

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 40-8084
License No.: SUA-1119
Report No.: 40-8084/97-01
Licensee: Rio Algom Mining Company
Facility: Former Lisbon Mill Facility
Location: La Sal, San Juan County, Utah
Dates: March 26-27, 1996
Inspector: Robert J. Evans, P.E., Health Physicist
Nuclear Materials Inspection and
Fuel Cycle/Decommissioning Branch
Division of Nuclear Materials Safety
Approved By: Charles L. Cain, Technical Assistant
Division of Nuclear Materials Safety

Attachments:

Attachment 1: Partial List of Persons Contacted
List of Items Opened, Closed, and Discussed
List of Acronyms
Attachment 2: Photographs Taken at the Lisbon Mill Facility

EXECUTIVE SUMMARY

Former Lisbon Mill Facility NRC Inspection Report 40-8084/97-01

This inspection included a review of site status; management organization and controls; site operations; and the licensee's radiation protection, waste management and environmental protection programs. The licensee was noted to have continued to decommission the site in accordance with NRC regulations and the conditions of the license.

Management Organization and Controls

- The licensee's organizational structure was found to be in compliance with the license requirements. Adequate oversight had been provided for site activities. Procedures had been established at the site and were deemed adequate for the work in progress (Section 2).

Operations Review

- Site activities were conducted in accordance with applicable license and regulatory requirements. No health or safety concern was identified during site tours (Section 3).

Radiation Protection

- The licensee had implemented a radiation protection program that met the requirements established in 10 CFR Part 20 and the license. Records of occupational exposures at the site indicated that site workers had received small fractions of the dose limits established in 10 CFR 20. Program areas deemed satisfactory included site training, contamination control, and the ALARA programs (Section 4).
- The licensee was noted to have used the incorrect radiological survey instrument efficiency factor for converting counts per minute to disintegration per minute. Although the licensee used the incorrect radiological survey instrument efficiency factor, nothing was identified that had been inappropriately released from the site for unrestricted use (Section 4).

Radioactive Waste Management/Environmental Protection

- A review of the licensee's environmental and ground water monitoring program, and the annual land use survey, indicated that the licensee was in compliance with license requirements with one minor exception. The failure of one pumpback well prevented the licensee from meeting the license-required groundwater pump flowrate. Corrective actions planned included drilling and installing a new pumpback well in the near future (Section 5).

Radioactive Waste Management/Environmental Protection, continued

- All reports related to the groundwater and environmental monitoring programs had been submitted to the NRC as required. A review of the reports and the original laboratory documentation revealed that releases of radioactive materials to the environment during 1996 were within regulatory limits (Section 5).

Followup

- Two previously identified NRC inspection followup items were reviewed. One item was related to the previous discovery of lower limits of detection discrepancies in the semi-annual effluent reports, and the second item was related to the licensee's continued inability to maintain the groundwater pump flowrate in compliance with the conditions of the license. Both items were left open (Section 6).
- The licensee recently released equipment from the site that was rejected by two scrap dealers in Utah. The scrap material had been rejected because it contained radioactive materials above background values. A review of the incident revealed that the rejected scrap material had come from the headframe structure. The headframe was previously used in mining operations at the site. These mining activities were not subject to NRC regulations. An evaluation of the circumstances showed that the licensee did not violate any NRC regulation or license condition (Section 6).

Report Details

1 Site Status

The Rio Algom-Lisbon mill began operating in May 1972. In 1989, mining operations were suspended and mill operations were discontinued the following year. Decommissioning of the mill began in November 1995. The mill process building, electrical power center, compressor building, steam generator plant, and all in-plant processing tanks and vessels were disassembled. Mill material and components were either released from the site or buried in the toe of the upper tailings impoundment in accordance with the NRC-approved reclamation plan. The bulk of the decommissioning work was completed by April 1996.

The mine headframe was disassembled by contract workers during September-November 1996. The salvageable material was radiologically scanned and released for unrestricted use. Eight truckloads of scrap material was released from the site. The scrap material was subsequently sold to dealers in Utah and Texas. The headframe material that was unsalvageable was buried onsite in a location southwest of Bisco Lake.

At the time of this inspection, the mill had been fully reclaimed, but the ground on which the mill was formerly situated had not been fully remediated. The licensee performed a gamma scan survey of the site property during 1996. In the near future, the licensee plans to obtain several hundred soil samples from the area inside of the former security fence. The licensee will then compare the soil sample results to the radium contamination limits established in Appendix A of 10 CFR 40. The licensee speculated that the soil sampling process will take about a month to complete.

