



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-4005

September 8, 2003

William F. Kearney, Manager
Environmental and Regulatory Affairs
Power Resources, Inc.
P.O. Box 1210
Glenrock, Wyoming 82637

SUBJECT: NRC INSPECTION REPORT 040-08964/03-001

Dear Mr. Kearney:

On July 24, 2002, the Nuclear Regulatory Commission (NRC) completed an inspection of your Highland Uranium Project Smith Ranch in-situ uranium processing facility in Converse County, Wyoming. The inspection consisted of a routine review of management organization and controls, site operations, radiation protection, radioactive waste management, environmental monitoring, and chemical process safety. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations of activities in progress. The inspection findings were discussed with you and your staff at the exit briefing on July 24, 2003, and during a subsequent telephone call on August 20, 2003. The enclosed report presents the results of that inspection.

Overall, the inspection determined that you had continued to operate the uranium production facility in a safe and effective manner. No violations or deviations were identified; therefore, no response to this letter is required.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, please contact Mr. Louis C. Carson II at (817) 860-8221 or the undersigned at (817) 860-8197.

Sincerely,

/RA/

Jack E. Whitten, Acting Chief
Nuclear Materials Licensing Branch

Docket No.: 040-08964
License No.: SUA-1548

Power Resources, Inc.

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Enclosure:
NRC Inspection Report
040-08964/03-001

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 040-08964

License No.: SUA-1548

Report No.: 040-08964/03-001

Licensee: Power Resources, Inc.

Facility: Highland Uranium Project
Smith Ranch In-Situ Leach Facility

Location: Converse County, Wyoming

Dates: July 22-24 and August 20, 2003

Inspectors: Louis C. Carson II, Health Physicist
Nuclear Materials Licensing Branch

Merritt N. Baker, Fuel Cycle Inspector
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Fuel Cycle Safety and Safeguards (FCSS)

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Fuel Cycle Facilities Branch
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Approved by: Jack E. Whitten, Acting Chief
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Attachment: Supplementary Information

EXECUTIVE SUMMARY

Highland Uranium Project: Smith Ranch In-Situ Leach Facility NRC Inspection Report 040-08964/03-001

This inspection included a review of site status, management organization and controls, site operations, radiation protection, radioactive waste management, environmental monitoring, and chemical process safety.

Management Organization and Controls

- The inspectors determined that the licensee's organization structure and staffing levels were acceptable for the work in progress at the facility (Section 2).
- The inspectors also determined that the licensee had both the organization and procedures in place to adequately implement the performance-based license (PBL) and staff the Safety and Environmental Review Panel (Section 2).

In-Situ Leach Facilities and Operation Review

- Site activities observed during the inspectors' tour were being conducted in accordance with applicable license and regulatory requirements. No yellowcake product spills were observed by the inspectors in the central processing plant (CPP) or the satellite plants. Plant process parameters were observed by the inspectors to be within license limits. Mechanical well integrity re-testings were performed in an acceptable manner (Section 3).

Radiation Protection

- The inspectors concluded that licensee had implemented a radiation protection program that met the requirements in 10 CFR Part 20 and the license (Section 4).
- Occupational exposures that occurred at the Highland Uranium Project (HUP), Smith Ranch (SR) In-Situ Leach (ISL) Facility during calendar year (CY) 2002, and to the date of this inspection in CY 2003, were determined by the inspectors to be well below the NRC's annual total effective dose equivalent limit (Section 4).

Environmental Protection and Radioactive Waste Management

- The inspectors' review of records and data indicated that no effluents were released to the environment exceeding regulatory limits during CY 2002, and to the date of this inspection in CY 2003. Reports related to groundwater and environmental monitoring programs were submitted to the NRC as required (Section 5).

Process Safety Information, Hazard Identification and Assessment, and Occupational Safety Activities

- Adequate chemical safety was demonstrated by the licensee during the inspection for activities involving licensed materials (Section 6.0).

