

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: Upgrade ATR Complex Fire Alarm System

SECTION B. Project Description and Purpose:

The Advanced Test Reactor (ATR) Complex Fire Alarm System (FAS) is comprised of two independent systems--fire alarm reporting account 602 (TRA-1627, TRA-1626, and TRA-1608) and fire alarm reporting account 603 (remaining fire alarm panels). Account 603 NCMs are connected using two separate copper wire pairs, one pair in and one pair out in a token ring configuration. The fire alarm panels were replaced in 2009 with a newer version of the same panel, make, and manufacturer, but the network copper wire was not replaced. It has been discovered that water accumulates in the conduit for the copper wire and leads to wire deterioration. This increases ground faults and communications failures in the FAS in the spring and fall when precipitation is higher than other seasons. In addition, the use of copper wire between buildings has made the FAS panels vulnerable to lightning strikes. Fire alarm communication failures impair the ability of fire alarms to be monitored and reported to building occupants and the Fire Department.

To address issues with the FAS copper wiring, the proposed action replaces it with fiber optic cable and associated inter-ducting. Replacing the fire alarm system cabling with fiber optics will stabilize system functions, allow for future growth, and combine both networks. Trenching may be required between facilities, but would not impact any CERCLA sites. The project would include on-reel and post-installation end-to-end testing and installation of some conduit.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Fugitive dust may be generated during trenching activities. All reasonable precautions would be taken to control fugitive dust. If dust control methods are required, the methods used must be recorded in project records.

Disturbing Cultural or Biological Resources

TRA-670 (ATR Reactor Building) is eligible for nomination to the National Register of Historic Places and is considered a Category 1 historic property. Removal and/or changes of original features may adversely impact this historic property; however, the project activities are exempt and may proceed as described without further cultural resource review. The described project activities fall under exemptions 2 (routine maintenance activities) and 6 (safety systems) listed in Table 2 (Idaho National Laboratory Cultural Resource Management Office. Idaho National Laboratory Cultural Resource Management Plan. DOE/ID-10997, revision 6, Idaho Falls, Idaho: U.S. Department of Energy, Idaho Operations Office, 2016, pg 51).

It is unlikely that excavation activities within fenced facility boundaries would disturb cultural or biological resources. However, discovery of bones or other cultural artifacts during excavation requires an immediate cessation of work and a review by BEA Cultural Resources personnel.

Generating and Managing Waste

Scrap metal will be diverted from landfill disposal and recycled where practical.

PCB contaminated materials and asbestos containing waste may also be generated.

Fiber optic cable installation is expected to generate small amounts of industrial waste. All waste will be characterized, stored, and disposed at the direction of Waste Generator Services (WGS). Copper will be recycled to the extent practicable.

Releasing Contaminants

Typical construction chemicals such as fuels, lubricants, cable cleaner, etc., will be used during the project.

Using, Reusing, and Conserving Natural Resources

All materials would be reused and/or recycled where economically practicable. All applicable waste would be diverted from disposal in the landfill where conditions allow.

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

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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, B2.2 "Building and equipment instrumentation" and B4.7, "Fiber optic cable."

Justification: Project activities are consistent with 10 CFR 1021, Appendix B, 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); and B4.7, "Adding fiber optic cable to transmission facilities or burying fiber optic cable in existing powerline or pipeline rights-of-way. Covered actions may include associated vaults and pulling and tensioning sites outside of rights-of-way in nearby previously disturbed or developed areas."

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: 8/23/2017