DOE-ID NEPA CX DETERMINATION
Idaho National Laboratory

CX Posting No.: DOE-ID-INL-16-068

SECTION A. Project Title: Excess Facilities Deactivation and Demolition Rev 1

SECTION B. Project Description and Purpose:

The purpose of this revision is to capture additional project scope. Building B25-601, built in 1996, would be added to the list of facilities to be deactivated, decontaminated, and demolished (DD&D). In addition, Central Facilities (CF)-1708 is an underground storage tank (UST) associated with CF-671 Boiler House, and this UST will undergo DD&D. The environmental aspects, work activities, and project conditions and instructions remain the same as those analyzed in the original environmental checklist (EC) (see below).

This additional scope does not include historic properties eligible for the National Register of Historic Places. Demolition of historic properties at the Central Facilities Area was analyzed in the *Environmental Assessment on the Disposition of Five Signature Properties at Idaho National Laboratory* (Department of Energy Environmental Assessment [DOE/EA]-1984).

Original EC

The purpose of the proposed action is to DD&D surplus vacant, inactivated, or soon to be inactivated facilities to reduce lifecycle costs associated with surveillance and maintenance. The proposed action would return the location of the facilities to near original condition. There is limited risk to site personnel posed by remaining hazards within these buildings and structures. Principal hazards are asbestos, lead-based paint, small quantities of hazardous materials and waste, confined spaces, and possible residual radiological contamination. The proposed action would DD&D the buildings located at the Idaho National Laboratory (INL) listed in the following table:

Facility	Description	Construction Type	Active Year	Sq. Ft	Current Status
Central Facilities Area (CFA)					
CF-661	Material Staging Buildings - empty	Steel Frame	1963	5,917	Cold, Dark & Dry
CF-629	Office Building - empty	Steel Frame	1979	9,850	Cold, Dark & Dry
CF-1605	CFA Waste Water Lab - empty	Steel Frame	1995	1,313	Cold, Dark & Dry
CF-674	Excess Warehouse - empty	Masonry	1952	56,508	Operating
CF-688	Technical Center Office Building - empty	Masonry	1963	19,312	Operational Standby
CF-689	Technical Center Office Building - empty	Masonry	1963	26,795	Operational Standby
CF-686	High Bay	Masonry	1979	4,822	Operating
CF-601	Warehouse	Masonry	1950	51,951	Operating
CF-663	Core Storage Building	Steel Frame	1990	6,160	Operating
CF-676	DOE Equipment Storage	Steel Frame	1963	1,475	Operating
CF-621	Multi Craft Shop	Steel Frame	1983	11,787	Operating
CF-622	Multi Craft Shop	Steel Frame	1985	10,943	Operating
CF-623	Multi Craft Shop	Steel Frame	1986	12,615	Operating
CF-624	Multi Craft Shop	Steel Frame	1986	7,986	Operating
CF-671	Boiler House	Masonry	1951	1,138	Operating
CF-664	Storage Building	Masonry	1951	16,385	Operating
CF-695	Fire Safety Equipment Storage	Masonry	1966	1,584	Operating
CF-619	Utility Building	Steel Frame	1985	400	Operating
CF-625	CFA Laboratory Building	Prefabricated	1989	8,797	Operating
CF-690	Radiological Environmental Science Lab	Masonry	1963	32,394	Operational Standby
Test Reactor Area (TRA) (now known as Advanced Test Reactor [ATR] Complex)					
TRA-669	Cold Storage Building - empty	Steel Frame	1968	2,269	Cold, Dark & Dry
TRA-689	Radioactive Waste Storage - empty	Concrete	1997	5,470	Operational Standby
Test Area North (TAN)					
TAN-601	Guard House - empty	Masonry	1954	2,995	Operating
B25-601	Engineering Barriers Test Facility - empty	Concrete	1996	2,166	Cold, Dark & Dry

After World War II, the INL was designated as a nuclear test site, and the buildings identified above were built to support the post war mission. In the early 1950s, CFA was established as the main service and support facility for nuclear programs conducted at other INL facility locations. Today, services provided at CFA include support activities such as transportation, maintenance, security, fire protection, warehouses, calibration laboratories, and cafeteria.

