

DOE-ID NEPA CX DETERMINATION

Idaho National Laboratory

SECTION A. Project Title: Idaho Falls (IF)-605 Mild Abuse Laboratory Enclosures

SECTION B. Project Description and Purpose:

The proposed project will make modifications to the IF-605 Mild Abuse Laboratory in support of future battery testing research. These modifications will add three containment structures where battery testing/upset conditions will occur. Structural, mechanical, electrical and drainage modifications will be made to support these structures. Details of these modifications are as follows:

- Remove overhead door and replace with a new, larger overhead coil-up door
- Relocate 1" fire water drain line
- Remove three power panels, transformers, and corresponding conduits
- Relocate a wall, thermostat, and associated wiring
- Remove light fixtures, emergency lighting, and associated wiring
- Relocate chain link fence and re-install with eight new line posts
- Relocate 30-feet of the exterior retention pond, associated liner, rip rap, and relocate to a new location
- Excavate a new 6-foot deep storm water retention pond and connect to the existing liner
- Relocate the beam anchors and wall tie-rod cross bracing from the center frame for Room 101 to the west frame of Room 101
- Install three new mild abuse laboratory enclosures that are 7.4' wide by 9.4' long and 9.4' tall
- Install a 1.5" and 1" fire water pipe to each enclosure from the 1.5" tap on the 3" overhead fire water header and install sprinkler heads inside the three enclosures
- Install an above ground 2,000 gallon poly catch tank on the west side of the building, with a below grade 50 gallon catch basin with a lift pump attached to each enclosure
- Backfill the retention pond area with compacted engineered fill to allow a stack and exhaust fan to be installed
- Raise the west wall girt beam of Room 101 up 36" to allow installation of three blowout panels
- Install three blowout panels with shrapnel fences onto the west exterior wall
- Install three 10-gauge welded steel ducts from each enclosure to the wall
- Install a 20' x 25' x 6" thick concrete pad west of Room 101 for the stack and fan assembly and tanks
- Install a 3 hp, 480 V, stack exhaust fan with a variable frequency drive motor starter and fused disconnect switch
- Install a 31' tall stack, 20" diameter, made of 1/4" thick steel painted outside
- Install all necessary ducting and electrical for the exhaust system
- Install a new Allerton control system for the existing and new air conditioning system.

The containment system would collect water from the fire deluge system when an upset condition takes place. This will drain to the outside collection lift station sump which would pump the wastewater to the 2,000 gallon above ground poly catch tank where sampling can be performed prior to discharge or other disposal.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

A stack and fan assembly will be installed on the west side of IF-605 that will vent the containment structures in the unlikely case of an upset event. An Air Permit Applicability Determination (APAD) will not be required. There will not be any radiological emissions associated with the battery testing activities.

Fugitive dust may be generated while excavating for the concrete pads and storm water retention basins.

Discharging to Surface-, Storm-, or Ground Water

The storm water collection/drainage basin on the west side of IF-605 will be modified to make room for the concrete pad, stack, fan assembly, lift station, and wastewater tank. Storm water discharges/characteristics would not change from current conditions. The tank contents will not be discharged to the ground but will be pumped and disposed appropriately.

Generating and Managing Waste

Scrap metal, conduit, wire, cable, pipe, concrete, packaging material, etc., will be generated during the project. Scrap metal will be diverted from landfill disposal and recycled where practical.

Wastewater will be generated from fire water systems and pumped to the 2,000 gallon poly storage tank in the unlikely case of an upset event in the battery containments. The wastewater is not expected to be hazardous but will be characterized if generated and appropriately disposed. Upset events are not likely. All waste will be characterized and disposed at the direction of WGS.

Releasing Contaminants

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Typical construction chemicals such as lubricants, fuels, adhesives, paints, etc., will be used on the project. The subcontractor will submit a chemical inventory list via vendor data with associated Safety Data Sheets (SDS's). The Construction Chemical Coordinator will track these chemicals in the Idaho National Laboratory (INL) Comply Plus Chemical Management System. Spills from chemicals will be reported to the Spill Notification Team as soon as possible.

The wastewater generated from an upset event will be contained within the wastewater collection system. The system will not discharge to the ground or to the Idaho Falls Sewer System. After characterization is completed, the wastewater tank will be pumped and disposed of appropriately--which could include pumping to the City of Idaho Falls Sewer System if characterization determines it meets industrial wastewater requirements.

The lift station sump is a below grade containment structure that holds less than 110 gallons and is excluded from any Underground Storage Tank (40 CFR 280) requirements.

Using, Reusing, and Conserving Natural Resources

Scrap metal such as conduit, wire, piping, etc., will be diverted from landfill disposal and recycled where 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, B2.5 "Facility safety and environmental improvements"

Justification: Project activities are consistent with 10 CFR 1021, Appendix B, 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 Jack Depperschmidt, DOE-ID NEPA Compliance Officer on: 12/3/2015