The construction of the final radon barrier was completed on the upper tailings impoundment in 1991 and on the lower tailings impoundment in 1992. Evaporation ponds were also installed on top of the two tailings impoundments. The licensee recently submitted the results of their radon barrier release rate measurements from the tailings impoundments to the NRC. In their letter dated December 31, 1996, the licensee informed the NRC that the average radon flux rate was 1.4 picocuries per square meter-second, a value that was well below the 10 CFR 40, Appendix A, limit of 20 picocuries per square meter-second. However, at the time of this inspection, the NRC had not approved the licensee's radon flux sample results.

Five pumpback wells were in service during the inspection. The pumpback wells were extracting groundwater at an average flow rate of 65-67 gallons per minute and were discharging the fluid into the two evaporation ponds. The licensee planned to place a sixth pumpback well in service in the near future. Groundwater remediation is expected to continue for several more years. The licensee is contemplating the idea of updating the groundwater corrective action program by

submitting alternate concentration limits to the NRC. These limits would then replace the current groundwater protection standards that are in effect for the site.

Later this year, the licensee plans to remediate the contaminated soils identified through radiological sampling at the site. The contaminated soil will be collected and disposed of in the toe area of the upper tailings impoundment. The licensee will then complete the long-term erosion protection and surface contouring work.

2 Management Organization and Controls (88005)

2.1 Inspection Scope

The organizational structure was reviewed to ensure that the licensee had established an organization with defined responsibilities and functions. The site standard operating procedures were reviewed, and the licensee's implementation of these procedures was assessed to evaluate the effectiveness of the licensee's control of site activities.

2.2 Observations and Findings

a. Management Organization

Site staffing requirements are established in License Condition 11. At the time of the inspection, site staffing consisted of two individuals, the radiation safety officer (RSO) and the administrative supervisor. During August 1996, the licensee transferred the former manager of radiation safety, licensing, and regulatory compliance to a different position within the company. This management position was being filled on an interim basis by the corporate vice president. The onsite staffing was comparable to the structure in place during the previous inspection, and the organizational structure complied with the license requirements.

During mill decommissioning, about 15 contractors were assigned to the site. These individuals arrived in late November 1995 and left the site by early April 1996. In addition, 2-3 contractors were used during the disassembly of the headframe in the Fall of 1996. Finally, the licensee planned to use a contract driller during early April 1997 to install a new pumpback well. No contractors were at the facility during the inspection.

Security was being provided by a local off-duty law enforcement official who made random inspections of the site. The site office is connected to an intrusion alarm that is linked to the county sheriff's office. The licensee routinely kept the access gate closed to prevent unauthorized access to the property. Finally, site perimeter fences appeared in good condition and properly posted.

b. Management Controls

License Condition 33 states that standard operating procedures shall be established for non-operational activities to include in-plant and environmental monitoring, bioassay analyses, instrument calibrations, and emergency response. The site procedures were reviewed during the inspection. Overall, site procedures had been established and were adequate for the amount of work in progress at the site. Emergency procedures have been developed. Records existed that indicated that site procedures had been reviewed on an annual basis by the RSO. The last review was performed during August 1996.

2.3 Conclusions

The licensee's organizational structure was consistent with structures in place during previous inspections, and it appeared that adequate oversight had been provided for the current mode of plant operations. Procedures had been established at the site. These procedures had been sufficiently documented and were appropriate for the amount of work in progress.

3 **Operations Review (88020)**

3.1 Inspection Scope

A facility tour was performed to verify that site activities were being conducted in accordance with applicable regulations and the conditions of the license, and to ensure that operational controls were adequate to protect the health and safety of the workers and members of the general public.

3.2 Observations and Findings

During the plant tour, site buildings, fences, gates, and operating equipment were observed. Site structures still in place included the office building, geology shack, shop, warehouse, and a trailer. The area where the former mill and headframe had been located was vacant. Some components of the mill and former headframe structure had been released from the site, while the remainder had been buried on site. Site fences were in good condition and were properly posted in accordance with License Condition 14. Overall, no health or safety hazard was identified during the site tour.

