



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

June 22, 2018

Mr. John Cash, Vice President  
Regulatory Affairs  
Lost Creek ISR, LLC  
58800 Enterprise Drive, Suite 200  
Casper, WY 82609

SUBJECT: LOST CREEK ISR - NRC INSPECTION REPORT 040-09068/2018-001

Dear Mr. Cash:

This letter refers to the routine U.S. Nuclear Regulatory Commission's (NRC) inspection conducted from May 22-24, 2018, at the Lost Creek in-situ recovery facility in Sweetwater County, Wyoming. The purpose of the inspection was to determine whether uranium recovery activities were being conducted safely and in conformance with the conditions of your license. A preliminary exit was conducted with you and your staff on May 24, 2018. The enclosed inspection report documents the details of the inspection.

The NRC inspection examined activities conducted under your license as they relate to public health and safety, the common defense and security, and to confirm compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, tours of the uranium recovery facilities, environmental monitoring locations, and interviews with personnel. No violations were identified and no response to this letter is required.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, 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 you choose to provide one, should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

J. Cash

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Should you have any questions concerning this matter, please contact Ms. Bernadette Baca, Health Physicist, at (817) 200-1235 or the undersigned at (817) 200-1191.

Sincerely,

/RA by RJEvans Acting for/

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

Docket: 040-09068

License: SUA-1598

Enclosure:

NRC Inspection Report 040-09068/2018-001

w/Attachment: Supplemental Information

cc:

S. Ramsay, WY Office of Homeland Security

M. Rogaczewski, WY Dept. of Env. Quality, Region III

R. Schierman, WY Dept. of Env. Quality, Land Quality Division

N. Williams, WY Dept. of Env. Quality, Region II

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket: 040-09068

License: SUA-1598

Report: 04009068/2018-001

Enterprise Identifier: I-2018-001-0102

Licensee: Lost Creek ISR, LLC

Location: Lost Creek Project  
Sweetwater County, Wyoming

Dates: May 22-24, 2018

Lead Inspector: Bernadette Baca, Health Physicist  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety

Martha Poston-Brown, Health Physicist  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety

Accompanied by: David Adams, Project Health Physicist  
State of Wyoming  
Department of Environmental Quality  
Land Quality Division

Brandi O'Brien, Project Health Physicist  
State of Wyoming  
Department of Environmental Quality  
Land Quality Division

Approved by: Ray L. Kellar, P.E., Chief  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety

Enclosure

## EXECUTIVE SUMMARY

Lost Creek ISR, Inc.  
NRC Inspection Report 040-09068/2018-001

The U.S. Nuclear Regulatory Commission (NRC) performed a routine health and safety inspection from May 22-24, 2018, which included observations of site activities, independent surveys, review of records, and interviews with site personnel. In summary, the licensee was conducting operations in accordance with regulatory and license requirements as described below.

### Management Control and Organization

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 reviews were performed in accordance with license requirements. The licensee conducted audits and inspections as required by regulatory requirements and the license. (Section 1.2)

### In-Situ Leach (ISL) Facilities

The licensee conducted in-situ recovery operations in accordance with the license and regulatory requirements. Radiological controls including signs and postings were implemented in accordance with license and regulatory requirements. (Section 2.2)

### Radiation Protection

Occupational exposures since the last inspection were below regulatory limits. Survey instruments were found to be in calibration and were being used appropriately by the licensee's staff. The licensee implemented a radiation protection program that met the requirements of 10 CFR Part 20 and the license. (Section 3.2)

### Effluent Control and Environmental Protection and Maintaining Effluents from Materials Facilities As Low As Reasonably Achievable

The licensee conducted environmental monitoring in accordance with license requirements. The licensee reported the results in semi-annual reports to the NRC. The annual dose to members of the public remained below regulatory limits. The licensee was documenting spills and conducting excursion sampling as specified in the license. (Section 4.2)

### Inspection of Transportation Activities and Radioactive Waste Processing, Handling and Storage

Transportation of yellowcake, treatment of waste water, disposal of byproduct material and management and storage of 11e.(2) wastes were conducted in accordance with license and regulatory requirements. (Section 5.2)

