

Project Title: Aalo Site Limited Construction Activities R2

Project Description and Purpose:

Revision 2

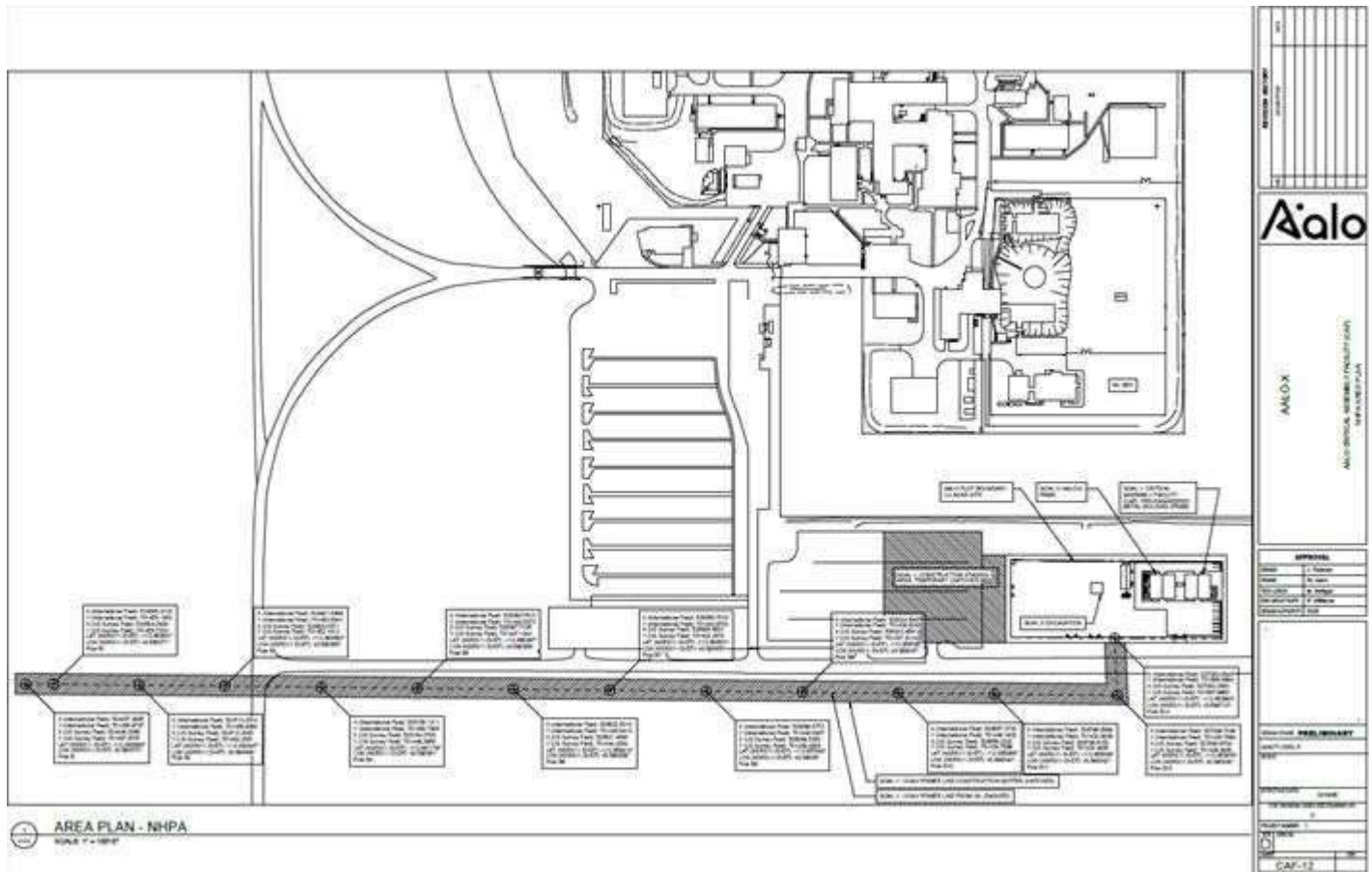
Power pole installation and tie-in to DOE power

INL Power Group will be installing a transformer to drop power from 138 kV to 13.8 kV from INL substation. Aalo will then install 14 power poles that tie into INL's 13.8 kV transformer that span 2,648', running west to east, to Aalo's 2.2 acre site (please see attached map). Aalo will install a 480V transformer to distribute power throughout the Aalo site.

