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

August 18, 2025

Tate Hagman, Restoration Manager
Crow Butte Resources, Inc.
86 Crow Butte Road
Post Office Box 169
Crawford, NE 69339-0169

SUBJECT: CROW BUTTE RESOURCES, INC. - NRC INSPECTION REPORT 04008943/2025001

Dear Tate Hagman:

This letter refers to the routine U.S. Nuclear Regulatory Commission (NRC) inspection conducted from August 5-6, 2025, at your Crow Butte Project near Crawford, Nebraska. The inspection examined activities conducted under your license as they relate to public health and safety, the common defense and security, and to confirm compliance with the Commission's rules and regulations and the conditions of the license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, measurements of radiation levels, and interviews with personnel.

The inspection findings were discussed with you and other members of your staff at the conclusion of the onsite inspection on August 6, 2025. The enclosed report presents the results of this inspection. No findings or violations of more than minor significance were identified during the inspection, and no response to this letter is required.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedures," 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 and from the NRC's ADAMS, accessible from the NRC website 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.

Sincerely,

Signed by Josey, Jeffrey
on 08/18/25

Jeffrey E. Josey, Chief
Decomm., ISFSI, and Operating Reactor Branch
Division of Radiological Safety and Security

Docket No. 04008943
License No. SUA-1534

Enclosure:
NRC Inspection Report 04008943/2025001

cc w/enclosure: Distribution via LISTSERV

T. Dyer, Crow Butte Resources
Becki Wisell, Nebraska DHHS

CROW BUTTE RESOURCES, INC. NRC INSPECTION REPORT 04008943/2025001 – DATED AUGUST 18, 2025

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DOCUMENT NAME: CROW BUTTE RESOURCES, INC. NRC INSPECTION REPORT 04008943/2025001
ADAMS ACCESSION NUMBER: **ML25226A245**

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket No.	040-08943
License No.	SUA-1534
Report No.	04008943/2025001
Enterprise Identifier:	EPID: I-2025-001-0126
Licensee:	Crow Butte Resources, Inc.
Facility:	Crow Butte Project
Location:	Dawes County, Nebraska
Inspection Dates:	August 5-6, 2025
Inspectors:	R. Evans, Senior Health Physicist T. Lancaster, Hydrogeologist L. Guo, Hydrogeologist
Accompanied By:	M. Abbaszadeh, Senior Health Physicist S. Cohen, NRAN J. Gutierrez, Health Physicist K. Hayes, Hydrogeologist C. Young, Health Physicist
Approved By:	Jeffrey E. Josey, Chief Decommissioning, ISFSI, and Operating Reactor Branch Division of Radiological Safety and Security

Enclosure

SUMMARY

This U.S. Nuclear Regulatory Commission (NRC) inspection was a routine, announced team inspection of activities being conducted at the licensee's Crow Butte Project, Dawes County, New Mexico. No findings or violations of more than minor significance were identified during the inspection.

List of Findings and Violations

None.

Additional Tracking Items

None.

SITE STATUS

At the time of the inspection, the site continued to remain in the care and maintenance mode of operations. Site activities included maintaining wellfield flows with operation of the reverse osmosis, ion exchanger, and yellowcake dryer equipment as needed. The licensee was not processing uranium or conducting yellowcake drying operations at the time of the inspection. The licensee's staff indicated that it had not commenced with construction activities at the Marsland Expansion Area.

There were no significant changes to site features or site operations since the last inspection in September 2024 (ML24285A187).

INSPECTION SCOPES

The inspection was conducted using the appropriate portions of the inspection procedures (IPs). Currently approved IPs are located on the public website at http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards. The inspection was declared complete when the objectives of the IPs were met, consistent with Inspection Manual Chapter (IMC) 2801, "Uranium Recovery and 11e.(2) Byproduct Material Facility Inspection Program."

