

April 20, 2015

MEMORANDUM TO: John Saxton, Project Manager  
Uranium Recovery Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

FROM: Reginald Augustus, Financial Project Manager **/RA/**  
Performance Assessment Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: LOST CREEK IN SITU RECOVERY FACILITY 2014-2015  
ANNUAL SURETY UPDATE SAFETY EVALUATION REPORT

Enclosed is the Performance Assessment Branch's (PAB) Safety Evaluation Report input with respect to the 2014-2015 annual surety update for the Lost Creek In-Situ Recovery Facility site located in Sweetwater County, Wyoming. Please contact Reginald Augustus if you have any specific questions regarding PAB's input.

Docket No.: 40-9068

License No.: SUA-1598

Enclosure:  
Safety Evaluation Report Input

CONTACT: Reginald Augustus, NMSS/DUWP  
(301) 415-0165

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DISTRIBUTION:  
JSaxton

**ML15103A366**

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<b>DATE</b>	4/13/15	4/14 /15	4/14/15	4/20/15

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## SAFETY EVALUATION REPORT INPUT

DATE: April 9, 2015

DOCKET: 040-09068

LICENSEE: LOST CREEK ISR, LLC

SITE: Lost Creek ISR Facility, Sweetwater County, Wyoming

PROJECT MANAGER: John Saxton

TECHNICAL REVIEWER: Reginald Augustus, John Saxton

SUBJECT: Lost Creek ISR, LLC 2014-2015 Annual Surety Update

### **REGULATORY REQUIREMENTS**

The Performance Assessment Branch's (PAB) staff reviewed Lost Creek's surety update in accordance with the requirements in 10 CFR Part 40, Appendix A, Criterion 9, and in License Condition 9.5 of Materials License SUA-1598. Staff used NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications" as guidance in determining elements to be included in a surety review. Specifically, Staff used the review procedures and acceptance criteria in Section 6.5, and guidance in Appendix C of the Standard Review Plan. Staff used Wyoming Department of Environmental Quality (WDEQ) Land Quality Division (LQD) Guideline 12 "Standardized Reclamation Performance Bond Format and Cost Calculation Methods" (Guideline 12) when applicable, to verify that acceptable and appropriate unit costs were included in the surety calculations.

### **DISCUSSION**

By letter dated November 21, 2014, Lost Creek In-Situ Recovery LLC (Lost Creek) submitted to the U.S. Nuclear Regulatory Commission (NRC), for review and approval, its 2014-2015 annual surety update (Agencywide Documents Access and Management System (ADAMS) Accession No ML14337A251). Staff from PAB was requested to provide technical assistance in the review of the annual surety update. Specifically, PAB staff was requested to review the adequacy of calculations used to derive the cost estimates and appropriateness of the instrument used to maintain the surety. This memorandum documents results of PAB staff's review of the annual surety update.

On March 18, 2015, NRC staff sent a Request for Additional Information (RAIs) to Lost Creek. By letter dated March 27, 2015, Lost Creek provided responses to the RAIs to NRC staff (ADAMS Accession No ML15099A577). Additionally, Lost Creek provided NRC staff with a revised surety calculation that addressed both NRC RAIs and RAIs from WDEQ.

Enclosure

### **Adequacy of the Calculations**

In the revised surety calculations, the licensee includes costs for decommissioning, and decontamination of the Central Processing Plant, and ancillary equipment, deep disposal wells, ponds, and two mine units, Mine Unit 1 and Mine Unit 2. The unit costs for Decommissioning, and Decontamination are consistent with WDEQ Guideline 12.

Lost Creek estimates the cost to decommission and decontaminate the facility by an independent party at \$14,640,000. This figure represents an increase of \$1,344,000 over the surety established for the prior year of \$13,296,000. The increase is attributed to: (1) unit cost increases due to inflation; (2) inclusion of reclamation and decommissioning costs for all header houses (HH) up to HH1-11, an additional deepwell; (3) costs for reclamation of the Underground Injection Control (UIC) Class I drill pads; (4) costs for performing 5-year Mechanical Integrity Tests on UIC Class III wells; and (5) other unit cost revisions requested by WDEQ-LQD and NRC staff. The cost estimate is based on costs of a third party contractor, does not take credit for any salvage value and includes a 29 percent contingency factor.

Staff has completed its review of the surety update estimate for Lost Creek's facility and finds that the licensee has included in the update all activities: (1) listed in the reclamation plan or in Sections 6.1-6.4 of the standard review plan in NUREG-1569; and (2) to be conducted during the period covered by the update. Staff finds the licensee has based the assumptions for the financial surety analysis on site conditions, including experiences with generally accepted industry practices, research and development at the site, and previous operating experience.

Staff finds the values used in the financial surety update are based on current dollars and reasonable costs for the required reclamation activities are defined. Therefore, staff finds that the licensee has established an acceptable financial assurance cost estimate based on the requirements in 10 CFR Part 40, Appendix A, Criterion 9.

### **Appropriateness of the Financial Instrument**

The instrument to be used by the licensee for the financial assurance update is a reclamation performance bond to be held in favor of the WDEQ. An original copy of the financial instrument remains with WDEQ for uranium recovery licensing activities based on an agreement between the State and the NRC. The NRC maintains a copy on file of the instrument as well. Along with WDEQ's portion, the bond should include 100 percent of NRC's portion. NRC will obtain a copy of the updated instrument once approval of the cost estimate has been submitted to the licensee. The surety bond will have a face value of at least \$14,640,000. Staff will find that the surety instrument meets the criteria in 10 CFR Part 40, Appendix A, Criterion 9, once receipt of the updated instrument has been received. Additionally, a Standby Trust Agreement (STA) must be established by the licensee to receive funds in case of the NRC's need to collect the surety. Because the licensee does not have an STA in place at this time, as required by 10 CFR Part 40, Appendix A, Criterion 9, in accordance with 10 CFR 40.14(a), staff has elected to request an exemption to the STA requirements in 10 CFR Part 40, Appendix A, Criterion 9, for the current surety arrangement.

## **CONCLUSION**

Based on the information provided in the application, the RAI's and the detailed review conducted of the surety estimate for Lost Creek's facility, the PAB staff concludes that the current surety estimate reasonably includes funds sufficient to cover the estimated current costs of the facility and is acceptable during the current surety period. Therefore, pending receipt of the revised surety bond amount, the proposed financial surety bond and surety estimate are consistent with 10 CFR Part 40, Appendix A, Criterion 9, and therefore acceptable.