- Power poles will be 55' tall with 7'6" buried
- Electrical services supplied from INL 13.8 kV transformer
- Design will be stamped by professional electrical engineer
- Transmission lines will be installed by certified linemen

No other utilities will be required for CAF except for electricity which will be covered by the transmission lines we will be running to the site. There will also be no chemical treatment in the steam system.

Aalo-X Plan 1:



Revision 1:

This revision is based on Aalo further defining areas needed to perform limited construction activities. The limited construction activities will remain the same as those listed in the original ECP. The areas that have been further defined for review are included in the image below and will be reviewed based on the original defined limited construction activities. One area is the parking lot to include a small portion extending to the east into undeveloped land (red shaded square), which may only be used for staging equipment, equipment laydown, and access in support of the limited construction activities. The second area is adjacent to the first area to the east (green hashed rectangle). This revision also includes the addition of approximately 1 acre to the east of the original 1 acre site (Aalo-X site will occupy approximately 2.2 acres total) for the construction of the Critical Assembly Facility (CAF), which shall provide a code-compliant building shell and site infrastructure for future installation of the Aalo-X critical assembly and associated systems. The building will be a single-story pre-engineered metal building nominally 60ft x 60ft x 60ft. It

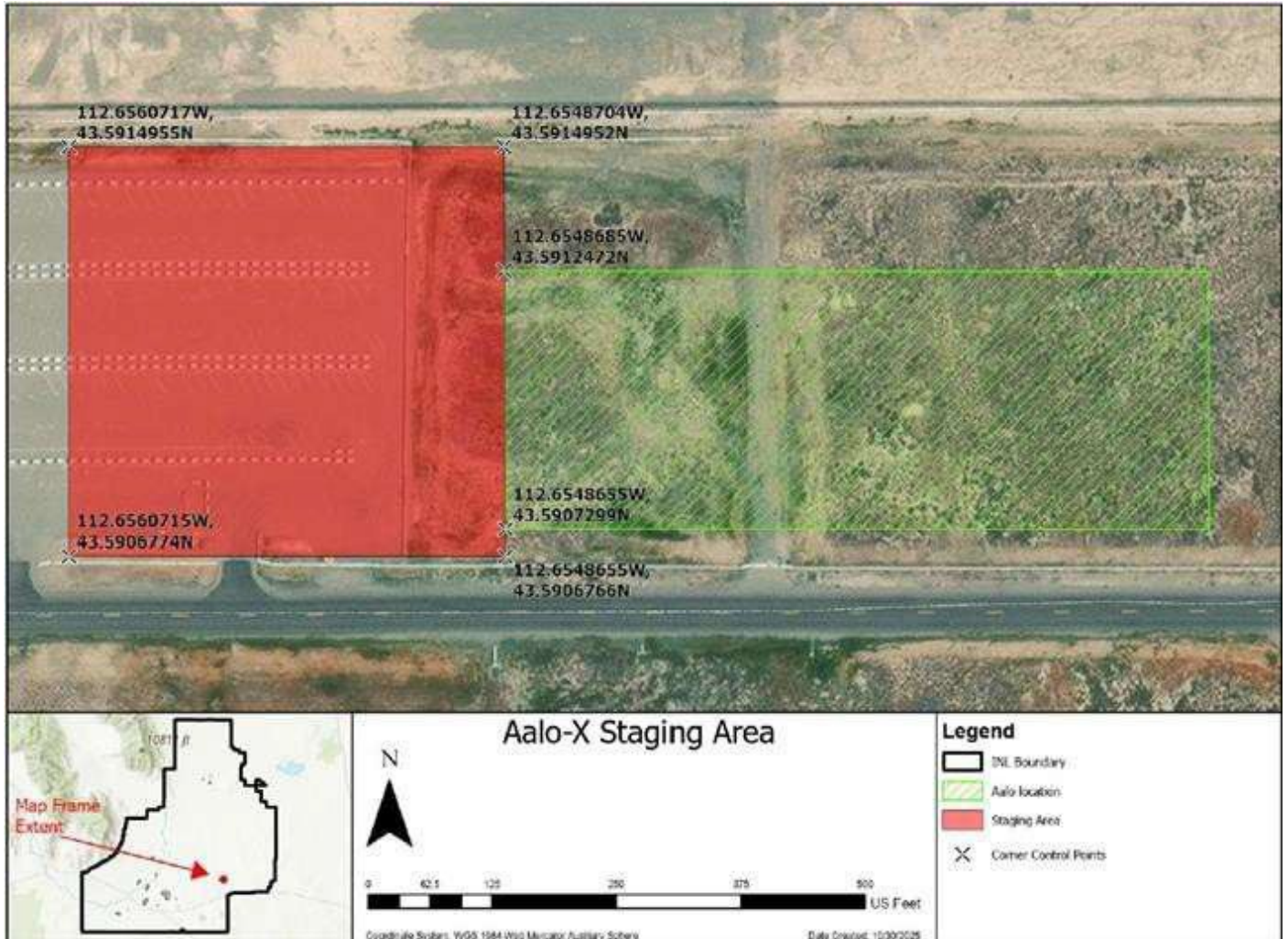
U.S. Department of Energy-Idaho Operations Office
National Environmental Policy Act
Categorical Exclusion Determination

