan (inappropriate radium-gamma correlation and unrepresentative soil background sample locations) that had been discussed with RAM in June of 1997. At that time, RAM indicated that windblown tailings clean-up was still underway and that an updated verification process was being used.

In September of 1999, RAM personnel informed NRC staff that verification of soil clean-up was nearing completion. The NRC staff and its contractors performed a confirmatory survey and program review at the site on November 8 through 10, 1999. NRC staff documented, via letter on March 8, 2000, concerns with the soil decommissioning program. As a result, RAM submitted a revised soil decommissioning plan and further justified some of its decommissioning practices.

In 2000, RAM reported that windblown tailings clean-up was completed by the milestone date of December 31, 1999 (License Condition 39.A), and that areas adjacent to the mill would be

remediated after mill decommissioning. A soil clean-up plan was submitted on October 26, 2000. The staff review resulted in 31 comments (January 3, 2001) that led RAM to make some changes and perform additional characterization.

EVALUATION:

The Plan addresses remediation of windblown tailings, effluent contaminated soils, and other soils contaminated by licensed activities. The NRC staff reviewed the Plan using Section 5.2 of NUREG-1620, *Rev. 1, Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978*. Some information provided in the aforementioned licensee's October 26, 2000, document entitled, *Contaminated Soil Clean-up Plan*, was also considered. The staff's evaluation for each of the major review areas are as follows:

(1) Site Characterization

The radionuclides of concern are natural uranium, thorium 230, and radium-226. The affected area is that which includes surface contamination from windblown tailings and deeper contamination resulting from the infiltration of mill process solutions. RAM performed gamma surveys and soil sampling for radium-226 to delineate the extent of windblown tailings contamination originating from RAM's facility. RAM indicated that no failures of the tailings or fluid retention ponds had occurred. Therefore, RAM began delineation of only the windblown tailings areas in 1986. In 1998, an improved gamma survey system was employed including a global positioning system, 2-inch sodium iodide detector, and improved data management. In 2003 and 2004, a new consultant performed additional work that included the analysis of soil from 124 locations. Elevated gamma levels remain south and east of remediated areas, and windblown tailings possibly remained east of the main access road. RAM stated that identifying additional areas of remediation will be primarily controlled by the overall gamma guideline for the site reclamation plan. RAM also stated that it anticipates these potential windblown contamination areas to be limited to minor "hot spots," and will be remediated once identified.

RAM stated that, based on gamma surveys and soil data, the area potentially affected by milling operations is about 740 acres in the mill area plus 256 acres for the Section 4 ponds. Of this area, 410 acres are affected by windblown tailing surface contamination, and 330 acres are subject to potential deeper soil contamination. RAM requested the application of ARC for the areas of deeper soil contamination. RAM provided gamma survey data that illustrated low- to-moderate gamma values in remediated areas and areas not impacted by windblown tailings. The survey data also revealed elevated gamma levels in the following areas:

- north and northeast of the site, impacted by former mining operations not related to RAM operations,
- unremediated areas:
  - south and east of the site, adjacent to the remediated area,
  - east of the site and immediately east of the main access road,
- areas identified as having possible deeper soil contamination, such as the former saturated zones adjacent to Pond 9 prior to trench operation.

RAM provided its most recently available analytical results for soil samples for each of the known areas of deep contamination. RAM used existing data for Ponds 4 through 8, and 10 to develop the dose assessment and ARC for those areas. Additional characterization was needed of the deeper contamination in the mill area, Pond 9, Section 4 Ponds, mine water treatment pond (north of mill site), and the saturated zones north of the treatment pond and adjacent to Pond 9, and the pipelines that contained process solutions.

The licensee provided analytical soil sampling data from Ponds 4, 5 and 6. Those evaporation ponds are each comprised of two units: (1) the soils around the northern edges of the pond, which are referred to as the "halo;" and (2) the soils marking the footprint of the ponds. Generally, the halo areas exhibit surface contamination, and the footprint has areas of contamination below the surface soil to about 3 feet deep. The samples exhibited a wide range of variability.

