

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: FMF Multi-Function Glovebox Line

SECTION B. Project Description and Purpose:

The scope of this project will be to develop and activate two new glovebox confinement enclosures in the South Workroom of the Fuel Manufacturing Facility (FMF) at the Materials and Fuels Complex (MFC). The specific project scope includes design, fabrication, installation, activation, operability testing, and turnover of the two new gloveboxes to FMF Operations. These new gloveboxes will be similar to glovebox systems already operational in FMF and will use inert atmospheres, with argon being the primary gas. This project will also develop the installation design and perform the minor facility system modifications necessary to tie these new gloveboxes into existing facility utilities and associated integrated systems.

These gloveboxes will be inherently general purpose in nature and are expected to be used by various future projects that may have needs for handling and processing multiple forms of uranium and transuranic material. Since the specific processing scope and associated potential radiological/chemical source terms of potential future user projects cannot be defined at this time, such projects planning to utilize these new glovebox confinement boundaries must develop project-specific environmental checklists (ECs) to address their potential environmental impacts and to identify TRU waste volumes.

The expected project start is 3Q of FY20 with an expected finish of 2QFY22. The total project cost is expected to be less than \$5M.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Air emissions will be generated from glovebox testing activities involving argon inert gas and infrequent small quantities of argon/hydrogen regeneration gas from the glovebox purification units.

Potential air emissions from future glovebox users will be analyzed in project-specific ECs.

Discharging to Surface-, Storm-, or Ground Water

N/A

Disturbing Cultural or Biological Resources

The Fuel Manufacturing Facility (MFC-704/FMF) was constructed in 1986 and is considered not eligible (based on age) for listing to the National Register of Historic Places (NRHP) (INL Cultural Resource Management Office 2016, 337). However, due to the in-progress update to the architectural inventory, this building is potentially eligible under Criteria Consideration G. As such, evaluation of the potential effects of the proposed activities will occur as if FMF is recommended eligible. A Cultural Resource Review (CRR) to complete the Section 106 process is forthcoming.

Generating and Managing Waste

Installation of equipment and associated minor facility modifications have the potential to generate industrial waste such as scrap metal. Reusable scrap material, if generated, will be recycled or excessed to the extent practical. Minor quantities (<1 m³) of LLW are expected to be generated during facility modifications and equipment installation activities (primarily from used PPE and potentially contaminated equipment scrap).

Waste generation from potential future glovebox users will be analyzed in project-specific ECs.

Releasing Contaminants

Typical construction chemicals that may be used (such as fuels, lubricants, adhesives, paints, concrete, concrete cure, etc.) will be compared to the current approved chemical inventory list. Chemicals not currently included will be entered into the INL Chemical Management Database by the Facility Chemical Coordinator. All chemicals will be managed in accordance with laboratory procedures.

Although not anticipated, there is a potential for spills when using chemicals. In the event of a spill, notify Environmental Staff. If Environmental Staff cannot be contacted, report the release to the Spill Notification Team (208-241-6400). Clean up the spill and turn over spill cleanup materials to WGS.

Using, Reusing, and Conserving Natural Resources

Recycled materials will be used to the greatest extent practical in the selection of materials. All materials will be reused or recycled where economically practical. All applicable waste will 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)-

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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 B3.6 "Small-scale research and development, laboratory operations, and pilot projects" and B1.31 "Installation or relocation of machinery and equipment."

Justification: The proposed R&D activities are consistent with CX B3.6 "Siting, construction, modification, operation, and decommissioning of facilities for small-scale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment."

The proposed relocation and installing activities falls within the scope of 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 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: 4/28/2020