

**ENCLOSURE 2**

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket No. 40-8943

License No. SUA-1534

Report No. 40-8943/99-02

Licensee: Crow Butte Resources, Inc.

Facility: Crow Butte Project

Location: Crawford, Dawes County, Nebraska

Dates: September 21-23, 1999

Inspector: Louis C. Carson II, Health Physicist  
Fuel Cycle and Decommissioning Branch

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Attachment: Supplemental Information

## EXECUTIVE SUMMARY

### Crow Butte Project NRC Inspection Report 40-8943/99-02

This inspection included a review of management organization and controls; in-situ leach operations; radiation protection; and the licensee's waste management and environmental protection programs. Overall, the licensee was operating the facility in a safe and effective manner.

#### Management Organization and Controls

- The licensee's organizational structure was in agreement with the license requirements, and adequate oversight had been provided for site activities (Section 2).
- A review of the licensee's performance based license condition demonstrated the licensee had adequately implemented the requirements of the license (Section 2).
- The licensee had not established pertinent radiation safety steps within the yellowcake dryer operations procedure as required by License Conditions 9.6 and 10.8(A). This failure to implement the license as required was identified as a Severity Level IV violation. The licensee implemented corrective actions during the inspection (Section 2).

#### In-situ Leach Facilities

- Site operations were conducted in accordance with applicable license and regulatory requirements. Site operating parameters were within the respective license limits, and no health or safety hazard was identified (Sections 3).

#### Radiation Protection

- The licensee had implemented a radiation protection program that met the requirements established in 10 CFR Part 20 and the license (Section 4).

#### Radioactive Waste Management

- A review of the spill management program found that the licensee had effectively documented spills pursuant to 10 CFR 40.36 in decommissioning records (Section 5).
- The determination of whether the May and June 1999 spill events were reportable to the NRC pursuant to License Condition 12.4 and 10 CFR 40.60 was considered unresolved pending further review by the NRC (Section 5).

#### Followup

- Event Number 35888 was closed regarding the excursion status of well CM6-6 (Section 6).

## Report Details

### **1 Site Status**

During the inspection, Crow Butte Resources in-situ uranium mine was in operation with Mine Units 4, 5, 6, and 7 in service, and Mine Units 1, 2, and 3 in restoration. In Mine Unit 7, Well House 27 had been placed into service since the last inspection. Well Houses 26 and 28 in Mine Unit 7 will be completed, and operations will begin later this year.

The licensee continues to produce yellowcake material in the Central Processing facility. Uranium-bearing leach solution was pumped from the well fields to the process facility at a nominal flow rate of 4,400 gallons per minute. Ion exchange columns were used to recover uranium from the leach solution. The end product was dried in a negative pressure dryer and packaged in 55-gallon drums for shipment offsite.

Restoration activities included recirculation cleanup in Mine Unit 1 and reverse osmosis/ion exchange column cleanup in Mine Units 2 and 3. Three reverse osmosis units were in service. Restoration flow was roughly 280 gallons per minute during the inspection.

Waste water was disposed through one deep-disposal well and several evaporation ponds. The licensee is authorized to dispose of waste water through the land application process, but the licensee currently has no plans to start using this waste water disposal method in the near future.

### **2 Management Organization and Controls (88005)**

#### **2.1 Inspection Scope**

The organizational structure was reviewed to ensure that the licensee had established an effective organization with defined responsibilities, functions, and controls in place to ensure compliance with NRC requirements.