In Section 2.4.1 of the Plan, the licensee states that elevated gamma levels exist in un-remediated archeological sites. The October 26, 2000, *Contaminated Soil Clean-up Plan*, stated that three cultural resource sites were identified for inclusion on the National and State registers based on research potential, but the current Plan states that some cultural resource sites are potentially eligible for inclusion in the National Register of Historic Places. RAM described plans to survey surface artifacts, remove them, and return them to their original locations after soil remediation. RAM stated that these plans were coordinated with cultural resource specialists and the New Mexico Office of Cultural Affairs State Historic Preservation Office. A detailed copy of the plan was received December 12, 2005.

The October 26, 2000, *Contaminated Soil Clean-up Plan*, stated that a Ra-226/U-nat ratio of 4 or less indicates mining residue. According to analysis, this ratio for 11 tailings samples ranged from 11 to 33 while 20 mining samples ranged from 0.3 to 4.8. The staff agreed that a ratio of 4 is a conservative value to use for identifying mining contamination. The current Plan states (Figure 2-9 and page 40) that the ratio of Ra-226/U-238 in windblown tailings areas is greater than 4.75 while in most mining affected surface soil the ratio values are less than 4.75. Page 40 (Section 3.2.5) indicates that U-238 levels were always less than 4.5 pCi/g in the windblown tailings soil while the majority of mining-affected samples had higher levels. Soil color and texture may also be of use to distinguish between mining and milling affected soil contamination. However, Page 41 indicates that for some samples from the Homestake mining area, the effects of windblown tailings appear indistinguishable from the mining contaminated soil.

For subsurface soil, page 39 indicates that the mine drainage/discharge contamination under the Section 4 Ponds can be distinguished from mill process fluid soil contamination by the lower Th-230 level in comparison to the Ra-226 or U-nat.

(2) Soil Background Radioactivity

Background gamma levels are less than 26,000 cpm with an average of 17,807 cpm. The background soil samples from 30 grids were taken north and northwest of the site because these areas are geologically similar to contaminated areas. The Ra-226 soil

background value used by DOE at the Title I Ambrosia Lake mill site one mile to the east of the RAM site was 1.2 pCi/g (see, *Ambrosia Lake Completion Report*, dated May 1, 1997).

RAM stated that the measured mean natural background Ra-226 value was 1.95 pCi/g. The mining area background mean value was 6.71 pCi/g. The upper 95 percent confidence limit of the mean natural background Ra-226 concentration was 2.3 pCi/g. Background samples averaged 2.69 pCi/g for Th-230 and 1.65 pCi/g for U-238. The average Ra-226/Th-230 ratio was 0.7 and the Ra-226/U-238 ratio was 2.3. In the mining area, background (20 samples), the Th-230 mean value was 5.7 and U-238 4.4 pCi/g with a Ra-226/Th-230 ratio of 1.15 and Ra-226/U-238 of 2.59.

(3) Proposed Radiological Criteria

For land clean-up, the residual Ra-226 in soil must meet the concentration limits in Part 40, Appendix A, Criterion 6(6), of no greater than 5 pCi/g above background in the top 6 inches (15 cm) of soil and 15 pCi/g above background in subsurface layers, in areas that are not evaluated by the radon flux criterion (i.e., areas other than the disposal cells). For NRC uranium recovery licensees (subject to Part 40, Appendix A) that did not have a decommissioning plan approved by June 11, 1999, or that subsequently submit a revised plan, the radium benchmark dose applies for clean-up of residual radionuclides other than radium (primarily uranium (U-nat) and thorium (Th-230)) for this site.

Radium Benchmark Dose Modeling

The potential dose to the public if the site contained 5 pCi/g Ra–226 is used to determine the criteria for Th-230 and U-nat (or U-238, assuming it is in equilibrium with U-234). The dose modeling was performed by using the RESRAD version 6.21 computer code. Parameter values reflect site-specific characteristics or values suggested in guidance with a ranching exposure scenario.

Appendix B (Benchmark Dose) references parameter values used in an example in a 1998 Commission paper and in NUREG-1620. RAM modeling results were 18 mrem/yr. This is conservative and results in lower than expected clean-up values. RAM proposes limits for Ra-226 of 7.5 pCi/g, Th-230 of 17 pCi/g, and U-238 of 19 pCi/g. The background values are 2.0, 2.7, and 1.7 pCi/g, respectively.

