

**DOE-ID NEPA CX DETERMINATION
Idaho National Laboratory**

SECTION A. Project Title: ATR Complex Warm Waste Underground Piping Replacement

SECTION B. Project Description and Purpose:

The ATR Warm Waste System (WWS) is designed to transport low-level radioactive liquid effluent from TRA-670 (Advanced Test Reactor (ATR)) and TRA-1627 (Radioanalytical Chemistry Lab (RaCL)) to the TRA-716 pump lift station and then out to the warm waste evaporation ponds located outside the East security fence. The WWS is composed of systems, structures, and components (SSC) that transport, monitor, treat and contain this waste stream. ATR constantly generates warm waste effluent regardless of whether the reactor is in outage or operational.

Warm liquid waste within ATR is routed and collected in the 670-M-28 warm waste collection tank. Two pumps (670-M-31 and 670-M-32) route warm waste from this collection tank to the ATR warm waste treatment facility (WWTF) which includes two ion-exchange vessels (670-M-111 and 670-M-112). Warm waste is routed from the ion-exchange vessels underground to a collection point known as the "dip tube" located just South of TRA-605. Pumps from TRA-605 (605-M-51, 605-M-52) draw effluent from the dip tube which passes through the effluent radiation monitor (ERM) in TRA-605, and back into the piping down-steam of the dip tube. The piping from the dip tube is routed to the TRA-716 pump lift-station where the warm waste effluent is then transferred to the warm waste evaporation ponds TRA-715. In ATR, there is a line that bypasses the WWTF and can route warm waste directly to the outer area.

The piping from the dip tube downstream to TRA-716 was replaced in 2003 with a double walled fiberglass line with leak detection. The cast iron piping from ATR to the dip tube, is the original piping installed in the early 1950s.

The scope of this project is to replace the underground WWS piping/components from ATR (TRA-670) to the existing fiberglass double walled piping and include all existing active tie-in lines as well as any components necessary to accomplish this objective. Two pumps in TRA-670 will be removed as part of the project activities. The pumps were manufactured in 1978, and the paint on the pumps and the oil in them may contain PCBs. The underground piping in question is approximately a quarter mile in length. The existing line will remain operational while the new piping is being installed, then the existing underground piping will be cut/capped and abandoned in place after all the active tie-ins are made. Existing piping in ATR, RaCL and TRA-605 are unpainted stainless steel.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

NA

Discharging to Surface-, Storm-, or Ground Water

NA

Disturbing Cultural or Biological Resources

Biological Resources: There is the potential for this work to impact vegetation and for project personnel to interact with various wildlife species. A nesting bird survey is required prior to the initiation of activities that might disturb soil or vegetation for activities taking place between April 1st and October 1st.

Cultural Resources: This federal undertaking is excluded from Section 106 review as the proposed activity 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.

PCB waste could be generated when performing maintenance on, replacing, or D&D equipment manufactured before 1982.

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:

B5.4 "Repair or replacement of pipelines"

Justification:

Repair, replacement, upgrading, rebuilding, or minor relocation of pipelines within existing rights of-way, provided that the actions are in accordance with applicable requirements (such as Army Corps of Engineers permits under section 404 of the Clean Water Act). Pipelines may convey materials including, but not limited to, air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water.

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: 6/22/2023