## Report Details

### Site Status

Lost Creek ISR, LLC (Lost Creek) received NRC authorization to begin full operations on October 3, 2013 (ADAMS Accession Number ML13276A588). At the time of this inspection, Lost Creek was extracting uranium using the in-situ recovery process. The Central Processing Plant (CPP) was in service and supporting operations of two mine units (Mine Units 1 and 2). Active uranium recovery was occurring at 11 of 13 header houses (HH) in Mine Unit 1 (MU1) and 3 header houses (HH 2-1 through 2-3) in Mine Unit 2 (MU2) with throughput of up to approximately 2,670 gallons per minute (gpm) and an average throughput of 2,146 gpm since the last inspection. Both dryers are available for operation at the time of inspection. Lost Creek has two primary methods for waste water disposal consisting of deep disposal wells (DDW) and Class V wells.

### **1 Management Organization and Control (88005)**

#### 1.1 Inspection Scope

Ensure that the licensee has 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 inspectors reviewed the licensee's organizational structure for Lost Creek Operations and found that it was in agreement with the structure specified in the license application, as modified by Safety and Environmental Review Panel (SERP) reviewed and approved changes.

At the time of the inspection, the licensee had approximately 32 full-time employees at the mine site. The inspectors determined that the licensee had sufficient staff for the work in progress.

##### b. Safety and Environmental Review Panel (SERP)

License Condition 9.4 of the performance-based license requires, in part, the licensee establish a SERP to evaluate if the program changes, tests, or experiments require an NRC license amendment prior to implementation. The inspectors reviewed the following SERP evaluation completed since the last inspection:

- SERP LC17-10, related to the approval of an individual's qualifications to serve as a Health Physics Technician (HPT).

The inspectors found that the licensee had implemented the SERP determination for the above evaluation in accordance with the performance-based License Conditions.

c. Audits and Inspections

The inspectors reviewed the audits and inspections being generated by the licensee in accordance with License Condition 9.7, which states, in part, that the licensee shall follow the guidance in NRC Regulatory Guide 8.31. The Radiation Safety Officer (RSO), Health Physics Technician (HPT), or qualified designees 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 Site Manager also performed a weekly walk-through of all plant areas to observe general radiation control practices. In addition, the RSO was generating a monthly report that summarized the results of the daily and weekly inspection, air monitoring, and radiation exposure data. The inspectors found that the audit and inspections met the requirement contained in the license.

The licensee had completed a 2017 calendar year annual audit of the radiation safety program. The findings of this audit were reviewed during this inspection and no issues were identified.

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 reviews were performed in accordance with license requirements. The licensee conducted audits and inspections as required by regulatory requirements and the license.

**2 In-Situ Leach (ISL) Facilities (89001)**

2.1 Inspection Scope

Determine if in-situ recovery activities were conducted in accordance with regulatory requirements and the license.

2.2 Observation and Findings

a. Uranium Recovery

Since the previous inspection in November 2017, the licensee brought online two additional header houses (HH2-1 and HH2-3). The daily average production rate was 2,146 gallons per minute which is within the maximum average daily flow rate of 6,000 gallons per minute, as required by License Condition 10.2.

The daily production for the facility since the previous inspection ranged between 584 gpm to 2,670 gpm, which is less than the average daily flow rate of 6,000 gpm and the maximum instantaneous flow rate of 6,300 gpm as stipulated in License Condition 10.2. In accordance with License Condition 10.1, the lixiviant consisted of native groundwater, carbon dioxide, sodium bicarbonate, and oxygen.

In Section 5.7.8.2 of the approved license application (referenced in License Condition 9.2) the licensee committed to maintain a production bleed between 0.5 and 1.5 percent of the production rate. Since the previous inspection, the daily bleed varied

between 0.54 and 0.74 percent of the daily production rate. The long-term bleed was approximately 0.62 percent of the daily production rate.