Alternate Release Criteria (ARC)

Page 49 of the Plan indicates that ARC will be applied to deeper contamination at or near the 7 evaporation ponds (Ponds 4 to10) on the mill site and the 11 ponds in Section 4. Ponds 4 to 8 were unlined and contaminates have been found to extend to 10 feet deep in some areas after removal of pond sediments.

Page 58 indicates that remediation of deep soil contamination will be done by grading, covering, and restricting access (within the DOE long-term Care boundary with fences and signs). No less than one foot of clean soil cover will be placed and contoured. Page 65 states that no further clean-up will be done because of the application of ARC. Dose modeling for

Ponds 4 through 8 is provided but dose modeling for the other evaporation ponds (Ponds 9-21 and the mill pond) will be provided after additional soil characterization.

The basis for this proposal to leave any remaining contamination in place is: worker safety, cost, and the land will be deeded to DOE for perpetual custody (institutional control for minimal human exposure). Details are provided for only Ponds 7 and 8 but RAM indicates that the other ponds would have the same results. RAM states that the cost to excavate and place the contaminated material in Pond 3 would be $2,200,000, and the resulting reduction in dose would cost $30,000 per person-rem.

To estimate potential dose from the covered ponds, RAM conservatively used the highest radionuclide values detected with the limited sampling for the source term. The dose modeling result for Ponds 4 through 8 was 11 mrem/yr, which is less than the radium benchmark dose.

There are areas on the site awaiting characterization. RAM proposed to use the approved methods outlined in the Plan. RAM also committed to submit a separate characterization and closure report for areas not currently characterized. In each case, it commits to providing a cost-benefit assessment.

RAM stated that the top few feet of contaminated soil in Ponds 4 through 6 had been removed and the footprint covered with clean soil. RAM also stated that the pond perimeters may contain deep contamination that will be evaluated for the application of the ARC. RAM stated that it would remove up to 2 feet of soil in areas above the clean-up levels. RAM committed to document the depths and radiation levels of areas where the ARC are applied in its Final Status Survey Report**.**

RAM will utilize the guideline provided within Section 2.A of Appendix F in NUREG 1623 and increase the layer thickness to 2 inches. This results in a thickness of 4 times the D-50 0.5 inch rock, well above the recommended 2 times D-50.

The QA/QC that RAM would perform to ensure that the rock placement is consistent over each Grid (10,000 square feet = 100 foot by 100 foot area) receiving the rock mulch will include:

1. Thickness tests of the rock layer to confirm that a minimum 2 inch layer of the rock mulch is placed. Thickness tests will be performed at a rate of 1 test per Grid;

2. Rock quantity testing to ensure a minimum of 62 cubic yards of rock is placed in each Grid. The volume of a 2 inch layer in a Grid is 61.7 cubic yards.

(4) Gamma Guideline Level

The gamma-radium correlation is used to determine a gamma guideline value that represents the Ra-226 clean-up limit to reduce the number of soil analyses. The licensee's process for determining the preliminary correlation (Section 2.4.2 and Plan Figure 2-3) was to use soil samples, many of which were obtained in mining impacted areas or presumably background areas.

The Plan indicates that the gamma action level is 30,300 cpm (background 11486-20915 cpm) based on the lower 95 percent prediction interval (page 55). Based on Table 2-1 and Figure 6-1 of the Plan, this appears appropriate.

(5) Remediation Techniques

The remediation strategy for surface soils involved removing the contaminated soil. Excavation is expected to be the top six inches of surface soil. Pipelines used for transferring waste solutions that are outside the footprint of the final disposal cell area will be excavated, surveyed and backfilled. RAM has stated that it will not use soil mixing. The remediation strategy for areas of deeper contamination is to provide a physical cover for the area and apply institutional controls to restrict access.

(6) As Low As Is Reasonably Achievable (ALARA)

For soil clean-up, the application of ALARA is reflected in a conservative gamma guideline level. In addition, the dose modeling for the mill site ponds included the rancher scenario, which is conservative considering the area will be within the long-term care boundary.