The proposed action would perform the following activities:

- Characterize facilities, including waste stream determinations and project development.
- Prepare project sites, including mobilization and staging of equipment and trailers, installation of electrical connections, and surface improvements, as necessary.
- Isolate and/or remove building utilities, including underground piping and utility lines, potable water, firewater, sewer, electrical, communication, ventilation, life safety, and steam lines. Minor re-routes of utilities may be necessary; major re-routes would be addressed separately
- Remove and manage all radiological contamination.

- Remove remaining building equipment, such as pumps, tanks, boilers, light fixtures, electrical panels and switch boxes, appliances, and cabinets.
- Remove entire building structures, including concrete footers/piers to 3 ft below grade, wooden structural components, walls, structural steel, and roofing. Below grade structures and intact concrete slabs will remain in place if deemed appropriate.
- Dispose and/or recycle/reuse all removed building components and equipment when practical or feasible.
- Grade the site to match the surrounding contour and ground cover (such as lawn, gravel, or native vegetation) and control wind and water erosion.

In characterizing these facilities, the project would only look for lead in the soil if there is evidence that soil contamination has occurred. Project personnel do not expect to take soil samples, unless stains, unfamiliar odors, or other signs of a spill or contamination are present during deactivation and demolition (D&D).

Collection of samples for chemical and radiological analyses would be performed to provide data necessary to minimize health and safety risk to D&D project workers and for developing and completing hazardous waste determinations for waste dispositions. Off-Site laboratories may be used to perform analyses of samples collected.

The total estimated cost for performing DD&D activities at these thirteen facilities is $10.185M. The schedule for completing these activities is dependent upon the funding made available annually.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Project activities may generate fugitive dust as the result of structural demolition, soil disturbance, and excavation activities. The limited nature of radiological contamination present means there would be a very low probability of any radiological emissions from such sources. Combustion equipment such as generators, portable heaters, ventilation equipment, and heavy equipment fueled with diesel would be used during D&D operations. The proposed demolition activities will not include on-site construction activities of an emissions unit which are of permanent nature.

There is a possibility that materials containing asbestos could be disturbed. All work on asbestos containing building materials would be performed by properly trained personnel. If the scope of work specified in the work package identifies an amount of regulated asbestos-containing material (RACM) to be removed that equals or exceeds the threshold quantity (260 linear feet on pipes / 160 square feet on other facility components / 35 cubic feet on facility components where the length or area could not be measured previously) specified in 40 Code of Federal Regulation (CFR) 61.145, contact the Asbestos Coordinator and provide the necessary information for completion of a 10-Day Demolition or Renovation Notification. Ten-day notifications are required for all demolitions, even if asbestos is absent. Examples of asbestos containing materials that may remain include floor tiles, mastics, insulation within fire doors, roofing materials, and piping gaskets. Project personnel will properly manage RACM in compliance with the asbestos National Emission Standard for Hazardous Air Pollutant (NESHAP) regulations during removal, transport, and disposal. Instructions provided in Laboratory-Wide Procedure (LWP)-8000 Section 4.3 will be implemented where applicable.

Discharging to Surface-, Storm-, or Ground Water

The project would involve excavation and potential disruption of existing drainage patterns. Prior to initiating any activity that could cause contamination of a drinking water system, such as isolating components of the drinking water system and while using drinking water for dust suppression, DD&D will consider protection of the wells and potable water supply.

Disturbing Cultural or Biological Resources

The project includes the demolition of CFA facilities constructed during the INL's Historic Period of Significance (1942-1970) which are eligible for listing on the National Register of Historic Places. These facilities include CF-661, CF-674, CF-688, CF-601, CF-690, TRA-669, and TAN-601. Demolition of historic properties at the Central Facilities Area was analyzed in the *Environmental Assessment on the Disposition of Five Signature Properties at Idaho National Laboratory* (DOE/EA-1984).