Categorical Exclusion Posting No.: DOE-ID-INL-25-030 R2

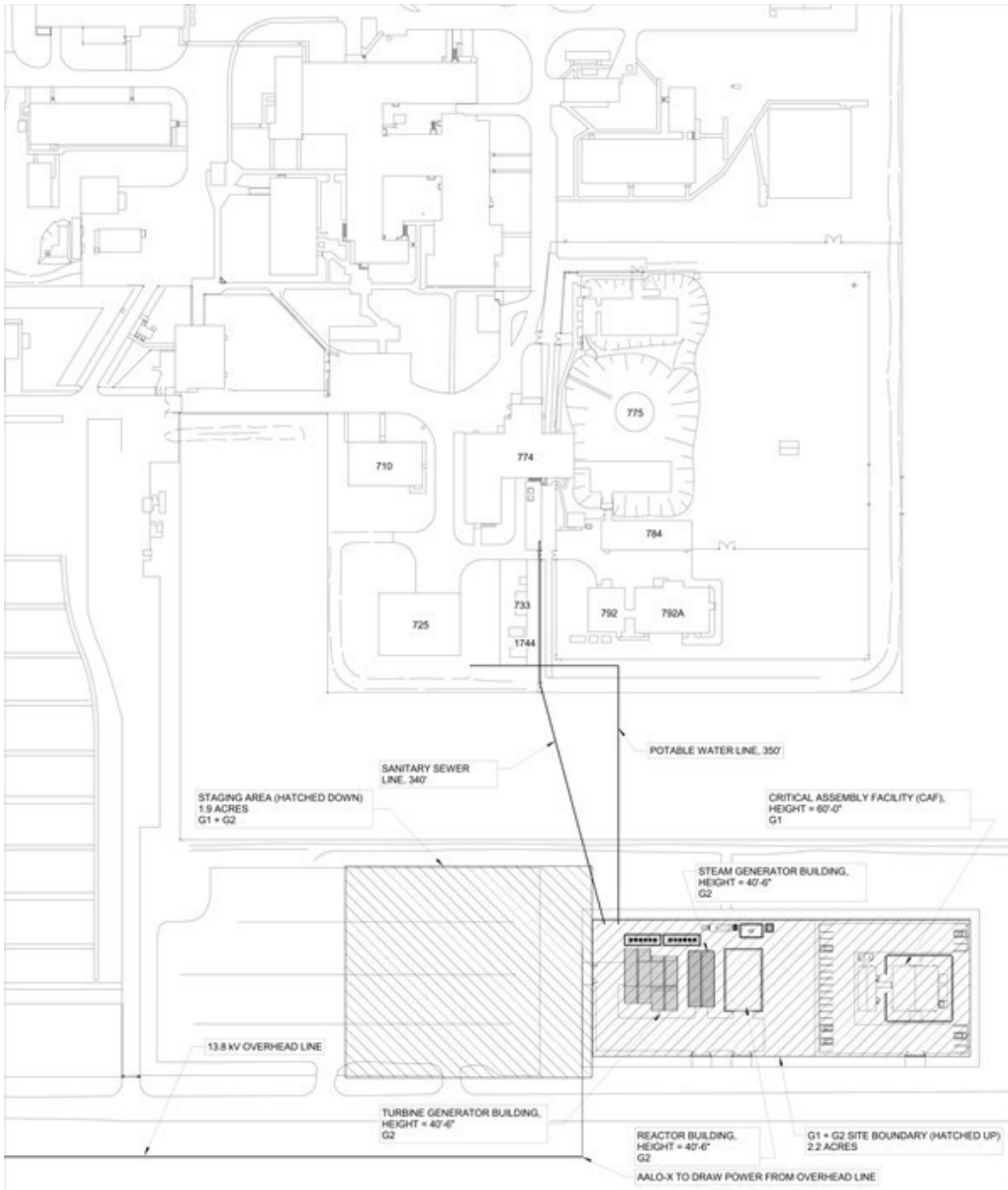
will include the building envelope, foundations, utilities, life-safety systems, 1200sqft, mobile office trailer adjacent to the CAF, and the critical assembly structure which houses the critical assembly and provides personnel access to the top of the assembly. Attachment 2 below shows the location of CAF site in relation to Materials and Fuels Complex. Attachment 3 shows a closer view of the CAF and areas outlined into Attachment 1.