Report Details

1 Site Status

In March 1992, a commercial license was issued to Rio Algom Mining Corporation for recovery of uranium through in-situ leach operations at the SR facility. Full scale construction of the central processing plant began in January 1996, and commercial operations began on June 20, 1997. In July 2002, the ownership and control of the SR facility were transferred to Power Resources, Inc. (PRI) as part of the HUP. On July 11, 2002, the NRC issued License Amendment No. 3 that acknowledged the transfer of ownership and control of SR and issued a standardized PBL.

The inspectors noted that Wellfields Nos. 1, 2, 3, D, E, F, and H were in production during the inspection. Both yellowcake dryers and filter presses were operating. During this inspection the inspector observed yellowcake product being dried. Wellfield No. 3 was originally placed into operation by the licensee on August 10, 1998, with eight operating mine units. Wellfield No. 4 began production on September 10, 1999, and currently had 12 operating mine units (wellfield headerhouses). A satellite facility was completed by the licensee in August 1998 and supports mining operations from both wellfields. This satellite facility has sufficient capacity to support all mine units in Wellfields Nos. 3 and 4. Additionally, the licensee placed in service three satellite facilities, and seven wellfields from the recently acquired Highland In-Situ Uranium Project. Groundwater cleanup activities at the time of the inspection were in progress in Wellfields A, B, and C.

2 Management Organization and Controls (88005)

2.2 Observations and Findings

a. Management Organization and Staff

The licensee's approved corporate organization structure is illustrated in Figure 9-5 of the September 27, 2000, application. During this inspection, the licensee's functional organization was compared to the organization chart as referenced in the license application. The inspectors found that the licensee's overall organization structure was in agreement with the license application.

Approximately 78 individuals were employed at the site during this inspection. The General Manager remained the licensee's highest ranking official on site, and the Corporate Radiation Safety Officer (CRSO) continued to report directly to the General Manager. The inspectors determined that the licensee had adequately staffed the site to support commercial operations.

b. As Low As is Reasonably Achievable Controls

SR License Condition 9.7, requires, in part, that the licensee follow the requirements of Regulatory Guide (RG) 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Mills will be As Low As is Reasonably Achievable (ALARA)," for the responsibilities and qualifications for the radiation safety officer (RSO) and radiation safety technicians. During April 2003, the licensee had completed personnel qualifications and required refresher training as specified in RG 8.31.

SR License Condition 12.2, requires, in part, that the licensee conduct an annual ALARA review. The inspectors reviewed the licensee's 2002 Annual ALARA Review, which was submitted to the NRC on April 11, 2003. The most current annual ALARA review was found by the inspectors to be thorough and comprehensive.

c. Safety and Environmental Review Panel

The licensee was issued a PBL on May 8, 2001. License Condition 9.4 of the PBL requires, in part, that the licensee establish a Safety and Environmental Review Panel (SERP). The SERP is required by the license to ensure that changes to the facility, procedures, and tests or experiments, which have not been reviewed by the NRC, do not have adverse effects on systems, structures, components, and the operation of the facility. The inspectors noted that the licensee through its Environmental, Health and Safety (EHS) Management System had established an Operational Review Committee (ORC) for pre-screening of work orders/radiation work permits, and to determine if any SERP action was required for proposed changes. The inspectors reviewed 19 work orders that were reviewed by the ORC. Six work orders were determined to require a SERP review. However, the inspectors noted that due to the combination of SR and HUP the work order program had become somewhat informal and was not fully meeting the intent of the EHS management system as indicated in Appendix J of the license application. This informal process for handling work orders was discussed with the licensee's representatives. The representatives present stated that they would initiate actions to enhance the EHS Management system. As part of this corrective action they would better document and track any changes that affect facility operations. The inspectors determined that the licensee's implementation of the PBL and SERP was adequate.

2.3 Conclusions

The inspectors determined that the organization structure and staffing levels were acceptable for the work in progress at the facility. The licensee had both the organization and procedures in place to adequately implement the PBL and SERP.

