

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: Zero Power Physics Reactor (ZPPR) Documented Safety Analysis (DSA) Implementation Project Tasks

SECTION B. Project Description:

The Zero Power Physics Reactor (ZPPR) Documented Safety Analysis (DSA) was conducted to verify that facility operations could be conducted without undue risk to the public or Materials and Fuels Complex (MFC) personnel. The DSA identified the need for implementation of the following tasks:

1. Replace 24 high-efficiency particulate air (HEPA) filters in the equipment room MFC-775.
2. Replace six exhaust fan motors, two new fan assemblies including motors, and eight new variable frequency drives (VFD) in MFC-775.
3. Modify the power supply to support the VFDs. Modifications are limited to removing the starters from the motor control center (MCC) buckets and extend new conduit and conductors from the remaining circuit breaker to the new VFDs located on an adjacent wall in the workroom.
4. Install new separate exhaust duct from the vault in MFC-775 directly to the building exhaust system to eliminate vault exhaust from flowing through the workroom in MFC-775.
5. Modify the duct work to reverse the flow of air from the equipment room into the workroom by installing a suction diffuser/ducting in the equipment room.
6. Provide a heating, ventilating, and air conditioning (HVAC) management system that will provide digital confinement monitoring indication and alarm of facility differential pressures, remote indication at the Central Alarm Station, networking capabilities, and control and monitoring of all HVAC functions including alarm and shutdown capabilities in case of an off-normal event.
7. Modify rack per impending design and analysis including seismic, criticality, and some small gap analysis.
8. Install two standard 20 position storage racks with Beverly cans in the ZPPR vault and re-rack the current material.
9. Remove and dispose of south hood (work-table).
10. Provide and install one new 6' radiologic fume hood.
12. Replace two existing supply fan motors in MFC-777 with like size motors and VFDs.
13. Modify the radiological monitoring system in MFC-775.
14. Install new storage bin pins.
15. Readiness activities.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions: There is a possibility for disturbance of asbestos containing building materials. All asbestos work must be conducted by properly trained personnel using appropriate abatement methods.

Disturbing Cultural or Biological Resources: MFC-775 and MFC-777 may be eligible for nomination to the National Register of Historic Places. The activities described in the project description are exempted from cultural resource review ("INL Cultural Resource Management Plan" Table 2, exemptions 4, 5, and 6 [DOE/ID-10997 rev. 5]). Therefore, the project could proceed as described without further cultural resource review.

Generating and Managing Waste: All of the construction activities would generate both industrial and radioactive low-level waste. Project personnel would work with Waste Generator Services (WGS) to properly dispose of industrial and radioactive low-level wastes. Waste determination and disposition forms (WDDF's) are already established for both industrial and radioactive low-level waste streams at ZPPR.

Releasing Contaminants: Typical construction chemicals such as fuels, adhesives, lubricants, paints, etc., would be used on the project. The Subcontractor would enter all chemicals and associated MSDS's in the vendor data system for approval. The Construction Chemical Coordinator would track these chemicals in the INL Comply Plus Chemical Management System. Chemical use has a potential for small amounts of air emission and spills. Any spills that occur from these chemicals would be reported to the Spill Notification Team and would be cleaned up by the subcontractor with the clean-up materials disposed through WGS.

PCB contamination is not anticipated, however, contamination control methods may be required if disturbing painted surfaces inside ZPPR.

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. New equipment would meet either the Energy Star or Significant New Alternatives Policy (SNAP) requirements as appropriate (see <http://www.sftool.gov/GreenProcurement/ProductCategory/14>). In addition, the project would practice sustainable acquisition, as appropriate and practicable, by procuring construction materials that are energy efficient, water efficient, are bio-based in content, environmentally preferable, non-ozone depleting, have recycled content, or are non-toxic or less-toxic alternatives.

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

For Categorical Exclusion (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 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 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 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: 10 CFR 1021, Appendix B to Subpart D item B2.5, "Facility safety and environmental improvements."

Justification: Project activities in this EC are consistent with 10 CFR 1021 Appendix B to Subpart D, Categorical Exclusion B2.5. "Safety and environmental improvements of a facility (including, but not limited to, replacement and upgrade of facility components) that do not result in a significant change in the expected useful life, design capacity, or function of the facility and during which operations may be suspended and then resumed. Improvements include, but are not limited to, replacement/upgrade of...facility air filtration systems."

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: 6/9/2014