



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 E LAMAR BLVD
ARLINGTON, TX 76011-4511

November 14, 2014

Mr. Wayne Heili
Lost Creek ISR LLC
5880 Enterprise Drive, Suite 200
Casper, WY 82609

SUBJECT: NRC INSPECTIONS 040-09068/13-002 AND 040-0968/14-001
AND NOTICE OF VIOLATION

Dear Mr. Heili:

This refers to the announced and unannounced inspections conducted at your Lost Creek in-situ recovery facility in Sweetwater County, Wyoming, during December 3-5, 2013, February 27, 2014, and June 25-26, 2014. These inspections were examinations of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel. The inspection findings were discussed with you at the exit briefings conducted at the conclusion of the onsite inspections on February 27, 2014 and June 26, 2014.

Based on the results of this inspection, the U.S. Nuclear Regulatory Commission (NRC) has determined that three Severity Level IV violations of NRC requirements occurred. The violations involve your failure to issue a Radiation Work Permit for clean up after a yellowcake, which resulted in several workers receiving uranium intakes; failure to evaluate the use of storage tanks on an embankment; and the failure to generate monthly reports by the Radiation Safety Officer. These violations were evaluated in accordance with the NRC Enforcement Policy included on the NRC's Web site at www.nrc.gov/aboutnrc/regulatory/enforcement/enforce-pol.html.

The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violations are being cited because the NRC identified the violations in accordance with the requirements of the NRC Enforcement Policy, Section 2.3.2.b.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be helpful. You can find the Information Notice on the NRC website at: <https://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1996/in96028.html>. If you have additional information that you believe the NRC should consider, you may provide it in your response to the notice.

The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, or proprietary information so that it can be made available to the Public without redaction.

Should you have any questions concerning this letter, please contact Ms. Linda Gersey, Health Physicist, at 817-200-1299.

Sincerely,

/RA/

Ray L. Kellar, P.E., Chief
Repository and Spent Fuel Safety Branch
Division of Nuclear Materials Safety

Docket: 040-09068
License: SUA-1598

Enclosures:

1. Notice of Violation (NOV)
2. NRC Inspection Report 040-09068/13-002 AND 040-09068/14-001

w/attachment: Supplement Inspection Information

cc w/enclosure: S. Ramsay, Wyoming Office of Homeland Security
C. Anderson, Wyoming Department of Environmental Quality
M. Rogaczewski, Wyoming Department of Environmental Quality

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C. Anderson, Wyoming Department of Environmental Quality
M. Rogaczewski, Wyoming Department of Environmental Quality

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OFFICIAL RECORD COPY

NOTICE OF VIOLATION

Lost Creek ISR, LLC
Sweetwater County, Wyoming

Docket: 040-09068
License: SUA-1598

During the U.S. Nuclear Regulatory Commission (NRC) inspections conducted on December 3-5, 2013, February 27, 2014, and June 25-26, 2014, three violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- (1) License Condition 9.2, states, in part, that the licensee shall conduct operations in accordance with commitments, representations, and statements contained in the license application dated April 22, 2010, Agencywide Documents Access and Management System (ADAMS No. ML102420249).

License Application Section 5.7.6.5, states, in part, that for work in radiological areas not covered by an existing, approved, Standard Operating Procedure, a Radiation Work Permit will be prepared by the Radiation Safety Officer (or designee) and approved by the Plant Supervisor, which will define any necessary personnel protective clothing, radiological controls and measurements necessary to ensure work and be accomplished maintaining exposures below limits and ALARA.

Contrary to the above, on November 28, 2013, work in radiological areas not covered by an existing, approved, Standard Operating Procedure, a Radiation Work Permit was not prepared by the Radiation Safety Officer (or designee) and approved by the Plant Supervisor. Specifically, ten workers cleaned up a spill of yellowcake, which originated in the dryer/drumming room, without a Standard Operating Procedure or by working under a Radiation Work Permit. This work was non-routine with the potential for exposure to yellowcake for which no written operating procedure already existed. Consequently, six individuals received intakes of uranium exceeding the action level of 15 micrograms of uranium per liter of urine (ug/L), as confirmed by positive bioassays, while working in this area. The bioassay results ranged from 24 ug/L to 102.5 ug/L.

This is a Severity Level IV violation (Section 6.3).