#### **2.2 Observations and Findings**

##### **a. Organization and Staff**

The organizational structure requirements are provided in License Condition (LC) 9.3, which references the NRC-approved license renewal application dated December 1995. Also, assignments and reporting responsibilities are provided in LC 9.12. The licensee continued to maintain a staff of about 44 employees operating the plant around the clock. Overall, the licensee's site organizational structure was consistent with those in place during previous inspections, and an appropriate level of oversight had been provided for the current mode of plant operations.

b. Performance Based License Review

The NRC issued Crow Butte Resources a performance based license on March 4, 1998. License Condition 9.4 states the licensee may, under certain conditions, and without prior NRC approval, make changes in the facility or processes, make changes to procedures, or conduct tests and experiments not presented in the license application. The licensee's implementation of the performance based license provisions was reviewed to ensure any changes made by the licensee did not negatively impact the licensing basis of the site. The licensee held three Safety and Environmental Review Panel (SERP) meetings since the previous inspection concerning the following:

- Review of spill events from January through May 1999.
- Review and Approval of Mine Unit 7 baseline monitoring, restoration values, and operational monitoring criteria (UCLs).
- Review and approval of Well Houses 25 and 28 in Mine Units 6 and 7, respectively.

It was concluded that the SERP panel conclusions were technically and administratively adequate. However, the inspector found that the licensee was unsure of when a spill event was reportable to the NRC. This matter is discussed further in Section 5 of this report.

c. Standard Operating Procedures

License Condition 9.6 states, in part, that written standard operating procedures (SOP) for all operational process activities shall enumerate pertinent radiation safety practices to be followed. The inspectors reviewed the following SOPs for consistency with the requirements of LC 9.6:

- C-5, "Radiation Work Permit" (RWP)
- C-18, "Timely Reporting of Non-Routine Events"
- C-19, "Solution Spills"
- P-15, "Installation, Operation and Maintenance of Wellfield Pipelines"
- P-19, "Yellowcake Dryer Operations and Maintenance"

The inspectors found that the SOPs reviewed were adequate with the exception of the issue discussed below regarding operation of the yellowcake dryer.

License Condition 10.8(A) states, in part, that if any yellowcake dryer emission control system fails to operate within the specifications set forth in the SOP:

- the drying and packing room shall be immediately closed-in as an airborne radiation area; and

- heating and operations shall be switched to cool down or operations shall be temporarily suspended.

The inspectors' discussions with the plant manager revealed that on January 20, 1999, the licensee implemented SOP P-19, "Yellowcake Dryer Operations and Maintenance," Revision 7, without enumerating the pertinent radiation safety steps to be taken during a yellowcake dryer emission control system failure. Yellowcake dryer operations are the most risk significant operation with regard to potential for internal exposure events. The licensee's failure to enumerate important radiation safety steps into SOP P-19 was identified as a violation of LC 9.6 (40-8934/9902-01).

During the inspection, the licensee corrected this violation by revising and reissuing SOP P-19 in accordance with the license. The corrective actions appeared adequate to resolve this violation.

## 2.5 Conclusions

The licensee maintained a staff at the site which met the intent of the license. The licensee had correctly implemented the requirements of the performance based license. The yellowcake dryer procedure did not include important radiation safety steps, as specified in LC 10.8(A), which was a violation of License Condition 9.6. The licensee implemented adequate corrective actions during the inspection.

## 3 **In-Situ Leach Facilities (89001)**

### 3.1 Inspection Scope

A site 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

#### a. Site Tour

A site tour was performed to inspect the condition of the Central Process Facility, evaporation ponds, site buildings, fences, gates, and operating equipment. Site fences and gates were found to be in good condition. The inspector determined that licensed material was secure within the site property as required by 10 CFR 20.1801, and facility process buildings were posted with radioactive material signs as required by 10 CFR 20.1902(e) and LC 9.11. During the site tour, the NRC inspector conducted radiation surveys using a Ludlum Model 19 microRoentgen meter. No unexpected gamma exposure rate readings were identified during the site tour. General background radiation levels were 25 microRoentgens per hour ( $\mu\text{R/hr}$ ). The mill and related components have been properly maintained and operated. No equipment misalignments were identified, and no process flow, level, or pressure parameters were

found outside of their required ranges. Housekeeping was good with no loose trash or debris identified on the floor. No health or safety hazard was identified during the site tour.

b. Production Parameters

License Condition 10.5 states that the annual throughput shall not exceed a flow rate of 5,000 gallons per minute (gpm), excluding restoration flow. At the time of the site tour, the production flowrate was 4,363 gpm, while the injection flowrate was 4,200 gpm. The flowrate difference was mainly due to the process bleed flow used to maintain a negative groundwater gradient in the wellfields. The inspectors concluded that actual flow rates were well below the limit established in the license.

