

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: Materials and Fuels Complex (MFC) Hot Fuel Examination Facility (HFEF) Purification System Modernization

SECTION B. Project Description and Purpose:

The proposed action would modernize the argon purification system in the Hot Fuel Examination Facility (HFEF) at the Materials and Fuels Complex (MFC) building MFC-785. The HFEF argon purification system consists of three basic parts: 1) analytical system, 2) hydrogen injection system and 3) purification/regeneration system. The project would use a phased approach, completing upgrades to the three parts of the air purification system individually in the order previously listed.

The proposed action would install a temporary analytical cabinet in the appropriate areas of HFEF and connect it to the associated portions of the purification system. Once the temporary system is functional, the analytical cabinet would be removed and a new cell analytical system installed. Once the new analytical system is installed and functional the temporary system would be removed. Phase 2 and 3 of the system would be implemented as time permits during facility outages. The modernization is to replace obsolete equipment with modern equivalents.

Various equipment would be replaced with modern equivalents that can be controlled by the programmable logic controller (PLC). The project would replace all temperature elements (currently mercury filled manometers) with resistance temperature detectors (RTDs), replace all pressure gauges with pressure transmitters, and replace a number of system valves with modern equivalents capable of communication with the PLC. Items to be replaced also include gas analyzers (oxygen and moisture), tubing, valves, pumps, and other equipment.

The manually controlled hydrogen injection system would be replaced by a small mass flow controller installed to allow the PLC to control the amount of hydrogen added.

This project is not considered a modification to the MFC Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA)-permitted facility, MFC-785.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Disturbing Cultural or Biological Resources

HFEF (MFC-785) is eligible for nomination to the National Register of Historic Places and is considered a Category 2 Property Type. The project as described is exempted from cultural resource review (Idaho National Laboratory [INL] Cultural Resources Management Plan, Table 2, exemptions 2 and 8 [Department of Energy Idaho Operations Office (DOE/ID)-10997 rev. 5]); therefore, the project may proceed as planned.

Generating and Managing Waste

Industrial waste may include typical waste such as scrap metal. Any scrap material, if generated, will be recycled or excessed to the extent practicable. Polychlorinated biphenyl (PCB) bulk product waste may be generated from suspect PCB paint that is on the existing facility components. Pollution prevention/waste minimization will be implemented where economically practicable to reduce the volume and/or toxicity of waste generated. All waste generated will be transferred to Waste Generator Services (WGS) for appropriate disposition.

Releasing Contaminants

All chemicals typically used in construction/maintenance, if used, will be managed in accordance with laboratory procedures. There is the potential for possible disturbance of suspect polychlorinated biphenyl (PCB) paint. Approved work controls will be in place to ensure that no releases occur during project activities.

Using, Reusing, and Conserving Natural Resources

All material generated from project would be reused and recycled where economically practicable. All applicable waste would be diverted from disposal in the landfill when possible. Project personnel would use every opportunity to recycle, reuse, and recover materials and divert waste from the landfill when possible.

SECTION F. 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, B2.2 "Building and equipment instrumentation"

Justification: Project activities are consistent with 10 CFR 1021, Appendix B, 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)."

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: 11/20/2015