DOE-ID NEPA CX DETERMINATION
Idaho National Laboratory

CX Posting No.: DOE-ID-INL-17-054

SECTION A. Project Title: MFC-752AL Hot Cell 5 Gamma Spectrometer Installation (AL-3100)

SECTION B. Project Description and Purpose:

The purpose of the proposed action is to provide state-of-the-art scientific instrumentation to support nuclear fuel research. The presence of unused and obsolete equipment in Hot Cell 5 at the Materials and Fuels Complex (MFC) Analytical Laboratory (AL), building MFC-752AL, does not meet modern standards and incurs unnecessary maintenance and labor costs and needs to be replaced.

The proposed action installs gamma spectroscopy equipment and a motorized trolley to change samples at desired intervals in Hot Cell 5 in MFC-752AL room A101a. A penetration (5MB5) used as an optical path for an atomic absorption spectrometer has been blocked with shielding anchored to the back of the hot cell and will be removed to allow installation of gamma spectroscopy shielding and collimation. Modifications also include installing other associated components. A stand will be designed and fabricated to hold the detector module equipment and Dewar.

Project activities have the potential to generate low-level radioactive waste (LLW) and mixed low-level waste (MLLW). The MLLW generated during this project will be sent to a commercial offsite RCRA-permitted TSD facility that is approved for treatment and disposal of radiologically contaminated MW (e.g., Clive, Utah). The LLW will be disposed at the Nevada National Security Site (NNSS). The environmental impacts of transferring low level waste from the INL to the NNSS were analyzed in the 1996 Nevada Test Site EIS (DOE/EIS-0243) and supplemental analysis (SA) (DOE/EIS-0243-SA-01) and DOE's Waste Management Programmatic EIS (DOE/EIS-200). The fourth Record of Decision (ROD) (65 FR 10061, February 25, 2000) for DOE's Waste Management Programmatic EIS established the Nevada National Security Site as one of two regional LLW and MLLW disposal sites. The SA considers additional waste streams, beyond those considered in the 1996 NTS EIS, which may be generated at or sent to the Nevada National Security Site for management.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Project activities have the potential to disturb asbestos containing building materials.

Disturbing Cultural or Biological Resources

MFC-752 is eligible for listing on the National Register of Historic Places. Removal and/or changes of original features may adversely impact this historic architectural property; however, the project activities are exempt and may proceed as described without further cultural resource review. The described project activities fall under exemption 8 (internal reconfiguration of active laboratories) 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).

Generating and Managing Waste

The proposed action has the potential to generate the following types of waste:

- Industrial (non-hazardous, non-radioactive) waste including boxes, wood, wiring, paper, insulation, and some metals.
- Hazardous waste from systems or equipment containing hazardous chemicals, or by using hazardous chemicals to clean or decontaminate equipment and systems. Hazardous metal waste (e.g., lead, electronics, brass, metal containing paints, etc.) could also be generated.
- Low level radioactive waste.
- Mixed low level waste from chemicals used to decontaminate equipment.

Releasing Contaminants

There is the potential to release small amounts of contaminants to the environment during project activities.

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

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 to Subpart D, B1.31 "Installation or relocation of machinery and equipment."

Final Waste Management Programmatic Environmental Impact Statement [WM PEIS] (DOE/EIS-0200-F, May 1997

Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada (DOE/EIS-0243) and supplemental analysis (SA) (DOE/EIS-0243-SA-01).

Justification: The proposed action is consistent with categorical exclusion 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 the 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."

The environmental impacts of transferring low level waste from the INL to the Nevada National Security Site were analyzed in the 1996 Nevada Test Site EIS (DOE/EIS-0243) and supplemental analysis (SA) (DOE/EIS-0243-SA-01) and DOE's Waste Management Programmatic EIS (DOE/EIS-200). The fourth Record of Decision (ROD) (65 FR 10061, February 25, 2000) for DOE's Waste Management Programmatic EIS established the Nevada National Security Site as one of two regional LLW and MLLW disposal sites. The SA considers additional waste streams, beyond those considered in the 1996 NTS EIS, that may be generated at or sent to the Nevada National Security Site for management.

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: 10/02/2017