DOE-ID NEPA CX DETERMINATION
IDAHO NATIONAL LABORATORY

CX Posting No.: DOE-ID-ICP-11-007

SECTION A. Project Title: TRA-632 Hot Cell Drain Piping Clean Closure

SECTION B. Project Description

The proposed action will perform clean-closure of TRA-632 Hot Cell Drain Piping, which has been determined to be contaminated with transuranic (TRU) isotopes and RCRA hazardous waste (Hazardous Waste Numbers D006, D007, D008, and D009). The HWMA/RCRA Closure Plan for the TRA-632 Hot Cell Drain Piping - Voluntary Consent Order Action Plan VCO-5.8.d (DOE/ID-11434) was approved by the State of Idaho Department of Environmental Quality and defines the clean-closure activities. The TRA-632 Hot Cell Drain Piping clean-closure involves stabilizing, cutting, and disposing of the piping and ancillary equipment; as well as removing contaminated soil and collecting soil samples for use in a risk assessment to ensure the closure performance standards have been achieved.

The RCRA closure components are the TRA-632 floor drain network which is located interior/under the three hot cells. A wax fixative may be applied inside the piping to affix the waste within the lines for contamination control during subsequent cutting and removal activities. A surface fixative may also be used. A Brokk 330 demolition robot or process equipment will be used to remotely cut and remove the piping and ancillary equipment until radiation fields drop to acceptable levels for manned operations. Due to the hazardous and radiological factors associated with this project, the cutting and removal activities will be performed in an enclosed environment with HEPA ventilation, or with point-source HEPA ventilation, and localized containment. Radiological shielding will be required including the use of elemental lead. Work will be performed inside the footprint of the former location of the TRA-632 Hot Cell building and the area north towards the TRA-604 Utility Basement.

Closure-generated mixed waste will be disposed at EnergySolutions, LLC or Nevada National Security Site (NNSS), depending on waste characteristics. The removed piping and ancillary equipment are planned to undergo generator treatment by macroencapsulation with grout to satisfy the Land Disposal Treatment Standards and packaged for transport to the disposal facility.

The approved closure plan identifies an area that can be used for the temporary storage and management of hazardous waste generated from this closure activity. The waste staging area will be identified as a temporary accumulation area (TAA) in order to track the hazardous waste in the Integrated Waste Tracking System. The approximate area of this TAA will be approximately 72,500 square feet. The large size of this TAA will better accommodate heavy equipment use within the waste storage area. The TAA will be closed upon completion of this project. Interim storage of RCRA-regulated waste at CPP 1617 may be necessary.

This project has an estimated completion date of September 2012. The project is estimated to cost approximately $1.4 million.

SECTION C. Environmental Aspects / Potential Sources of Impact

1. Air Pollutants - Fugitive dust will be generated during excavation and fugitive emissions will be generated from cutting and removal activities. Ventilation and exhaust systems will be necessary for piping and ancillary equipment cutting and removal activities. An air evaluation was completed for this work scope and documents no air permitting is required.

4. Chemical Use and Storage - Diesel fuel and other typical petroleum products will be used for heavy equipment operations. Chemicals may also include external fixative such as Blue Max, Durasoil, Paint, or other suitable materials. In addition, an internal fixative wax may be used to stabilize hazardous/mixed waste internally in piping.

9. Hazardous/Mixed Waste Generation and Management - An estimated 3 cubic feet of TRU-contaminated mixed waste will be managed within a temporary waste staging area located at the ATRX Complex. The mixed waste will be placed into CO-90 waste boxes (e.g. Bull Run metal containers), which have been prepared to macroencapsulate the MLLW generated from closure activities. Prior to disposal at EnergySolutions or NNSS, the waste will be treated to meet the applicable Land Disposal Restrictions. Although the waste is known to contain some transuranic isotopes, it is assumed that the waste will contain less than 100 nCi/gm of TRU isotopes. (i.e., The waste will not be TRU.)

The temporary waste staging area will be >50,000 ft^2 and will follow the company procedure applicable to a RCRA temporary accumulation area with an exception to the 90-day accumulation limit. A 365-day storage clock for closure generated waste has been approved as part of the closure plan. The temporary accumulation area will be closed upon completion of this project.

10. Hazardous/Rad. Material or Waste Handling and Trans. – A hazardous waste determination will be performed for all waste streams to identify the appropriate management practices. Waste will be packaged in appropriate DOT-compliant containers and shipped in accordance with established ICP procedures.

14. PCB Contamination - The hazardous/mixed waste piping being removed may contain radioactive PCB contamination. Any materials that contain PCBs above the threshold limit of 50 ppm will be managed in compliance with 40 CFR 761 Subpart D. Treatment (e.g., macroencapsulation) of PCBs $\geq$ 50 ppm requires TSCA approval (or equivalent, if CERCLA waste) under Subpart B. Notifications to EPA and the TSDF may also be required depending on the type of PCB waste and method of off-site disposal allowed under Subpart D of the TSCA regulations.

18. Use, Reuse and Recycling of Resources – Backfill sources may be taken from existing borrow sources within the Idaho National Laboratory (INL). INL borrow sources must be coordinated with BEA personnel and completion of Form 450.AP01 is required.

SECTION D. Determine the Level of Environmental Review (or Documentation) and Reference(s): Identify the applicable categorical exclusion from 10 CFR 1021, Appendix B, give the appropriate justification, and the approval date.

Note: 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, including requirements of DOE orders; 2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities; 3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; 4) adversely affect environmentally sensitive resources. In addition, no extraordinary circumstances related to the proposal exist which would affect the significance of the action, and the action is not "connected" nor "related" (40 CFR 1508.25(a)(1) and (2), respectively) to other actions with potentially or cumulatively significant impacts.

References: Categorical Exclusion B6.1, Small-scale, short-term cleanup actions under RCRA, Atomic Energy Act, or other authorities.

Justification: B6.1 addresses small-scale, short-term RCRA closure actions (less than approximately $5M and 5 years duration).

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

Approved by Jack Depperschmidt, DOE-ID NEPA Compliance Officer on October 3, 2011.