The two evaporation ponds were in service during the inspection. The minimum freeboard requirements established in License Condition 45 were not being exceeded in either pond. (During the inspection, the licensee presented documentation that indicated that the pond levels had remained below the maximum allowed elevations during 1996 and the first quarter of 1997.) Also, a pond-to-pond transfer system was available on an as-needed basis to control pond level in either pond. At the time of the inspection, the transfer system was not

operable; however, the licensee did not plan to transfer pond water to either pond during the immediate future.

License Condition 53.E states that the licensee shall construct the enhanced evaporation system as described in the June 1990 amendment application, as revised by letter dated November 12, 1990. The enhanced evaporation system was not in service at the time of the inspection. The licensee was contemplating the installation of a new enhanced evaporation system with a higher evaporation capacity. The licensee was reminded that any new system(s) would have to comply with the requirements of License Condition 53.E, otherwise a license amendment may be necessary for the them to install and operate a new evaporation system.

License Condition 44.E states that an annual technical evaluation of the stability of the tailings impoundments and the Bisco Lake embankment shall be conducted under the direction of a registered engineer. The licensee submitted the last annual technical evaluation to the NRC on July 2, 1996. The evaluation findings indicated that the impoundments and embankments continued to remain stable.

An annual fence inspection is required by License Condition 11. The licensee performed this annual inspection during July 1996. During the NRC inspection, site fences were examined. No problem areas were identified although all portions of the site property were not toured.

3.3 Conclusions

Site activities generally appeared to have been conducted in accordance with applicable license and regulatory requirements. Site fences were in good condition, and perimeter postings were appropriate. No health or safety hazards were identified.

4 **Radiation Protection (83822)**

4.1 Inspection Scope

The purpose of this portion of the inspection effort was to determine if the licensee's radiation protection program was in compliance with the requirements established in the license and 10 CFR Part 20 regulations.

4.2 Observations and Findings

a. Employee Exposures

To ensure that personnel had been properly monitored for potential exposures to radioactive materials, the licensee's internal and external monitoring programs were reviewed. The licensee's personnel monitoring program consisted of issuance of

thermoluminescent dosimeters (TLDs), sampling for airborne natural uranium, annual external gamma surveys, and obtaining bioassay samples from site workers.

TLDs were issued to site employees during 1996. The highest dose for the year to one individual was 40 millirems. The contractors who had performed the decommissioning work were issued TLDs also. For the first half of 1996 when the bulk of the decommissioning work was performed, the highest total effective dose equivalent for one contractor was 61 millirems. In summary, site doses were well below the occupational dose limits established in 10 CFR 20.1201 (5000 millirems per year).

The licensee is required to implement a bioassay program consistent with the requirements established in License Condition 42. Since the last inspection, bioassay samples were obtained from two site contract workers. Both samples were below 5 micrograms of uranium per liter of, and neither sample exceeded the lowest action level of 15 micrograms per liter of uranium.

General area air samples are required to be obtained quarterly in accordance with the licensee's standard operating procedures. The samples were being taken primarily to demonstrate that exposures were less than 10 percent of the 10 CFR 20 occupational dose limits. In addition, monthly air samples were required by the decommissioning plan during mill demolition. The monthly and quarterly air samples were analyzed by the licensee for their natural uranium concentrations. The highest sample result measured (2.5 E-13 microcuries per milliliter) was obtained in the contractor's trailer during March 1996. (This trailer was no longer situated at the site.) This sample was only 1.25 percent of the occupational inhalation limit established in 10 CFR 20, Appendix B.

Breathing zone samples were obtained during decommissioning activities. The highest sample result obtained was 14.4 percent of the derived air concentration limit established in 10 CFR 20 for natural uranium. The sample was taken for a worker who was torch cutting on the autoclaves during December 1995.

Annual gamma surveys are required by License Condition 11. The licensee performed the annual gamma survey during 1996 as part of the reclamation process. At the time of the NRC inspection, the licensee had not performed the annual gamma survey for 1997.

Radon daughter sampling had been previously performed monthly during decommissioning. The radon daughter sampling program is not required to be implemented by the license and has been suspended. The licensee plans to perform radon daughter sampling only as stipulated by radiation work permits that are issued in the future.

b. Contamination Control

License Condition 29 states that the licensee shall decommission the mill in accordance with the NRC-approved decommissioning plan. The decommissioning plan states that designated eating areas, change rooms, and offices within the restricted area will be surveyed on a weekly basis. The licensee maintained documentation of the weekly surveys. No contamination above the action levels was identified in the weekly surveys.

