

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: ATR Emergency Firewater Injection System (EFIS) Replacement

SECTION B. Project Description and Purpose:

Firewater infrastructure supporting the ATR Reactor Building that was installed in the 1960's has reached the end of life. The existing firewater piping around the ATR Reactor Building has a dual function to support fire suppression and emergency core water cooling in case of a loss of coolant event. The emergency core cooling system is called Emergency Firewater Injection System (EFIS) and is required to meet strict nuclear safety standards. EFIS and the fire suppression system share the same firewater lines. Existing firewater lines supporting the project, that are not needed, which are uncovered during excavation may be removed and disposed. The proposed potential scope includes replacing up to 1723 feet of EFIS piping (1495 ft outside ATR/228 ft inside ATR) and 4865 feet of firewater piping (4414 ft outside and 451 feet inside ATR). If the proposed potential scope is out of budget, a reduced targeted scope for the installation of up to 1463 feet of EFIS piping (1182 ft outside ATR/281 ft inside ATR) and 1237 feet of firewater piping (1152 ft outside and 85 feet inside ATR). The trenches will be excavated to a depth of 10 feet and have a width of 5 feet for an overall disturbance of approximately 12,000 cubic yards of excavated material for the full project scope and 5,000 cubic yards of excavated material for the targeted scope.

This project will replace the EFIS system, separating the EFIS system from the existing firewater system and will abandon original lines in place. Active underground lines that are disconnected for this modification shall be capped using connections that are compatible to the system. The existing hydrants will be replaced with the new system hydrants and will have the top three feet removed so they are not visible or in service. Ideally, we would replace all of the firewater piping along with the EFIS system, but budget constraints required a targeted approach to minimize operational impacts. With the EFIS system and firewater system sharing the same lines, failure on the shared line can and do impact ATR and the primary reason to separate the EFIS piping system from the firewater system.

The work will disturb soil within the boundaries of the CERCLA perched water IC site TRA-J and the WAG 2 Drilling and Groundwater IC area. The depth of the excavation will not reach the groundwater. Segments of the proposed excavation (in the vicinity of Grayling Street) are coincident with a No Action CERCLA site, TRA-59 (See Location Figure). TRA59 is the location of a closed and abandoned sulfuric acid transfer line. The line was purged, and no documented releases were recorded. If unusual field conditions are noted (staining, odor, discoloration, etc.), stop work and contact the CERCLA NSD coordinator or the ICP CERCLA PEL for further assistance.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Potential to generate fugitive dust from soil disturbance activities. Emission from combustion of mobile equipment and potentially portable generators.

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. This activity is excluded from Section 106 review as the proposed action has little to no potential to cause effects to historic properties.

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.

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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:

B1.15 "Support buildings"

Justification:

B1.15 Support buildings. 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, such as activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix.

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

Approved by Jason L. Anderson, DOE-ID NEPA Compliance Officer on: 05/23/2023.