



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 15, 2025

Sara Sheen
State Historic Preservation Officer
Wyoming State Historic
Preservation Office
2301 Central Avenue
Barrett Building, Third Floor
Cheyenne, WY 82002

SUBJECT: ARCHAEOLOGICAL TESTING RESULTS FOR SITES 48LN740 AND 48LN8940 AND REQUEST FOR CONCURRENCE ON UPDATED SECTION 106 DETERMINATION AT THE PROPOSED KEMMERER POWER STATION UNIT 1 SITE IN LINCOLN COUNTY, WYOMING (DBI_WY_2022_280) (DOCKET NUMBER: 50-613)

Dear Sara Sheen:

The U.S. Nuclear Regulatory Commission (NRC) staff is providing your office with the results of additional archaeological testing at historic sites 48LN740 and 48LN8940 in Lincoln County, Wyoming, and is requesting concurrence from the Wyoming State Historic Preservation Office (WY SHPO) on the NRC's updated determination of **no adverse effects** to historic properties for the Kemmerer Power Station Unit 1 construction permit application.

Background

TerraPower, LLC (TerraPower), on behalf of US SFR Owner, LLC, a wholly owned subsidiary of TerraPower, has applied to the NRC for a permit to construct the Natrium Reactor Plant in Kemmerer, Lincoln County, Wyoming (Kemmerer Power Station Unit 1). The NRC staff has determined that the issuance of this construction permit would be a Federal undertaking under Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA). Pursuant to paragraph 800.8(c) of Title 36 of the *Code of Federal Regulations* (36 CFR) Part 800, the regulations implementing NHPA Section 106, the NRC staff is using the National Environmental Policy Act of 1969, as amended, process to comply with NHPA Section 106 in lieu of the procedures set forth in 36 CFR 800.3 through 800.6. Accordingly, by letter dated June 12, 2024, the NRC staff initiated NHPA Section 106 consultation with the WY SHPO for this undertaking (WY SHPO project identifier DBI_WY_2022_280) (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML24114A090](#)).

Thereafter, by letter dated February 4, 2025 ([ML25034A123](#)), the NRC staff notified the WY SHPO that:

- (1) Based on a Class III cultural resources report for the Kemmerer Power Station Unit 1 site ([ML25049A292](#)) and consistent with 36 CFR 800.5, the NRC staff had determined that the undertaking (the proposed issuance of a construction permit for Kemmerer

Power Station Unit 1) would result in adverse effects on historic properties, specifically, sites 48LN740 and 48LN8940;

- (2) Pursuant to 36 CFR 800.6(a) and 36 CFR 800.8(c)(1)(v), the NRC staff was consulting with the WY SHPO, Tribes, and the Advisory Council on Historic Preservation (ACHP) to solicit input to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects of the undertaking on historic properties; and
- (3) If the adverse effects could not be sufficiently avoided or minimized, resolution of adverse effects would be considered pursuant to 36 CFR 800.6(b) and a memorandum of agreement (MOA) would be prepared consistent with 36 CFR 800.6(c) (see also 36 CFR 800.8(c)(4)).

In response ([ML25044A095](#)), the WY SHPO concurred that sites 48LN740 and 48LN8940 would be adversely affected by the undertaking as planned and recommended that the NRC staff develop an MOA, specifying the terms under which the adverse effects to the historic properties would be mitigated. By letter dated February 18, 2025 ([ML25049A244](#)), the ACHP separately notified the NRC that it did not believe its participation in the consultation to resolve adverse effects was needed.

In early March 2025, TerraPower notified the NRC of its intent to conduct additional archaeological testing to reinvestigate the site extent and eligibility and to determine whether adverse effects could be avoided at sites 48LN740 and 48LN8940 ([ML25064A005](#)). By letter dated March 24, 2025, the NRC requested WY SHPO concurrence on TerraPower's archaeological testing plan to further investigate sites 48LN740 and 48LN8940 ([ML25073A136](#)).

Results of Additional Archaeological Testing at Sites 48LN740 and 48LN8940

Additional archaeological testing was conducted at the Kemmerer Power Station Unit 1 site from April 28 to May 1, 2025, by TerraPower's cultural resources contractor, Tetra Tech, Inc., in accordance with "Cultural Resource Testing Plan for Sites 48LN740 and 48LN8940 as part of TerraPower, LLC's Natrium Demonstration Project, Lincoln County, Wyoming" (hereafter, the Testing Plan), dated March 2025 ([ML25195A006](#)). The purpose of this archaeological testing was to: (1) determine the elements of sites 48LN740 and 48LN8940 that contribute to the sites' eligibility for inclusion in the National Register of Historic Places; (2) determine if current planned construction of the proposed Kemmerer Power Station Unit 1 would adversely affect those elements; and (3) if so, either make changes to the planned construction to avoid those elements or develop the methodology to mitigate the potential adverse effect. Consistent with the Testing Plan, the archaeological testing utilized a combination of geophysical remote sensing and auger test probes within the 48LN740 site boundary and auger test probes within the 48LN8940 site boundary to fully define the horizontal and vertical extent of the subsurface cultural resource components identified at each historic property.

