SECTION A. Project Title: Aalo Site Characterization R1

SECTION B. Project Description and Purpose:

REVISION 1

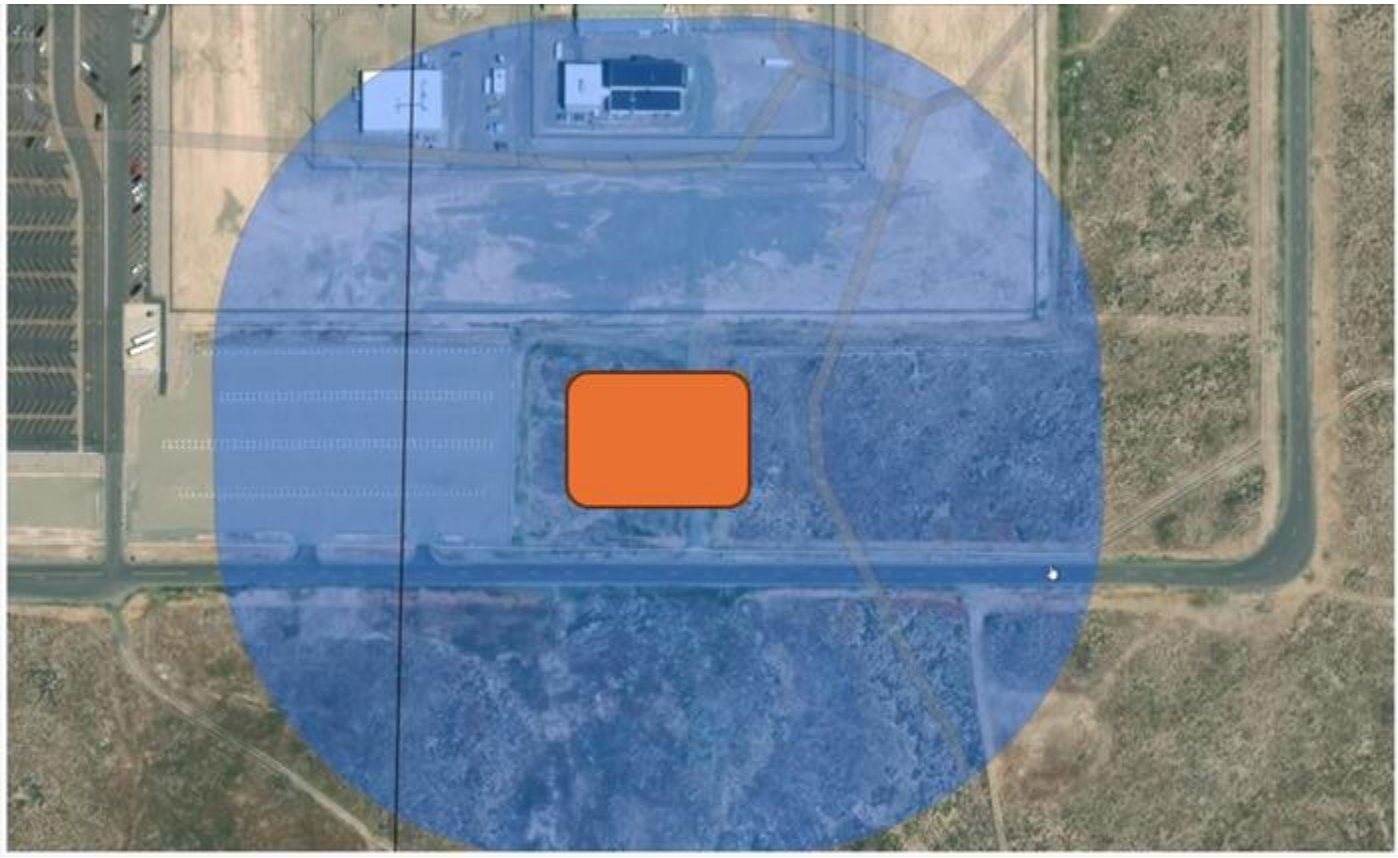
The original scope of work to be conducted includes cultural resource, historical preservation, and biological surveys of the site. The new scope includes borehole drilling and ground penetrations, soil testing, ground disturbance and excavation, weather measurements, monitoring well installation, mowing, ground leveling, and other survey means to facilitate the design of the Aalo-X facility. A drill rig will be used to drill/bore 10-50 boreholes (Figure 1 - orange area). Borehole material will be placed back within the drilled holes. Water may be used for dust suppression during the drilling.

