

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: Central Facilities Area (CFA)-623/624 Electric Heat Conversion Project

SECTION B. Project Description:

The CFA-671 Boilers currently supply steam heat to buildings CFA-601, CFA-623 and CFA-674. Various problems such as steamline leaks/repairs, CFA-671 structural problems, age of the boilers, fuel costs, and upcoming 40 Code of Federal Regulations (CFR) 63 Subpart DDDDD regulations has led to the decision to replace the steam heat in these buildings with electric heat. The on-site air emissions associated with fuel burning equipment would be reduced with the inactivation of these boilers. The heating, ventilating, and air conditioning (HVAC) systems in buildings CFA-623 and CFA-624 are currently using pressurized steam coils to provide heat to both buildings. The proposed design would replace these steam coils with slip-in electric duct heaters. There are ten overall electric heaters that would be installed between both buildings and the associated air handling units. To accommodate this additional electrical load, a new 750 kVA pad-mount transformer would be installed along with a new panelboard and associated molded-case circuit breakers in CFA-623. Existing thermostats and control systems would be re-used where feasible. CFA-601 and CFA-674 warehouses would be heated by electric air handler units similar to what is currently supplying the CFA-601 warehouse office area. The CFA-671 Boilers would initially be kept in a ready status until the electric heat conversion is complete.

When the boilers are deemed permanently inactive, the underground storage tank and supply line would be pumped out and the diesel fuel would be transferred to and used in another tank. Boiler USTs do not have to meet 40 CFR 280 requirements, including Subpart G closure requirements. However, all liquids and accumulated sludges would be removed from the tank and the UST would either be removed from the ground or filled with an inert solid material such as grout. A reduction in diesel fuel use and the corresponding on-site reduction in air emissions from burning fossil fuels would be the result of deactivating the boilers.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions - The CFA-671 boilers (CFA-671-007, CFA-671-008) are covered by Air Permitting Applicability Determination (APAD) INL-11-004 and qualify for a Category I, Level I Exemption. The boilers would initially be kept in a ready status until the electric heat conversion demonstrates adequacy in the winter months. When there is confidence that the electric heat is adequate, the boilers would be deemed permanently inactive and the APAD would be cancelled. Compliance to Idaho National Laboratory (INL) Tier I Air Permit requirements for these boilers, such as visible emissions, excess emissions, fuel type, fuel sulfur content, and upcoming 40 CFR 63 Subpart DDDDD requirements, would no longer be applicable. The on-site air emissions associated with fuel burning equipment would be reduced with the inactivation of these boilers.

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 - CFA-601, CFA-671, and CFA-674 are 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, exemption 4 [Department of Energy Idaho Operations Office (DOE/ID)-10997 rev. 5]). Therefore, the project could proceed as described without further cultural resource review.

Generating and Managing Waste - Typical construction debris such as packaging material, scrap wood, scrap metal, conduit, piping, wire, empty chemical containers, etc., would be generated during the project. Electronic waste, switches, and sensors would be dispositioned/recycled. The diesel in the underground storage tank (UST) and supply line would be pumped out and moved to another storage tank for reuse. Any waste associated with emptying the UST, supply line, and chemicals associated with the boilers would be disposed through Waste Generator Services (WGS). Polychlorinated Biphenyls (PCBs) and lead may be encountered in items painted prior to 1980. All waste would be characterized, stored, and disposed at the direction of WGS.

Releasing Contaminants - Typical construction chemicals such as lubricants, fuels, adhesives, etc., would be used by the subcontractor. A chemical inventory list with associated Material Safety Data Sheets (MSDS's) would be submitted in the vendor data system by the subcontractor. All chemicals would be entered into the INL Comply Plus Chemical Management System by the Construction Chemical Coordinator.

PCB contamination is not anticipated, however, contamination control methods may be required if disturbing surfaces painted prior to 1980.

Using, Reusing, and Conserving Natural Resources - A reduction in diesel fuel use and the corresponding on-site reduction in air emissions from burning fossil fuels would be the result of deactivating the boilers. All materials would be reused and 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 will 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 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 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 item B3.9, "Projects to reduce emissions and waste generation"

Justification: "Projects to reduce emissions and waste generation at existing fossil or alternative fuel combustion or utilization facilities, provided that these projects would not have the potential to cause a significant increase in the quantity or rate of air emissions. For this category of actions, 'fuel' includes, but is not limited to, coal, oil, natural gas, hydrogen, syngas, and biomass; but fuel does not cover nuclear fuel. Covered actions include, but are not limited to:

- (a) Test treatment of the throughput product (solid, liquid, or gas) generated at an existing and fully operational fuel combustion or utilization facility;
- (b) Addition or replacement of equipment for reduction or control of sulfur dioxide, oxides of nitrogen, or other regulated substances that requires only minor modification to the existing fuel combustion or utilization facility, for which the existing use remains essentially unchanged;
- (c) Addition or replacement of equipment for reduction or control of sulfur dioxide, oxides of nitrogen, or other regulated substances that involves no permanent change in the quantity or quality of fuel burned or used and involves no permanent change in the capacity factor fo the fuel combustion or utilization; and
- (d) Addition or modification of equipment for capture and control of carbon dioxide or other regulated substances, provided that adequate infrasstructure is in place to manage that substance."

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: 7/17/2014