DOE-ID NEPA CX DETERMINATION
Idaho National Laboratory

CX Posting No.: DOE-ID-INL-16-095

SECTION A. Project Title: Materials and Fuels Complex (MFC) Research Collaboration Building

SECTION B. Project Description and Purpose:

Work at Idaho National Laboratory's (INL's) Materials and Fuels Complex (MFC) involves research and technology development, with results disseminated openly and shared with the scientific community or made available to private industry. The quality of such work depends on open dialogue and exchange of information. In this capacity, MFC hosts many foreign visitors and assignees with whom active information exchange is encouraged. Other work includes training programs as well as Department of Homeland Security research and development (R&D). Other research involves commercial interests.

Facilities housing major capabilities at MFC have been maintained and renovated over the years to enable R&D for various initiatives, but MFC faces significant challenges from normal aging of buildings and infrastructure. There is a substantial need for upgraded facilities.

To address the need for accessible space at MFC for nuclear energy research and support personnel, critical small-scale mock-up equipment, instrumentation development work, data visualization and analysis, and computer workstations for analysis of post irradiation examination work, the proposed action would design and construct a Research Collaboration Building (RCB) at MFC.

The proposed RCB would be designed and space allocated for external nuclear energy researchers to train, work and collaborate with MFC researchers. The facility would be two stories and approximately 15,000 to 20,000 sq. ft. located outside of the MFC perimeter west of building MFC-701 and would be used for office, collaboration, and non-radiological laboratory space. MFC research and support personnel would be relocated to the facility. A dry laboratory area would be designed and constructed for small-scale mock-up experiments and processes and instrumentation development.

Building construction would require relocation of part of the perimeter fence west of MFC-701 and the vehicle entry. A utility corridor would be installed to provide electrical power, sewer, potable water, fire water, and telephone and data communications from inside the MFC perimeter. The building would have standard utilities including heating, ventilation and air conditioning (HVAC), electrical lighting and power, compressed air, telephone and data communications, potable water, sewer, voice paging, evacuation, fire alarm and wet fire sprinkler systems. Storm drainage would be installed to convey rainwater from the building to the MFC storm water drainage system. Excavation would be needed for the building foundation, utility corridor, and potential removal or relocation of existing underground utilities.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Project activities may involve the use of portable generators and equipment owned by subcontractors. Emissions from portable generators are exempt from permitting if in place less than one year.

In addition, activities will disturb soil and likely create fugitive dust.

Discharging to Surface-, Storm-, or Ground Water

Project activities will connect to and extend current wastewater systems, if needed. Environmental personnel must pre-approve all discharges to industrial wastewater systems per the MFC Industrial Waste Water Permit."

Project activities will connect to and extend current potable/fire water systems per Safe Drinking Water Act and Fire Water Standards and Regulations. Project activities will direct potential stormwater sources to the MFC stormwater drainage ditches. Project activities will connect to and extend current sanitary sewer systems. In accordance with the Safe Drinking Water Act Regulations, the sanitary sewer lines must meet the applicable separation distances from the potable water lines.

If a sanitary or industrial wastewater main line is extended and/or a lift station's are added, the applicable plans and specifications must be submitted to the Idaho Department of Environmental Quality for review and approval prior to construction. Contact MFC environmental personnel for assistance.

Disturbing Cultural or Biological Resources

Cultural resources may be present in both disturbed and undisturbed contexts outside the existing perimeter fence at MFC.

Generating and Managing Waste

The proposed action would generate a variety of waste, including the following:

- Industrial (non-hazardous, non-radioactive) waste includes typical maintenance wastes such as boxes, wood, wiring, paper, insulation, and some metals.

- Hazardous wastes have the potential to be generated during maintenance operations on systems or equipment containing hazardous chemicals, or by using hazardous chemicals to clean or decontaminate equipment and systems. Hazardous metal waste (e.g., lead, electronics, brass, metal containing paints, etc.) may also be generated.

Releasing Contaminants

Two CERCLA sites are located west of MFC-701, but are not under institiutional controls. However, ground disturbance in this area should proceed with caution.

Project activities will likely use construction related chemicals such as adhesives, fuels, weld rod, compressed gases, lubricants, paints, etc. Subcontractors must submit initial, quarterly, and final chemical inventory lists and Safety Data Sheets (SDSs) for approval by Battelle Energy Alliance, LLC (BEA) via the vendor data system prior to bringing any chemicals to the INL. The Construction Chemical Coordinator will enter these chemicals into the INL Chemical Management System.

Using, Reusing, and Conserving Natural Resources

Diesel and other fossil fuels would be used during project activities. All materials would be reused or recycled where economically practicable. All applicable waste would be diverted from disposal in the landfill where conditions allow. The project would practice sustainable acquisition.

SECTION D. Determine Recommended Level of Environmental Review, Identify Reference(s), and State Justification: Identify 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 B1.15 "Support buildings" and B3.6 ""Small-scale research and development, laboratory operations, and pilot projects."

Justification: Project activities described in this Environmental Checklist (EC) are consistent with 10 CFR 1021, Appendix B to Subpart D, items B1.15 "Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.5, B6.6, and B6.10 of this appendix;" and B3.6 "Siting, construction, modification, operation, and decommissioning of facilities for small-scale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment."

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: 8/10/2016