Since the completion of the decommissioning, the licensee has suspended the program for routine surface contamination checks. The licensee still had a requirement that personnel contamination checks were necessary if an individual came into contact with potentially contaminated material. Also, the licensee performed quarterly spot checks for potential contamination on site workers. Furthermore, weekly checks of the alpha survey meters were being performed in accordance with License Condition 43.

c. Monthly Inspections

License Condition 39 states that the RSO or designee shall conduct monthly documented inspections of all active work areas. Also, the inspection frequency shall be increased to weekly during mill decommissioning. The licensee had maintained records that demonstrated that the monthly inspections had been performed as required. During the decommissioning activities, the licensee performed the inspection on a daily basis. The licensee reverted back to the monthly frequency once decommissioning had been completed in early April 1996.

Monthly inspections were also conducted to examine the site's fire extinguishers and the halon system. Halon was used to protect site records, including archived milling and payroll records. The licensee also performed annual tests/inspections of the fire protection equipment; this work was performed by corporate personnel and not by site employees.

d. Employee Training

License Condition 41 states that all workers shall be provided with on-the-job training related to the radiation safety aspects of the job to be performed. This training was required prior to beginning work and annually thereafter. New employee training was provided to all new site workers in 1996, and refresher training was provided to all other site employees. All workers successfully completed the radiation safety training quiz. In addition, Mine Safety and Health Administration training was conducted for site workers in 1996. Finally, the RSO received biennial training at an offsite location during November 1996.

e. Equipment Calibrations

License Condition 15 states, in part, that the calibration of equipment shall be documented. The inspector reviewed the licensee's instrument calibration records. The components being calibrated by the licensee included the environmental monitoring air samplers, general area air sampler, lapel air samplers, and the radiological survey instruments. The licensee had documentation that verified that all equipment had been properly calibrated at the respective frequencies (or prior to use if the calibration had expired). In addition, the licensee had separated and clearly labelled equipment, such as spare lapel air samplers, that had been taken out of service.

One minor observation was made and reported to the licensee. The environmental monitoring air samplers were required to be calibration checked every quarter. There was no record of a calibration being performed during the first quarter of 1996. The air samplers were actually calibrated by the licensee at the end of the fourth quarter of 1995 in lieu of the first quarter of 1996. However, the premature calibration did not have an effect on the operability of the equipment during 1996.

f. Respiratory Protection Program

Respirators were used during the decommissioning process. From a radiological standpoint, the licensee did not take credit for the protection factors associated with the use of respirators. At the time of the inspection, the licensee still had a written respiratory protection program and had respirators onsite available for use. In addition, the site employees maintained their annual physicals up-to-date. Respirators were expected to be used only as stipulated in radiation work permits that are issued in the future.

g. Release of Equipment for Unrestricted Use

The requirements for the release of equipment from the site for unrestricted use are provided in License Condition 18. During the mill decommissioning and headframe disassembly, equipment was released for both restricted and unrestricted use. Some of the used mining and milling components were released as restricted material to a licensee located in the State of Colorado. This material included the yellowcake precipitation tanks, motors, and pumps. The material was transported via exclusive use shipments between December 1995 and February 1996.

In addition, eight truckloads of headframe material was released during November-December 1996. One minor error was noted in the truck survey release records. The licensee accidentally used the wrong radiological survey units for the ambient gamma exposure rates.

During the inspection, the NRC noted that the licensee routinely used a 2π survey instrument efficiency factor for conversion of counts per minute to disintegrations

per minute. This conversion factor had been incorporated into the licensee's standard operating procedures. The NRC has previously determined that licensees should use a 4π conversion factor for instrument efficiency instead of a 2π efficiency factor.

The licensee's equipment release records for 1996 were reviewed. The records revealed that the licensee did not inappropriately release any equipment above the NRC guideline values even with the survey results being doubled in value (a rough estimate of the conversion from a 2π to a 4π efficiency factor). Although site procedures listed an administrative limit of 75 percent of the NRC limits, the licensee typically used an As Low As Reasonably Achievable (ALARA) limit of 10-20 percent. During the inspection, the licensee stated that they would immediately start using the 4π efficiency factor instead of the 2π efficiency factor.

h. Annual ALARA Audit

License Condition 40 states that the licensee shall submit a copy of the annual ALARA audit to the NRC. The most recent audit, dated April 30, 1996, that was submitted to the NRC was reviewed during the previous NRC inspection. The report was noted to be a comprehensive document that met the intent of the license. The last ALARA committee meeting was held on February 26, 1997. The report for this meeting was not available for review at the time of this inspection.