- (2) License Condition 9.4(B)(v) states, in part, that the licensee shall obtain a license amendment pursuant to 10 CFR 40.44 prior to implementing a proposed change, if that change would create a possibility for an accident of a different type than any previously evaluated in the license application (as updated).

Contrary to the above, from November 2013 through December 2013, the licensee failed to obtain a license amendment pursuant to 10 CFR 40.44 prior to implementing a proposed change that would create a possibility for an accident of a different type than any previously evaluated in the license application (as updated). Specifically, the licensee installed and used four temporary water storage tanks and associated piping on top of the storage pond embankment, as approved in the licensee's Safety and Environmental Review Panel, ID Number LC131107-01, on November 8, 2013. The licensee failed to consider the accident possibilities of having four water tanks, with 16,800-gallons of capacity each, and the impact those tanks would have on the embankment.

This is a Severity Level IV violation (Section 6.3).

- (3) License Condition 9.2, states, in part, that the licensee shall conduct operations in accordance with commitments, representations, and statements contained in the license application dated April 22, 2010, Agencywide Documents Access and Management System (ADAMS No. ML102420249).

License Application Section 5.3.1.3 states, in part, at least monthly, the Radiation Safety Officer will review the results of daily and weekly inspections, including a review of all monitoring and exposure data for the month. The Radiation Safety Officer will provide the Mine Manager and Department Heads a written summary of the month's significant worker protection activities that contains a summary of the most recent personnel exposure data, including bioassays and time-weighted calculations and a summary of all pertinent radiation survey records. In addition, the monthly summary report should specifically address any trends or deviations from the radiation protection and ALARA program, including an evaluation of the adequacy of the implementation of license conditions regarding protection and ALARA. The summary should provide a description of unresolved problems and the proposed corrective measures. Monthly summary reports will be maintained on file and be readily accessible for at least five years.

Contrary to the above, from January 2014 through May 2014, the Radiation Safety Officer failed to review the results of daily and weekly inspections and provide the Mine Manager and Department Heads a written summary of the month's significant worker protection activities that contains a summary of the most recent personnel exposure data. Specifically, the Radiation Safety Officer failed to review the results of daily and weekly inspections and summarize air sampling data and dosimetry reports on a monthly basis, which could lead to a failure to identify a negative trend in radiation exposures or equipment deficiencies.

This is a Severity Level IV violation (Section 6.3).

Pursuant to the provisions of 10 CFR 2.201, Lost Creek ISL, LLC is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, Region IV within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation or, if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System

(ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 14th day of November 2014

**U.S. NUCLEAR REGULATORY COMMISSION
REGION IV**

Docket: 040-09068

License: SUA-1598

Reports: 040-09068/13-002 and 040-09068/14-001

Licensee: Lost Creek ISR LLC

Facility: Lost Creek Project

Location: Sweetwater County, Wyoming

Dates: December 3-5, 2013, February 27, 2014, June 25-26, 2014

Inspector: Linda M. Gersey, Health Physicist, Team Leader
Repository and Spent Fuel Safety Branch
Division of Nuclear Materials Safety

Accompanied By: Inspection Dates: December 3-5, 2013 and June 25-26, 2014
John L. Saxton, Project Manager
Uranium Recovery Licensing Branch
Division of Decommissioning, Uranium Recovery, and Waste
Programs
Office of Nuclear Material Safety and Safeguards

Inspection Dates: June 25-26, 2014
Stephen Poy, Mechanical Engineer
Agreement State Programs Branch
Division of Material Safety, State, Tribal, and Rulemaking
Programs
Office of Nuclear Material Safety and Safeguards

Inspection Date: February 27, 2014
D. Blair Spitzberg, PhD, Former Branch Chief
Repository and Spent Fuel Safety Branch
Division of Nuclear Materials Safety

Approved By: Ray L. Kellar, P.E., Chief
Repository and Spent Fuel Safety Branch
Division of Nuclear Materials Safety

Attachments: Supplemental Inspection Information

EXECUTIVE SUMMARY

Lost Creek ISR, LLC, In-Situ Recovery Facility
NRC Inspection Report 040-09068/13-002 and
NRC Inspection Report 040-09068/14-001

This inspection included a review of site status, site tours, management organization and controls, site operations, radiation protection, and excursion monitoring.