The project will purchase and install a new seismic station within the orange area shown in Figure 1. This new seismic station includes a "seismic vault" consisting of a 4-foot diameter culvert buried a few inches into the ground. Concrete will be poured on the bottom of the vault to give a solid and flat bottom. Various instruments (e.g., seismometer, accelerometer and/or infrasound sensor) will then be fastened to the concrete pad. A digitizer, batteries and other electrical components will also be housed within the culvert.

In addition to the culvert, an 8-foot mast will be installed to support a solar panel, radios and antenna to supply communication abilities with the instruments. Data collected will be transmitted to the Seismic Monitoring Program data collection server in Idaho Falls.

Waste may include personal protective equipment.

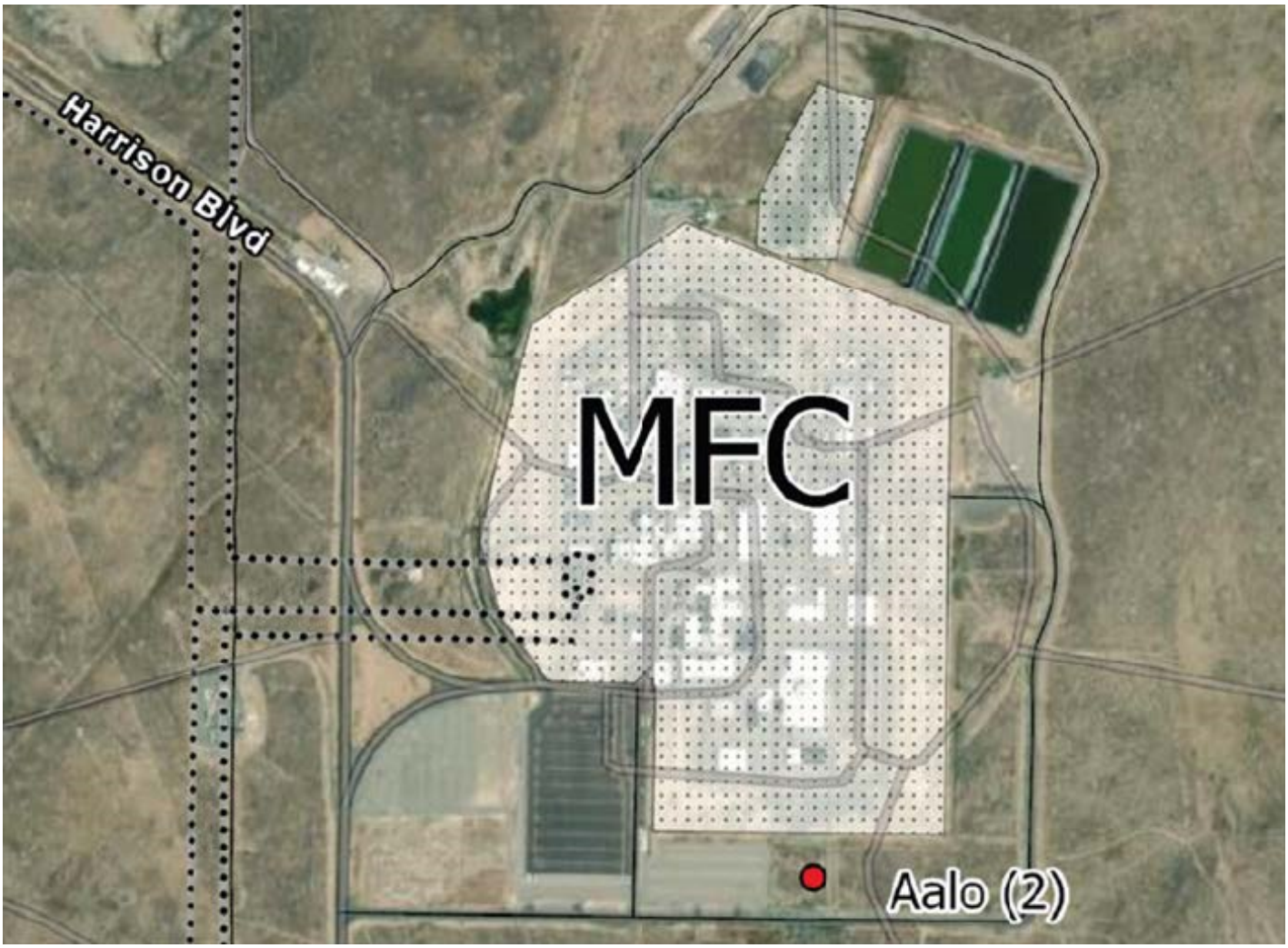
Figure 1: Borehole and seismic station location (orange area)



