

NUCLEAR REGULATORY COMMISSION

[Docket No. 40-8943; NRC-2025-0976]

Crow Butte Resources, Inc.;

Crow Butte Project and Marsland Expansion Area;

Environmental Assessment and Finding of No Significant Impact

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering renewal of Crow Butte Resources, Inc.'s (CBR or the licensee), source and byproduct materials license SUA-1534 for continued in situ recovery (ISR) of uranium at the Crow Butte Project and for construction and operation of a satellite facility and support operations at the Marsland Expansion Area in Crawford, Nebraska, for an additional 20 years. The NRC staff is issuing an environmental assessment (EA) and finding of no significant impact (FONSI).

DATES: The EA and FONSI referenced in this document are available on July 30, 2026.

ADDRESSES: Please refer to Docket ID NRC-2025-0976 when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2025-0976. Address questions about Docket IDs in Regulations.gov to Bridget Curran; telephone: 301-415-1003; email: Bridget.Curran@nrc.gov. For technical questions, contact the individual(s) listed in the "For Further Information Contact" section of this document.

- **NRC's Agencywide Documents Access and Management System**

(ADAMS): You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin ADAMS Public Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by email to PDR.Resource@nrc.gov.

- **NRC's PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Christine Pineda, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-6789; email: Christine.Pineda@nrc.gov

SUPPLEMENTARY INFORMATION:

I. Background

The NRC is making available to the public the "Environmental Assessment for the Proposed Renewal of Crow Butte Resources, Inc.'s License for In-Situ Uranium Recovery at the Crow Butte Project and Marsland Expansion Area in Dawes County, Nebraska." The EA is available in ADAMS under Accession No. ML26204A421.

II. Introduction

The NRC is considering the renewal of source and byproduct materials license SUA-1534 for CBR's ISR project in Dawes County, Nebraska at the Crow Butte Project (CBP) and Marsland Expansion Area (MEA) sites for an additional 20 years. CBR plans to continue recovering uranium and producing yellowcake using the ISR process. The

CBP is an operating facility that has been in standby since 2018. The MEA has not yet been constructed. Yellowcake, the uranium oxide product of the ISR process, is used in the production of fuel for commercially operated nuclear power reactors.

The NRC staff has prepared an EA for this proposed licensing action in accordance with NRC regulations in part 51 of title 10 of the *Code of Federal Regulations* (10 CFR), “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” which implement the National Environmental Policy Act of 1969, as amended (NEPA). Based on the EA, the NRC has concluded that a FONSI is appropriate. Therefore, in accordance with paragraph 10 CFR 51.31(a), “Determinations based on environmental assessment,” the NRC has determined that preparation of an environmental impact statement is not warranted for the proposed action. The NRC is issuing a FONSI at this time.

III. Summary of the Environmental Assessment

Description of the Proposed Action

The proposed Federal action is approval of CBR’s application for license renewal. If the NRC does decide to renew the license, CBR would continue ISR operations at the CBP and could construct and operate a satellite facility and support operations at the MEA. Other licensed activities include aquifer restoration and decommissioning activities. The NRC will renew license SUA-1534 (ADAMS Accession No. ML25259A241), under 10 CFR part 40, “Domestic Licensing of Source Material,” if the NRC concludes that CBR has demonstrated it will continue to meet NRC requirements for operation at the CBP and for construction and operation at the MEA.

The CBP license area occupies approximately 2,840 acres, and the area disturbed over the estimated life of the project is approximately 1,265 acres. The ISR project at the CBP consists of processing facilities and 11 sequentially-developed

wellfields (mine units), a central processing facility, two nonhazardous Class I deep injection (disposal) wells, a Class V septic disposal well, evaporation ponds, and associated infrastructure and support facilities. Currently, only aquifer restoration activities are ongoing at the CBP (no uranium recovery). If Crow Butte restarts operations at the CBP, uranium would continue to be recovered from the Basal Chadron Sandstone at a depth that varies from 400 to 900 feet below the ground surface. The maximum flow rate of the processing facility is 9,000 gpm, excluding restoration flow, and total annual yellowcake production is limited to 2 million pounds.

The MEA license area encompasses approximately 4,622 acres, and Crow Butte estimates that the area to be disturbed would be approximately 1,754 acres. At the MEA, facilities would include wellfields, a satellite ion exchange facility, two nonhazardous Class I deep disposal wells, a Class V well for septic disposals, and support facilities and infrastructure. Crow Butte has not started construction of the ISR facilities at the MEA.

After operations at a wellfield in the CBP or the MEA cease, CBR would begin aquifer restoration to return groundwater quality within the production zone of wellfields to standards consistent with NRC requirements at 10 CFR part 40, Appendix A, Criterion 5B(5) and, if applicable, 5B(6). After groundwater restoration, CBR would proceed with reclamation and decommissioning. CBR's goal in reclamation and decommissioning is to return disturbed lands back to conditions that are at least equal in quality to pre-ISR conditions.

Purpose and Need for the Proposed Action

The purpose of the proposed license renewal is to enable Crow Butte to continue ISR operations for an additional 20 years. In regulating uranium milling and the ISR process, the NRC is meeting its obligations under the Atomic Energy Act of 1954, as amended, (AEA), to allow and ensure the safe possession and use of radioactive

materials. This definition of “purpose and need” reflects the Commission’s recognition that, unless there are negative findings in the NRC’s safety review required by the AEA, or findings under NEPA that would lead the NRC to reject the license renewal application, the NRC has no role in a company’s decision to construct and operate an ISR facility at a particular location.