IP 89020 – Groundwater and Water Management at Uranium Recovery and 11e.(2) Byproduct Material Facilities

The inspectors:

(1) Observed the centralized computer automation facility for monitoring site activities, in part, to confirm that alarms were in use to ensure minimum extraction rates were being maintained in the wellfields
(2) Toured the control room to confirm that the production well extraction rates were providing an adequate bleed rate (pumping rate) to create an inward hydraulic gradient in the mine units
(3) Toured Wellhouse 33 in Mine Unit 8 to observe the manifold layout and operating injection/extraction wells
(4) Reviewed the 2024 Semi-Annual Radiological Effluent and Environmental Monitoring Reports dated August 20, 2024, and February 26, 2025 (ML24233A232 and ML25057A355, respectively) to verify that the 2024 extraction rates in the mine units were adequate to create an overall inward hydraulic gradient and injection rates were maintained below casing and formation rupture pressures
(5) Reviewed contoured, groundwater elevation map and production rates for the facility (ML25120A425) for a qualitative evaluation of the inward hydraulic gradient during the inspection review period
(6) Toured the on-site laboratory to observe the testing equipment, laboratory chemical storage, and quality control features
(7) Reviewed the On-Site Laboratory Manual of Standard Operating Procedures
(8) Reviewed procedure CBR-EMP-002, "Evaporation Pond Monitoring," revision 9

(9) Reviewed Underground Injection Control (UIC) Class I Injection Well Permits NE0210825 and NE0211670, with expiration dates of November 22, 2030, and August 25, 2034, respectively

IP 89025 – Assessment of Dryer and Yellowcake Packaging Operations

The inspectors:

(1) Conducted a walkdown of the dryer and yellowcake packaging equipment using procedure CBR-SOP-019, "Yellowcake Dryer Operation and Maintenance," revision 24
(2) Conducted a limited review of operational data related to uranium production
(3) Interviewed the supervisor of operations to discuss significant changes to dryer and yellowcake packaging operations, interlock tests, maintenance activities, radiological sampling/monitoring in the dryer enclosure, and incidents related to dryer operations

IP 89030 – Radiation Protection at Uranium Recovery and 11e.(2) Byproduct Material Facilities

The inspectors:

(1) Reviewed site procedures including Radiation Protection Procedure RPP-002, "Health Physics Organization and Management," revision 5, RPP-004, "External Radiation Protection," revision 2, and RPP-008, "Exposure Monitoring," revision 5
(2) Reviewed dosimetry reports, exposure calculations, site monthly radiation safety summary reports, and respirator fit tests
(3) Verified worker doses were within regulatory and site limits
(4) Reviewed bioassay sample collection requirements and sample results
(5) Reviewed and discussed two radiation work permits with the Radiation Safety Officer
(6) Reviewed in-plant survey results including wellhouse gamma radiation surveys, dose rate surveys, and contamination surveys
(7) Observed use of instrumentation in the field for surveying out of a radiologically restricted area
(8) Checked the calibration and functional status of three survey instruments being used in the facility
(9) Reviewed instrument calibration records including calibration certificates, instrument repair work orders, instrument reliability determination calculations, instrument parameter print outs, and source certificates
(10) Reviewed training records including visitor, respirator, and annual refresher training
(11) Reviewed the licensee's daily plant walkthrough records
(12) Conducted site tours, in part, to measure ambient radiation levels using Radeye G (serial number 376, calibration due date of 11/26/25) and Radeye PRD (serial number 31894, calibration due date of 11/26/25) survey meters

IP 89035 – Radioactive Waste Management and Transportation at Uranium Recovery and 11e.(2) Byproduct Material Facilities

The inspectors:

(1) Conducted site tours inside the central processing plant, in part, to verify control of radioactive wastes as specified in procedure CBR-SOP-053, “Plant Waste System Maintenance,” revision 2
(2) Observed an operator conducting a daily/weekly monitoring of evaporation ponds (three commercial ponds and two research ponds) including verification of liner leaks, pond water depth, and pond embankments
(3) Observed operation of the restoration process equipment and compared the flow path to the Restoration Process Flow Diagram
(4) Reviewed Straight Bill of Lading (shipping paper), Shipment No. W-01-23 CB-2 dated March 4, 2025 and the sample calculation of total shipment activity for the shipment
(5) Verified that that licensee continued to have a Byproduct Disposal Agreement as required by License Condition 9.9

IP 89045 – Effluent Control and Environmental Protection at Uranium Recovery and 11e.(2) Byproduct Material Facilities

The inspectors:

(1) Reviewed the two 2024 Semi-Annual Radiological Effluent and Environmental Monitoring Reports dated August 20, 2024, and February 26, 2025 (ML24233A232 and ML25057A355, respectively) to verify the liquid effluent and monitoring programs were conducted in accordance with applicable license conditions
(2) Observed the sampling of Basal Chadron monitoring well CM9-15 to confirm compliance with procedure CBR-EMP-003, “Water Monitoring,” revision 9
(3) Observed the Deep Disposal Well 2 wellhouse, including piping, filtration system, and annulus tank, to confirm operations were conducted in accordance with procedure CBR-SOP-022, “Deep Disposal Well Operation and Control,” revision 19
(4) Reviewed the two semi-annual reports listed above and the June 2025 Monthly Monitoring Report dated July 7, 2025 (ML25788A246) for Class I deep disposal wells Nos. 1 and 2
(5) Reviewed procedure CBR-RPP-003, “Airborne Radioactivity,” revision 6, specifically Section 1.8, “Radon Daughter Sampling Procedure”
(6) Reviewed airborne effluent monitoring results including radon and radon progeny sample results for both the central processing plant and well houses
(7) Observed locations of fixed radon monitoring stations throughout the site and examined instrumentation associated with monitoring airborne radioactivity

IP 89050 – Emergency Preparedness and Fire Protection at Uranium Recovery and 11e.(2) Byproduct Material Facilities

The inspectors:

(1) Reviewed CBR-EPRP-007, “Radiological & Spill Emergencies,” revision 10

(2) Confirmed the location and contents of the spill response kit, as established in CBR-EPRP-007
(3) Reviewed licensee records of three spills that occurred since the last inspection and confirmed the documented spills did not meet the NRC's reportability criteria
(4) Interviewed the supervisor of operations to evaluate whether the licensee's fire protection program was adequate. There have been no onsite fires since the previous inspection.

IP 89005 - Management Organization and Controls at Uranium Recovery and 11e.(2) Byproduct Material Facilities

The inspectors reviewed the:

(1) 2024 Annual ALARA Report and 2024 Land Use Survey dated June 4, 2025 (ML25155B834)
(2) 2024 Additional Protocol Reports including forms AP-1 (certification), AP-2, (contact information), AP-7 (concentration plant operations) and AP-8 (holdings impure source material)
(3) Annual Report of Changes, Tests and Experiments dated January 3, 2025 (ML25003A040) which included an updated restoration schedule
(4) Licensee's organizational structure in place at the time of the inspection

INSPECTION RESULTS

No findings or violations of more than minor significance were identified during this inspection.

EXIT MEETING AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report:

- On August 6, 2025, the inspectors conducted a final exit meeting with T. Hagman, Restoration Manager.

ADDITIONAL DOCUMENTS REVIEWED

Response to Request for Supplemental Information for the Acceptance Review of the License Renewal Application, Crow Butte Resources, Inc. Uranium Recovery Project, Dawes County, Nebraska, License SUA-1534, April 30, 2025 (ML25120A425)

Quarterly Excursion Monitoring Report dated July 9, 2025 (ML25191A219)

Quarterly Excursion Monitoring Report dated April 9, 2025 (ML25099A182)

Quarterly Excursion Monitoring Report dated January 21, 2025 (ML25022A168)

Quarterly Excursion Monitoring Report dated October 18, 2024 (ML24292A205)

CBR-SOP-001, "Wellfield Flow Measurement and Control," revision 27

CBR-SOP-023, “Mechanical Integrity Test,” revision 14

CBR-RPP-005, “Contamination Control,” revision 8

CBR-EPRP, “Fire and Explosions,” revision 4

Licensee’s On-Site Files:

- Geological, Geophysical, and Well Construction Information for Wells in Mine Unit 11: (1) Perimeter Monitoring Well CM11-11; (2) Production Well P6066; (3) Production Well P5813; and (4) Production Well P5809

- 2024 and 2025 Groundwater Analytical Data - Stabilization Monitoring in Mine Units 2, 3, 4, 5, and 6

- Facility Field Records-Excursion Monitoring Report

- Facility maintained quarterly reports comprised of spreadsheets summarizing daily flow rates for each injection and production well and injection manifold pressures on the entire system

- Facility Field Records-Evaporation Pond freeboard and underdrain water depth

- Mechanical Integrity Test Results