



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

February 4, 2025

Honorable Boyd I. Gourneau, Chairman
Lower Brule Sioux Tribe
187 Oyate Circle
Lower Brule, SD 57548

SUBJECT: NOTIFICATION OF ADVERSE EFFECT FINDING FOR THE TERRAPOWER
KEMMERER POWER STATION UNIT 1 CONSTRUCTION PERMIT
REVIEW IN LINCOLN COUNTY, WYOMING (DOCKET NUMBER: 50-613)

Dear Chairman Boyd I. Gourneau:

The U.S. Nuclear Regulatory Commission (NRC) is soliciting input on aspects of a proposed licensing action in Kemmerer, Lincoln County, Wyoming and providing notification about an upcoming Tribal information workshop. The NRC staff is reviewing a construction permit (CP) application submitted by TerraPower, LLC (TerraPower), on behalf of US SFR Owner, LLC, a wholly owned subsidiary of TerraPower, for the proposed Kemmerer Power Station Unit 1. The application was submitted to the NRC by letter dated March 28, 2024 (Agencywide Documents Access and Management System (ADAMS) Package [ML24088A059](#)), pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities." An environmental report was included as part of the application ([ML24088A072](#)). These documents may be obtained online in the NRC's ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS 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. The application and additional information is also available on the NRC's public website at <https://www.nrc.gov/reactors/new-reactors/advanced/who-were-working-with/applicant-projects/terrapower.html>.

The purpose of this letter is three-fold:

- Solicit input on the adequacy of a Class III cultural resources report and notify you of NRC's determination that the proposed action would result in adverse effects on historic properties;
- Provide information on the preparation of a memorandum of agreement (MOA) to resolve adverse effects; and
- Provide notification about an upcoming Tribal information workshop planned for February 25, 2025.

All activities described within this letter are expected to be conducted within the [set schedule](#) for the Kemmerer Power Station Unit 1 CP review and are consistent with the NRC mission, which is to protect public health and safety and advance the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and

radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment.

Project Overview

The proposed facility, if permitted, would be constructed within the Kemmerer Power Station Unit 1 site in Kemmerer, Lincoln County, Wyoming (see Enclosure 1). As part of its review, the NRC staff is preparing an environmental impact statement (EIS) on the proposed action of whether to issue a CP for the facility, as provided by 10 CFR 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," the NRC's environmental protection regulations that implement the National Environmental Policy Act of 1969, as amended (NEPA). In accordance with Title 36 of the *Code of Federal Regulations* (36 CFR) Part 800, "Protection of Historic Properties," Paragraph 800.8(c), the NRC staff is using the NEPA process to comply with Section 106 of the National Historic Preservation Act of 1966, as amended, in lieu of the procedures set forth in 36 CFR 800.3 through 800.6. The EIS will include identification of historic and cultural resources and historic properties, an analysis of potential effects of the proposed action, including potential effects on historic and cultural resources and historic properties, and the NRC staff's determination. The U.S. Department of Energy (DOE) Office of Clean Energy Demonstrations (OCED) serves as a cooperating agency for the environmental review ([ML23213A147](#)), and the NRC is the lead Federal agency for the environmental review.

As described by correspondence sent in June 2024 ([ML24114A087](#) and [ML24114A079](#)), the proposed Kemmerer Power Station Unit 1 would be located west of the North Fork Little Muddy Creek in Lincoln County, Wyoming. The proposed site is approximately 3.8 miles southeast of the Naughton Power Plant and approximately 3 miles south of the City of Kemmerer, Wyoming. The site comprises approximately 290 acres and is located on undeveloped land. TerraPower has proposed the construction of transmission and water supply lines approximately 6 miles in length to support Kemmerer Power Station Unit 1. The facility is planned to be a pool-type reactor that uses liquid sodium as the coolant instead of water.

The NRC staff has defined the direct and indirect area of potential effects (APE) for this CP licensing action as the Kemmerer Power Station Unit 1 site and its immediate environs and the proposed transmission and water supply lines, which may be directly or indirectly impacted by land-disturbing and building activities associated with the construction of the proposed facility. Enclosure 1 is a map of the APE.

Class III Report and Determination of Adverse Effects

Consistent with 36 CFR 800.2(c)(2)(ii) and 36 CFR 800.8(c)(1), the NRC is providing Indian Tribes that might attach religious and cultural significance to historic properties in the APE an 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.

As documented by TerraPower in its environmental report and supported by a recently completed Class III Cultural Resources Report (Enclosure 2), the currently planned construction activities at Kemmerer Power Station Unit 1, including for the transmission and water supply lines, would have adverse effects on two historic properties: 48LN740 and 48LN8940. As noted below, these adverse impacts will be mitigated through the development of an MOA.