4.3 Conclusions

The licensee had implemented a radiation protection program that met the requirements established in 10 CFR Part 20 and the conditions of the license. Records from the licensee's personnel monitoring program confirmed that occupational exposures were well below 10 percent of the Part 20 limits.

Program areas deemed satisfactory included site training, contamination control, and ALARA programs. Although the licensee improperly used the incorrect radiological survey instrument efficiency factor, nothing was identified that had been inappropriately released from the site for unrestricted use.

5 Radioactive Waste Management (88035) and Environmental Protection (88045)

5.1 Environmental Protection

a. Inspection Scope

The environmental monitoring program at the site was reviewed to assess the effectiveness of the licensee's program and to evaluate the effects, if any, of site activities on the local environment.

b. Observations and Findings

Environmental monitoring program requirements are identified in License Condition 51. Also, the licensee is required to submit the sample results to the NRC on a semi-annual basis in accordance with License Condition 22. The program in place at the site consisted of airborne particulate, radon gas, direct radiation, groundwater, surface water, soil, and vegetation sampling. Overall, the licensee had obtained the required number of samples at the specified frequency and reported the sample results to the NRC in a timely manner.

Four sample stations were used by the licensee, including one nearest residence station and one background control station. Each sample station consisted of an air particulate monitor, a radon gas canister, and a TLD. Air particulate samples were analyzed quarterly for their natural uranium, thorium-230, radium-226, and lead-210 concentrations. The results indicated that the sample radionuclide concentrations were less than 4 percent of the limits established in 10 CFR 20, Appendix B. The radon-222 gas sample results indicated that the radon concentrations were also under 4 percent of the limits.

TLDs were used to measure the ambient gamma radiation levels at the four sample stations. During 1995, the highest annual measurement (83 millirems) was obtained at the onsite station EM-2. However, the measurement at Station EM-2 was only 21 millirems above the background station's measurement of the ambient gamma radiation level for 1996. Although not required, the licensee also measured the exposure rate inside of the site office. The office area measured 141 millirems of exposure for 1996. This elevated reading may have been the result of the accumulation of radon gas in an enclosed building.

Surface water samples were obtained twice during 1995 at one offsite location. The samples were analyzed for their dissolved and suspended natural uranium and radium-226 concentrations. The sample results indicated that the natural uranium and radium-226 concentrations were less than 2 percent of the 10 CFR 20 limits.

Soil samples were obtained once at the four sample stations during 1995. Also, a sediment sample was obtained at one offsite location. The soil and sediment samples were analyzed for their natural uranium, radium-226, and lead-210 concentrations. Also, vegetation samples were obtained once at three locations during the grazing season. The vegetation samples were obtained and analyzed for their radium-226 and lead-210 concentrations. The vegetation and soil sample results for 1996 were noted to be comparable to the results obtained during the previous year.

During the review of the two semi-annual effluent reports submitted to the NRC for 1996, several typographical errors were identified in the reports. Many appeared to be related to the time frame when the current RSO was away from the site on an

extended leave of absence. The licensee planned to update the reports with the correct information, and to submit the revised pages to the NRC at a later date.

5.2 Ground Water Compliance Monitoring Program

a. Inspection Scope

The ground water compliance monitoring program was reviewed to verify that the program was consistent with the requirements specified in the license.

b. Observations and Findings

A ground water compliance monitoring program is required to be implemented by License Condition 53. The program consists of sampling 17 wells, measuring the water level in 32 additional wells, and operating a minimum of three groundwater extraction pumps. In addition to the 17 wells, the licensee sampled an 18th well, RW-2, although they were not required to do so by the license. Eleven wells were located in the north aquifer while seven wells were located in the south aquifer. Two point-of-compliance wells and one background well were located in each of the two aquifers. The 18 wells were sampled on a semi-annual frequency for arsenic, molybdenum, selenium, and water level, and on a quarterly frequency for natural uranium, chloride, sulfate, pH, and conductivity.

The sample results for 1996 were submitted to the NRC in the semi-annual effluent reports dated August 30, 1996, and February 27, 1997. The sample results indicated that the natural uranium concentrations remained above the protection standard limits in three point-of-compliance wells during 1995 (the fourth well, EF-3, could not be sampled during 1996). In addition, the arsenic, molybdenum, and selenium levels were over the limits in selected wells. The licensee continues to operate the extraction wells in an attempt to remediate the ground water. In the long term, the licensee may submit alternate concentration limits in accordance with 10 CFR 40, Appendix A, to replace the current groundwater protection standards listed in the license.

