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| SECTION A. Project Title: ANTARES Commercial Reactor Site Characterization and Pre-Construction Planning R1 |
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| SECTION B. Project Description and Purpose: |
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Revision 1:

This Environmental Compliance Permit (ECP) covers planning and site characterization activities to support the potential future deployment of the Antares R1 Micro reactor at the Idaho National Laboratory (INL). The R1 reactor is a rapidly deployable microreactor created with critical infrastructure resilience in mind and is intended to operate in remote and challenging environments.

Activities included in this scope are limited to technical analysis, engineering support, and field investigations necessary to inform design and siting decisions.

Covered activities include:

- Technical support and analysis related to:
 - Reactor and facility siting
 - Design and selection of materials for nuclear system applications.
 - Fuel fabrication and support with nuclear fuel vendors.
 - Development of the Antares facility safety analyses
 - Design and facilities for irradiation testing of novel reactor systems required for regulatory licensing.
- Design and development of the Antares facility and reactor experiment(s).
- Modeling and simulation of advanced nuclear systems using the High Performance Computing resources maintained by INL.
- Site characterization, including:
 - Geotechnical drilling to evaluate subsurface conditions
 - Cultural, historical, and biological resource surveys
 - Surface clearing and grubbing to facilitate access for drilling and surveys
 - Identification and evaluation of access routes
- Development of construction specification(s) for construction activities and operations plans.

Under the proposed action, field activities will occur within previously defined candidate siting areas. The anticipated disturbance footprint is approximately 3 acres (see figures 1 & 2). Siting areas were developed to be larger than needed to ensure flexibility.

No construction or operation of the reactor is included in the scope of this ECP. Any activities that are not addressed in this ECP, including those associated with reactor construction, commissioning, operation, or D&D will require separate NEPA review.