Management Organization and Controls

- The organizational structure and staffing levels maintained by the licensee during the inspection period met the requirements specified in the license and were sufficient for the work in progress. (Section 1.2a)
- The licensee's safety and environmental review evaluations were performed in accordance with license requirements, with one exception. (Section 1.2b)
- One violation of License Condition 9.4(B)(V) was identified related to failure to evaluate the potential for accidents when utilizing four storage tanks for waste water. (Section 1.2b)
- One violation of Section 5.3.1.3 of the License Application was identified related to failure of the Radiation Safety Officer to generate monthly radiation safety reports. (Section 1.2c)

In-Situ Leach Facilities

- The licensee was conducting in-situ recovery wellfield activities in accordance with license and regulatory requirements. (Section 2.2a)

Radiation Protection

- One violation was identified for failure to perform work under a Radiation Work Permit, as required by the license. (Section 3.2a)

Effluent Control and Environmental Protection and Maintaining Effluents from Materials Facilities ALARA

- The licensee implemented the excursion monitoring and spill reporting in accordance with the license requirements. (Section 4.2b)

Report Details

Site Status

Lost Creek ISR, LLC (Lost Creek) received NRC authorization to begin full operations on October 3, 2013 (see Agencywide Documents Access and Management System (ADAMS) No. ML13276A588). The first routine inspection after operations began was conducted on December 3-5, 2013. At the time of the inspection, Lost Creek was extracting uranium using the in-situ recovery process. The Central Processing Plant (CPP) was in service and supporting operations in one mine unit, Mine Unit 1 (MU-1). Active uranium recovery was proceeding at three header houses (Header House 1-1 (HH1-1) through HH1-3); these three HHs are located north of the Lost Creek Fault. A fourth HH, HH1-4, had the production wells installed, but, was not in operation. Only one dryer was in operation at the time of the inspection. The licensee was waiting for a piece of equipment for the second dryer. During the December inspection, the licensee was in the process of loading two truckloads of drummed yellowcake.

During the February and June 2014 inspections, MU-2 was in development/exploration and Lost Creek East was being characterized prior to requesting an NRC license amendment for operations. Monitoring wells had been installed at MU-2 and the licensee had identified the locations of all but two of the prior exploratory drill holes. Production at MU-2 is expected in 2015. The licensee was performing a pumping test at Lost Creek East at the time of the June 2014 inspection. The licensee stated that an application for a license amendment to expand into Lost Creek East is expected to be submitted to the regulatory agencies (NRC, the Wyoming Department of Environmental Quality and the U.S. Bureau of Land Management) in 2014.

Since the startup on August 2, 2013, the licensee has been challenged with disposal of liquid byproduct material. Prior to December 2013, the licensee had filled the retention ponds to capacity, and had use of only one deep disposal well (DDW), well DDW-1. The licensee received the aquifer exemption approval for DDW-4 from the Environmental Protection Agency on December 12, 2013.

1 Management Organization and Controls (88005)

1.1 Inspection Scope

Ensure that the licensee had established an organization to administer the technical programs and to perform internal reviews, self-assessments, and audits.

1.2 Observations and Findings

a. Organizational Structure

The licensee's organizational structure is illustrated in Figure 5.1-1 of the license application. At the time of the inspections, Lost Creek had approximately 60 full-time employees at the mine site. Contractors were used for drilling work and as needed. The licensee had one qualified Radiation Safety Officer (RSO) and one Health Physics Technician (HPT). The inspectors reviewed the licensee's organizational structure for the Lost Creek operations and found that it was in agreement with the structure specified in the license application. The inspectors determined that the licensee had sufficient staffing for the work in progress.

b. Safety and Environmental Review Panel

Between the pre-operational inspection in August 2013 and June 2014, the licensee had completed eight evaluations by its Safety and Environmental Review Process (SERP). The following SERP evaluations were reviewed by the inspectors:

| SERP ID | Date of final internal signature approval | Title |
|--------------|---|--|
| LCI130718-01 | November 27, 2013 | Fix Soil Cleanup Criteria inconsistencies in Application |
| LCI130730-01 | August 13, 2013 | Remove Plant Sump Vent |
| LCI130730-02 | August 14, 2013 | Change in Deep Well Pipeline Inspection |
| LCI130805-01 | December 4, 2013 | Temporary Change in Restrict Area Boundary |
| LCI130805-02 | August 19, 2013 | Approve MU1 Wellfield Package |
| LCI130918-01 | February 3, 2014 | Alteration of Vent Piping from IX Columns |
| LCI31107-01 | November 27, 2013 | Inject Permeate into Wellfield (HH1-4) |
| LCI31120-01 | November 27, 2013 | Designate Ponds as Restricted Area |

With the exception of one SERP report, LC131107-01, the inspectors concluded that the licensee had implemented the SERP determinations and procedures in accordance with the performance based LC 9.4.