License Condition 10.7 provides restrictions on the control of liquid effluents. Liquid effluents were being returned to the process circuit, disposed of via deep-well disposal, or discharged to the evaporation ponds. During the site tour, no evidence of improper process fluid releases was observed.

License Condition 11.1 states, in part, that during wellfield operations, injection pressures shall not exceed the integrity test pressure (100 pounds per square inch [psi]) at the injection well heads. The well injection fluid pressure in the pipe exiting the Central Processing facility was approximately 85 psi, and the range was 40-95 psi. Two wellfield houses were toured, and the well injection pressures were less than 100 psi in both houses. Process flows and pressures were obtained and recorded in accordance with LC 11.1.

c. Yellowcake Dryer Operations

The licensee dried yellowcake product using a vacuum chamber dryer. The yellowcake dryer was required to be operated and maintained in accordance with the requirements listed in LC 10.8 which assures a negative pressure during system operation. Licensee SOP P-19, "Yellowcake Dryer Operation and Maintenance," was used by the operations staff for dryer operations. All instrumentation required by the license was verified as operational. During the inspection, the operations staff demonstrated yellowcake dryer alarm functions from the control room computer and that the alarms were audible in the plant. The inspector concluded that the yellowcake dryer effluent negative pressure system was fully operational.

3.5 Conclusions

Site activities were conducted in accordance with applicable license and regulatory requirements. Plant process parameters were within the licensed limits and site fences were in good condition. No health or safety concern was identified during the plant tour.

## 4 Radiation Protection (83822)

### 4.1 Inspection Scope

The scope of this portion of the inspection 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. As Low As is Reasonably Achievable (ALARA) Review

License Condition 12.6 requires that the licensee conduct an annual ALARA audit, and that the ALARA Audit Report be retained in the licensee's files for the inspector's review. According to 10 CFR 20.1101(c), the licensee shall periodically (at least annually) review the radiation protection program content and implementation. The 1998 Crow Butte Annual ALARA Audit was completed on March, 1999. The audit was performed by the CRSO and the Manager of Environmental and Regulatory Affairs.

The ALARA audit report stated that programs were evaluated based on the recommendations contained in NRC Regulatory Guide (RG) 8.31, Information Relevant To Ensuring That Occupational Radiation Exposures At Uranium Mills Will Be As Low As Is Reasonably Achievable. Section 2.3.3 of RG 8.31 recommends the detail that an ALARA audit should contain. The audit report summarized the radiation protection program and provided trends and analysis of key radiation protection parameters. The inspectors found that the ALARA audit report provided useful findings regarding the licensee's radiation protection program.

#### b. Surface Contamination

Table 5.7-20 of the license application specifies that eating rooms, change rooms, control rooms, and office areas shall be surveyed for alpha contamination on a weekly basis. The licensee had performed the weekly surveys on a routine basis during 1999. The restricted and unrestricted areas were surveyed weekly using hand-held survey instruments for detection of total (fixed and removable) alpha contamination. Smear tests for removable alpha contamination were performed monthly in the unrestricted areas. All sample results were noted to be below the respective license and action level limits.

