



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

September 18, 2018

Lawrence J. Corte, President
Western Nuclear, Inc.
2801 Youngfield, Suite 340
Golden, CO 80401

SUBJECT: WESTERN NUCLEAR, INC. - NRC INSPECTION REPORT 040-01162/2018-001

Dear Mr. Corte:

This letter refers to the announced, routine U.S. Nuclear Regulatory Commission's (NRC) inspection that was conducted on August 28, 2018, at the Western Nuclear, Inc., Split Rock 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 Mr. Brad Dewaard, Land and Resource Manager, Western Nuclear Inc. and Mr. Lou Miller, consultant to Western Nuclear Inc., at the conclusion of the onsite inspection. 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.

L. Corte

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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: 040-01162

License: SUA-56

Enclosure:

NRC Inspection Report 040-01162/2018-001

cc w/enclosure:

R. Schierman, WY Uranium Recovery Program Manager

D. Shafer, U.S. DOE, Office of Legacy Management

G. Cameron, Wyoming Homeland Security

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

Docket: 040-01162

License: SUA-56

Report: 040-01162/2018-001

Licensee: Western Nuclear, Inc.

Facility: Split Rock Site

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

Western Nuclear, Inc., Split Rock Site NRC Inspection Report 040-01162/2018-001

This inspection was a routine, announced inspection of the reclaimed mill site and tailings impoundment at the Western Nuclear, Inc., Split Rock site in Fremont County, Wyoming. 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 groundwater monitoring in accordance with license requirements. (Section 1.2)
- The licensee's license amendment request to revise the nitrate alternate concentration limit for the southwest wells continues to be reviewed by NRC staff. (Section 1.2)
- No concerns related to the tailings impoundment or licensed property were identified by the inspector during the on-site tour. (Section 1.2)

Report Details

Site Status

All reclamation work has been completed and approved by the NRC, including reclamation of the tailings impoundment, reclamation of the corrective action pond, approval of the alternate concentration limits for groundwater, and subsequent deactivation of the groundwater remediation system. The licensee is no longer required to maintain a radiation safety program because all tailings have been covered. The only activities remaining are groundwater and surface water monitoring and preparation for transfer of the site to the U.S. Department of Energy (DOE) for long-term surveillance.

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 in June 2010 (ADAMS Accession No. ML101580296) and no findings were identified. Following the June 2010 inspection, NRC staff determined that routine inspections did not need to be completed in strict accordance with the 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 anticipated turn-over to the DOE. The DOE has made periodic site visits since 2010 in preparation for long-term surveillance. The most recent DOE site visit occurred in early August 2018.

License Condition (LC) 24 requires, in part, that the licensee collect surface water samples at 5 locations from the Sweetwater River and report the analytical results to the NRC in semi-annual reports. The compliance groundwater sampling program is identified in LC 74. A total of 16 wells are sampled semi-annually or annually for 23 constituents. Point of compliance Wells 5 and 21 must comply with the groundwater protection standards or the NRC-approved alternate concentration limits for constituents. License Conditions 74D and 74E also specify trigger levels at the points of exposure for surface water locations and 2 aquifers. The inspector verified that the licensee had submitted all semi-annual groundwater and surface water reports from 2010 through the first half of 2018. The semi-annual reports are reviewed by the NRC project manager and communicated by separate correspondence.

Since 2014, the groundwater sampling results for the southwest valley Wells SWAB-2 and SWAB-1/1R have indicated exceedances in the alternate concentration limit for nitrate. The licensee submitted a license amendment request dated October 25, 2016, (ADAMS Accession No. ML16328A402) to allow for a different alternate concentration limit for nitrate and a possible extension of the DOE long-term care boundary. At the

time of the inspection, the NRC continues to evaluate the license amendment request. After a determination has been made by the NRC for the license amendment request, the DOE's Draft Long-Term Surveillance Plan, dated April 12, 2012 (ADAMS Accession No. ML12109A081) will require revision.

The inspector conducted a site tour to observe the condition of the tailings impoundment and surrounding property. The inspector observed that the two primary entry gates to the licensed property were locked and in good condition. The inspector also noted that the boundary and interior fences appeared in good condition and there were no changes to the tailings impoundment or surrounding land area since the previous inspection.

During the site tour, the inspector conducted radiation surveys using a Ludlum Model 19 microRoentgens survey meter calibrated with radium-226 (NRC Number 015530, calibration due date of July 12, 2019). The covered tailings areas were found to be approximately 35-45 microRoentgens per hour, which was the same as the background ambient gamma exposure rate.

1.3 Conclusions

The licensee continued to perform groundwater monitoring in accordance with license requirements. The licensee's amendment request to revise the nitrate alternate concentration limit for the southwest wells continues to be reviewed by NRC staff. No concerns related to the tailings impoundment or licensed property were identified by the inspector during the on-site tour.

2 **Exit Meeting Summary**

The inspector presented the inspection results to Mr. Brad Dewaard, Land and Resource Manager, Western Nuclear Inc. and Mr. Lou Miller, consultant to Western Nuclear Inc., at the conclusion of the onsite inspection on August 28, 2018. During the inspection, the licensee did not identify any information reviewed by the inspector as proprietary.

SUPPLEMENTAL INSPECTION INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

B. Dewaard, Land and Water Resource Manager
L. Miller, Consultant to Western Nuclear Inc.

Wyoming Department of Environmental Quality

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

INSPECTION PROCEDURE (IP) 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
IP	Inspection Procedure
LC	License Condition
NRC	U.S. Nuclear Regulatory Commission

WESTERN NUCLEAR, INC. - NRC INSPECTION REPORT 040-01162/2018-001

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