

# DOE-ID NEPA CX DETERMINATION

## Idaho National Laboratory

### **SECTION A. Project Title:** Surface Science Instrument Relocation to Safety and Tritium Applied Research Facility (STAR)

### **SECTION B. Project Description and Purpose:**

The Fusion Safety Program (FSP) in the Fusion, hydrogen, and measurement Science organization (C640) organization is transferring two surface science instruments from the Idaho National Laboratory (INL) Research Complex (IRC) building Idaho Falls (IF)-603, room C-4 to the Safety and Tritium Applied Research (STAR) facility at the Advanced Test Reactor Complex (ATR Complex) building Test Reactor Area (TRA)-666/666A, room 102 on the annex side. The two instruments are a Scanning Auger Microprobe (SAM), property numbers 381133, 370547, and 418891, and an x-ray photoelectron spectrometer (XPS) property numbers 381134, 370546, 381134, and 415111. The SAM cost \$75k and the XPS cost \$190k when initially purchased by INL in 2005.

In this project, the two instruments will initially be prepared by a vendor (RBD Instruments Inc.) technician for storage, and they will be moved by INL to the WestOne Logistics Warehouse in Fiscal Year (FY)-16. Warehouse storage is temporary until STAR room 102 is modified. Storage preparation involves draining oils and fluids to prevent freeze damage, removing cables, and removing delicate filaments and sensors.

Upgrades to room 102 include the following:

- Reverse door swing of double doors
- Remove the southwest workbench to add additional floor space
- Run 240 Volt and 60 amp electrical power to the southern part of room
- Add 120 Volt electrical power to the southern part of room
- Run potable water for cooling to the southern part of the room
- Run instrument air lines to the southern part of the room.

These changes to STAR room 102 (workbench and doors) should be completed in FY-16. Other infrastructure additions to room 102 will be added in FY-17, including a new Glow Discharge Optical Emission Spectrometer (GDOES). INL is expected to move the two instruments from warehouse storage to room 102 at STAR before the end of FY-17. The RBD Instruments technician will reassemble, test, and calibrate the SAM and XPS. The GDOES, SAM and XPS will be put in use by early FY-18.

Cost estimate for the modification of room 102 and relocation of equipment is expected to be approximately \$100K, and the cost of new GDOES is estimated to be \$300K.

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

#### **Air Emissions**

Asbestos containing building materials (floor tile, fire doors, drywall, etc.) are known to be present in TRA-666. Suspect materials may be sampled or presumed to contain asbestos and managed appropriately.

#### **Disturbing Cultural or Biological Resources**

TRA-666 is eligible for nomination to the National Register of Historic Places and is considered a Category 2 historic property. Removal and/or changes of original features may adversely impact this historic property; however, the project activities as described are exempt and may proceed as described without further cultural resource review. The described project activities fall under exemption 8 (internal reconfiguration of active laboratories) listed in Table 2 (Idaho National Laboratory Cultural Resource Management Office. Idaho National Laboratory Cultural Resource Management Plan. DOE/ID10997, revision 6, Idaho Falls, Idaho: U.S. Department of Energy, Idaho Operations Office, 2016, pg 51).

#### **Generating and Managing Waste**

Industrial (non-hazardous, non-radioactive) waste will be generated during the project. Hazardous waste is not expected, but may be generated (e.g., paint containing heavy metals). Asbestos containing waste and potential polychlorinated biphenyl (PCB)-contaminated material (e.g., paint prior to 1982) may be generated. All waste would be characterized, managed, and dispositioned through Waste Generator Services (WGS).

#### **Releasing Contaminants**

Typical construction chemicals such as lubricants, paints, adhesives, etc., will be used during the project. All spills would be reported to the Construction Field Representative and Spill Notification Team if applicable.

#### **Using, Reusing, and Conserving Natural Resources**

All applicable waste would be diverted from disposal in the landfill when possible.

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**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, Categorical Exclusion B1.31 "Installation or relocation of machinery and equipment."

**Justification:** The proposed activities are consistent with CX B1.31 "Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts."

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: 6/30/2016