3 In-Situ Leach Facilities (89001) Operations Review (88020)

3.1 Inspection Scope

3.2 Observations and Findings

a. Site Tour

The inspectors conducted site tours to observe ISL process plant, wellfield, and satellite operations at both the HUP and SR sites. During the site tours the inspectors were tasked to verify that site activities were being conducted in accordance with applicable regulations and the license. Additionally the inspectors were to ensure that operational controls were adequate to protect the health and safety of workers and members of the public. During the site tours the inspectors noted that several wellfields were in production at both the SR and HUP facilities. The inspectors also observed the condition of the plant satellites, equipment, fences, and gates. The inspectors noted that ISL operations and activities at the satellite facilities, CPP, deep well disposal, and wellfield appeared to be conducted in accordance with established licensee procedures.

b. Yellowcake Dryer Area Operations

The inspectors reviewed the standard operating procedure (SOP) No. 2040, "Yellowcake Dryer Area Operations." One of the two yellowcake dryers was operating during this inspection. The inspectors observed dryer operations and confirmed that no yellowcake product spills had occurred since the last inspection in the SR CPP. The inspectors observed a licensee operator remove the yellow cake from the filter press and then load a yellowcake dryer. Since the last inspection, the licensee had implemented new procedures and a new design to enhance the removal of yellowcake from the filter press. Facility equipment and components were found to be operational and properly maintained. The inspectors noted during the site tour that in the plant control room no equipment misalignments were identified, and no process flow, level, or pressure indications were found outside required parameters. The inspectors reviewed the completed record, "Yellowcake Filter Press/Dryer Data Sheet," for CY 2003. The data sheets validated that the licensee had routinely tested the dryer vacuum alarms as required by SR License Condition 10.2. SR License Condition 10.1 states, in part, that the annual yellowcake production shall not exceed 3.5 million pounds. The inspectors determined that as of July 2003 yellowcake production was below the 3.5 million pound annual limit.

c. Well Mechanical Integrity Testing at the Highland Uranium Project

At the time of the inspection, the licensee managed the HUP wellfield operations by using licensee personnel located at the SR. Licensed operations at the HUP were conducted in accordance the HUP License SUA-1511, Docket No. 040-08857, not SUA-1548. HUP License Condition 10.2 requires, in part, that the licensee perform well mechanical integrity tests (MITs) on each injection and production well before the wells are utilized and after the licensee services each injection and production well. The purpose of the MIT is to insure the well casings remain intact and to prevent the migration of ISL fluids into aquifers other than the production aquifers. MITs conducted at the HUP were to be performed using

techniques approved in the underground injection control program administered by the State of Wyoming and the operations plan described in the approved license application. MITs are repeated once every 5 years for all wells used to inject lixiviant, or fluids for restoration operations. Any failed well casing that cannot be repaired by the licensee to pass the integrity test is required to be plugged and abandoned.

The instructions for wellfield MITs were described in HUP SOP No. 2.3. The well MIT involved the licensee installing a bottom well packer approximately 10 feet above the well screen, installing a well packer at the top of the casing, filling the well with water, and pressurizing the zone between the packers to 120 percent of the allowable maximum injection pressure for the field. To pass the MIT, the well must not lose more than 10 percent of the pressure within 10 minutes. The licensee used Form HUP SOP\2-36-1 to record the results of the test.

The inspectors observed a MIT on Well No. FIP 1208 located in Wellfield F of the HUP. The inspector determined that the well was being tested within the 5-year window required for retesting. However, the inspectors did not observe the installation of a safety cage over the top of the well casing prior to inflation of the packers as stated in the MIT SOP. The licensee informed the inspectors that the safety cage was not installed, generally, if the top of the well casing was close to the ground surface. Additionally, the inflation of the packer would not be expected to cause a casing failure near the surface. The licensee's compliance in following MIT SOP was determined by the inspectors to be acceptable.

