

# DOE-ID NEPA CX DETERMINATION

## Idaho National Laboratory

**SECTION A. Project Title:** Materials and Fuels Complex (MFC)-752 Analytical Laboratory B103 Heating, Ventilating, and Air Conditioning (HVAC) Upgrade

**SECTION B. Project Description:**

The proposed action would upgrade the ventilation system ducting, high-efficiency particulate air (HEPA) filter housings, fume hoods, and steam coils in the MFC-752 B103 Laboratory. The upgrade would include 1) installation of a heating, ventilating, and air conditioning (HVAC) control system that would interface with the iVu system, 2) installation of a unit heater at the north end of the A wing hallway, and 3) installation of an air lock isolation wall with doorway in the basement of MFC-752.

The current HEPA filter housings do not seal correctly due to corrosion, and the HEPA filter system and two fume hoods are currently out of service. A new HEPA filter bank would replace the existing HEPA filter bank in order to achieve proper sealing and testing. The fume hoods are antiquated and are being updated to enhance usability. The current processes that utilize these fume hoods would not change.

The two steam coils would also be replaced with two electric coils. The steam heating of laboratory B-103 is insufficient during the winter months and causes problems with instrumentation and equipment in the room. The installation of electric heating coils would allow for better heat control in the room. A new HVAC control system would be installed. The HVAC control system would interface with the iVu system to control and maintain proper heating to the room and electric duct heaters. Connecting the heating controls into the iVu system would allow for monitoring, trending and controls. This iVu system is already interfaced with the air handling units in the facility. New ducting would enhance supply air flow to the fume hoods and the room.

In addition, a wall unit heater would be installed at the north end of the A wing hallway to provide comfort heating in this area during the cold weather.

Finally, an airlock isolation wall with doorway would be installed in the basement of MFC-752 to isolate the basement from the main floor to control airflow and maintain proper pressure in the analytical laboratory when access hatches are open. Building flow and pressure changes are hard to control when the access hatch is removed. Adding this airlock will help keep the building air pressure and flow under control.

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

**Air Emissions:** Project activities could result in radioactive air emissions from the removal of the existing HEPA filters, ducting and fume hoods. It is not anticipated that this work will result in releases exceeding historical facility emissions. Any releases associated with the proposed action would vent to the MFC-752 suspect exhausts system which is equipped with HEPA filtration and a continuous monitoring system to minimize and monitor any releases to the atmosphere. No permit or air permit applicability determination (APAD) is need for this project.

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. Quantities of asbestos that are to be disturbed will be communicated to the Construction Environmental Support and Services (ES&S) representative in order to file the Asbestos Removal Notification Form (450.04). Asbestos work will not take place until the project has received approval from the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAPs) Technical Point of Contact (TPOC).

**Disturbing Cultural or Biological Resources:** MFC-752 is eligible for listing on the National Register of Historic Places. The project as described is exempted from cultural resource review (Idaho National Laboratory [INL] Cultural Resources Management Plan, Table 2, exemption 2 [Department of Energy Idaho Operations Office (DOE/ID)-10997 rev. 5]). Therefore, the project may proceed as planned.

**Generating and Managing Waste:** Demolition and removal of the existing ventilation, existing HEPA filter housings, fume hoods, steam coils, and ducting generate low level waste due to residual contamination. Construction activities will generate industrial waste such as packaging material, small amounts of scrap wiring, piping materials, etc., and removed equipment, conduit, piping, etc. Construction activities could generate hazardous waste during the demolition of existing equipment and the installation of the new equipment. Asbestos and/or lead based paint and polychlorinated biphenyls (PCBs) may have been used in the construction of the Analytical Laboratory facility and could be disturbed by the demolition and construction activities. Approved work controls will be in place to ensure that no airborne release of asbestos and lead will occur during removal activities. Project personnel will work with Waste Generator Services (WGS) to properly characterize, store, and dispose all waste according to established waste streams and laboratory procedures.

**Using, Reusing and Conserving Natural Resources:** All materials would be reused and/or recycled where economically practicable and as accepted by the customer. 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 <https://sftool.gov/green-products/0/hvacmechanical?agency=0>). 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 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 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)-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 B2.1 "Workplace enhancements" and B2.5 "Facility safety and environmental improvements"

**Justification:** Project activities in this Environmental Checklist (EC) are consistent with 10 CFR 1021, Appendix B to Subpart D, Categorical Exclusion B2.1 "modifications within or contiguous to an existing structure, in a previously disturbed or developed area, to enhance workplace habitability (including, but not limited to, installation or improvements to lighting, radiation shielding, or heating/ventilating/air conditioning and its instrumentation, and noise reduction" and 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 control valves, in-core monitoring devices, 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: 11/21/2014