Monthly swipe surveys were obtained to detect loose contamination in the unrestricted areas. No sample result exceeded the licensed limit of 1000 dpm/100 cm<sup>2</sup>. The inspectors determined that the licensee maintained positive control over surface contamination in all areas because no sample result exceeded the license limit during 1999.

c. Personal Contamination Monitoring

License Condition 10.11 states that employees shall monitor themselves with an alpha survey instrument prior to exiting the restricted area. Should the results of monitoring exceed an action level of 1000 dpm/100 cm<sup>2</sup>, employees shall decontaminate themselves to less than the action level. The licensee maintained an extensive number of log entries in this program area. Licensee records indicated that employees were monitoring themselves with an alpha survey meter prior to exiting the restricted area. Based on personal monitoring records, no individual had left the site with contamination above the release limit. All workers observed by the inspectors during the inspection tested the survey meter prior to monitoring themselves for contamination and appropriately documented the survey results. The inspectors concluded that licensee employees effectively monitored for contamination prior to exiting the restricted area.

d. Release of Equipment for Unrestricted Use

In accordance with LC 9.8, the release of equipment or packages from the restricted area shall be in accordance with the NRC guidance document entitled, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct or Source Materials."

The licensee's equipment release records for 1999 were reviewed during the inspection. The licensee maintained extensive, detailed records of equipment released from the site. The licensee's records indicated no items had been released with contamination in excess of the fixed surface and removable contamination limits of 15,000 and 1,000 dpm/100 cm<sup>2</sup>, respectively.

e. Licensee Inspections

Table 5.7-20 of the license application requires a daily walk-through in all areas where the potential for yellowcake contamination exists, in part, to identify locations with visible yellowcake material. Table 5.7-20 also requires the ventilation system to be inspected daily in all areas with the potential for airborne radioactivity exists. Further, LC 11.5.A, requires the licensee to document problems observed during the daily walk-through inspections in writing.

The licensee's daily walk-through records were reviewed. The walk-throughs were being performed on a daily basis, and the inspections included a requirement to specifically observe the operation of the ventilation equipment. Weekly inspections were required by LC 11.5.B. These inspections allowed the licensee to observe general radiation control practices and to review required changes in procedures and equipment. These inspections were required to be performed by the CRSO and the plant manager. The licensee clearly documented it had performed these inspections weekly during 1999.



f. Bioassay Program

The bioassay program requirements are listed in LC 10.12. The licensee's program consisted of quarterly urine bioassays for people who work in areas where the possibility of yellowcake inhalation existed, with annual sampling for all other site workers. Baseline samples were obtained from all new employees prior to their initial assignment at the plant, and termination samples were obtained from personnel terminating employment with Crow Butte Resources, Inc. Although not required by the license, the licensee obtained monthly bioassay samples from the chemistry laboratory workers because they routinely handled radioactive material.

The licensee had maintained extensive records related to bioassay sampling. No sample result had exceeded the action level of 15 micrograms of natural uranium per liter of urine during 1999.

g. Radiation Work Permits

Radiation work permit (RWP) requirements are provided in License Condition 10.9. The licensee had issued 14 RWPs during 1999. These RWPs provided guidance to workers conducting ion exchanger manifold and resin transfers. The inspectors determined that the radiation safety instructions provided to the workers for the scope of the work being conducted was adequate.

h. Training Program Review

The training program requirements are listed in LC 9.13. Training consisted of annual refresher, new employee, bi-monthly and respiratory protection training. Annual refresher training was conducted for all employees during 1999. An examination was administered to validate the training received. Bi-monthly training combined pertinent radiological and industrial hygiene topics. New employee training was provided on an as-needed basis and included a written examination. The inspectors reviewed training records of 14 employees and they were found to be complete. The inspectors noted that only certain employees were considered "radiation workers," such as the CRSO, HPT, and plant operators. The facility engineers, secretary, chemistry technicians, well field maintenance worker, and well field construction were not considered "radiation workers." However, the inspectors determined that the licensee had provided all workers training required by LC 9.13 and 10 CFR Part 19. Additionally, the inspectors reviewed the training records of the CRSO and the HPT and found them to be acceptable.

i. Airborne Natural Uranium and Radon Progeny Sampling

License Application Section 5.7.3.1 states that the licensee shall perform monthly surveys for airborne natural uranium in compliance with NRC Regulatory Guide 8.25, "Air Sampling in the Workplace." All samples were taken within the required periodicity and appropriate locations. The licensee obtained the airborne natural uranium surveys as required by the license application.