The licensee evaluated the plausibility of injecting permeate into the production horizon through HH1-4 as a means of disposing of waste water, in SERP Report LC131107-01. The licensee concluded that an NRC license amendment was not required for this activity. As part of this SERP, the licensee also decided to use four temporary storage tanks to hold waste water. Four 16,800-gallon temporary tanks were placed on the embankment adjacent to the storage ponds, although no evaluation was previously performed on the possibility of accidents of a different type previously evaluated, that these additional storage tanks could cause. This is a violation (VIO 040-09068/1302-01) of License Condition (LC) 9.4(B)(v) which states, in part, that the licensee shall obtain a license amendment pursuant to 10 CFR 40.44 prior to implanting a proposed change, test, or experiment if the change, test, or experiment would create a possibility for an accident of a different type than any previously evaluated in the license application. The licensee stopped using the temporary tanks after they received the aquifer exemption from the EPA which allowed them to begin using the second DDW for waste water disposal.

c. Audits and Inspections

The inspectors reviewed the audits and inspections being generated by the licensee in accordance with LC 9.7, which states in part, that the licensee shall follow the guidance in U.S. Nuclear Regulatory Commission Regulatory Guide (RG) 8.31, "Information Relevant to Ensuring That Occupational Radiation Exposures at Uranium Recovery Facilities Will Be As Low As Reasonably Achievable." The RSO or the HPT were conducting and documenting a daily walk-through of all work and storage areas of all facilities to ensure good radiation practices were being followed. The RSO and a site

Manager also performed a weekly walk-through of all plant areas to observe general radiation control practices and review required changes in procedures and equipment.

During the June 2014 inspection, the inspectors identified a violation (VIO 040-09068/1402-01) of license application commitments. Section 5.3.1.3 of the NRC approved license application states, in part, that at least monthly, the RSO will review the results of daily and weekly inspections, including a review of all monitoring and exposure data for the month. The RSO will provide the Mine Manager and Department Heads a written summary of the month's significant worker protection activities that contains a summary of the most recent personnel exposure data, including bioassays and time-weighted calculations and a summary of all pertinent radiation survey records. The summary should provide a description of unresolved problems and the proposed corrective measures. Monthly summary reports will be maintained on file and be readily accessible for at least five years. The inspectors noted that from January 2014 through May 2014, the RSO failed to review the radiation safety program on a monthly basis and failed to generate a monthly report that summarized the radiation safety activities for review by the Mine Manager and Department Heads. Failure to review the radiation safety program activities on a monthly basis could lead to a failure to identify a negative trend in radiation exposures or equipment deficiencies.

1.3 Conclusions

The organizational structure and staffing levels maintained by the licensee during the inspection period met the requirements specified in the license and were sufficient for the work in progress. The licensee's safety and environmental review evaluations were performed in accordance with license requirements, with one exception. One violation of License Condition 9.4(B)(V) was identified related to failure to evaluate the potential for accidents when utilizing four storage tanks for waste water. One violation of Section 5.3.1.3 of the License Application was identified related to failure of the Radiation Safety Officer to generate monthly radiation safety reports.

2 In-Situ Leach Facilities (89001)

2.1 Inspection Scope

Determine if in-situ recovery activities were being conducted by the licensee in accordance with the NRC's regulatory requirements and the license.

2.2 Observation and Findings

a. Recovery Operations

At the time of the June 2014 inspection, uranium recovery operations were being performed at four HHs in Mine Unit 1 (MU-1). All four header houses control wells that produce from one of four horizons in the HJ aquifer and are located north of the Lost Creek Fault. The four HHs consist of a maximum 135 production wells and 126 injection wells.

Delineation and exploration was occurring at HH1-5. The monitoring wells were completed in MU- 2 and the licensee was preparing the wellfield data package for that mine unit. At the time of the inspection, Lost Creek was also performing pumping tests

at the expansion area designated as Lost Creek East. The licensee reported that all but two abandoned boreholes were found and properly abandoned in MU-2.