48LN740. This historic property is a multi-component prehistoric and historic-era artifact scatter with both surface and sub-surface contexts (see figure 6 of Enclosure 2). Identified artifacts include Middle Archaic to Late Prehistoric projectile points, worked stone tools and debitage, heat-altered rocks, and various metal and glass historic items. The site is eligible for the National Register of Historic Places (NRHP) under Criterion D for its information potential. Construction of Kemmerer Power Station Unit 1 will have an adverse effect on 48LN740 because this area will be graded, disturbed, and modified for the construction of a parking lot and other associated structures.

48LN8940. This historic property is a multi-component prehistoric and historic-era artifact scatter with both surface and sub-surface contexts (see figure 31 of Enclosure 2). Identified artifacts include one Late Archaic and one non-diagnostic projectile point, other worked stone tools and debitage, and various metal and glass historic items. The site is eligible for the NRHP under Criterion D for its information potential. Construction of the transmission and water supply lines will have an adverse effect on 48LN8940 because this area will be graded, disturbed, and modified for the construction and installation of these utilities.

Pursuant to 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," Enclosure 2, the Class III Cultural Resources Report, is withheld from public disclosure and may not be made publicly available. An electronic copy of the Class III Cultural Resources Report has been made available to the identified cultural resources contact for your Tribe. However, if you would like to receive a paper copy of the Class III Cultural Resources Report, please reach out to Sarah Lopas of my staff using the contact information provided at the end of this letter.

Based on the above and consistent with 36 CFR 800.5, the NRC has made a finding of Adverse Effect for this undertaking. Therefore, pursuant to 36 CFR 800.6(a) and 36 CFR 800.8(c)(1)(v), the NRC is consulting with you, other Tribes, the Wyoming State Historic Preservation Officer (WY SHPO), 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.

Draft Memorandum of Agreement

If the adverse impacts cannot be sufficiently avoided or minimized, resolution of adverse effects will be considered pursuant to 36 CFR 800.6(b) and an MOA will be prepared consistent with 36 CFR 800.6(c) (see also 36 CFR 800.8(c)(4)). The NRC staff is preparing a draft MOA for consultation with the WY SHPO, Tribes, ACHP (if participating), and DOE OCED to resolve adverse effects on 48LN740 and 48LN8940. The NRC staff intends to share a preliminary draft MOA with consulting parties in March 2025.

Upcoming Tribal Information Workshop

The NRC staff has scheduled a virtual workshop for consulting Tribes on February 25, 2025, 2:00 p.m. to 5:00 p.m. Eastern Time, to provide information on Kemmerer Power Station Unit 1, discuss the undertaking and potential impacts to historic and cultural resources, and solicit Tribal input on the MOA process and any other concerns related to the undertaking. The NRC staff has coordinated the workshop with the identified cultural resources contact for your Tribe, however, if you need additional information regarding the workshop or would like to invite other Tribal representatives to the workshop, please contact Sarah Lopas of my staff, using the contact information provided below.

The NRC staff invites you to submit any comments that you may have on the enclosed cultural resources report, the NRC staff's finding of Adverse Effect, and the development of an MOA. 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; or Patricia Vokoun, Environmental Project Manager, by phone at 301-415-3470 or via email at Patricia.Vokoun@nrc.gov.

Sincerely,



Signed by Regan, Christopher
on 02/04/25

Christopher M. Regan, Director
Division of Rulemaking, Environmental,
and Financial Support
Office of Nuclear Material Safety
and Safeguards

Docket No. 50-613

Enclosures:

1. APE map
2. Class III Cultural Resources Report
(NON-PUBLIC)

cc w/ enclosures:

Boyd Gourneau, Director
Cultural Resources
and Public Information Office
boydgourneau@yahoo.com

Gretchen Applegate
gretchen.applegate@hq.doe.gov

Amy Shanahan
amy.shanahan@hq.doe.gov

cc w/o Enclosure 2:
TerraPower Environmental Unit 1
via GovDelivery

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DATED: February 4, 2025

DISTRIBUTION (w/o Enclosure 2)

PUBLIC

- P. Vokoun, NMSS
- W. Burris, NMSS
- M. Nagel, NMSS
- M. Rome, NMSS
- T. Smith, NMSS
- D. Barnhurst, NMSS
- C. Regan, NMSS
- N. Morgan, NMSS
- M.A. Spencer, OGC
- M. Sutton, NRR
- J. Borromeo, NRR
- R. Alexander, RIV
- S. Burnell, HQ/OPA
- A. Moreno, OCA
- A Miracle, PNNL (Ann.Miracle@pnnl.gov)
- J. Jackson, PNNL (Jim.Jackson@pnnl.gov)
- K. Kerwin, DOE (Kristen.Kerwin@hq.doe.gov)
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ADAMS Package Accession No: ML24358A177

***concurrence via e-mail**

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DATE	1/7/2025	01/07/2025	12/23/2024	1/24/2025
OFFICE	BC:REFS	BC:DANU	OGC (NLO)	DD:REFS
NAME	DBarnhurst	JBorromeo	JWachutka*	CRegan
DATE	1/24/2025	1/27/2025	1/27/2025	2/4/2025

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