License Application Section 5.7.3.2 states that the licensee shall perform monthly surveys for radon or radon progeny in the restricted area inhabited by workers, with the exception that the surveys shall be increased to weekly if concentrations are found to exceed the action level of 0.08 working levels. The licensee measured radon progeny concentrations using the Modified Kusnetz method. The licensee normally collected the samples during worst-case situations, such as during the early morning hours prior to opening the building doors. No radon progeny sample exceeded the action level of 0.08 working levels during 1999.

j. Instrument Calibrations

License Condition 10.13 states all radiation and environmental monitoring, sampling, and detection equipment shall be recalibrated after repair and as recommended by the manufacturer or at least annually, whichever is more frequent. The inspectors reviewed calibration records for 1999. The licensee had maintained calibrated equipment available for use, and had maintained records indicating all equipment was routinely calibrated. The inspectors observed that radiation detection equipment being used in the plant had been calibrated.

k. External Exposures and Gamma Radiation Surveys

The inspectors reviewed the licensee's external exposure monitoring program for site personnel. The licensee used thermoluminescent dosimeters (TLD) to monitor specific personnel considered as radiation workers. Environmental area TLD data was used for establishing exposures for employees who were not considered radiation workers, who did not handle radioactive material routinely, and who did not work in the Central Processing Area (Restricted Area) routinely. The inspectors reviewed the results from environmental TLDs located in the administrative office. Based on the TLD data, the dose rates for the five office locations measured 0.06-0.2 millirem/hour (mr/hr). Although not specifically required, the inspectors found that the chemistry laboratory was not being monitored by a TLD. The inspectors measured the dose rates in the chemistry laboratory and found them to range between 0.1-0.35 mr/hr. No radiation areas were identified which were not already identified and properly posted. The range of dose rates in the Central Processing Facility were 0.1 mr/hr to 12 mr/hr. The locations of the radiation areas were the injection filter areas and a reverse osmosis filter area.

During 1998 the highest TLD exposure recorded was 215 mr, and the average exposure for the 20 employees who were monitored was 101 mr. The licensee found that TLD exposures for 1998 were 14 percent higher than 1997. The licensee also found that background in the TLD storage area had increased 0.025-0.030 mr/hr. The licensee relocated the TLD storage rack which represented some reduction in external dose data. However, the licensee was continuing to closely monitor dose rates around the office and the Central Process facility.

#### 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.

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

#### 5.1 Inspection Scope

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

#### 5.2 Observations and Findings

##### a. Onsite Contaminated Materials Storage Areas

License Condition 10.14 states that the licensee shall maintain an area within the restricted area boundary for storage of contaminated materials prior to disposal. The licensee had developed and maintained two areas for storage of contaminated materials, one inside of the Central Processing facility, and one outside of the Reverse Osmosis building. These areas were clearly marked, and no potentially contaminated item was identified outside of the respective restricted area.

##### b. Management of Spills

###### (1) Spill Report and Documentation Requirements

License Condition 12.4 states that until license termination, the licensee shall maintain documentation on all spills of source or 11e.(2) byproduct materials. Also, the licensee is required to notify the NRC by telephone within 48 hours of the event of any spill that may have a radiological impact on the environment and follow the notification with a written report within 7 days. According to LC 12.4, the reporting requirements were in addition to the reporting requirements in 10 CFR 20.2202 and 10 CFR 40.60. The maintenance of the spill records are also required, in part, by the decommissioning record keeping requirements of 10 CFR 40.36(f).

The inspectors reviewed records of the 1999 spills to ascertain whether the licensee reported any spills to the NRC in accordance with license requirements or other regulatory requirements.

###### (2) Spill Incidents in 1999

The licensee had maintained extensive and detailed spill records for all solution spills as required by 10 CFR 40.36. From January through May 1999 records indicated that 19 spill incidents occurred. An additional 18 spill incidents occurred from June through September 23, 1999, for a total of 37 spills during 1999. During calendar years 1996

through 1998, the licensee experienced 27, 18, and 21 spills, respectively. The inspectors determined that the licensee's spill incidents for 1999 had increased over the previous years.

Each spill that occurred in the first 5 months of 1999 was evaluated by the licensee as not being reportable to the NRC. Additionally, the licensee's SERP reviewed the 19 spills in June 1999 and reconfirmed that the spills were not reportable. The SERP had not met and reviewed the 18 spills that had occurred since June 1999. Licensee management had called the NRC program office to discuss one spill that was discovered in June 1999. The inspectors' review of the spills that occurred since June 1999 revealed two spills which may have met the NRC's reporting requirements and were not formally reported as required. The details of those two spills are discussed below.

(3) June 1999 Solution Spill

On June 29, 1999, the licensee discovered a 140,941 gallon injection solution spill and promptly notified an NRC staff member by telephone. The licensee determined that the spill began on June 24, 1999. The licensee estimated that the spill released 605 microcuries ( $\mu\text{Ci}$ ) of radium-226 and 1.09  $\mu\text{Ci}$  of natural uranium into the soil. The licensee estimated that average soil contamination concentration was 214 picocuries/gram ( $\text{pCi/gm}$ ). Immediate corrective actions included stopping the spill, isolating the spill area, and conducting a radiological assessment of the spill in accordance with SOP C-19, "Solution Spills." Long term corrective actions included a revision to SOP P-15, "Installation, Operation and Maintenance of Wellfield Pipelines" regarding wellfield startups, equipment lockouts, and visual inspections of new wellfield pipes. This contamination event affected 138  $\text{ft}^2$  of a wellfield pit. Most of the solution material that spilled had absorbed into the ground. The licensee recovered less than 100 gallons of solution during the cleanup. The licensee found that the spill occurred because an injection well (I-1275) was placed into operation on June 24, 1999, before construction was verified complete. The inspectors observed that the licensee had partially covered the I-1275 pit area with dirt. The inspectors determined that the licensee had maintained personnel access controls at the contaminated I-1275 pit area for at least one week during the remedial cleanup activities. According to the licensee's 10 CFR 40.36 report on this spill, the licensee determined that excavation and remediation was not advisable until final decommissioning.

(4) May 1999 Resin Spill

During a routine transfer of stripped ion exchange resin on May 9, 1999, 7  $\text{ft}^3$  of contaminated resin spilled from the main plant building restricted area. The spill reached the ground outside the plant building and into the unrestricted area. Based on the licensee's estimate, the maximum radioactivity that each cubic foot of resin contained was 1.48  $\mu\text{Ci}$  uranium. The licensee estimated that it recovered 9  $\text{ft}^3$  of resin and remediated soil with a total activity of 13.3  $\mu\text{Ci}$ . Overall, the licensee reclaimed an additional 12  $\text{ft}^3$  of dirt from the cleanup operation and placed it in 55-gallon drums. The licensee completed cleanup activities on May 19, 1999. According to the licensee's final status survey report on this resin spill, the staff implemented the NRC's latest

decommissioning guidance and cleanup criteria. The licensee's soil sample results demonstrated that the maximum residual radioactivity left in the soil after cleanup was 4.5 pCi/gm above background. Background measured 1.6 pCi/gm. The inspectors determined that the licensee's cleanup results met the NRC's cleanup criteria specified in 10 CFR Part 40, Appendix A, Criterion 6-6. This criterion allows residual contamination to remain in-place if the radioactivity in the top 6 inches of soil is less than 5 pCi/gm above background.

