

SECTION A. Project Title: INL-19-171 ATR Low Pressure Air System Refurbishment and TRA-694 Construction

SECTION B. Project Description and Purpose:

The purpose of this Environmental Checklist (EC) is to address the redesign and installation of the new Advanced Test Reactor (ATR) Low Pressure Air System and the construction of the climate-controlled compressed air building supporting the system, Test Reactor Area (TRA)-694. The redesign and installation of the low pressure air system was originally covered in EC INL-18-108, but the due to the fact that the building is an addition to the scope and will support the system, a new EC is required to address the scope change and the potential for cumulative effects of these connected actions.

The original ATR Complex plant and instrument air system provided plant and instrument air to three reactors (MTR, ETR, & ATR), and because only ATR remains, the size, location and distribution of plant and instrument air needs to be redesigned. In addition, TRA-694 will need to be constructed to house the system and ancillary equipment.

The new system, equipment, and support building will be constructed and installed at the area between TRA-671, TRA-670, and TRA-640 and will provide compressed air to TRA-670 and TRA-671. The redesign, installation, and construction activities include:

- removing the two out-of-service transformers and respective concrete slab, TRA-711, located between TRA-671 and TRA-640 (Figure 1). Activity includes removal of fencing, excavation, and reworking of the ground to support construction of TRA-694
- installing new air compressors, air dryers, filters, air receivers, and glycol cooling loop for the compressors
- Installing emergency communication systems and related safety equipment
- installing new underground compressed air distribution piping and connecting to existing compressed air lines, as feasible
- capping some of the existing compressed air lines that are no longer in use
- installing 480v switchgear and other electrical components, as necessary

The air compressor system will have discharges in the form of condensate which will be routed to the cold waste line from TRA-671 and into the cold waste drain system. TRA-694 will be a nonnuclear/nonradiological facility that will not contain significant quantities of chemical or toxicological materials. Figure 2 shows the location of underground utilities around TRA-694.

Figure 1. TRA-694 Location (indicated in yellow)