The inspectors reviewed the records for daily pressures on the injection and recovery manifolds for each header house since the previous inspection. During the third quarter of 2017, the maximum daily pressure was 132 pounds per square inch at HH1-7, for the fourth quarter of 2017, the maximum daily pressure was 135 pounds per square inch at HH1-6 and during the first quarter of 2018, the maximum pressure was 136 pounds per square inch at HH1-2. These pressures were less than the maximum of 90 percent of the fracture pressure, in accordance with Section 3.2.7.1 of the approved license application, and the maximum allowed operating pressure for piping materials of 150 pounds per square inch (psi), in accordance with license application Section 3.2.6.

b. Site Tours

The inspectors conducted tours in the CPP, selected header houses (HH1-6, HH1-9, HH2-1 and HH2-3), and deep disposal well DDW-4. The inspectors observed environmental sampling at sampling station HV-5. The inspectors also toured the 11e.(2) waste storage areas, evaporation ponds, and bone yard. The inspectors found that all entrance areas to the facility and wellfields were posted with the words, "Any Area Within This Facility May Contain Radioactive Material," as required by License Condition 9.8.

The inspectors conducted independent radiological surveys of the gamma exposure rates present in the CPP, office buildings, header houses, and DDW-4. The surveys were conducted using a Ludlum Model 19 microRoentgen ( $\mu\text{R}$ ) survey meter (NRC Serial #015518, calibration due October 25, 2018). Gamma exposure rates measured by the inspectors were as expected and the inspectors did not identify any areas in the CPP, header houses, or other areas which had not already been identified and posted as radiation areas by the licensee.

c. Additional Protocols

The inspectors verified that the licensee had provided the NRC with appropriate documentation to comply with 10 CFR 75.11 requirements, which related to the agreement between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the U.S. The licensee submitted the four necessary forms that provide contact information, the capacity of yellowcake production, the actual yellowcake production and the quantity of yellowcake on hand. The inspectors found the reports to be complete and accurate.

d. Financial Assurance

In accordance with License Condition 9.5, the licensee submitted its most recent annual financial assurance updates for the Lost Creek ISR, LLC on October 20, 2017 (ADAMS Accession Number ML17310A236). NRC completed its review on March 20, 2018, and accepted the calculation (ADAMS Accession Number ML18088A515).

## 2.3 Conclusion

The licensee conducted in-situ recovery operations in accordance with the license and regulatory requirements. Radiological controls including signs and postings were implemented in accordance with license and regulatory requirements.

## 3 **Radiation Protection (83822)**

### 3.1 Inspection Scope

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

### 3.2 Observations and Findings

#### a. Occupational Exposures

The inspectors reviewed the licensee's occupational exposure records since the last inspection in November 2017. Approximately 25 employees and/or contractors were monitored in the third quarter of 2017, 28 employees and/or contractors were monitored in the fourth quarter of 2017, and 27 employees were monitored in first quarter of 2018. Occupational monitored employees included plant and wellfield operators, health physics staff and maintenance workers. The highest deep dose equivalent since the last inspection was 39 millirem (mrem) assigned to a plant operator for exposure during the first quarter of 2018.

The licensee conducted air sampling, in part, for assessment of internal exposures. The inspectors reviewed the licensee's radon-222 air sampling records and the uranium particulate and worker breathing zone results since the last inspection. The highest employee derived airborne concentration in hours (DAC-hrs) was 62 DAC-hrs for radon daughters and 26 DAC-hrs for airborne uranium, through the end of the second quarter of 2017. All DAC-hr results were below the regulatory limit of 2,000 DAC-hrs per year. The highest exposure to radon was 155 mrem assigned to an office worker who is a trained and monitored radiation worker.

The inspectors confirmed internal exposures were below the limits established in 10 CFR 20. The inspectors confirmed that the licensee had conducted air sampling at the required intervals. The licensee monitored for soluble uranium intake in compliance with 10 CFR 20.1201(e). There were no bioassay results above the action level for investigation, and blanks and spiked samples were submitted at the appropriate frequency. The appropriate exposures were calculated and recorded for each employee. Occupational doses were below the limits established in 10 CFR 20.1201.