The licensee reported that it was not using the shakers as part of the elution circuit but was using the solvent soda ash to clean the resin. The license also reported that it had to provide an adjustable control on the amount of acid added during the precipitation circuit due to the high carbon dioxide content of the solution.

The plant was utilizing only two of five trains (a primary and secondary column) for the Ionic Exchange (IX). Each train can process lixiviant flow-through of approximately 800 gallons per minute. The licensee reported no problems with the IX processing equipment except for minor leaks at PVC piping joints.

b. Site Tours

The inspectors conducted tours of all areas in the CPP. During the December 2013 inspection, upon entering the drum storage room, the inspectors noted loose yellowcake on the surface of electrical outlets, drum scale, flooring near the drum pass through, and rollers on the drum conveyor belt. The inspectors also noted loose yellowcake on the floor near the dryer room door and a significant amount of dried yellowcake on the dryer room HEPA filter. The licensee stated that there were two spill incidents that contributed to the yellowcake contamination. One incident involved a pipe in the drum storage room which burst open and contaminated the room with yellowcake slurry. The second incident involved a spill of approximately 1,500 pounds of yellowcake in the dryer room. This incident is discussed further in Section 3.2. The inspectors requested that the licensee clean up the visible yellowcake in these areas of the plant. By the end of the December 2013 inspection, the inspectors verified that these areas were free from visible yellowcake contamination. During the June 2014 inspection, the inspectors noted that all of the above listed areas had no visible yellowcake.

Also during the December 2013 inspection, the inspectors noted that the two filter presses had a significant amount of visible yellowcake splattered on the upper walkway grating and on the upper and lower portions of the filter presses. The licensee stated that they were continuing to perfect the procedure for the filter press use. The licensee attempted to clean the visible yellowcake, upon the inspector's request, although the upper walkway grating would require additional effort for full removal. The inspectors noted that during the June 2014 inspection, the licensee had improved its housekeeping and very little visible yellowcake was visible near the filter presses.

The inspectors conducted independent radiological surveys of the gamma exposure rates present in the CPP, office building, laboratory, and HHs. The surveys were conducted using a Ludlum Model 19 microRoentgen survey meter (NRC 015540, calibration due date of 07/18/2014). Gamma exposure rates measured by the inspectors were as expected. Background readings of 25 microRoentgen per hour ($\mu\text{R/hr}$) were found outside the CPP. The highest gamma exposure reading of 3500 $\mu\text{R/hr}$ was measured in the drum storage room in the CPP, where approximately 50 55-gallon drums of yellowcake were being stored prior to shipment. This area was posted as a radiation area. The inspectors did not identify any areas that had not already been identified and posted as radiation areas by the licensee.

2.3 Conclusions

The licensee was conducting in-situ recovery wellfield activities in accordance with license and regulatory requirements.

3 **Radiation Protection (83822)**

3.1 Inspection Scope

Determine whether the licensee's radiation protection program was being conducted in compliance with license and 10 CFR Part 20 requirements.

3.2 Observations and Findings

a. Occupational Exposures

During the December 2014 inspection, the licensee discussed a spill that had occurred during the routine drumming of yellowcake. On November 28, 2013, the dryer operator was attempting to fill a 55-gallon drum when approximately 1,500 pounds of dried yellowcake poured out of the hatch while the operator was trying to determine why the yellowcake was not flowing through the star valve. The licensee had determined that the cause of this incident was hard yellowcake above the star valve which prevented the yellowcake from flowing through the star valve. The operator was wearing protective clothing and a respirator at the time of the spill. The operator immediately left the drumming room and contacted the RSO. Yellowcake was tracked through the CPP as the licensee attempted to shut the plant down.

The inspectors determined that the clean-up of yellowcake contamination inside and outside of the drumming room was performed without a Radiation Work Permit (RWP). This clean-up was non-routine with the potential for exposure to yellowcake for which no written operating procedure already existed. Consequently, six individuals received intakes of uranium exceeding the action level of 15 micrograms of uranium per liter of urine (ug/L), as confirmed by positive bioassays, while working in this area. The bioassay results ranged from 24 ug/L to 102.5 ug/L. This is a violation (VIO 040-09068/1302-02) of License Application Section 5.7.6.5, which states, in part, that for work in radiological areas not covered by an existing, approved, Standard Operating Procedure, an RWP will be prepared by the RSO (or designee) and approved by the Plant Supervisor, which will define any necessary personnel protective clothing, radiological controls and measurements necessary to ensure work and be accomplished maintaining exposures below limits and ALARA.

