



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

September 19, 2018

Paul G. Mifsud  
AREVA  
7135 Minstrel Way, Suite 104  
Columbia, Maryland 21045

SUBJECT: AREVA NC, INC., LUCKY MC URANIUM MILL - NRC INSPECTION  
REPORT 040-02259/2018-001

Dear Mr. Mifsud:

This letter refers to the announced, routine U.S. Nuclear Regulatory Commission's (NRC) inspection that was conducted on August 28, 2018, at the AREVA NC Inc. Lucky Mc Uranium Mill site in Fremont County, Wyoming. This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

The inspection findings were presented to your representative, Mr. R. Mark Owens, by telephone on September 13, 2018. The enclosed report presents the results of this inspection. Based on the results of this inspection, no violations were identified and no response to this letter is required.

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

P. Mifsud

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Should you have any questions concerning this inspection, please contact Linda M. Gersey at 817-200-1299 or the undersigned at 817-200-1151.

Sincerely,

/RA/

Janine F. Katanic, PhD, CHP, Chief  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety

Docket: 040-02259

License: SUA-672

Enclosure:

NRC Inspection Report 040-02259/2018-001

cc w/enclosure:

R. Schierman, Wyoming Uranium Recovery Program Manager

D. Shafer, U.S. Department of Energy, Legacy Management Office

G. Cameron, Wyoming Homeland Security

R. Owens, SteelCats, LLC

**U.S. NUCLEAR REGULATORY COMMISSION  
Region IV**

Docket: 040-02259  
License: SUA-672  
Report: 040-02259/2018-001  
Licensee: AREVA NC Inc.  
Facility: Lucky Mc Tailings Uranium Mill  
Location: Fremont County, Wyoming  
Inspection Date: August 28, 2018  
Inspector: Linda M. Gersey, Health Physicist  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety  
Approved by: Janine F. Katanic, PhD, CHP, Chief  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety

Enclosure

## EXECUTIVE SUMMARY

### **AREVA NC Inc., Lucky Mc Uranium Mill Site NRC Inspection Report 040-02259/2018-001**

This inspection was a routine, announced inspection of the reclaimed mill site and tailings impoundment at the Lucky Mc Uranium Mill site in Fremont County, Wyoming. A limited inspection of the site was conducted due to the unavailability of the licensee representative. In summary, the licensee was maintaining the site in accordance with license and regulatory requirements.

#### Uranium Mill, In-situ Leach Uranium Recovery, and 11.e(2) Byproduct Material Disposal Site Decommissioning

- The licensee continued to perform the groundwater monitoring and annual land use surveys in accordance with license requirements. (Section 1.2)
- No concerns related to the reclaimed mill site and tailings impoundment were identified during the inspector's limited observations. (Section 1.2)
- The significance of the uranium concentrations in Well AL-1 continues to be evaluated by the NRC. (Section 1.2)

## Report Details

### Site Status

At the time of the inspection, the reclamation of the Lucky Mc site was complete. The licensee continued to implement a groundwater monitoring program, perform annual land use surveys, and periodically inspect the site. In preparation for the long-term stewardship of the tailings impoundment, the U.S. Department of Energy (DOE) was deeded the title to the transfer area property in 2010. The NRC is currently reviewing DOE's Draft Long Term Surveillance Plan, dated December 22, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML12006A113).

The NRC approved the transfer of ownership for the license from Pathfinder Mines Corporation, Lucky Mc Tailings Site, to AREVA NC, Inc., in License Amendment number 73, dated June 26, 2014 (ADAMS Accession No. ML14079A494). The change in ownership did not amend any license requirements.

### **1 Uranium Mill, In-situ Leach Uranium Recovery, and 11.e(2) Byproduct Material Disposal Site Decommissioning (87654)**

#### 1.1 Inspection Scope

Determine if the licensee was maintaining the reclaimed site as required by the license and regulatory requirements.

#### 1.2 Observations and Findings

The previous NRC inspection was conducted on May 4, 2010 (ADAMS Accession No. ML101450472) and concluded that the licensee was maintaining oversight of the decommissioned facility in accordance with license requirements. After the May 4, 2010, inspection, NRC staff determined that routine inspections did not need to be completed in strict accordance with NRC's Manual Chapter 2801, "Uranium Mill 11e.(2) Byproduct Material Disposal Site and Facility Inspection Program" (found at <https://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/>). This determination was based on the limited license activity requirements and the projected site turn-over to the DOE. The DOE has made periodic site visits since 2010 in preparation for long-term stewardship. The most recent DOE site visit occurred in March 2018.