Additionally, the inspectors observed that the licensee pressure tested wells a total of three times before the well was deemed to have failed. The inspectors noted that the MIT SOP did not specify the number of times a well can be tested prior to failing. However, Form HUP SOP\2-36-1 stated, in part, that a well must maintain 90 percent or greater of the initial test pressure to pass the MIT. The licensee informed the inspectors that the reason the test was performed up to three times was to insure that packers have the opportunity to seal properly to the well casing. The inspectors noted that Form HUP SOP\2-36-1 was used to record the outcome of the MIT.

In summary, observations by the inspectors and a review of records concluded that the licensee was conducting well MITs in an acceptable manner and in accordance with license requirements.

3.3 Conclusions

Site activities observed during the inspectors' tour were being conducted in accordance with applicable license and regulatory requirements. No yellowcake product spills were observed by the inspectors in the CPP or the satellite plant. Plant process parameters were observed by the inspectors to be within license limits. The licensee had performed mechanical well integrity re-testings in an acceptable manner.

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 requirements established in the license and 10 CFR Part 20 regulations.

4.2 Observations and Findings

a. Routine Ambient Gamma Surveys

Section 9.11 of the SR license application requires, in part, that the licensee perform quarterly gamma radiation surveys in specific locations in enclosed areas and conduct spot checks in these areas to confirm the adequacy of the gamma radiation monitoring plan. The inspectors' reviewed records and verified that the licensee had performed the required routine surveys and spot checks as specified by the license. During the site tour, inspectors measured ambient gamma exposure rates using an NRC microRoentgen (μR) meter, Serial Number 15540 with a calibration due date of March 2, 2004. Within the CPP, the NRC inspectors did not identify any areas that met the definition of a radiation area (greater than 5 millirems per hour (mr/hr)) that the licensee had not previously posted. The satellite facilities at the Highland site and several wellfield headerhouse had areas that measured 4-5 mr/hr . The inspector determined that the licensee had posted these areas as radiation areas as required by 10 CFR 20.1003.

b. Airborne Natural Uranium and Personnel Doses

SR License Condition 11.7 requires, in part, that the licensee perform monthly surveys for natural uranium and radon. Airborne natural uranium sample results were reviewed by the inspectors for the period from September 2002 to July 2003. The inspectors noted that only the air sample results from the yellowcake dryer and packaging areas routinely had measurable natural uranium. Most air sample results measured by the licensee were less than 10 percent of a derived air concentration (DAC) value for natural uranium ($5.0\text{E-}10 \mu\text{Ci/ml}$).

A review of personnel dose records indicated that doses during CY 2002, and to the date of this inspection in CY 2003, were within the regulatory limits. Dose records maintained by the licensee were based on external radiation, airborne uranium, and radon daughters. The highest total effective dose equivalent during CY 2002 was 717 mr , which was well below the 10 CFR 20.1201 occupational dose limit of 5000 millirems. As of July 23, 2003, in CY 2003 doses to all workers were less than 10 percent of the occupational limit for CY 2003.

c. Bioassays

The inspectors reviewed the bioassay program to determine compliance with SR License Conditions 11.2 and 11.3. Action levels used by the licensee were defined in Table 1 of RG 8.22, "Bioassay at Uranium Mills," Revision 1. Bioassay procedures require that evaluations be performed by the licensee when bioassay results exceeded any action level

specified in RG 8.22 and that pertinent corrective actions be implemented. Bioassay samples taken by the licensee were analyzed by a contract laboratory vendor. All sample shipments provided to a contract laboratory vendor for analysis included blank and spiked samples for quality assurance. The inspectors noted that all process operators and laboratory personnel were sampled by the licensee on a monthly basis, while personnel involved in dryer operations were sampled weekly. Since the last inspection, one worker's bioassay sample measured in excess of the action level of 15 µg/l. The inspectors noted that the licensee had adequately investigated the causes of the elevated bioassay and had implemented immediate corrective actions.

d. Instrument Calibration

Section 9.6 of the license application requires, in part, that all radiation monitoring, sampling, and detection equipment be recalibrated after each repair, as recommended by the manufacturer, or at least annually, whichever is more frequent. The inspectors reviewed the licensee's calibration records and determined that survey instruments were calibrated routinely. Also, the inspectors observed during the site tours that instruments in use had current calibration stickers affixed. The inspectors reviewed radiation instrument functional check records prepared since the previous inspection and determined that the licensee had complied with the license. The inspectors observed the licensee's radiation technician perform radiation instrument functional checks in the CPP and satellites in accordance with the SOP.