The following buildings are not eligible for listing on the National Register of Historic Places, and therefore no further cultural resource review is required for implementation of the project activities as described:

- B25-601
- CF-1605
- CF-619
- CF-621
- CF-622
- CF-623
- CF-624
- CF-625
- CF-629
- CF-663

- CF-686
- TRA-689

The buildings listed in Table 1 (below) are identified as Category 3 Historic Properties in the INL Cultural Resource Management Plan (CRMP), and are eligible for listing on the National Register of Historic Places. Demolition of these properties must be mitigated. Mitigation for Category 3 historic properties, as described in the INL CRMP, requires reconnaissance-level, high quality digital photo documentation and completion of an Idaho Historic Sites Inventory (IHSI) form for each property (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.166). The photo documentation must be completed and received by the INL Cultural Resource Management Office prior to commencement of work.

Table 1: Historic Properties

BUILDING	CONSTRUCTION DATE	NATIONAL REGISTER ELIGIBILITY	PROPERTY TYPE	MITIGATION COMPLETE
CF-601	1950	Eligible	Category 3	No
CF-661	1963	Eligible	Category 3	No
CF-664	1951	Eligible	Category 3	No
CF-671	1951	Eligible	Category 3	Yes
CF-674	1952	Eligible	Category 3	No
CF-676	1963	Eligible	Category 3	No
CF-688	1963	Eligible	Category 3	Yes
CF-689	1963	Eligible	Category 3	Yes
CF-690	1963	Eligible	Category 3	No
CF-695	1966	Eligible	Category 3	No
TAN-601	1956	Eligible	Category 3	No
TRA-669	1968	Eligible	Category 3	Yes

Project activities would not directly impact wildlife or their habitat, but would have potential impacts due to disturbing soil. D&D of facilities has the potential to impact nesting birds.

Generating and Managing Waste

The project may generate hazardous or mixed waste, including components and materials that contain lead, cadmium, and mercury, such as fusible links (sprinkler heads), lead packing on piping, mercury switches, and fluorescent lamps. Based on historical operations, there is the potential to generate both waste streams. The proposed action would generate industrial waste in the form of concrete and structural steel, with additional waste coming from corrugated metal siding, wood framing, gypsum board, and scrap metal. Asbestos containing material consisting of both friable and non-friable asbestos-containing materials would be generated. CF-690 may contain residual radiological contamination (both fixed and loose).

Because of the age of the buildings, polychlorinated biphenyls (PCBs) may be present in painted surfaces and possibly other materials such as wiring, electrical cable insulation, components, light ballasts, contaminated fixtures, and hydraulic and dielectric fluids. PCBs may also be present in waste residues within tanks, pumps, piping, floor trenches, sumps, and other components.

Releasing Contaminants

Portions of the facility equipment and components contain asbestos-containing material, both friable and non-friable. Examples of the materials may include floor tiles, mastics, insulation within fire doors, roofing materials, and piping gaskets.

Using, Reusing, and Conserving Natural Resources

DD&D activities would require the use of various chemicals, including fuels (gasoline and diesel), sealants, adhesives, fixatives, and paints. Project activities would remove building structural components, including possibly lead and equipment.

SECTION D. Determine Recommended Level of Environmental Review, Identify Reference(s), and State Justification: 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 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: National Environmental Policy Act (NEPA) Implementing Procedures, Final Rule. 10 CFR 1021 Appendix B to Subpart D, Categorical Exclusion B1.23 "Demolition and disposal of buildings"

Final Environmental Assessment on the Disposition of Five Signature Properties at Idaho National Laboratory and Finding of No Significant Impact (DOE/EA-1984; September 2014).

Justification: Project activities in this Environmental Checklist (EC) are consistent with 10 CFR Appendix B to Subpart D, Categorical Exclusion B1.23 "Demolition and subsequent disposal of buildings, equipment, and support structures (including, but not limited to, smoke stacks and parking lot surfaces), provided that there would be no potential for release of substances at a level, or in a form, that could pose a threat to public health or the environment;" and demolition of historic properties at the Central Facilities Area was analyzed in the *Environmental Assessment on the Disposition of Five Signature Properties at Idaho National Laboratory* (DOE/EA-1984).

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: 6/28/2016