

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: IF-685 (Energy Systems Laboratory) D100 Modifications

SECTION B. Project Description and Purpose:

The northwest high bay (D100) of IF-685 Energy Systems Laboratory is experiencing ambient temperature extremes that adversely affect personnel comfort and have the potential to affect research equipment reliability. New programs moving into the space compounds the problem with temperature control. An in-floor radiant heat system provides heat to the high bay, but the area was not designed to be air conditioned.

The proposed action installs air conditioning and heated make-up air capability for exhaust systems in the high bay. A concrete pad-mounted Heating, Ventilation, and Air Conditioning (HVAC) unit will be installed outside the ESL Building. Supply and return air ductwork will be sized and installed. The HVAC system will interface with the ESL Building Management System (BMS). These HVAC additions are for temperature control only and do not add air emission sources that would require an air permitting applicability determination.

In addition, air compressors located in the D100 high bay generate sound and create a nuisance to facility occupants. The proposed action designs and installs mitigation measures, such as installing sound absorbing panels or a sound proof curtain, to reduce sound levels.

The proposed action includes installation of a new access platform for the exhaust fan (EF-5) in the southwest corner of D100 if funding is available. The new access platform (similar to the one fabricated and installed within high bay E-100) allows safe access to the exhaust fan for maintenance activities.

Estimated Start Date: June, 2018

Estimated End Date: October, 2018

Approximate Cost: \$884,000

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Construction activities will generate emissions typical of cutting, grinding, and welding.

The new HVAC unit will have refrigerant R410-A with two circuits that will be greater than 50 lbs charge. These HVAC additions are for temperature control and do not add any air emission sources that would require an air permitting applicability determination.

Generating and Managing Waste

General construction debris such as conduit, piping, packaging material, wire, RCRA empty containers and waste concrete may be generated during project activities. Hazardous waste generation is not anticipated.

Releasing Contaminants

Chemicals such as fuels, lubricants, caulks, paints, weld rod, concrete/grout and refrigerant (R410-A) will be used throughout the project.

Using, Reusing, and Conserving Natural Resources

The project will evaluate waste items to see if recycling or reuse is an option. Appropriate waste items such as scrap metal and wire will be diverted from landfill disposal and recycled to the extent practical.

SECTION D. 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)-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, B1.4 "Air conditioning systems for existing equipment," B2.1 "Workplace enhancements," and B2.5 "Facility safety and environmental improvements."

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Justification: Project activities are consistent with 10 CFR 1021, Appendix B to Subpart D, B1.4, "Installation or modification of air conditioning systems required for temperature control for operation of existing equipment;"

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);"

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, or substation transformers or capacitors; addition of structural bracing to meet earthquake standards and/or sustain high wind loading; and replacement of aboveground and belowground tanks and related piping, provided that there is no evidence of leakage, based on testing in accordance with applicable requirements (such as 40 CFR part 265, "Interim Status Standards for Owners and Operators Hazardous Waste Treatment, Storage, and Disposal Facilities" and 40 CFR part 280, "Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks"). These actions do not include rebuilding or modifying substantial portions of a facility (such as replacing a reactor vessel)."

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act) Yes No

Approved by Jason Sturm, DOE-ID NEPA Compliance Officer on: 2/15/2018