4.3 Conclusions

The licensee had implemented a radiation protection program that met the requirements in 10 CFR Part 20 and the license. Occupational exposures that occurred at the Highland Uranium Project, Smith Ranch In-Situ Leach Facility site during CY 2002, and to the date of this inspection in CY 2003, were determined by the inspectors to be well below the NRC's annual total effective dose equivalent exposure limit.

**5 Radioactive Waste Management (88035)
Environmental Monitoring (88045)**

5.1 Inspection Scope

The groundwater, environmental, and radioactive waste management programs were reviewed by the inspectors to assess the effectiveness of the licensee to control waste and monitor the effects of site activities on the local environment.

5.2 Observations and Findings

a. Semi-annual Effluent Reports

SR License Condition 12.2 states, in part, that the results of effluent and environmental monitoring shall be reported to the NRC in accordance with the provisions of 10 CFR 40.65. The semi-annual environmental monitoring report for the second half of CY 2002 was submitted to the NRC on April 11, 2003. The inspectors reviewed this report during the inspection. The semi-annual report was submitted to the NRC in a timely manner and

provided relevant data for the facility. The environmental monitoring program had consisted of air particulate, radon, groundwater, surface water, soil, and vegetation sampling. Measurements of ambient gamma exposure rates were also performed. The inspectors determined that all values reported were within acceptable limits.

b. Groundwater and Environmental Water Sampling

The inspectors reviewed groundwater monitoring well and effluent monitoring data. All required data was presented in the reports. Groundwater and surface water monitoring programs were implemented by the licensee in accordance with Table 5.3 of the license application. The groundwater program consisted of the licensee conducting quarterly sampling for natural uranium and radium-226 taken from wells used for livestock or domestic wells located within 1-kilometer of the operating wellfields .

The inspectors' review of data for the third and fourth quarters of CY 2003 indicated that the concentrations of natural uranium and radium-226 were below the 10 CFR Part 20, Appendix B, effluent concentration limits of $3.0 \text{ E-}7$ microcuries per milliliter ($\mu\text{Ci/ml}$) and $6.0 \text{ E-}8 \text{ } \mu\text{Ci/ml}$ for uranium and radium, respectively.

c. Environmental Air Sampling

The HUP is considered a zero gaseous and particulate effluent release facility based on the design of the CPP and the yellowcake dryer system. However, the licensee had continuously performed air particulate sampling at three locations around the site during CY 2002 and up to the date of this inspection in CY 2003. The licensee had analyzed samples on a quarterly basis for natural uranium, thorium-230, radium-226, and lead-210 concentrations. The air sample results reviewed by the inspectors indicated that these radionuclide concentrations were a fraction of the 10 CFR Part 20, Appendix B, effluent concentration limits for CY 2002 and to the date of this inspection in CY 2003. The inspectors concluded from the records reviewed that potential radiation dose to any member of the public from licensed material during CY 2002 and to the date of this inspection CY 2003 was below the 100 millirem per year annual dose limit to the public.

d. Environmental Exposure Rates

The licensee used environmental thermoluminescent dosimeters (ETLD) to monitor ambient gamma radiation. The ETLDs were placed at seven locations as specified in Table 5.3 of the license application and were changed quarterly. The ETLDs at background station, Dave's Waterwell, measured 152 millirem during CY 2002. During CY 2002, the ETLDs in Wellfield I had the highest ambient readings measuring 16 millirem above background. The ETLDs at the fence line restricted area boundary measured 12 millirem above background. The ETLD data reviewed by the inspectors indicated no upward trend compared to the previous years. The inspectors concluded that potential radiation dose to any member of the public from licensed material for CY 2002 was below the 100 millirem per year annual dose limit to the public.