(7) Instruments and Procedures

The licensee has the responsibility to ensure that the procedures provide acceptable data and documentation to allow NRC to approve the Decommissioning Completion Report as meeting applicable standards. Instrument sensitivity appears adequate to reliably identify the proposed guideline levels. The gamma survey procedures for soil verification indicate the speed and spacing of the readings or scan path. Soil samples will be composites and sample handling (e.g., chain of custody) will follow appropriate procedures. The licensee stated that the instruments and techniques to be used for verification of compliance with Criterion 6(6) will be the same or very similar to those used to assess background values and the radium-gamma correlation.

(8) Quality Assurance and Quality Control

Page 64 states that a quality assurance project procedure will be developed for the final status survey using a graded approach. Assessment of the final data will include verification (i.e., quality control checks, surveillance, and audits), validation (i.e., reviews, reports, use of appropriate analytical methods and detection limits, accuracy, representativeness, comparability, and completeness) and quality assessment (i.e., data correct type, quality and quantity).

Attachment 1 describes the quality assurance program. A quality assurance manager will be independent of the projects cost and schedule to guarantee objectivity. The quality assurance program includes document control, measuring and testing equipment, audits, and surveillance.

Also, corrective action reports will be maintained. This general description is acceptable to NRC staff because at this point, RAM cannot develop a complete QA program until it knows what its clean-up criteria will be.

(9) Final Status Survey

Section 8 of the Plan describes the final status survey plan. RAM proposes to use a global positioning system that allows for more efficient and comprehensive identification of residual Ra-226. The detector will be held 18 inches (45 cm) from the ground while walking or driving at a casual walk rate. The distance between paths will be approximately 6 ft (1.8 meters). The scanning density will be 10 or more readings per grid.

Soil samples will be collected from five evenly spaced locations within a 100 m^2 grid and composited in a consistent fashion. RAM stated that 2 percent of remediated grids in the windblown area will be soil sampled. RAM also described sampling that will be done in other areas, such as the pipe trenches and the Section 4 Ponds.

The staff determined that enough data of the proper quality can be provided after decommissioning to demonstrate compliance with Criterion 6(6) of Appendix A and §40.42(k)(2). For example, the proposed number and pattern of soil grids to be sampled and analyzed for Ra-226 are justified based on the following degree of uncertainty (i.e., level of error in the measurements, number of measurements), the gamma guideline level, and implementation procedures.

RAM committed to track soil samples that fail the Ra-226 criteria, and to perform additional clean-up after a verification soil sample exceeds the Ra-226 standard. RAM also stated that it would provide a gamma-radium correlation of the verification data in the Completion Report to confirm that the gamma guideline value was adequate.

(10) Records and Health and Safety

The licensee (Plan page 5) has identified a location to keep the records of information important to the decommissioning as required by §40.36(f). The licensee has in the past provided acceptable radiation safety controls and monitoring for worker, public, and environmental protection during soil decommissioning activities and mill demolition. Existing procedures and programs should address the requirements of §40.42(g)(4) for the health and safety of workers, the public, and the environment.

(11) Non-Radiological Hazardous Constituents

The Plan addressed (page 69) the non-radiological hazardous constituents of the byproduct material to comply with Criterion 6(7). For windblown tailings areas, meeting the surface Ra-226 standard should be adequate to control these constituents. A small quantity of organic contaminated soil may be present within the mill area due to the former solvent extraction circuit.

(12) Decommissioning Cost Estimate

To assess compliance with Criterion 9, staff examined the categories of activities considered by RAM. Ponds 4 through 6 have been backfilled so the cost estimates include final contouring and re-vegetation. Ponds 7 and 8 have been re-vegetated but costs include some re-seeding. Pond 9 costs estimates cover soil clean-up, contouring, sampling, and re-vegetation. Pond 10 work costs are for soil characterization, clean-up of hot spots, contouring, and re-vegetation.

The costs for the Section 4 Ponds include excavation, relocation, placement in Pond 2, clean-up verification, contouring, and re-vegetation. The cost for radiation safety is included for all the ponds. The cost estimates for the windblown tailings and mill areas include re-surveys, some clean-up, final verification, contouring, and re-vegetation.

CONCLUSION:

The plan submitted by RAM on January 19, 2005, as supplemented by its responses to staff RAIs, establishes reasonable assurance that RAM will be able to demonstrate compliance with the requirements of 10 CFR 40, Appendix A, Criterion 6. Therefore, staff recommends that the decommissioning plan, as supplemented, be accepted and that RAM's license be amended to reflect the approval.