The water, sewer, and electrical lines depicted in Attachments 1 and 2 are not apart of this analysis.

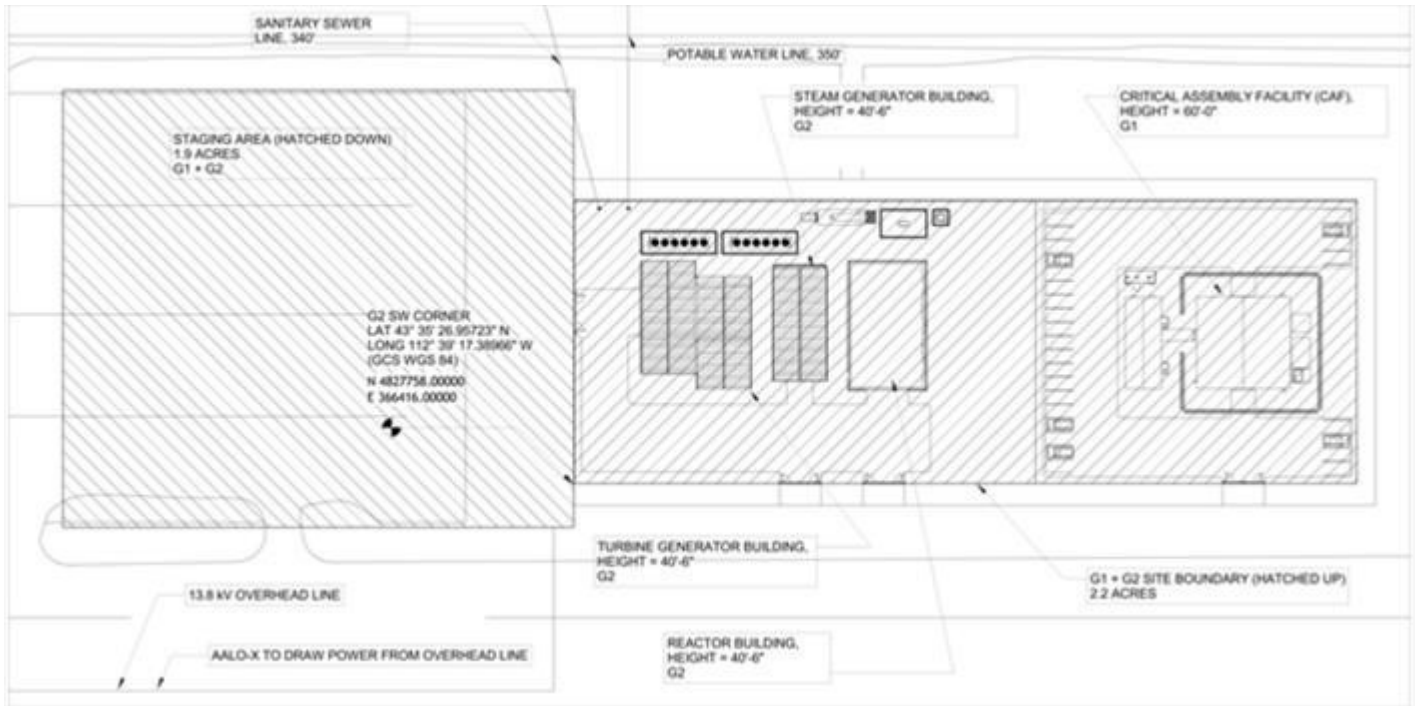
Attachment 1:



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Original ECP:

The U.S. Department of Energy, Idaho Operations Office is proposing to allow Aalo Atomics Inc. (Aalo) to site the Aalo-X facility and reactor experiment at the Idaho National Laboratory near the Materials and Fuels Complex (MFC) to perform experiments that would de-risk Aalo's development and commercialization of its next-generation advanced nuclear technologies.

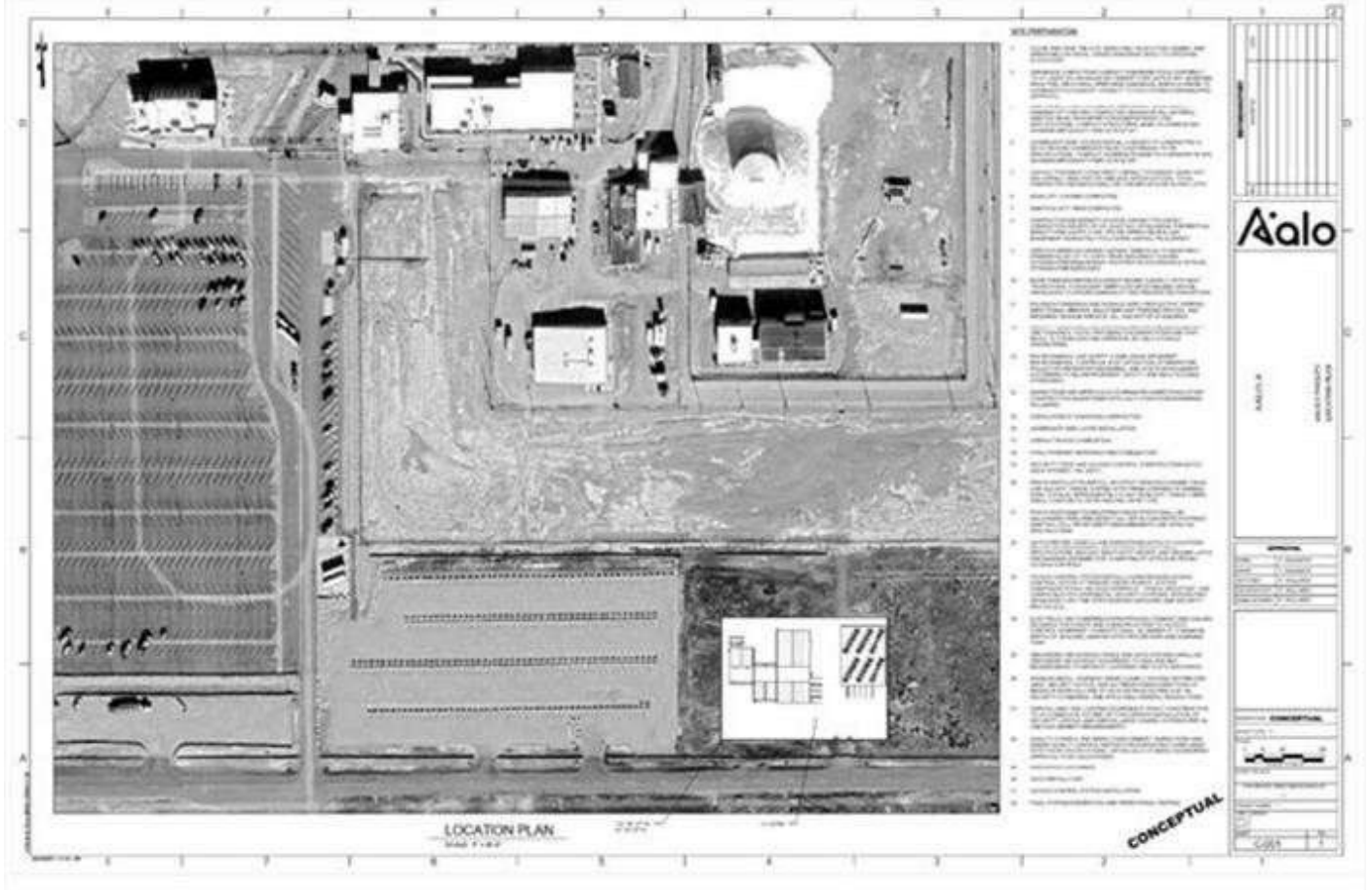
The Aalo-X site will occupy approximately 1 acre next to the MFC site and may require up to 5 acres for construction activities.