#### b. Radiation Work Permits

Section 9.7 of the license application requires, in part, that the licensee will issue a Radiation Work Permit (RWP) when an employee is required to conduct activities of a non-routine nature where there is a potential for significant exposure to radioactive materials and no standard operating procedure exists for the activity. Since the previous inspection, twenty-six (26) RWPs were issued by the licensee and involved various ion exchange circuit and component maintenance, dryer and dryer room maintenance,

header house maintenance, evaporation pond maintenance, Mechanical Integrity Testing (MIT) and other annual well testing for Deep Disposal Wells (DDW) DDW-1, DDW-3 and DDW-4. The inspectors reviewed the RWPs and found that they included the necessary direct surveys, air sampling, and protective equipment requirements for work being performed.

c. Radiation Surveys

License Condition 9.2 requires, in part, the licensee conduct operations in accordance with Section 5.7.2.2, as revised April 2010 (ADAMS Accession Numbers ML102100263, ML102420249) of the license application and its supplements. This specifically required that the licensee perform quarterly gamma radiation surveys in approximately 46 areas throughout the CPP area to verify radiation postings and to assess external radiation conditions. At the time of the inspection, the inspectors determined that the licensee was conducting the gamma radiation surveys on a monthly basis.

d. Radiation Instrumentation

The inspectors reviewed the licensee's operability, calibration, and maintenance records for portable radiation survey instruments in accordance with License Condition 10.4. All portable survey instruments to an outside vendor for calibration on an annual basis. The inspectors reviewed instrument calibration certificates and maintenance records for several portable survey instruments and found the calibration certificates to be adequate, maintenance records adequately maintained, and instruments currently calibrated. The inspectors observed survey meters being used by the licensee's employees when exiting restricted areas. The survey instruments examined by the inspectors were found to be in calibration and were being used appropriately by the licensee's staff.

e. Contamination Control

The inspectors reviewed the licensee's procedure for contamination control and observed personnel surveying out from restricted areas, such as the CPP and the wellfield. The surveys were conducted in accordance with licensee procedures.

3.3 Conclusions

Occupational exposures since the last inspection were below regulatory limits. Survey instruments were found to be in calibration and were being used appropriately by the licensee's staff. The licensee implemented a radiation protection program that met the requirements of 10 CFR Part 20 and the license.

**4 Maintaining Effluents from Material Facilities As Low As is Reasonably Achievable (ALARA) and Effluent Control and Environmental Protection (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 Observations and Findings

### a. Environmental Monitoring

The semi-annual reports were submitted timely by the licensee in accordance with the requirements of 10 CFR 40.65. Submissions were initially reviewed and evaluated by NRC headquarters staff. The NRC's review of these documents will be provided to the licensee under separate correspondence. The NRC inspectors reviewed the environmental monitoring and sampling processes at 1 air monitoring station (HV-5) and 1 water sampling location (downstream capture point for MU1 and MU2 [LC-2A]) for adequate and/or material condition.

### b. Dose to Members of the Public

The licensee performed a public dose assessment based on environmental monitoring results on February 27, 2017. This dose assessment stated that there have not been any ranchers, campers, hunters or other members of the general public spending any significant amount of time near the plant, so doses were calculated for a contractor employee spending 3 days onsite or the occasional delivery driver who was onsite for 173 hours/year. Both doses were well below the allowable limit of 100 mrem/year or 2 mrem in any one hour.

### c. Wellfield and Excursion Monitoring

License Condition 10.5 requires, in part, that the licensee perform MIT on all injection and production wells before utilization and retest each well at least once every 5 years. The inspectors reviewed the MIT records for wells tested since the previous inspection. Of 187 wells tested in the third and fourth quarters of 2017, and first quarter of 2018, only 8 wells failed their MIT. The wells which failed were plugged and abandoned according to procedure.

The inspectors reviewed data collected since the last inspection under the licensee's excursion monitoring program, conducted in accordance with License Condition 11.5. At the time of the inspection, the licensee had no excursions or reportable spills during the inspection period, although some small volume spills occurred during the inspection period. The inspectors reviewed the reports prepared by the licensee associated with these small volume spills and found that the licensee had properly documented and performed soil samples at the spill locations.

## 4.3 Conclusions

The licensee conducted environmental monitoring in accordance with license requirements. The licensee reported the results in semi-annual reports to the NRC. The annual dose to members of the public remained below regulatory limits. The licensee was documenting spills and conducting excursion sampling as specified in the license.

