

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: Advanced Test Reactor High-Temperature Loop Inpile Tube and Large Inpile Tube Expansion Joint Gland Seal Design Modification

SECTION B. Project Description and Purpose:

Revision 1: The equivalent seal on the ATR IPT Lower Seal also has design issues. This seal does not have the ability to accommodate packing consolidation which requires more re-tightening sequences to maintain seal efficiency. The issues associated with the ATR IPT lower seal can be eliminated by switching to expansion joint gland seal. The purpose of the additional work scope is to design, test, and fabricate expansion joint gland seal to replace the ATR IPT Lower Seal.

Original Work Scope: The Advanced Test Reactor (ATR) high-temperature loop inpile tube and large inpile tube (including crossarm) bellows expansion seals have several design and fabrication issues. Additionally, these seals are very difficult to install and upon removal, the bellows are destroyed.

The purpose of this work is to design, test, and fabricate expansion joint gland seals to replace the ATR high-temperature loop inpile tube and large inpile tube (including crossarm) bellows expansion seals. The issues associated with the bellows expansion seals discussed above can be eliminated by switching to the expansion joint gland seals.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

N/A

Discharging to Surface-, Storm-, or Ground Water

N/A

Disturbing Cultural or Biological Resources

ATR (TRA-670) 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 as described are exempt (Idaho National Laboratory Cultural Resource Management Office. Idaho National Laboratory Cultural Resource Management Plan. DOE/ID10997, revision 5, Idaho Falls, Idaho: U.S. Department of Energy, Idaho Operations Office, 2013; pg 53, Table 2, Exemptions 2 and 8). As such, the project may proceed as described without further cultural resource review.

Generating and Managing Waste

Project personnel will contact Waste Generator Services (WGS) to identify waste streams, handling, storage, and disposal requirements. All radioactive waste will be managed in accordance with laboratory procedures and established waste streams to ensure compliance with Department of Energy Order (DOE O) 435.1 CHG 1. All waste would be characterized, stored, and disposed at the direction of WGS.

Releasing Contaminants

All chemicals utilized by this activity will be managed in accordance with laboratory procedures.

Using, Reusing, and Conserving Natural Resources

All materials would be reused and recycled where economically practicable. All applicable waste would be diverted from disposal in the landfill where conditions allow. 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: National Environmental Policy Act (NEPA) Implementing Procedures, Final Rule, 10 CFR 1021, Appendix B to Subpart D, Categorical Exclusion B1.31 "Installation or relocation of machinery and equipment."

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Justification: The proposed activities are consistent with CX 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."

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: 6/10/2020