The scope of this ECP is limited to the following Aalo-X experiment construction activities:

- Site Improvements (Fencing, grading, concrete pad installation, foundation pours for non-nuclear buildings)
- Construction of Steam Generator Building and Turbine Building
- Construction of Concrete Equipment Pads
- Excavations and installation of underground utilities and drainage systems
- Creating of laydown areas for future construction activities
- Temporary building or trailer installation to support construction and logistics
- Excavate and construct the reactor building basement and all related cast in place elements

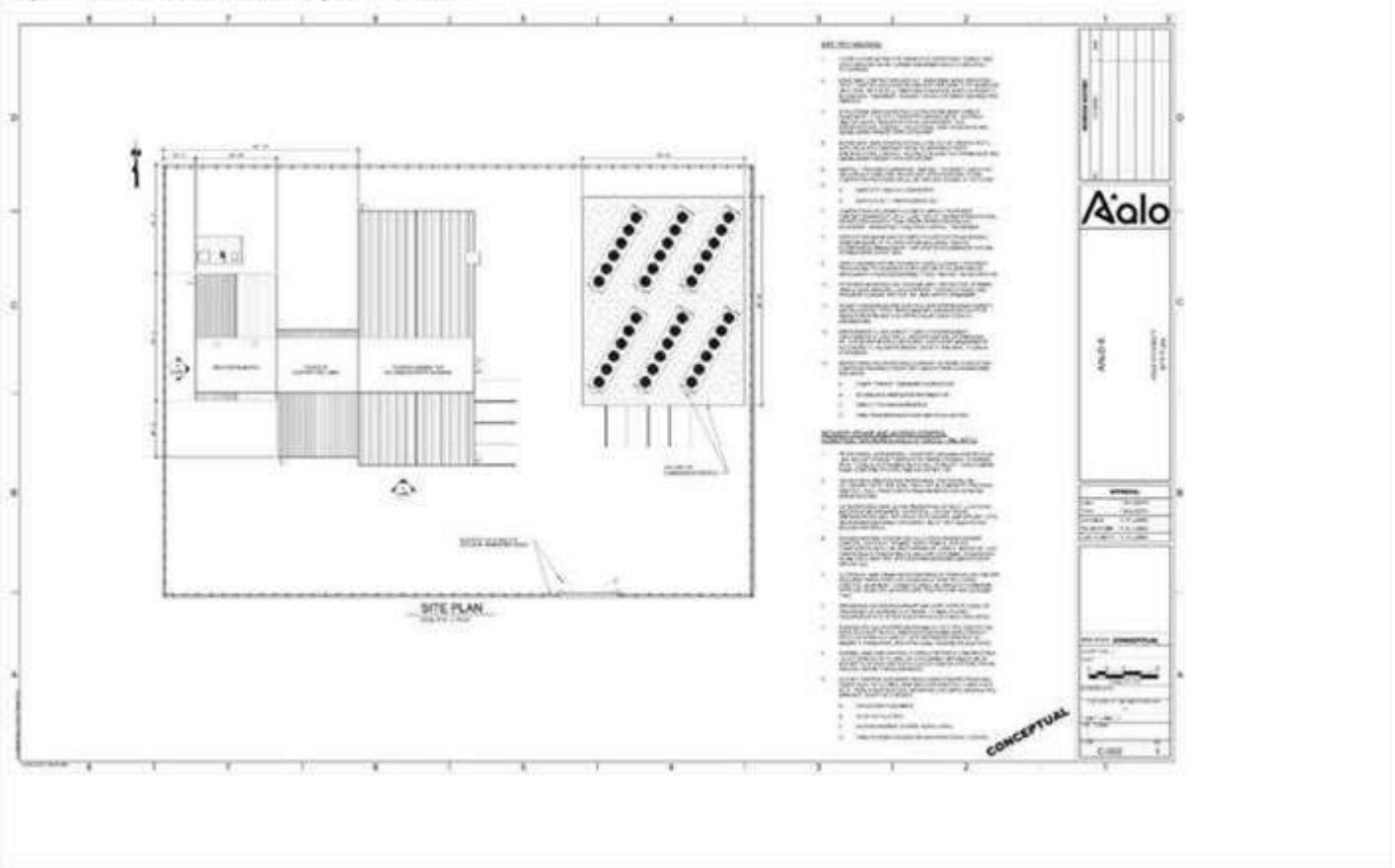
Old Staging Area:

Figure 1, Rev. 2: Aalo-X Project Conceptual Site Location Plan Contiguous to MFC



Old Staging Area 2:

Figure 2, Rev. 2: Aalo-X Conceptual Plot Plan



Environmental Aspects or Potential Sources of Impact:

Air Emissions

Project activities have 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 Section 106 review has completed under CRMO project number (BEA-25-086 R5) and resulted in No Adverse Effect. Please refer to Holds Points and Project Specific Instructions of 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.

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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.

DETERMINATION:

References:

B3.6 Small-scale research and development, laboratory operations, and pilot projects. Siting, construction, modification, operation, and decommissioning of facilities for small-scale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

The proposal fits within the classes of actions listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE's NEPA Implementing Procedures and satisfies the conditions that are integral elements of the classes of actions therein. The proposal does 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, Appendix B; (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, Appendix B.

There is no extraordinary circumstance related to the proposal that is likely to cause a reasonably foreseeable significant adverse effect or for which DOE does not know the environmental effect. Extraordinary circumstances are unique situations presented by specific proposals, including, but not limited to, scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; and unresolved conflicts concerning alternative uses of available resources.

The proposal has not been segmented to meet the definition of a categorical exclusion. Segmentation can occur when a proposal is broken down into small parts in order to avoid the appearance of significance of the total action. However, segmentation does not include proposals that are developed and potentially implemented over multiple phases where each phase results in a decision whether to proceed to the subsequent phase.

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

Approved by Jason L Anderson, DOE-ID NEPA Compliance Officer on: 1/27/2026