Original ECP

Aalo Atomics is seeking to site a test small modular reactor at Idaho National Laboratory in support of advancing commercial development globally. The Strategic Land Use Program, in coordination with the Department of Energy – Idaho Field Office, has tentatively identified a location for initial evaluation. See Figure 1 for the proposed Aalo reactor site location (1 acre in total size), South of the MFC fenced boundary.

Immediate needs for site characterization include cultural and biological resource surveys. This work will be preliminary to aid in determination of the preferred site and location for siting the test reactor on that site. Additional site characterization activities will require relevant approvals, this SOW will be updated once those approvals are received.



SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Project has the potential to generate fugitive dust.

Discharging to Surface-, Storm-, or Ground Water

No storm water concerns, this project is located outside of the boundary of the storm water corridor and therefore is not considered to have reasonable potential to discharge to “Waters of the U.S.”.

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 project-specific Section 106 review was completed under CRMO project number (BEA-24-071 R1) and resulted in No Historic Properties Affected. Please refer to Holds Points and Project Specific Instructions.

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 description indicates materials will need to be purchased or used that require sourcing materials from the environment. Being conscientious about the types of materials used could reduce the impact to our natural resources.

Environmental Justice

N/A

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.

For Categorical Exclusions (CXs), the proposed action must not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, or similar requirements of Department of Energy (DOE) or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment or facilities; (3) disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources (see 10 CFR 1021). In addition, no extraordinary circumstances related to the proposal exist that would affect the significance of the action. In addition, the action is not “connected” to other action actions (40 CFR 1508.25(a)(1) and is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1608.27(b)(7)).

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

Justification: Based on the purpose and need and description of the proposed action and potential environmental impacts, the proposed action fits within the class of actions that is listed in Appendix B CX B3.1. There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal (10 CFR 1021.410(b)(2)). The proposed action has not been segmented to meet the definition of a categorical exclusion (10 CFR 1021.410(b)(3)). This proposal is not connected to other actions with potentially significant impacts, is not related to other actions with individually insignificant but cumulatively significant impacts, and is not precluded by 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement (10 CFR 1021.410(b)(3)).

Authorizing the proposed action will not (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive orders; (2) require siting of new facilities or expansion of existing facilities; (3) disturb hazardous substances, pollutants, or contaminants; (4) adversely affect environmentally sensitive resources; or (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species.

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: 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; Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools);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; Aquifer and underground reservoir response testing; Installation and operation of ambient air monitoring equipment; 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);Sampling and characterization of water effluents, air emissions, or solid waste streams; Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources);Sampling of flora or fauna; and Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act) ☐ Yes ☒ No

Approved by Robert Douglas Herzog, DOE-ID NEPA Compliance Officer on: 4/28/2025