

# DOE-ID NEPA CX DETERMINATION IDAHO NATIONAL LABORATORY

## SECTION A. Project Title: MFC-752 Analytical Laboratory Seismic Upgrade

## SECTION B. Project Description:

The Department of Energy, Idaho Operations Office (DOE-ID) conducted a review of the nuclear safety practices on the Materials and Fuels Complex (MFC) documented safety analyses (DSAs) in 2005 during transition of operating contractors. The DOE-ID assessment concluded that the MFC DSAs had potential inadequacies in following the safe harbor methodology of the nuclear safety rule. That review identified the need to bring the MFC DSAs into full compliance with the nuclear safety rule and correct the potential deficiencies noted in the assessment.

Implementation of the Analytical Laboratory safety basis to meet Performance Category 2 requirements is needed for building MFC-752. The new DSA requires major structural modifications to the roof and walls of the A-wing, B-wing and basement of the facility. To meet this need, the following facility modifications are proposed:

1. Repair the structural inadequacies of the roof: newly installed support columns and wall bracing would be tied-in to new deck framing, and rolled sheet metal would be fastened to the roof decking to provide a diaphragm to prevent roof failure. A Sarnafeld PVC roof would be installed over the metal. Cross bracing below the roof decking and support beams around the perimeter in the A-wing would be installed.
2. Fix wall inadequacies: On the upper floor, the connections between the roof and the wall and the floor and the wall are insufficient, therefore, a special clip would be fabricated and then installed to reinforce the existing connections. Installation of wall columns and supports would occur in B-wing, and installation of wall supports would occur in A-wing. In addition, the inadequate structural integrity of the walls in the B-wing basement, caused by soil pressure on the exterior of the walls, and the high bay wall in the A-wing, caused by wind load forces, would be addressed by bracing with inverted flying buttress steel fabricated braces or vertical strong backs attached directly to the wall. The method used would depend on available space. The design for these modifications needs to be developed. A lightweight fill and water barrier would be installed in C-wing. This would require excavation of the existing soil near the wall and replacing it with a lightweight fill material.

The proposed action would also reinforce the two stacks north of the facility (welding metal flutes to the exterior to better direct the wind), install door stoppers on the hot cell doors, install new fire doors in the entrance corridor, and upgrade the air damper.

Estimated Start Date: August 2011

Estimated Completion Date: August 2012

Approximate Cost: \$1, 200,000

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

**Air Emissions** - The asbestos report for MFC-752 presumes the existing roof contains asbestos. This Presumed Asbestos Containing Material (PACM) is listed as roofing felt and insulation. Roof penetrations would be required for the project. Asbestos sampling would be performed by the facility to confirm the presence of asbestos and to determine what type of asbestos material (insulation, felt or asphalt matrix) is present. If the asbestos roofing is in the asphalt matrix, it can be classified as non-friable category I asbestos. If the roofing material is Regulated Asbestos Containing Material (RACM), i.e. insulation, abatement actions would be necessary. Additional asbestos in the form of mudded joints, pipe insulation, caulking, ceiling tile, cove base, drywall, fire doors, floor tile, penetration compound, and window glazing exists throughout the building. Asbestos needing removal would be identified in the hazard walkdown for the project. See sections E and F for conditions and instructions.

**Disturbing Cultural/Biological Resources** - MFC-752 was constructed prior to 1975. The footprint of the interior walls of MFC-752 would not be altered. See Sections E and F for project conditions and instructions.

**Generating and Managing Waste** - The project would generate industrial waste in the form of existing roofing material (non-friable Category I ACM), RCRA empty containers, packaging material, insulation, rubber membrane scrap, and scrap metal. Hazardous waste is not expected to be generated, but adhesives and other chemical waste could be generated during the project. See Sections E and F for conditions and instructions.

**Releasing Contaminants** - Typical construction chemicals such as primers, adhesives, caulks, fuels, paint, lubricants, etc., would be used during the project. These have the potential to release volatiles during installation of the roofing system. All subcontractor chemicals would be submitted and approved in the vendor data system prior to bringing them on site. The Construction Chemical Coordinator would enter all chemicals used on the project into the INL Comply Plus Chemical Management System. See Sections E and F for conditions and instructions. See the Environmental Aspect for Air Emissions for asbestos information.

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

Note: 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, including requirements of DOE orders; 2) require siting and construction or

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major expansion of waste storage, disposal, recovery, or treatment 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) adversely affect environmentally sensitive resources. 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: National Environmental Policy Act (NEPA) Implementing Procedure, Final Rule, 10 CFR 1021 Appendix B to Subpart D, Categorical Exclusion B2.5 "Safety and environmental improvements of a facility, including replacement and upgrade of facility components," effective 1996.

Justification: This activity is required to bring the facility up to current seismic design standards. 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 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 may include, but are not limited to: Replacement/upgrade of control valves, in-core monitoring devices, facility air filtration systems, or substation transformers or capacitors; addition of structural bracing to meet earthquake standards and/or sustain high wind loading;..."

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 9/7/2011.