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## **LOST CREEK ISR, LLC**

October 20, 2015

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Re: Reply to a September 11, 2015 Notice of Violation  
Lost Creek ISR Project License SUA-1598, Docket 040-09068**

To Whom It May Concern,

On September 11, 2015 the U.S. NRC issued findings for the inspection performed during January 27-29, 2015. The letter contained one cited Severity Level IV violation. Please find below Lost Creek ISR, LLC's responses to the violation:

### **Severity Level IV Violation: Failure to Issue Radiation Work Permits (RWP)**

#### **Description of NOV from NRC**

*License Condition 9.7, of NRC License SUA-1598, Amendment No. 2, states, in part, that the licensee shall follow the guidance set forth in Regulatory Guide 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Recovery Facilities will be As Low As Reasonably Achievable (ALARA)" (as revised). Regulatory Guide 8.31, Section 2.2, "Operating Procedures", states, in part, that for work on non-routine maintenance jobs when the potential for exposure to radioactive material exists and for which no standard written operating procedure already exists, a Radiation Work Permit (RWP) should be used.*

*Contrary to the above, on September 11, 2014 and December 24-29, 2014, the licensee failed to use a RWP for a non-routine maintenance job, when the potential for exposures to radioactive material existed and no standard written operating procedure existed.*

*Specifically, on September 11, 2014, two operators used a pry bar to loosen plugged yellowcake from the knife valve in the yellowcake dryer chute 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, approximately 1,400 pounds of dried yellowcake poured to the floor of the dryer room. Additionally, from December 24-29, 2014, the hydraulic draw-down testing of Deep Disposal Well 4 was completed without a Standard Operating Procedure or by working under a Radiation Work*

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*Permit. This work was non-routine with the potential for exposure to radioactive material for which no written operating procedure already existed.*

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

## **Lost Creek ISR, LLC Response**

**Reason for Violation** – The first instance an RWP was not issued occurred after business hours on, September 11, 2014. The health physics staff was not consulted prior to the start of the work to see if an RWP was required and staff failed to recognize the need for an RWP.

The second instance an RWP was not issued, December 24-29, 2014, occurred because the employees involved were aware an RWP had been prepared for the first draw-down test, and believed that the RWP included work on both deep disposal wells.

**Corrective Action and Results** – The immediate corrective actions following the events on September 11, 2014 included:

- The employees working in the dryer room showered
- An incident investigation was started the following day
- Air samples for airborne uranium were collected to ensure the air in the plant was clean
- Urine bioassay samples were submitted for employees who were on site during the incident

There was one positive bioassay from the incident on September 11, 2014. The calculated intake was 1.87 mg of uranium (the weekly limit is 10 mg/week) resulting in, a calculated dose of 7.9 mrem (the annual dose limit is 5,000 mrem).

There were no immediate corrective actions following the work during December 24-29, 2014. The work was performed according to the RWP for the same work.

**Steps Taken to Avoid Further Violations** – The dryer operations Standard Operating Procedure (SOP) was updated to require an RWP when the inside of the dryer is accessed. The RWP requirement was included in the SOP because of the risk of yellowcake spillage when the inside of the dryer is accessed. Specifying that an RWP is required, in the relevant SOP, clearly communicates the expectation.

To prevent similar issues in the future, the matter was discussed with all supervisors. The discussion included when an RWP should be issued, and it was specified that non-routine work when radioactive material may be present should be reviewed with the health physics staff. The supervisors were made aware that the failure to issue an RWP would result in an NRC cited violation, and the significance of an NRC cited violation was explained.

During the 2015 annual radiation safety refresher training, which includes all site personnel, the then-potential violation was discussed. The employees were trained on when an RWP was required.

**Date of Full Compliance** – The Yellowcake Dryer Operations SOP was updated on February 25, 2015 to require the use of RWPs when accessing the inside of the dryer.

Training for Lost Creek supervisors was performed on February 2, 2015 by Chris Pedersen. The training covered when RWPs are required and discussed the two relevant situations when an RWP was not issued, but should have been.

John Cash participated in a Lost Creek supervisor staff meeting on Feb 16, to emphasize the significance of the then-potential violation for failure to prepare an RWP.

Lost Creek ISR, LLC understands the nature of each of the violations discussed above and takes the resolution of each very seriously. We trust that this response is sufficient to close out the issues.

Sincerely,



Chris Pedersen  
Radiation Safety Officer

Cc: T Horne, Ur-Energy, Littleton  
NRC Region IV Administrator  
J. Saxton, NRC (via email)