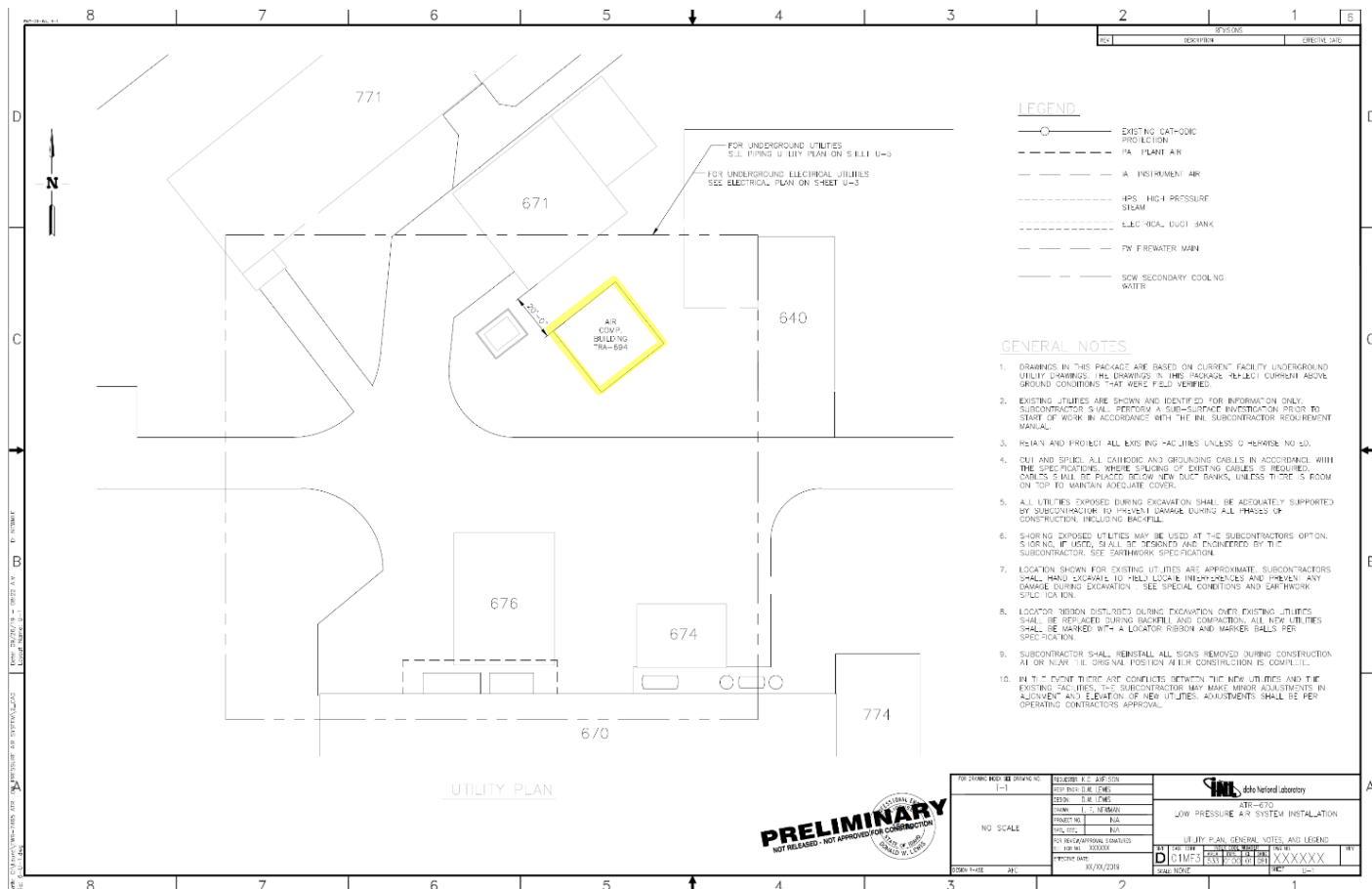
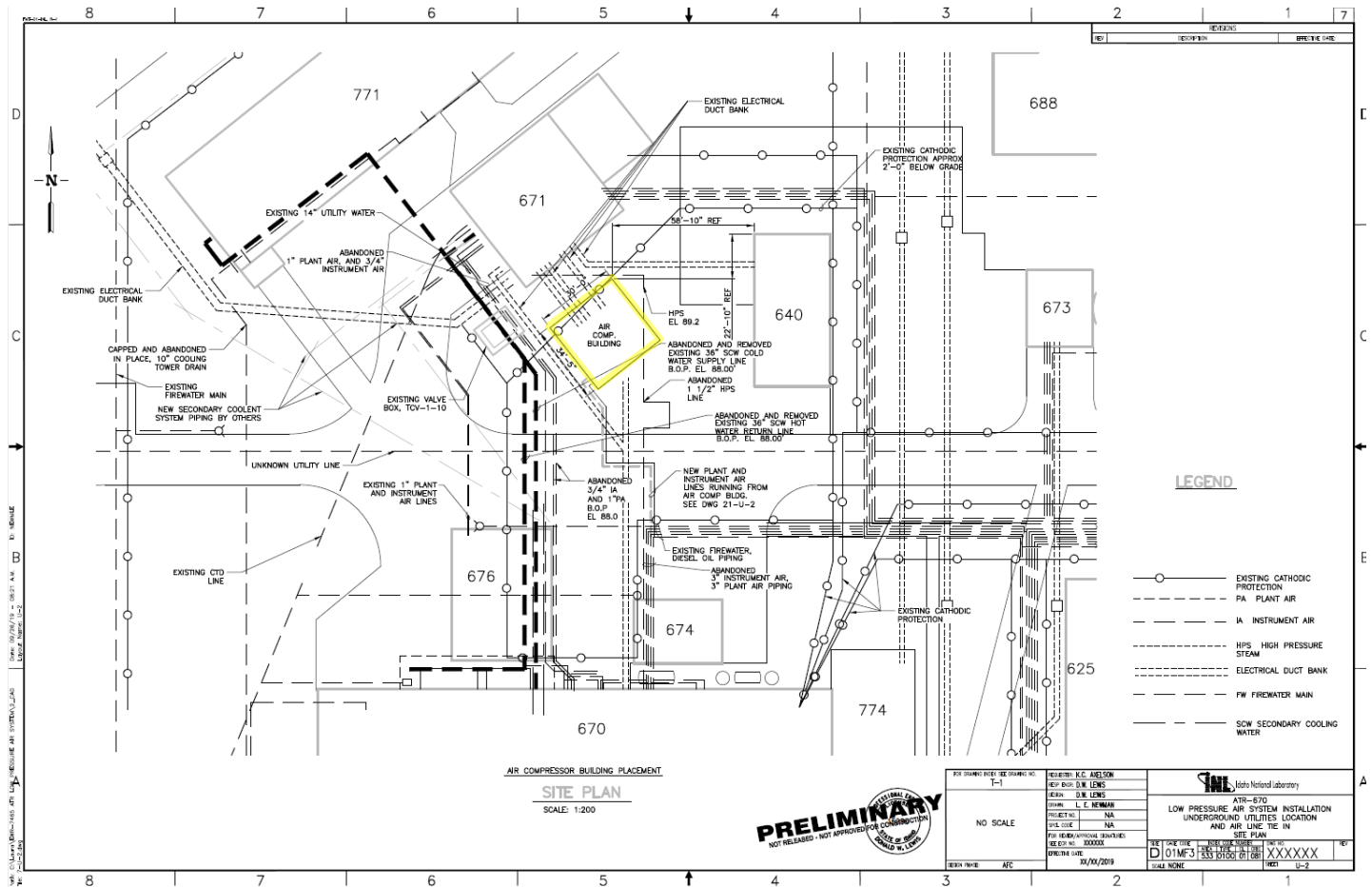