The licensee was noted to have implemented the groundwater program in compliance with the requirements of the license, with one minor exception. License Condition 53.D states, in part, that the licensee shall implement a corrective action program consisting of pumping wells at a combined flowrate of approximately 100 gallons per minute (gpm). At the time of the inspection, the licensee was operating four pumps in the north aquifer and one pump in the south aquifer with a combined flowrate of 65-67 gpm. The licensee could not meet the 100 gpm limit because one pumpback well failed during December 1995 and could not be salvaged. An NRC inspection followup item was issued to review the licensee's corrective actions taken to increase the combined flowrate. As discussed in Section 6.2 below, the licensee planned to replace Well EF-3 with EF-3A in the near future. Well EF-3A was expected to increase the total pump flowrate by an

additional 40 gpm which would bring the combined flowrate up to the license required flowrate of approximately 100 gpm.

An annual ground water corrective action program review is required by License Condition 53.D to be submitted to the NRC by July 1 of each year. The last program review was submitted to the NRC on June 28, 1996. The report provided an adequate amount of information related to the progress towards attaining the ground water protection standards.

5.3 Annual Land Use Survey

License Condition 21 stipulates that a land use survey be performed annually. The most recent annual land use survey was submitted to the NRC on January 9, 1997. A cursory spot check was performed to confirm the accuracy of the report. No discrepancies were identified during the spot check of the report.

5.4 Conclusions

A review of the annual land use survey, ground water, and environmental monitoring programs indicated that the licensee was in compliance with license and regulatory requirements, with one minor exception. The licensee cannot meet the groundwater pumpback flowrate established in the license because of equipment failure. However, the licensee plans to replace an inoperative well in the near future. The employment of the new pumpback well should bring the licensee back into compliance with the license.

All reports related to the ground water and environmental monitoring programs had been submitted to the NRC as required. The reports were thorough although a few data errors were identified in the two semi-annual effluent reports. The licensee planned to correct these errors in the near future.

6 Followup (92701)

6.1 (Open) Inspection Followup Item 40-8084/9601-02: Environmental monitoring sample discrepancies.

During a previous review of the vegetation sample results, several errors were identified by the inspector in the semi-annual report for the second half of 1995. The radionuclide concentrations listed in the report did not agree with the sample results provided to the licensee by the laboratory. In addition, the lower limits of detection (LLD) listed in the semiannual effluent report for the second half of 1995 for the vegetation samples were less conservative than the LLDs specified in License Condition 51.E. During the previous inspection, the licensee was not able to provide a clear explanation for the LLD discrepancies. However, the licensee planned to review the data and take corrective actions as necessary to resolve the

discrepancies. Therefore, an inspection followup item was issued to ensure that corrective actions have been effectively implemented by the licensee.

During the current inspection, the licensee was noted to have corrected the problems related to the vegetation samples. However, discrepancies were identified with the air particulate sample LLDs for radium-226. The licensee did not have clear explanation about these new discrepancies; therefore, this inspection followup item will remain open pending licensee's investigation and correction of the radium-26 LLD discrepancies.

6.2 (Open) Inspection Followup Item 40-8084/9601-03: Restoration of the ground water corrective action program to full capacity.

License Condition 53.D requires the licensee to implement a ground water corrective action program that consists, in part, of pumping wells at a combined flow rate of approximately 100 gallons per minute (gpm). During this and the previous inspection, five pumpback wells out of six were in service. The pumps' combined flow rate was noted to be less than 70 gpm. The sixth pump, EF-3, was lost during December 1995 and could not be repaired. The loss of this pump also resulted in the loss of access to its well; therefore, another well was required to be drilled to restore the pumping capacity to the license required flow rate.

State approval was necessary for the licensee to drill and install a replacement well. The licensee finally received permission in late-January 1997 to drill the replacement well. The licensee signed a contract with a driller in mid-March 1997. The well was scheduled to be drilled and the replacement pump installed in early April 1997. When the sixth pump is placed into service, the licensee expects to be able to pump groundwater at a combined flow rate of at least 100 gpm. In addition, the licensee was contemplating the installation of additional wells as necessary to speed up the ground water remediation process.