e. Wellfield Monitoring and Excursions at Highland Uranium Project

HUP Licence Condition 11.2 requires, in part, that wellfield monitoring wells at operating areas, excluding groundwater restoration, be monitored at an interval not exceeding 14 days in accordance with the operations plan of the approved license application. The inspectors observed the licensee's representative purging monitoring well number CM-15 prior to sampling. This well is located in HUP Wellfield C. The inspectors observed licensee personnel collecting samples in accordance with HUP SOP No. 28 for well sampling. The inspectors determined that licensee personnel seemed knowledgeable of the SOP and followed wellfield sampling SOP as written.

HUP Licence Condition 12.3 requires, in part, that in the event a lixiviant excursion is confirmed by groundwater monitoring, the NRC be notified by telephone within 24 hours and by letter within 7 days from the time the excursion is confirmed. The licensee is required to make notification to the NRC in accordance with Licence Condition 9.2. The inspectors reviewed correspondence that the licensee had sent to the NRC during CY 2002 and to the date of this inspection in CY2003. The inspectors noted that the licensee had sent several letters to the NRC documenting well excursions. The inspectors determined that the licensee had followed the SOPs for notifying the NRC of wellfield excursions and Licence Conditions 9.2 and 12.3 were being met by the licensee.

5.3 Conclusions

A review of records and data by the inspectors indicated that the licensee had not released effluents into the environment exceeding regulatory limits during CY 2002 and to the date of this inspection in CY 2003. The inspectors noted that reports related to groundwater and environmental monitoring programs were submitted to the NRC as required.

6 Process Safety Information (88056), Hazard Identification and Assessment (88057) Management of Change (88065), OSHA Interface Activities (93001)

6.1 Inspection Scope

The objective of this portion of the inspection was to verify that site activities were being conducted in accordance with applicable regulations, occupational safety standards, and license conditions. Additionally, this portion of the inspection was to ensure that chemical safety at SR was adequate to protect the health and safety of the workers and the members of the public.

6.2 Observations and Findings

Site Safety and Operations

During the facility tour, the inspectors observed licensee practices related to worker mine, occupational, and industrial safety activities. These safety activities are under the regulatory jurisdiction of the State of Wyoming Mine Safety who implements the Mine Safety and Health Administration (MSHA) and Occupational Safety and Health Administration (OSHA) requirements. MSHA has established a memorandum of understanding (MOU) with OSHA regarding OSHA requirements at MSHA facilities. The NRC has MOUs with both MSHA and OSHA regarding NRC licensed facilities.

The inspectors evaluated a number of the licensee's programs. The inspectors verified by interviews with licensee personnel that the following programs were in place and functioning:

- ▶ Operators and mechanics training
- ▶ Contractor worker training
- ▶ Pre-startup safety reviews
- ▶ Hot work permits
- ▶ Compliance audits
- ▶ Process safety information
- ▶ Hazard analysis
- ▶ Operating procedures
- ▶ Site safety practices (hot work, lockout/tagout, line breaking, etc.)
- ▶ Emergency response
- ▶ Maintenance
- ▶ Management of change
- ▶ Incident investigation
- ▶ Audits and self-assessments

The inspectors examined the following plant facilities and equipment: CPP; ammonia detector; control room; programmable logic controller; laboratory; truck unloading bays; bulk chemical storage tanks; fuel storage tanks; compressed gas storage racks; fire water storage tank and pumps; and maintenance shop. The inspectors reviewed the following planned upgrades to the bulk anhydrous ammonia storage tank and piping and discussed the design package with the plant engineer:

- ▶ Operator training;
- ▶ Vessel maintenance, testing, inspections and welded repairs;
- ▶ Drawings/sketches;
- ▶ Compliance with ANSI standard K61.1;
- ▶ Pressure relief calculations;
- ▶ Comparison of MSHA and State of Wyoming Mine Safety Regulations