Figure 2. TRA-694 (indicated in yellow) and Connecting Underground Utilities Locations



SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Construction activities include temporary fugitive emissions from backhoes, bulldozers, other heavy equipment, and vehicle operations and ground disturbance.

Temporary emissions include reactive organic gases, nitrogen oxides, and respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (referred to as PM10) from construction equipment, construction employee commute trips, material transport (especially on unpaved surfaces), and other construction activities.

Discharging to Surface-, Storm-, or Ground Water

The proposed facility will not be connected to sewer or potable water utilities. Minimal amounts of stormwater may discharge to the storm drain near construction area.

Disturbing Cultural or Biological Resources

TRA-670 is eligible for listing on the National Register of Historic Places and (NRHP) is considered a Category 1 historic property. All federal undertakings (projects involving federal funding or property) must undergo cultural resource review (CRR).

Generating and Managing Waste

Industrial waste such as concrete, asphalt, scrap wood, scrap metal, packaging material, rags, insulation, wire, pipe scrap, etc., will be generated during the project.

Hazardous waste generation is not anticipated, although paint waste, adhesive waste, and spill material have the potential for being hazardous.

There is a potential for the transformer removal to produce PCB waste, which will be disposed of during this activity.

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Releasing Contaminants

Vehicles and heavy equipment could release hazardous substances (primarily petroleum-based products) to the ground. Typical construction chemicals such as fuels, lubricants, adhesives, paints, concrete, concrete cure, asphalt, refrigerants, etc., will be used and will be submitted to chemical inventory lists with associated Safety Data Sheets (SDSs) for approval in the vendor data system prior to use. The Facility Chemical Coordinator will enter these chemicals into the INL Chemical Management Database. All chemicals will be managed in accordance with laboratory procedures. When dispositioning surplus chemicals, project personnel must contact the facility Chemical Coordinator for disposition instructions.

Although not anticipated, there is a potential for spills when using chemicals or fueling equipment. In the event of a spill, notify facility Environmental Staff. If the Environmental Staff cannot be contacted, report the release to the Spill Notification Team (208-241-6400). Clean up the spill and turn over spill cleanup materials to WGS.

Using, Reusing, and Conserving Natural Resources

Recycled materials will be used to the greatest extent practicable in the selection of building materials.

The proposed action uses fossil fuels, metals, and other resources. Project personnel will use every opportunity to recycle, reuse, and recover materials and divert waste from the landfill when possible.

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: 10 CFR 1021, Appendix B to Subpart D, items B1.31 "Installation or relocation of machinery and equipment", B1.15 "Support buildings", and B2.2 "Building and equipment instrumentation".

Justification: Project activities described in this Environmental Checklist (EC) are consistent with 10 CFR 1021, Appendix B to Subpart D, items B1.31 "Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts."

B1.15 "Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.5, B6.6, and B6.10 of this appendix.",

and B2.2 "Installation of, or improvements to, building and equipment instrumentation (including, but not limited to, remote control panels, remote monitoring capability, alarm and surveillance systems, control systems to provide automatic shutdown, fire detection and protection systems, water consumption monitors and flow control systems, announcement and emergency warning systems, criticality and radiation monitors and alarms, and safeguards and security equipment)."

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

Approved by Jason Sturm, DOE-ID NEPA Compliance Officer on: 1/7/2020