

**TECHNICAL EVALUATION REPORT FOR AREVA'S  
PROPOSED 2017 SURETY ESTIMATE  
FOR THE LUCKY MC MILL TAILINGS SITE**

**Docket No.:** 040-02259      **License No.:** SUA-672

**DATE:**            May 3, 2018

**FACILITY:**      Lucky Mc Mill Tailings Site

**TECHNICAL REVIEWERS:** Dominick Orlando, Reginald Augustus

**PROJECT MANAGER:**      Dominick Orlando

**SUMMARY AND CONCLUSIONS**

By letter dated August 25, 2017, SteelCats, LLC, submitted, on behalf of AREVA, Inc., (AREVA) the 2017 surety estimate for AREVA's Lucky Mc uranium mill tailings site and requested that the U.S. Nuclear Regulatory Commission (NRC) amend Source Materials License SUA-672 to incorporate the revised surety amount (Agencywide Documents Access and Management System (ADAMS) Accession Number ML17262A104). The NRC staff reviewed the 2017 estimate and determined that the decommissioning and reclamation activities were adequately described and reasonable cost estimates for each activity were provided. Appropriate cost estimates were also provided for contingencies and long-term maintenance and surveillance. The NRC staff determined that AREVA's method of increasing its cost estimate, based on 1) Wyoming Department of Environmental Quality's Land Quality Division Guideline 12 (Guideline 12); 2) Current contractor costs and 3) Inflation, using the Urban Consumer Price Index (CPI-U), adequately demonstrates compliance with the requirements of 10 *Code of Federal Regulations* (CFR) Part 40, Appendix A, Criteria 9 and 10.

**BACKGROUND**

AREVA is the holder of NRC license no. SUA-672 for its former Lucky Mc conventional uranium mill site in Gas Hills Mining District, Wyoming. The site consists of three reclaimed tailings impoundments and three tailings solution ponds, occupying approximately 241 acres. Uranium milling began at the site in 1958. The Lucky Mc site ceased active uranium recovery operations in 1988 and has completed final site reclamation activities.

**TECHNICAL EVALUATION**

AREVA's license was issued under 10 CFR Part 40, Domestic Licensing of Source Material. 10 CFR 40, Appendix A, Criterion 9, "Financial Criteria" requires that licensees maintain an NRC-approved financial surety arrangement to cover estimated costs for decommissioning and decontamination activities at their site. Criterion 9 requires that the cost estimates are calculated on the basis of a third party completing all decommissioning and decontamination activities and that the cost estimate must be updated annually. License Condition (LC) 27 of Source Materials License SUA-672 also requires that AREVA maintain an NRC-approved financial surety arrangement to cover estimated costs for decommissioning and

decontamination activities and that the annual update be submitted 3 months prior to December 15.

In addition, 10 CFR 40, Appendix A, Criterion 10, requires that a minimum charge of \$250,000 (1978 dollars) must be paid by each uranium mill operator to the U.S. Treasury or appropriate State agency, prior to uranium mill license termination, to account for costs associated with long-term surveillance and maintenance.

The NRC staff reviewed AREVA's annual financial assurance update using the guidance in NUREG-1620, Appendix C, Revision 1 "Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978," dated June 2003 (NUREG-1620, Rev. 1).

AREVA's 2017 proposed surety estimate is \$968,106. The submittal also includes a request to amend the license's current surety amount based on an adjustment for inflation for its Long-Term Surveillance (LTS) fee, by applying the percent difference between the Consumer Products Index for Urban Consumers (CPI) for December 1978 (67.7) and July 2017 (244.786). The result is a \$15,284 increase to the previously approved LTS fee of \$888,652, for a new LTS fee of \$903,936. In addition, unit or total costs for the remaining activities were based on the use of a consultant at current rates that the licensee has paid. In determining whether an adjustment to increase the surety amount based on current actual costs and CPI would be adequate, the NRC staff evaluated several factors for adjusting the cost estimate, as outlined in 10 CFR 40 Appendix A, Criterion 9(f)(4) that included:

1. Spills, leakage or migration of radioactive material leading to additional contamination.

AREVA's facility remains in a non-operational status with all of the reclamation activities completed. There have been no recorded events of spills or leaks.

2. Waste inventory increase above previous estimate.

There have been no activities at the site which have increased the waste.

3. Waste disposal cost increases.

There have been no waste disposals at, or from, the site.

4. Facility modifications.

There have been no facility modifications at the site which affect this surety update.

5. Changes to authorized possession limits

There have been no changes in authorized possession limits under License SUA-672 since the last surety update.

6. Actual remediation costs above previous cost estimate

Actual remediation costs have not changed except for the updated LTS fee.

7. Any other conditions that affected the costs.

No other known conditions have been identified that affect the cost estimate.

8. Onsite Disposal.

There have been no onsite disposals of radioactive material.

Therefore, the NRC has determined that an increase to the cost estimate meets the requirements in 10 CFR 40 Appendix A, Criterion 9.

AREVA submitted its annual surety update on August 25, 2017, which was more than 3 months prior to December 15. Therefore, NRC staff has determined that the submittal meets the license requirement for a surety update to be submitted at least 3 months prior to the December 15 anniversary date specified in LC 27.

In addition, the costs in the annual surety update are estimated based upon third party costs to reclaim, remediate, and decommission facilities and lands affected by past project operations. All unit costs, labor and equipment, and other fees were included. Also, the licensee added 15 percent for contingencies, as well as the required costs for long-term surveillance fees based on \$250,000 (1978 dollars). The LTS fee was determined using the CPI, which is acceptable. Therefore, NRC staff has determined that the cost estimate is based upon third party costs, includes an adequate contingency factor of 15 percent, and accounts for long-term surveillance fees as required by 10 CFR 40, Appendix A, Criterion 9 and 10.

The cost estimate breakdown includes:

(1) Environmental Monitoring:	
• Labor, Program Administration, and Analytical Work	\$22,200
(2) Miscellaneous Expenses:	
• Legal Expenses (exclusive of license termination)	\$10,000
(3) License Termination and Site Transfer Issues:	
• Legal Expenses	\$5,000
• Labor	\$16,600
• Miscellaneous	<u>\$2,000</u>
<b>Subtotal (1-3)</b>	<b>\$55,800</b>
<b>(4) Contingency(15%)</b>	<b>\$8,370</b>
<b>(5) Long-Term Care Fee (\$250,000 in 1978 dollars)</b>	<b><u>\$903,936</u></b>
<b>Total Estimated Costs</b>	<b>\$968,106</b>

AREVA has previously submitted an NRC-approved letter of credit and standby trust agreement to demonstrate compliance with 10 CFR 40, Appendix A, Criterion 9. Upon approval of the current surety update, AREVA must submit within a reasonable amount of time, a finalized

update to its surety bond and Schedule A of the Standby Trust Agreement to reflect the new increased amount.

**CONCLUSION**

The NRC staff has determined that AREVA's annual 2017 surety update for its Lucky Mc Mill Tailings Site adequately reflects: the decommissioning activities, unit costs; contingency; long-term surveillance fees; and financial assurance mechanism as required by 10 CFR Part 40, Appendix A, Criterion 9, 10, and LC 27.

**PROPOSED LICENSE AMENDMENT:**

Revise License Condition 27 to change the required surety amount to: \$968,106.