The inspectors reviewed a significant sample of applicable procedures, including, but not limited to:

- ▶ Procedure 2025, Manual Precipitation of Acidified Rich Eluate;
- ▶ Procedure 2030, Automatic Precipitation of Acidified Rich Eluate;
- ▶ Procedure 2403, Material Safety Data Sheets Procedure;
- ▶ Procedure 2460, Breaking Lines;
- ▶ Procedure 2505, Bulk Chemical Handling;
- ▶ Procedure 7133, Hazardous Materials Spill Contingency Plan;
- ▶ Procedure 7135, Ammonia Emergency Response Plan;
- ▶ Procedure 7140, Emergency Evacuation Procedures;
- ▶ Procedure 7150, Chemical Emergency Response Guide;

The inspectors determined that procedures and administrative controls were adequate to minimize the risks from hazardous chemicals. The inspectors noted effective dates existed on procedures which originated under the previous owner Rio Algom. The licensee stated that Rio Algom procedures were current and valid, and there was a program in place to update all procedures.

The inspectors found that the material condition of the hazardous chemical bulk storage tanks, piping, and equipment in the plant areas was in satisfactory condition. However, the inspectors did observe evidence of damage around the berm located at the sulfuric acid storage tank. The licensee's staff stated that a plan was in place to repair the berm. Based on observations made during facility tours, the inspectors determined that the material condition of the CPP, control room, truck unloading bays, and laboratory areas was satisfactorily maintained.

6.3 Conclusions

Based on this inspection, the inspectors determined that adequate chemical safety was demonstrated by the licensee for activities involving licensed materials. Licensee chemical safety programs were conducted safely and in accordance with regulatory requirements.

7 **Exit Meeting Summary**

The inspectors presented the preliminary inspection results to the licensee's representatives at the conclusion of the onsite inspection on July 24, 2003. A subsequent telephonic exit briefing was held on August 20, 2003, to discuss the results of the inspection described in this report. Representatives of the licensee acknowledged the findings as presented. During the inspection, the licensee did not identify any information reviewed by the inspectors as propriety.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

P. Drummond, Manager, Plant Operations
J. Hagar, Radiation Safety Technician
W. Kearney, Environmental & Regulatory Affairs /Corporate Radiation Safety Officer, Manager
R. Knode, General Manager, Uranium Operations
J. McCarthy, Radiation Safety Officer
T. McCullough, Safety Supervisor

ITEMS OPENED, CLOSED, AND DISCUSSED

Open

None

Closed

None

Discussed

None

INSPECTION PROCEDURES USED

IP 83822	Radiation Protection
IP 88005	Management Organization and Control
IP 88035	Radioactive Waste Management
IP 88045	Environmental Monitoring
IP 88056	Process Safety Information
IP 88057	Hazard Identification and Assessment
IP 88063	Management of Change
IP 89001	In-Situ Leach Facilities
IP 93001	OSHA Interface Activities

LIST OF ACRONYMS USED

ALARA	As Low As is Reasonably Achievable
CFR	Code of Federal Regulations
CPP	Central Process Plant
CRSO	Corporate Radiation Safety Officer
DAC	Derived Air Concentration
EHS	Environmental, Health and Safety Management System
ETLD	environmental thermoluminescent dosimeter
FCSS	Fuel Cycle Safety and Safeguards
HUP	Highland Uranium Project
ISL	In-Situ Leach
$\mu\text{Ci/ml}$	microcuries/milliliter
$\mu\text{R/hr}$	microRoentgen per hour
mr	millirem
MIT	mechanical integrity test
MOU	memorandum of understanding
MSHA	Mine Safety and Health Administration
NRC	Nuclear Regulatory Commission
ORC	Operational Review Committee
OSHA	Occupational Safety and Health Administration
PBL	Performance-Based License
PDR	Public Document Room
RG	Regulatory Guide
RSO	Radiation Safety Officer
SERP	Safety and Environmental Review Panel
SR	Smith Ranch
SOP	standard operating procedure
UPS	Uranium Processing Section