## **5 Inspection of Transportation Activities and Radioactive Waste Processing, Handling and Storage (86740 and 88035)**

### **5.1 Inspection Scope**

Determine if storage and disposal activities were conducted in compliance with regulatory and license requirements.

### **5.2 Observations and Findings**

#### **a. Inspection of Transportation Activities**

The inspectors reviewed transportation activities since the last inspection. During this time period, the licensee made five yellowcake shipments, four byproduct material, and four 11e.(2) byproduct waste shipments. The inspectors reviewed the licensee's procedures and shipping records associated with these shipments. No regulatory issues were identified.

#### **b. Inspection of Byproduct Waste Storage**

The inspectors observed that the CPP's 11e.(2) byproduct material waste storage areas were appropriately located and labelled. The 11.e(2) storage areas consist of 11.e(2) staging areas within the CPP and a restricted area attached to the CPP which is normally accessed through a door in the CPP. The CPP's outside 11e.(2) byproduct material waste storage bins were within a fenced and locked restricted area. The inspectors performed ambient gamma radiation surveys of the containers to confirm that the areas were appropriately posted and controlled in accordance with 10 CFR 20 regulations.

During the last two inspections, the inspectors identified issues with the storage of 11e(2) waste at the site, specifically: (1) a container of mixed 11e(2) material (sediments, pipe fittings, hose pieces, etc.) was identified in the boneyard uncovered with an on-contact reading of 2.8 mR/hr (VIO-040-09068/2017-002-01) and (2) failure to place equipment and process wastes in covered containers in header houses (VIO-040-09068/2017-001-02). Based on the observations made by the inspectors during tours of the CPP, boneyard, and header houses, the licensee covered the containers in the header houses and placed the equipment and process waste in labeled, closed barrels for later sorting and disposition as waste. Based upon the licensee's corrective actions, both violations will be closed.

c. Wastewater Treatment Activities

The licensee has three Class I DDWs (DDW-1, DDW-3 and DDW-4), and two Class V shallow disposal wells (M-FG7 & M-FG6). During the reporting period, the average disposal flow rates and injection pressures per quarter were:

3rd Quarter 2017

Well	Avg Flow Rate (gpm)	Max Flow Rate (gpm)	Permitted Injection Flow (gpm)
DDW-1	1.1	1.5	50
DDW-3	6	8	50
DDW-4	7	12	50
M-FG7	71	117	200
M-FG6	0	0	200

4<sup>th</sup> Quarter 2017

Well	Avg. Flow Rate (gpm)	Max Flow Rate (gpm)	Permitted Injection Flow (gpm)
DDW-1	0.9	2.4	50
DDW-3	6	11	50
DDW-4	7	18	50
M-FG7	99	170	200
M-FG6	0	0	200

1st Quarter 2018

Well	Avg. Flow Rate (gpm)	Max Flow Rate (gpm)	Permitted Injection Flow (gpm)
DDW-1	0.7	1.7	50
DDW-3	6	11	50
DDW-4	7	10	50
M-FG7	50	219	200
M-FG6	68	198	200

The licensee's injection pressures per quarter were:

3<sup>rd</sup> Quarter 2017

Well	Avg. Injection Pressure (psig)	Max Pressure (psig)	Permitted Injection Pressure (psig)
DDW-1	576	599	609
DDW-3	830	875	915
DDW-4	655	728	838
M-FG7	0.1	44	45
M-FG6	0	0	45

psig – pounds per square inch gauge

4<sup>th</sup> Quarter 2017

Well	Avg. Injection Pressure (psig)	Max Pressure (psig)	Permitted Injection Pressure (psig)
DDW-1	557	602	609
DDW-3	837	884	915
DDW-4	648	750	838
M-FG7	2.5	47.1	45
M-FG6	0	0	45

1<sup>st</sup> Quarter 2018

Well	Avg. Injection Pressure (psig)	Max Pressure (psig)	Permitted Injection Pressure (psig)
DDW-1	542	602	609
DDW-3	837	885	915
DDW-4	628	771	838
M-FG7	1	65	45
M-FG6	1	42	45

