



## National Environmental Policy Act (NEPA) Determination

<b>Recipient:</b>	TerraPower
<b>State:</b>	North Carolina
<b>Project Title:</b>	Sodium Fuel Fabrication Facility, Site Characterization and Environmental Monitoring Activities
<b>Funding Opportunity Announcement Number:</b>	DE-FOA-0002271
<b>Award Number:</b>	DE-NE0009054
<b>OCED NEPA Control Number:</b>	OCED-09054-001-CX

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:

**CX, EA, EIS Appendix, Number, and Description: B3.1 Site characterization and environmental monitoring:** Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind

energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

**Proposed Action:** In October 2020, the U.S. Department of Energy's (DOE) Advanced Reactor Demonstration Program entered into a cooperative agreement with TerraPower for the development and demonstration for a new sodium cooled fast reactor that will be in Kemmerer, WY. The scope of the cooperative agreement includes, among other elements, the development and operation of the Sodium Fuel Fabrication Facility (FFF). Authorization of federal funding for project activities is contingent upon a NEPA review. Currently, DOE's Office of Clean Energy Demonstrations (OCED) is proposing to provide funding to TerraPower, under the existing cooperative agreement, for site characterization and environmental monitoring in support of the Sodium FFF. The FFF will be located on the GE Nuclear Facility controlled access area of the GE Energy site in Wilmington, NC. GE Hitachi Nuclear Energy is a co-developer in the Sodium technology. The CX would cover the site characterization and environmental monitoring activities including surveys of existing utility lines and subsurface investigation to provide additional geotechnical engineering data to support facility design and construction. Geotechnical testing and borings would include one Seismic Cone Penetrometer Test sounding; four cone penetrometer test soundings; three standard penetration test borings; five Kessler dynamic cone penetrometers; soil samples will be collected from each test for visual inspection and laboratory testing; site survey will be conducted to document the locations of all installed borings and field tests; standing water depth measurement will be obtained in the open boreholes at the completion of drilling (aero-hour) and at 24 hours after the completion of the boring/sounding when possible; and test holes will be abandoned in accordance with North Carolina Administrative Code Title 15A, Subchapter 2C, Section .0100 (Well Construction Standards) and backfilled with bentonite pellets to just below ground surface. No additional site characterization or environmental monitoring activities are planned at this time. DOE has considered potential impacts on resources, including those of an ecological, historical, and cultural nature. DOE does not anticipate adverse impacts on these resources. The project site was included in a 1600-acre archaeological survey and consultation with North Carolina (NC) State Historic Preservation Office (SHPO) in 2008 and SHPO determined that the GNF-A facilities would not affect any historic buildings or archaeological resources eligible for inclusion on the National Register of Historic Places. The proposed activities will not increase or alter the footprint therefore there are no further obligations under the National Historic Preservation Act Section 106 process. In 2008, informal consultation with Raleigh Ecological Services, U.S. Fish and Wildlife Service (USFWS) who concurred with the determination of "no effect" for 22 threatened and endangered (T&E) species and "may affect not likely to adversely affect" for 9 T&E species. USFWS stated that surveys may be required for the red-cockaded woodpecker if the project would remove pine trees greater than 30 years old. Tree removal would not occur under the proposed activities. In 2023, DOE requested an official T&E species list from the USFWS's Information for Planning and Consultation (IPAC) which included one additional federally threatened species that hadn't been previously consulted on, the Northern Long-eared Bat. DOE completed the streamlined consultation process for the NLEB and determined that the project would have "no effect" on this species. Wetlands surveys were completed and delineated for the 1600-acre site in 2007 and no waters of the U.S. including wetlands were found within the proposed project site. DOE would complete the NEPA process for preconstruction related activities for the Sodium FFF when sufficient information is available to conduct a meaningful review.

**Terms and Conditions:** This categorical exclusion applies to only those activities associated with the site characterization and environmental monitoring activities at the proposed Natrium FFF location in North Carolina. Any changes to the project activities or location are subject to additional NEPA review by DOE and are not authorized for federal funding unless and until the Contracting Officer provides written authorization on those additions or modifications.

**FOR CATEGORICAL EXCLUSIONS:**

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not:

- (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders,
- (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities,
- (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases,
- (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B (4) of 10 CFR Part 1021, Subpart D, Appendix B, or
- (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B (5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal. The proposed action has not been segmented to meet the definition of a categorical exclusion.

This proposal is not connected to other actions with potentially significant impacts (40 CFR 1501.9(e)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.1(g)(3)) and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

DOE has determined that work to be carried out outside of the United States, its territories and possessions is exempt from further review pursuant to Section 5.1.1 of the DOE Final Guidelines for Implementation of Executive Order 12114; "Environmental Effects Abroad of Major Federal Actions."

The proposed action is categorically excluded from further NEPA review.

A portion of the proposed action is categorically excluded from further NEPA review.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

OCED NEPA Compliance Officer:

Date:

**OCED PROJECT MANAGEMENT DIVISION DIRECTOR**

Project Management Division Director review required.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NEPA COMPLIANCE OFFICER:**

Project Management Division Director:

Date:

**OCED DEPUTY DIRECTOR**

OCED Deputy Director review required.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NEPA COMPLIANCE OFFICER  
AND PROJECT MANAGEMENT DIVISION DIRECTOR:**

OCED Deputy Director:

Date: