

# DOE-ID NEPA CX DETERMINATION

## Idaho National Laboratory

### SECTION A. Modification of Helium, Air, and Argon Supply Systems in MFC-704, Fuel Manufacturing Facility

### SECTION B. Project Description and Purpose:

There are four gloveboxes in the Fuel Manufacturing Facility (FMF) that are each in need of one or more piping modifications:

- The Transuranic Breakout Glovebox (TBG),
- The Neptunium Repackaging Glovebox (NRG),
- The Special Nuclear Materials Glovebox (SNM), and
- The Advanced Fuel-Cycle Initiative Glovebox (AFCI)

Three of the four gloveboxes are in need of modifications to enable regular helium leak checks by plumbing helium from the existing helium distribution system directly to the gloveboxes. The gloveboxes that fall into this category are the TBG, NRG, and SNM gloveboxes. In addition, the TBG and NRG gloveboxes have several pneumatic operated valves that are fed from the gloveboxes' internal argon system. During leak testing, the argon in the glovebox system is replaced with helium which would then be exhausted by the pneumatic valves. This would make it difficult or impossible to conduct valid helium leak tests. Therefore, instrument air lines will be installed from the facility instrument air system to power the pneumatic valves.

The other two modifications that are not related to helium leak testing are expected to be performed at the same time to prevent multiple glovebox outages. They are as follows:

**Modification 1:** The NRG and TBG gloveboxes have facility vacuum shutoff valves that are located out of reach overhead above some other piping and conduit. These valves are both difficult and hazardous to access due to their location and height. The proposed modification is to install new facility vacuum valves at the TBG and NRG within safe reach of a person standing on the floor.

**Modification 2:** The AFCI glovebox has a helium-argon proportioner (flow-controlled mixer) that is located on the south wall of the south workroom. Operators must leave the AFCI enclosure, walk across the North work room into the south work room, and then across the south work room to access the indicators and controls for this helium-argon proportioner. This makes it difficult for the operators to ensure the correct gas flows are set for the work they are performing. To improve the ability of the operators to perform their jobs effectively, this proportioner will be relocated to the AFCI enclosure.

FMF was built in 1986; therefore, PCBs are not a concern

### SECTION C. Environmental Aspects or Potential Sources of Impact:

#### Air Emissions

There is a possibility for disturbance of asbestos containing material (e.g. valves, gaskets). The activity has the potential to generate fugitive dust; emissions typical of cutting/grinding/welding are possible.

#### Disturbing Cultural or Biological Resources

The facilities at MFC have not been reviewed for eligibility to NRHP; therefore, a cultural review is required.

#### Generating and Managing Waste

Typical construction waste such as metal pieces (e.g. stainless and copper pipe) and packaging material will be generated during the project.

If valves, gaskets, etc. contain asbestos, small amounts of asbestos waste may be generated.

#### Releasing Contaminants

Typical construction chemicals such as lubricants, etc. may be used during the project as well as helium, air, and argon. All chemicals will be tracked on subcontractor's chemical inventory list and tracked by the appropriate BEA Chemical Coordinator.

#### Using, Reusing, and Conserving Natural Resources

All material will be reused and/or recycled (e.g. copper pipe) where economically practicable. All applicable waste will be diverted from disposal in 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

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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 items B2.2 "Building and Equipment Instrumentation" and B2.3 "B2.3 Personnel safety and health equipment ".

**Justification:** The proposed activities are consistent with CX B2.2 "Installation of, or improvements to, building and equipment instrumentation (including, but not limited to, remote control panels, remote monitoring capability, alarm and surveillance systems, control systems to provide automatic shutdown, fire detection and protection systems, water consumption monitors and flow control systems, announcement and emergency warning systems, criticality and radiation monitors and alarms, and safeguards and security equipment);" and

B2.3 "Installation of, or improvements to, equipment for personnel safety and health (including, but not limited to, eye washes, safety showers, radiation monitoring devices, fume hoods, and associated collection and exhaust systems), provided that the covered actions would not have the potential to cause a significant increase in emissions."

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: 3/2/2020