Environmental Impacts of the Proposed Action

The NRC staff has assessed the potential environmental impacts of the proposed action. The results of the NRC’s environmental review can be found in the EA. The NRC staff assessed the potential impacts on land use; visual and scenic resources; noise; air quality; geology and soils; water resources; ecological resources; historic and cultural resources; socioeconomics; transportation; public and occupational health and safety; and waste management.

The proposed action would not change the current and expected land use at the CBP. No significant changes in operations and no new construction at the CBP site, including roads, are planned or expected. Traffic is not expected to increase from current conditions (during full operations). The NRC staff has determined that impacts to water resources would not be significant, as discussed in detail in the EA. During the 20-year term of the license renewal, CBR would continue to operate in accordance with NRC, State, and other requirements to minimize impacts to water resources. There would be no significant impacts to public radiological and non-radiological health, and CBR would continue to operate in accordance with NRC and State requirements to minimize radiological and non-radiological impacts.

The proposed action at the MEA likewise would not result in a significant increase in short-term or long-term radiological risk to public health or the environment. Certain construction impacts could be noticeable, including impacts from noise

(temporary impacts to the nearest resident to the MEA during construction) and impacts on ecological resources (localized and temporary impacts resulting from the loss and slow recovery of forest habitat). While potential noticeable impacts would be expected for specific aspects of these resource areas, the construction impacts are short-term and temporary. Impacts from MEA operations would not be significant, as described in section 3 of the EA. After construction, CBR would operate the MEA during the 20-year license renewal term in accordance with NRC, State, and other requirements to minimize impacts to water resources. The NRC staff does not expect significant impacts from MEA operation to public radiological and non-radiological health, and CBR would operate the MEA in accordance with NRC and State requirements to minimize radiological and non-radiological impacts.

In accordance with the Endangered Species Act, the NRC staff evaluated potential impacts to federally protected ecological resources that may result from the proposed action. As discussed in section 1.6.2 of the EA, the U.S. Fish and Wildlife Service concurred with NRC staff's effect determinations of "may affect but is not likely to adversely affect" the monarch butterfly, Suckley's cuckoo bumble bee, and western regal fritillary.

In accordance with the National Historic Preservation Act, the NRC staff evaluated potential impacts to historic and cultural resources at the CBP and the MEA. The NRC staff consulted with Federally recognized Indian Tribes, and the Nebraska State Historic Preservation Office, as described in section 1.6.1 of the EA. Based on the staff's assessment and the results of consultation, the NRC staff concludes that impacts from licensed activities at the CBP and MEA during the proposed license renewal period on unevaluated sites, sites eligible for listing in the National Register of Historic Places

(NRHP), and Federally recognized Indian tribal sites not eligible for listing in the NRHP but of significance to Federally recognized Indian Tribes will not be significant.

Environmental Impacts of the Alternative to the Proposed Action

As an alternative to the proposed license renewal for the Crow Butte ISR project at the CBP and the MEA, the NRC considered the no-action alternative. Under the no-action alternative, the NRC would not renew license SUA-1534. CBR would not be able to continue operations at the CBP, and would not be able to pursue construction and operation at the MEA. For the CBP site, CBR would need to submit a decommissioning plan for NRC approval. Decommissioning would commence only after the NRC has conducted parallel safety and environmental reviews and approved the decommissioning plan. The potential impacts of the no-action alternative would therefore be the same as the impacts resulting from decommissioning activities. Section 2.1.5 of the EA provides a general description of decommissioning activities.

At the MEA site under the no-action alternative, there would be no environmental impacts on land use, transportation, geology and soils, air quality, water resources, ecological resources, noise, historic and cultural resources, visual and scenic resources, waste management, and public and occupational health and safety. Drill holes associated with MEA preconstruction activities would be properly plugged and abandoned, and the wells would be decommissioned.

Additionally, the uranium minerals present in the Crow Butte area would not be made available to support the U.S. nuclear fuel supply chain with domestically produced uranium.

Agencies and Persons Consulted

On May 26, 2026, the NRC provided the draft EA to the State of Nebraska's Department of Water, Energy, and Environment. The NRC received no comments on the

draft EA.

Under Section 106 of the National Historic Preservation Act, the NRC staff consulted with the Nebraska State Historic Preservation Office, CBR, and 28 Federally recognized Indian Tribes, as described in section 1.6.1 of the EA. Under the Endangered Species Act, the NRC staff consulted with the U.S. Fish and Wildlife Service, as described in section 1.6.2 of the EA.

IV. Finding of No Significant Impact

In accordance with the requirements in 10 CFR part 51, the NRC staff has concluded that the proposed action will not significantly affect the quality of the human environment. Therefore, the NRC staff has determined, pursuant to 10 CFR 51.31, “Determinations based on environmental assessment,” that preparation of an EIS is not required for the proposed action, and pursuant to 10 CFR 51.32, “Finding of no significant impact,” a FONSI is appropriate. Consistent with 10 CFR 51.32(a)(4), this FONSI incorporates by reference the EA described in this notice.

Authority: 42 U.S.C. 2011 *et seq.*

Dated: July 24, 2026

For the Nuclear Regulatory Commission.

/RA/

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