Figure 1, Rev. 1 West CFA Siting Location

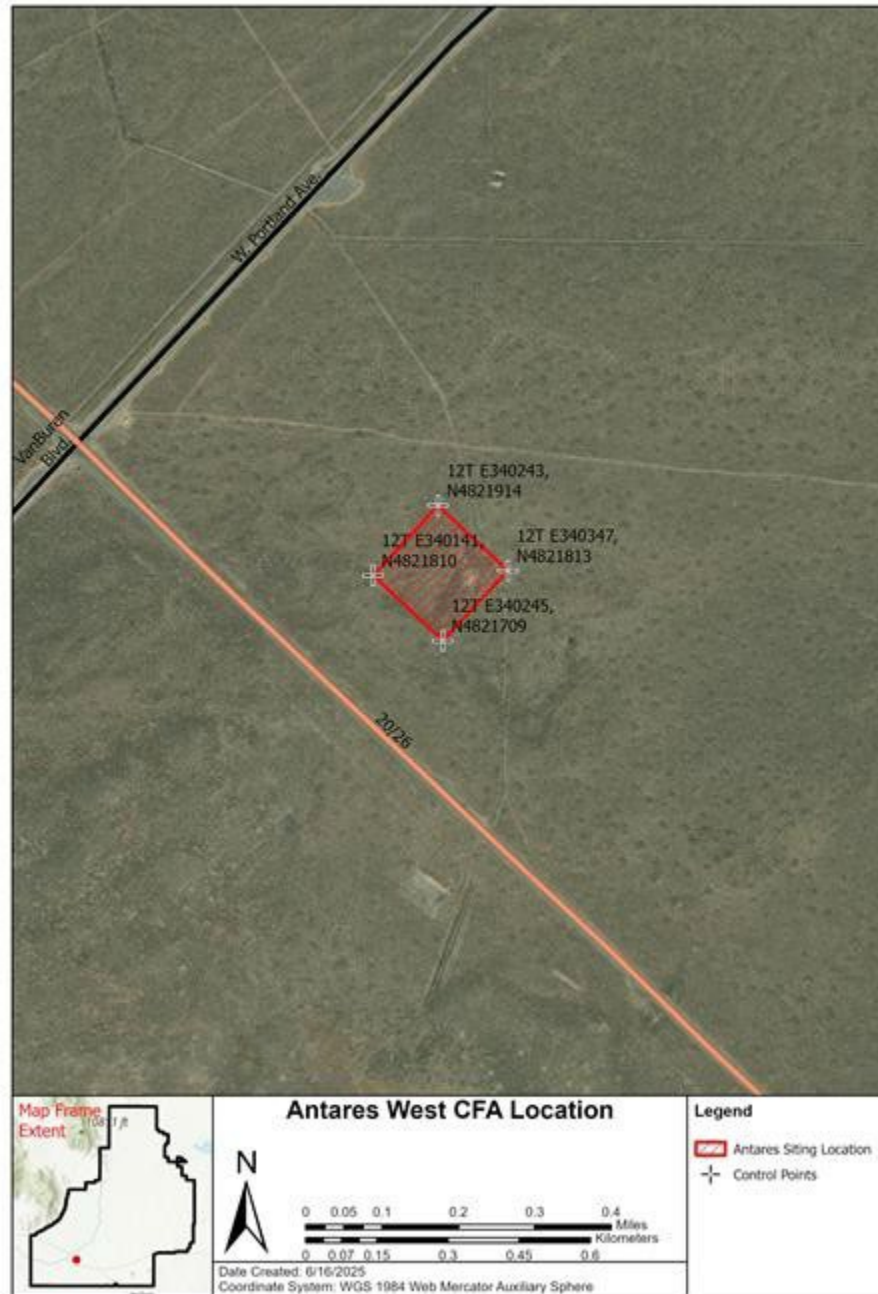


Figure 2, Rev. 1 South ARA Siting Location



Original ECP:

The purpose of this Umbrella is to provide a platform for public-private partnership. There is no funding associated with this Umbrella. This Environmental Compliance Permit (ECP) is for the broad scope of the Umbrella. Each Project Task Statement (PTS) will require a separate environmental review to assess the environmental impacts to ensure the PTS is within the Umbrella scope. If the PTS scope is outside of the original Umbrella ECP, a revision to the ECP will be required.

This project will be conducted in EROB. No waste is expected to be generated as part of this project.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Field activities have the potential to generate fugitive dust.

Discharging to Surface-, Storm-, or Ground Water

NA

Disturbing Cultural or Biological Resources

There is the potential for this work to impact vegetation and for project personnel to interact with various wildlife species. A Biological Resource Review will be arranged within two weeks prior to the initiation of any activities that might disturb soil or vegetation and again following completion of project activities. A nesting bird survey is included with the Biological Resource Review for actions occurring between April 1 - October 1 per compliance with the Migratory Bird Treaty Act. Bat surveys are also included with the Biological Resource Review in accordance with the INL Bat Protection Plan.

Cultural: A Section 106 review was completed under CRMO project number BEA-25-064. It is not anticipated that the proposed activities would result in an adverse effect. Please refer to Holds Points within the ECP.

Generating and Managing Waste

When wastes are generated, how they are disposed can adversely affect the environment. Managing wastes appropriately and responsibly and implementing recycling or reuse practices, where feasible, during project activities can reduce the potential impact on the environment.

Releasing Contaminants

When chemicals are used during the project there is the potential for spills that could impact the environment (air, water, soil).

Using, Reusing, and Conserving Natural Resources

Project activities have the opportunity to reduce the impact on our natural resources by recycling or diverting materials from disposal in the landfill.

SECTION D. Determine Recommended Level of Environmental Review, Identify Reference(s), and State Justification: Identify the applicable categorical exclusion from 10 Code of Federal Regulation (CFR) 1021, Appendix B, give the appropriate justification, and the approval date.

References: B3.1 "Site characterization and environmental monitoring"

For the DOE procedures regarding categorical exclusions, including the full text of each categorical exclusion, see 10 CFR 1021.102 and Appendix B to 10 CFR Part 1021, and also Section 5.4 (Applying one or more categorical exclusions to a proposal) and Appendices B and C of DOE's National Environmental Policy Act Implementing Procedures (June 30, 2025). Requirements and guidance in 10 CFR 1021.102 and DOE's NEPA Implementing Procedures: (See full text in regulation and in Implementing Procedures)

The proposal fits within a class of actions that is listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE's NEPA Implementing Procedures (June 30, 2025). To fit within the classes of actions listed in Appendix B to 10 CFR Part 1021, or Appendix B of DOE's NEPA Implementing Procedures, a proposal must satisfy the conditions that are integral elements of the classes of actions in Appendix B of both 10 CFR Part 1021 and DOE's NEPA Implementing Procedures.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal. DOE or an applicant may modify the proposal to avoid reasonably foreseeable adverse significant effects such that the categorical exclusion would apply. The proposal has not been segmented to meet the definition of a categorical exclusion. [Note: For proposals that fit within the categorical exclusions listed in Appendix C of DOE's NEPA Implementing Procedures, see DOE's notice of adoption for the subject Appendix C categorical exclusion for additional considerations. DOE notices of adoption for other agency categorical exclusions may be found on DOE's Section 109 webpage.]

Based on my review of the proposed action, as NEPA Compliance Officer, I have determined that the proposed action fits within the specified class(es) of action, the other requirements and guidance set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

DOE-ID NEPA CX DETERMINATION
Idaho National Laboratory

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Approved by Jason L Anderson, DOE-ID NEPA Compliance Officer on: 6/26/2025