The inspector reviewed licensee documents from the NRC Region IV office due to the unavailability of the licensee representative. Telephone conversations were held between the inspector and the licensee representative for clarification on records, as needed.

License Condition (LC) 21, requires, in part, that the licensee conduct an annual survey of land use within 5 miles of the site and submit a report of this survey to the NRC. The inspector reviewed the semi-annual land use reports for 2012–2018 (ADAMS Package Accession No. ML18260A324). The semi-annual reports indicated there were no significant changes in land use from 2012-2018. Cattle and sheep grazing, adjacent to the site boundary, was occasionally observed by the licensee. The inspector determined

that the licensee was conducting and reporting to the NRC the annual land use survey in accordance with LC 21.

Due to the completion of the tailings reclamation and mill site decommissioning, the licensee received NRC approval to discontinue effluent and environmental monitoring when License Amendment Number 64, dated February 20, 2003, was issued (ADAMS Accession No. ML030520650). Although LCs 11 and 48 were modified in License Amendment Number 64, LC 22, which requires effluent and environmental reports to be completed in accordance with Title 10 of the *Code of Federal Regulations* 40.65, was inadvertently left in place. The NRC Project Manager acknowledged the former approval to discontinue effluent and environmental monitoring in letter dated November 15, 2017 (ADAMS Accession No. ML17271A153).

License Condition 60 requires, in part, that the licensee submit to the NRC a semi-annual groundwater monitoring report and comply with the listed groundwater protection standards at the point of compliance (POC) Well T1-12. The licensee performs quarterly sampling at five wells, which includes one POC well, one point of exposure (POE) well, two up-gradient wells, and one background well. The inspector reviewed the licensee's semi-annual reports from the first half of 2011 to the first half of 2018 (ADAMS Package Accession No. ML18257A091) and found them to contain the information as required by LC 60. The NRC staff noted that the uranium concentrations at well AL-1, located up-gradient of the POE Well AL-6, has fluctuated since 1995, with the highest most recent concentration identified as 2.54 milligrams of uranium per liter of groundwater in December 2017. Since well AL-1 is not a POC well, is up-gradient of the POE Well AL-6, and no license requirements were violated, the significance of the uranium concentrations is unknown. The NRC, DOE, and the State of Wyoming Department of Environmental Quality are jointly considering options to address this issue. At the time of this inspection, no determination had been made.

Due to the unavailability of the licensee's representative to accompany the inspector to the site, a full site tour was not conducted. The inspector was able to view the site from the fence line at the south and west sides of the property. The inspector noted that the fences appeared to be in good condition and each of the gates were locked, in accordance with LC 11. The "Caution-Radioactive Material" signs at the entry gates and perimeter fence were adequate. The inspector did not identify any unauthorized activities within the site boundary. From the limited view at the fence line, no concerns were identified by the inspector with the tailings impoundment.

### 1.3 Conclusions

The licensee continued to perform groundwater monitoring and annual land use surveys in accordance with license requirements. No concerns related to the reclaimed mill site and tailings impoundment were identified during the inspector's limited observations. The significance of the uranium concentrations in Well AL-1 continues to be evaluated by the NRC.

## **2 Exit Meeting Summary**

The inspector presented the inspection results to Mr. R. Mark Owens, the licensee's representative, by telephone on September 13, 2018. During the inspection, the licensee did not identify any information reviewed by the inspectors as proprietary.

## SUPPLEMENTAL INSPECTION INFORMATION

### PARTIAL LIST OF PERSONS CONTACTED

#### Licensee

R. Mark Owens, Consultant for AREVA, Inc.

#### Wyoming Department of Environmental Quality

R. Schierman, Uranium Recovery Program Manager, Land Quality Division

### INSPECTION PROCEDURE USED

IP 87654      Uranium Mill, In-situ Leach Uranium Recovery, and 11.e(2) Byproduct Material Disposal Site Decommissioning

### ITEMS OPENED, CLOSED AND DISCUSSED

#### Opened

None

#### Closed

None

#### Discussed

None

### LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
CFR	<i>Code of Federal Regulations</i>
DOE	U.S. Department of Energy
LC	License Condition
NRC	U.S. Nuclear Regulatory Commission
POC	Point of Compliance
POE	Point of Exposure



AREVA NC, INC., LUCKY MC URANIUM MILL - NRC INSPECTION REPORT  
 040-02259/2018-001 – DATED SEPTEMBER 19, 2018

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