

July 30, 2013

MEMORANDUM TO: Bill Von Till, Chief  
Uranium Recovery Branch  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
And Environmental Protection  
Office of Federal and State Materials  
And Environmental Management Programs

FROM: Lydia Chang, Chief /RA/  
Special Projects Branch  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

SUBJECT: LOST CREEK IN SITU RECOVERY FACILITY ANNUAL SURETY  
UPDATE SAFETY EVALUATION REPORT (TAC NUMBER  
J00695)

Enclosed is our Safety Evaluation Report input with respect to the annual surety update for the Lost Creek In Situ Recovery Facility site located in Sweetwater, Wyoming. Please contact Reginald Augustus if you have any specific questions regarding our input.

Docket No.: 40-9068  
License No.: SUA-1598

Enclosure:  
Safety Evaluation Report Input

CONTACT: Reginald Augustus, FSME/DWMEP  
(301) 415-0165

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<b>DATE:</b>	7/29/13	7/30/13	7/30/13

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## SAFETY EVALUATION REPORT INPUT

DATE: July 23, 2013  
DOCKET: 040-09068  
LICENSEE: LOST CREEK ISR, LLC  
SITE: Lost Creek ISR Facility, Sweetwater, Wyoming  
PROJECT MANAGER: John Saxton  
TECHNICAL REVIEWER: Reginald Augustus  
SUBJECT: Lost Creek ISR, LLC Annual Surety Update

### BACKGROUND

By License Condition 9.5, Lost Creek ISR, LLC (Lost Creek) is required to submit to the U.S. Nuclear Regulatory Commission (NRC), for review and approval, annual updates of the financial surety to cover third-party costs for decommissioning and decontamination at the Lost Creek facility located in Sweetwater County, Wyoming. The initial surety for the first year of operation at the Lost Creek facility was submitted to NRC on February 10, 2012 (ADAMS Accession No. ML12048A678). The first year surety was reviewed and approved by NRC staff on April 18, 2013 (ADAMS Accession No. ML13038A325).

By letter dated January 15, 2013, Lost Creek submitted to the NRC, for review and approval, its second annual surety update (2012-2013) (ADAMS Accession No ML13032A112). Staff from the Special Projects Branch (SPB) was requested to provide technical assistance in the review of the second annual surety update. Specifically, the SPB 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 SPB staff's review of second annual surety update.

### REGULATORY REQUIREMENTS

The SPB staff reviewed Lost Creek's surety update in accordance with requirements in 10 CFR Part 40, Appendix A, Criterion 9, "Financial Criteria" and in License Condition 9.5 of Materials License SUA-1598. The SPB staff used NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications" (SRP) as guidance in determining elements to be included in a surety review. Specifically, Staff use the review procedures and acceptance criteria in Section 6.5, and guidance in Appendix C of the SRP. Staff used Wyoming Department of Environmental Quality (WDEQ) Land Quality Division 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

On March 5, 2013, NRC staff submitted an email to Lost Creek notifying the licensee that the surety update was administratively complete and acceptable for a detailed technical review (ML13065A019). On April 18, 2013, NRC staff sent requests for additional information (RAIs) to the licensee. By letter dated May 23, 2013, Lost Creek provided responses to the RAI's to NRC staff. As discussed below, Staff found those responses adequate.

Subsequently, NRC staff had an additional question regarding the apparent discrepancy between the surety calculation of \$8,599,391 and the bond amount of \$8,599,000. In response to this additional question by email, Lost Creek stated that the calculations yielded the figure of \$8,599,391; however, for the sake of simplicity, the State of Wyoming asked Lost Creek to round the estimate to the nearest \$1,000 increment. In this case, the rounding results in a surety of \$8,599,000, which is \$391 less than that calculated. Staff's evaluation of this discrepancy is discussed below.

### *Adequacy of the Calculations*

In the surety calculations, the licensee includes costs for decommissioning and decontamination (D&D) of the CPP and ancillary equipment, deep disposal wells, ponds, and one mine unit, Mine Unit 1. The unit costs for D&D are consistent with WDEQ Guideline 12.

Lost Creek estimates the cost to decommission and decontaminate the facility by an independent party at \$8,599,391. This figure represents an increase of \$6,851,391 over the surety established for the prior (first) year of \$1,748,000. 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.

SPB Staff has completed its review of the surety update estimate for the Lost Creek in situ leach facility and finds that the licensee has included in the update all activities listed in the reclamation plan or in Sections 6.1-6.4 of the standard review plan in NUREG-1569 and 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.

SPB 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. In the cover letter, the licensee has indicated that 100 percent of the bond is NRC's portion. NRC has obtained a copy of the instrument. The surety bond has a face value of \$8,599,000.

Staff finds that the surety instrument meets the criteria in 10 CFR Part 40, Appendix A, Criterion 9 and is therefore acceptable given the following factors:

- (1) In favor of the State Regulatory Agency 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. NRC maintains a copy on file of the instrument as well.
- (2) A Standby Trust Agreement (STA). On June 19, 2013, the licensee submitted their response to the additional question to NRC. In regards to the STA, it is needed based on new requirements the licensee must meet after December 17, 2012. The licensee's surety estimate submittal was submitted to the State Regulatory Agency Wyoming Department of Environmental Quality (WDEQ) on December 6, 2012. At the time of the submittal, the licensee was not required to submit the new regulatory language in its surety estimate.
- (3) The surety bond has been approved by the State Regulatory Agency WDEQ for \$8,599,000 but that amount is \$391 less than the licensee's surety estimate. However, the licensee's surety estimate took into account the start-up of 7 header houses but now is expected to only start-up 5 header houses prior to the next surety estimate being due to NRC. Therefore, the current surety estimate reasonably includes funds sufficient to cover the estimated current costs of the facility and therefore acceptable during the current surety period. In addition, a license condition has been established to limit the amount of header houses to 5 until approval of the next surety update.

## CONCLUSION

Based on the information provided in the application, the RAI's and the detailed review conducted of the surety estimate for the Lost Creek in situ leach facility, the NRC staff concludes 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, the proposed financial surety bond amount and the surety estimate itself includes methods of estimation that are acceptable and are consistent with 10 CFR Part 40, Appendix A, Criterion 9, which requires that financial surety arrangements be established by each licensee.