(5) Spill Summary

Licensee spill records were thorough and met the intent of 10 CFR 40.36(f) decommissioning records retention. Based on the spill record reviews, the inspectors determined that the May and June 1999 spill events may have been reportable to the NRC pursuant to LC 12.4 and 10 CFR 40.60. Circumstances surrounding the two spill events were discussed between the licensee, inspectors, and the NRC's Uranium Recovery and Low-Level Waste Branch (URLLW). URLLW staff determined that they would further review uranium mills spill reporting requirements to assure consistency with the regulations. The inspectors determined that this issue would be considered an Unresolved Item pending a final determination by the NRC of the reportability of these two spills (40-8943/9902-02).

5.3 Conclusions

A review of the spill management program found that the licensee had effectively documented spills pursuant to 10 CFR 40.36 decommissioning records. However, two spills required further review by NRC to determine whether they should have been reported to NRC pursuant to LC 12.4 and 10 CFR 40.60. This issue was considered an Unresolved Item that required further review by NRC.

**6 Followup (92701)**

6.1 (Closed) Excursion Status Well CM6-6: (EN 35888)

This event involved the licensee's discovery on July 1, 1999, that monitoring Well CM6-6 was in excursion status based on water sample exceeding upper control limits. The upper control limit parameters exceeded included sodium, sulfate, chloride, conductivity, and alkalinity. The licensee determined that the cause of the excursion was an imbalance in Wellhouses 22 and 24 flowrates. The licensee's corrective actions included balancing the flowrates of the two wellhouses and collecting weekly well samples. Consequently, Well CM6-6 will be removed from excursion status by December 1999. The inspectors determined the licensee's decision to not remove Well CM6-6 from excursion status was appropriate.

The inspectors noted that licensee telephonically notified the NRC of the excursion on July 2, 1999, and issued an excursion report to the NRC on July 7, 1999, in accordance with LC 9.2.

## 7 Exit Meeting Summary

The inspectors presented the inspection results to the representatives of the licensee at the conclusion of the onsite inspection on September 23, 1999. Licensee representatives acknowledged the findings as presented. The licensee did not identify anything reviewed by the inspector as proprietary.

### **SUPPLEMENTAL INFORMATION**

#### **PARTIAL LIST OF PERSONS CONTACTED**

##### Licensee

S. Collings, President  
M. Griffin, Manager of Environmental/Regulatory Affairs  
R. Grantham, Corporate Radiation Safety Officer  
S. Magnuson, Vice President/Manager of Operations  
C. Miller, Plant Superintendent

#### **INSPECTION PROCEDURES USED**

83822	Radiation Protection
88005	Management Organization and Controls
88035	Radioactive Waste Management
88045	Environmental Monitoring
89001	In-Situ Leach Facilities
92701	Followup

#### **ITEMS OPENED, CLOSED AND DISCUSSED**

##### Opened

40-8943/9902-01	NOV	Failure to incorporate radiation safety steps from LC 10.(A) into the yellowcake dryer SOP pursuant to LC 9.6.
40-8943/9902-02	URI	NRC review of criteria for reporting significant spills.

##### Closed

40-8943/9902-01	NOV	Failure to incorporate radiation safety steps from LC 10.(A) into the yellowcake dryer SOP pursuant to LC 9.6.
EN 35888		Well Excursion CM6-6

**LIST OF ACRONYMS USED**

ALARA	As Low As is Reasonably Achievable
CFR	Code of Federal Regulations
CRSO	Corporate Radiation Safety Officer
dpm/100 cm <sup>2</sup>	disintegrations per minute per 100 square centimeters
gpm	gallons per minute
μCi	microcuries
mr	millirem
NRC	Nuclear Regulatory Commission
PDR	Public Document Room
RWP	radiation work permit
SERP	Safety and Environmental Review Panel
SOP	standard operating procedure
TLD	Thermoluminescent Dosimeter
URLLW	Uranium Recovery and Low-Level Waste Branch