The "Cultural Resource Testing Results for Sites 48LN470 and 48LN8940 as part of TerraPower, LLC's Natrium Demonstration Project, Lincoln County, Wyoming" (hereafter, the Testing Report), is enclosed with this letter and is submitted in WyoTrack. Pursuant to Title 10 of the *Code of Federal Regulations* Section 2.390, "Public inspections, exemptions, requests for withholding," the Testing Report is withheld from public disclosure and may not be made publicly available. A publicly available version of this report, with sensitive archaeological resource information redacted, has been made publicly available at [ML25195A007](#).

The Testing Report documents, in detail within Section 4.0, Tetra Tech, Inc.'s archaeological auger test probe investigations at sites 48LN740 and 48LN8940 and summarizes the geophysical survey investigation conducted by Cannon Heritage Consultants at site 48LN740. At site 48LN740, the geophysical survey investigation identified evidence of potentially small, subsurface thermoremanent features that suggest the presence of small archaeological pit features within the contributing portion of the site identified in 2022. Extensive auger test probe investigation across the entire southeastern portion of 48LN740 (316 auger test probes in total with 34 positive for cultural materials) provided supporting evidence that the originally defined contributing area from 2022 should be expanded to the northeast and that a second contributing area located to the north should be added (see figures 7 and 9 in the Testing Report). At site 48LN8940, 34 auger test probes in total with one positive for cultural materials provided supporting evidence that the northeastern portion of the site is non-contributing to the overall eligibility of the historic property (see figure 8 in the Testing Report).

Revised Determination of Effect

Given the additional archaeological testing and survey at sites 48LN740 and 48LN8940, the NRC has determined that the proposed issuance of a construction permit for Kemmerer Power Station Unit 1 would have **no adverse effect** on the historic properties present at the Kemmerer Power Station Unit 1 site. The NRC has made this revised determination based on:

- The results of the additional archaeological testing as documented in the Testing Report.
- TerraPower's plan to modify the parking lot construction to avoid and buffer (with physical barriers) the contributing portions of site 48LN740.
- TerraPower's plan to move the utility corridor to avoid contributing portions of site 48LN8940.
- Additionally, TerraPower has committed to integrate the avoidance and management of site 48LN740 into its overall environmental management policies for the facility.

Next Steps

Consistent with 36 CFR 800.2(c)(2)(ii) and 36 CFR 800.8(c)(1), the NRC staff is ensuring that Indian Tribes that might attach religious and cultural significance to historic properties in the area of potential effects are afforded the opportunity to identify their concerns, provide advice on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, and participate in the resolution of any adverse effects on such properties. In addition to sharing this same information with consulting Indian Tribes, the NRC is also holding closed, virtual meetings for Indian Tribes on Wednesday, August 6, and Tuesday, August 12, 2025. The closed meetings will provide information on the additional archaeological testing results and TerraPower's plans to modify construction to avoid adverse effects to contributing portions of sites 48LN740 and 48LN8940.

On June 18, 2025, the NRC issued for public comment and continued consultation NUREG.2268, "Environmental Impact Statement for the Construction Permit Application for Kemmerer Power Station Unit 1, Draft Report for Comment" ([ML25148A356](#)). In that draft environmental impact statement (EIS), the NRC staff made the preliminary determination that the proposed issuance of a construction permit for Kemmerer Power Station Unit 1 would have the potential to cause adverse effects to sites 48LN740 and 48LN8940. Based on the additional archaeological testing results and TerraPower's plans to modify construction to avoid contributing areas of these sites, and pending consideration of consultation input received from your office and consulting Indian Tribes, the NRC plans to revise Section 3.7 in the final EIS to

reflect the updated finding of **no adverse effect** to historic properties. The NRC plans to publish the final EIS by December 31, 2025 ([ML25181A764](#)).

The NRC staff is requesting your review and concurrence on the updated determination of “no adverse effect” for 48LN740 and 48LN8940 by August 18, 2025. If you have any questions, comments, or concerns, please contact Sarah Lopas, Senior Environmental Project Manager, by phone at 301-415-6360 or via email at Sarah.Lopas@nrc.gov.

Sincerely,



Rikhoff, Jeffrey signing on behalf
of Rome, Michelle
on 07/15/25

Michelle Rome, Chief
Environmental Technical Review Branch 1
Division of Rulemaking, Environmental,
and Financial Support
Office of Nuclear Material Safety
and Safeguards

Docket No. 50-613

Enclosure:
Testing Report (Non-Public)

cc w/enclosure:

Brian Beadles
Deputy State Historic Preservation Officer
Wyoming State Historic Preservation Office
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Electronic WyoTrack

Gretchen Applegate
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cc w/o enclosure:
TerraPower Environmental Unit 1
via GovDelivery

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DATED: July 15, 2025

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***concurrence via e-mail**

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