The licensee's occupational exposure reports were not reviewed in detail during these inspections. These results will be reviewed during a future inspection.

b. Radiation Protection Surveys

During these inspections, the results of routine radiation protection surveys were not reviewed by the inspectors, due to time constraints. These reports will be reviewed during a future inspection.

3.3 Conclusions

One violation was identified for failure to perform work under a Radiation Work Permit, as required by the license.

4 Effluent Control and Environmental Protection and Maintaining Effluents from Materials Facilities ALARA (87102 and 88045)

4.1 Inspection Scope

Determine if the environmental and effluent monitoring programs are adequate to monitor the impacts of site activities on the local environment.

4.2.1 Observations and Findings

a. Environmental Monitoring

The licensee's environmental monitoring program was not reviewed by the inspectors during this inspection due to higher priority issues. This program area will be reviewed during a future inspection.

b. Wellfield and Excursion Monitoring

The inspectors reviewed data collected for the licensee's excursion monitoring program. License Condition 11.5 requires, in part, that the licensee monitor groundwater at the designated monitoring wells twice a month. Due to limited time available during the inspections, the inspectors had an opportunity to review only several representative groundwater sampling records. Based on that review, the inspectors concluded that the operational groundwater monitoring was being conducted as required by the license.

License Condition 11.6 states, in part, that the licensee record information on spills and provides criteria for reporting of spills. From August 3, 2013 through November 23, 2013, the licensee reported four spills that occurred during the reporting period which required notification to NRC. The inspectors noted that the licensee had notified the NRC Project Manager for each of the spills and that the 30-day reports have been submitted in a timely manner.

4.3 Conclusions

The licensee implemented the excursion monitoring and spill reporting in accordance with the license requirements.

6 Exit Meeting Summary

The NRC inspectors presented the inspection results to the licensee's representatives at the conclusion of the onsite inspections on December 5, 2013, February 27, 2014 and June 26, 2014. During the inspections, the licensee did not identify any information reviewed by the NRC inspectors as proprietary that was included in the report.

SUPPLEMENTAL INSPECTION INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

John Cash, Vice President, Regulatory Affairs Exploration and Geology
Steve Hatten, Vice President, Operations
Mike Lueders, Mine Manager
Jay Douthit, Wellfield Operations Foreman
Charles Kelsey, Radiation Safety Officer
Mike Gaither, Manager of Environmental Health and Safety and Regulatory Affairs

INSPECTION PROCEDURES USED

| | |
|----------|---|
| IP 88005 | Management Organization and Controls |
| IP 89001 | In-Situ Leach Facilities |
| IP 83822 | Radiation Protection |
| IP 88045 | Effluent Control and Environmental Protection |
| IP 87102 | Maintaining Effluents from Materials Facilities ALARA |
| IP 86740 | Inspection of Transportation Activities |
| IP 88035 | Radioactive Waste Management |

ITEMS OPENED, CLOSED, AND DISCUSSED

Open

| | | |
|-------------------|-----|---|
| 040-09068/1302-01 | VIO | Failure to evaluate the use of storage tanks |
| 040-09068/1302-02 | VIO | Failure to perform work under a Radiation Work Permit |
| 040-09068/1402-01 | VIO | Failure to Complete the RSO Monthly Reports |

Closed

None

Discussed

None

LIST OF ACRONYMS

| | |
|-------|---|
| ALARA | as low as reasonably achievable |
| CFR | <i>Code of Federal Regulations</i> |
| CPP | Central Processing Plant |
| DDW | Deep Disposal Well |
| HH | Header House |
| HPT | Health Physics Technician |
| IP | NRC Inspection Procedures |
| IX | ionic exchange |
| LC | license condition |
| MU | mine unit |
| NRC | U.S. Nuclear Regulatory Commission |
| RG | U.S. Nuclear Regulatory Commission Regulatory Guide |
| RSO | Radiation Safety Officer |
| RWP | Radiation Work Permit |
| SERP | Safety and Environmental Review Panel |
| ug/L | micrograms per liter |
| VIO | violation |