This discharge rate was sufficient for the waste disposal generated by the current production rates but less than the design rate of 50 gpm for each DDW. The discharge rate was limited by pressure buildup. In addition, the injection pressures did not exceed the permitted injection pressure limits for each well except periods of non-normal operations during the first quarter of 2018. Specifically, M-FG7 flowrate and pressures exceeded the permitted levels during injection testing and step rate injection testing conducted when bringing additional header houses in MU2 online.

d. Pond Inspections

The inspectors reviewed the status of the ponds and leak detection systems according to License Condition 10.8 and Section 5.3.2 of the license application.

On January 22, 2018, the license notified the NRC that the North Pond Sump water level was greater than six inches and conductivity was 50 percent greater than the latest pond conductivity value (ADAMS Accession Number ML180291311). When the ponds thawed in March, the North Pond water level was decreased by pumping water into the South Pond. A contractor was scheduled in May to identify the source of the leak. A preliminary review was not able to identify the source of the leak. The contractor is planning to proceed with the leak identification by exposing sections of the liner until the leak is identified. Minimum water levels are being maintained for compliance with Environmental Protection Agency (EPA) requirements and to prevent movement of the North Pond liner.

The inspectors reviewed the licensee's freeboard records to ensure the requirements of License Condition 10.8.A were being met by maintaining a minimum freeboard of 3 feet. Since the last inspection, the licensee has maintained a daily minimum freeboard of 3 feet.

The inspectors review the operations of the two ponds used for wastewater storage. During the reporting period, the ponds had been properly maintained, and inspected daily, weekly, quarterly, and annually in accordance with License Condition 10.8.

5.3 Conclusions

Transportation of yellowcake, treatment of waste water, disposal of byproduct material and management and storage of 11e.(2) wastes were conducted in accordance with license and regulatory requirements.

## **6 Exit Meeting Summary**

The NRC inspectors presented the preliminary inspection results to Mr. Steve Hatten, Vice President of Operations, and members of the license's staff at the conclusion of the onsite inspection on May 24, 2018. During the inspection, the license did not identify any information reviewed by the NRC inspectors are proprietary that was included in the report.

**SUPPLEMENTAL INSPECTION INFORMATION**  
**Partial List Of Persons Contacted**

Licensee Personnel

K. Brown, Mine Manager  
A. Buehrle, Corporate Radiation Safety Officer  
J. Cash, Vice President, Regulatory Affairs  
M. Gaither, Manager, Environment, Health, and Safety/Regulatory Affairs  
S. Hatten, Vice President, Operations  
A. Hunt, Process Engineer/Plant Manager

**Items Opened, Closed and Discussed**

Opened

None

Closed

040-09068/2017-002-01 VIO Failure to ensure radioactive waste containers were covered  
040-09068/2017-001-02 VIO Failure to ensure radioactive waste containers were covered

Discussed

None

**Inspection Procedures**

IP83822 Radiation Protection  
IP86740 Inspection of Transportation Activities  
IP87102 Maintaining Effluents from Materials Facilities ALARA  
IP88005 Management Organization and Control  
IP88035 Radioactive Waste Processing, Handling, Storage and Transportation  
IP88045 Effluent Control and Environmental Protection  
IP88050 Emergency Preparedness  
IP88055 Fire Protection  
IP89001 In-situ Leach (ISL) Facilities

## List of Acronyms

ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
CPP	Central Processing Plant
DAC	Derived Air Concentration
DDW	Deep Disposal Well
gpm	gallons per minute
HH	Header House
HPT	Health Physics Technician
IP	NRC Inspection Procedure
ISL	in-situ leach
ISR	in-situ recovery
LC	license condition
MIT	mechanical integrity testing
mrem	millirem
μR	microRoentgen
NRC	U.S. Nuclear Regulatory Commission
psig	pounds per square inch gauge
RSO	Radiation Safety Officer
RWP	Radiation Work Permit
SERP	Safety and Environmental Review Panel

LOST CREEK ISR - NRC INSPECTION REPORT 040-09068/2018-001 – DATED JUNE 22, 2018

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