This inspection followup item will remain open pending installation and placement of the new pump in service, and the restoration of the flowrate requirements as established in the license.

6.3 Rejection of Scrap Material Released from the Rio Algom-Lisbon Site

During September 1996, a licensee contractor, Valley Scrap Metal, began the disassembly of the headframe, part of the abandoned mineshaft. According to the licensee, the headframe was located on site property but outside of the former mill's restricted area. Because the licensee was unable to determine if the headframe contamination came from natural or 11e.(2) byproduct material, portions of the headframe were disassembled and radiologically surveyed as a conservative measure prior to release from the site. In addition, the trucks transporting the scrap offsite were surveyed for radioactive contamination prior to their departure from the site.

On December 4, 1996, a truckload of scrap metal was run through the radiation detection scanner of the David J. Joseph Company, a scrap dealer in Plymouth, Utah. The truckload of scrap metal set off the scrap dealer's radiation detection alarm, and the load was hand-surveyed by the dealer. With a background of 5 μ R/hr, the scrap dealer measured a maximum of 28 μ R/hr on contact. The scrap was rejected by David J. Joseph Company because it had exceeded background values. In addition, the scrap material had been rejected about two weeks earlier by a different scrap dealer for the same reason. The David J. Joseph Company informed the State of Utah about the exceedence, and a rejection report was apparently sent to the state. (The Region was informed of the incident on December 4, 1996, by the Section Manager, Division of Radiation Control, Department of Environmental Quality, State of Utah).

The RSO at Rio Algom-Lisbon was contacted by the NRC on December 5, 1996. The RSO speculated that a potential cause of the incident was the differences in background gamma exposure rates between La Sal and Plymouth. According to the RSO, the background values at La Sal were higher than Plymouth's ambient exposure rates; therefore, low levels of radioactive material that could not be detected in La Sal might be detected in areas with lower background levels. In addition, the RSO stated that the scrap metal did not exceed one-fifth of the limits established in their license for release of material for unrestricted use. (One-fifth was the ALARA limit established by the licensee.) Furthermore, the radioactive material was most likely ore from previous mining operations and not NRC-licensed tailings material.

The licensee performed an internal review of the incident. (A copy of the incident investigation report was submitted to the NRC on January 14, 1997.) The licensee's RSO concluded that no violations of NRC or Department of Transportation regulations had occurred in part because the material did not exceed the release limits established in the NRC document "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct or Source Materials," dated September 1984. The scrap material was subsequently delivered to a dealer in El Paso, Texas.

Exit Meeting Summary

The inspector presented the preliminary inspection results to the representatives of the licensee at the conclusion of the inspection on March 27, 1997. Licensee representatives acknowledged the findings as presented.

Attachment 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

L. Axtell, Administrative Supervisor
F. Fossey, RSO

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Closed

None

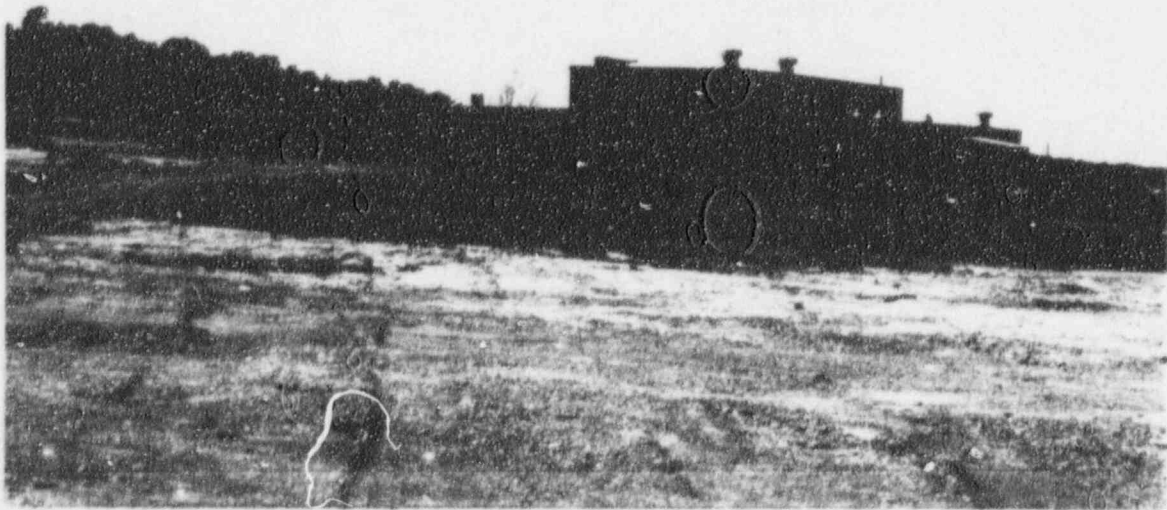
Discussed

40-8084/9601-02	IFI	Ensure the corrective actions taken in response to the environmental monitoring sample discrepancies are appropriate.
40-8084/9601-03	IFI	Ensure that actions are taken to restore pumping capacity required for the ground water corrective action program.

LIST OF ACRONYMS USED

ALARA	as low as reasonably achievable
gpm	gallons per minute
LLD	lower limit of detection
μ R/hr	microrentgens per hour
RSO	radiation safety officer
TLD	thermoluminescent dosimeter

Attachment 2
PHOTOGRAPHS TAKEN AT THE LISBON MILL FACILITY



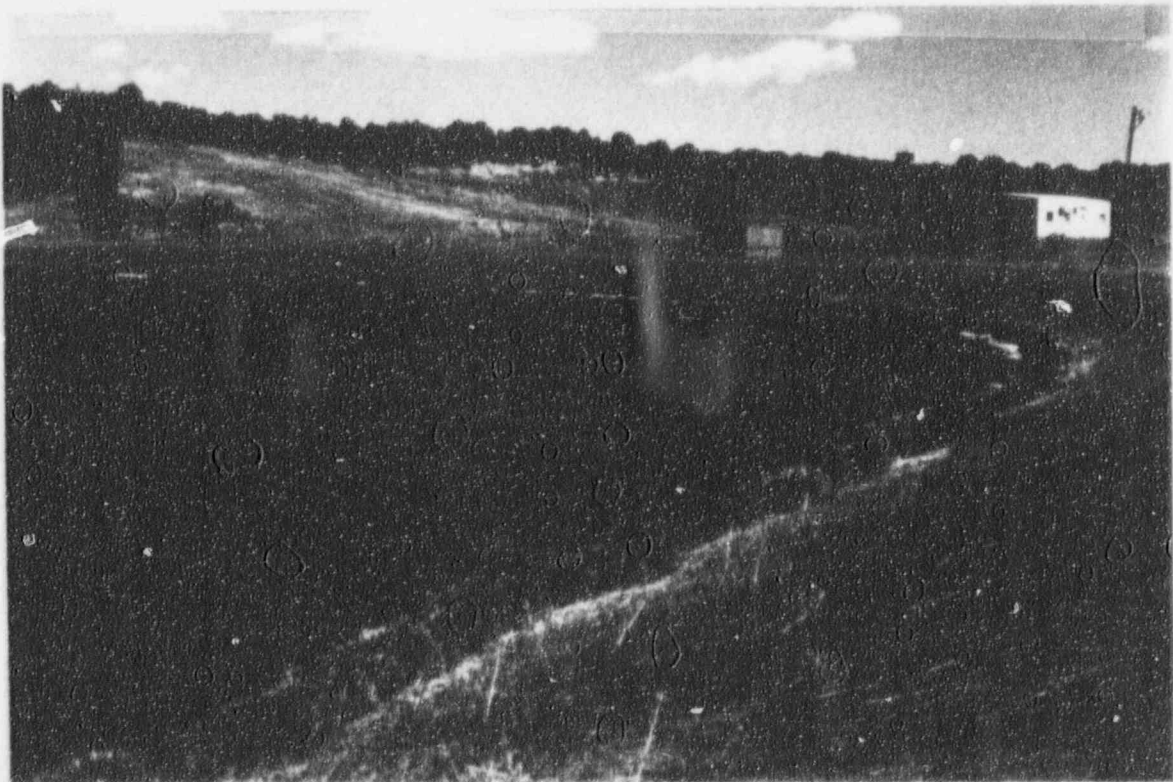
Photograph 1 - Rio Algom-Lisbon site structures; the mill was previously located in the foreground.



Photograph 2 - Area where Headframe was previously situated; the Headframe was disassembled in September-November 1996.



Photograph 3 - Area near Bisco Lake where unsalvageable Headframe material was buried; NRC inspector is performing a gamma survey of the area.



Photograph 4 - Upper Evaporation Pond; bales of hay was added to the shoreline to provide erosion protection from wave action.