Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

May 27, 2014

Dear Citizen:

The U. S. Department of Energy (DOE) is issuing the *Draft Environmental Assessment on the Disposition of Five Signature Properties at Idaho National Laboratory (DOE/EA-1984)* document for public review and comment. Your input on this project and the potential environmental impacts are important to us. The environmental assessment can be accessed on the DOE website at www.id.doe.gov. Please submit your comments to Dan Shirley either by e-mail to spea@id.doe.gov, or by mail to, 1955 Fremont Ave., Idaho Falls, ID 83415-1222. Comments must be received or postmarked by June 30, 2014.

All comments will be addressed in a Response to Comment section in the final EA that will be released the fall of 2014. Based on the analysis in the EA, and on public review, DOE will either issue a Finding of No Significant Impact and implement the selected action, or determine that further National Environmental Policy Act analysis is required before deciding on a course of action.

Thank you for your interest in this important endeavor.

Sincerely,

Richard B. Provencher
Manager

DOE/EA-1984

Draft Environmental Assessment on the Disposition of Five Signature Properties at Idaho National Laboratory

U.S. Department of Energy
Idaho Operations Office

Prepared by:
The Department of Energy, Idaho Operations Office

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Acronyms

ACHP	Advisory Council on Historic Preservation
ACM	Asbestos containing material
AEC	Atomic Energy Commission
CFA	Central Facilities Area
D&D	Deactivating and demolishing
DOE	Department of Energy
ESA	Endangered Species Act
GHG	Greenhouse gas
INL	Idaho National Laboratory
LLW	Low-level radioactive waste
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPG	Naval Proving Ground
NRHP	National Register of Historic Places
NRTS	National Reactor Testing Stating
PCB	Polychlorinated biphenyl
SHPO	Idaho State Historic Preservation Office
WW-II	World War-II

Glossary

Area of potential effects: The geographic area (or areas) within which a federal undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.

Attainment area: An area considered to have air quality as good as or better than the National Ambient Air Quality Standards as defined in the Clean Air Act. An area may be an attainment area for one pollutant and a nonattainment area for others.

Clean Air Act: The Federal Clean Air Act is the basis for the national air pollution control effort. Basic elements of the act include National Ambient Air Quality Standards for major air pollutants, hazardous air pollutants, state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

National Ambient Air Quality Standards: Standards established by the Environmental Protection Agency under authority of the Clean Air Act that apply to outdoor air throughout the country. Primary standards are designed to protect human health with an adequate margin of safety, including sensitive populations (such as children, the elderly, and individuals suffering from respiratory disease). Secondary standards are designed to protect public welfare from any known or anticipated adverse effects of a pollutant.

Prevention of significant deterioration: This term applies to new major sources, or major modifications at existing sources, for air pollutants where the area at which the sources are located is in attainment or unclassifiable with the National Ambient Air Quality Standards. If significant impact levels (as defined in the regulation) are exceeded at any public receptor, a detailed air quality impact analysis is required to determine if controls are necessary to maintain air quality.

Signature Property: Signature property is a term coined by the Department of Energy that denotes it's most historically important properties across the complex and/or those properties that are viewed as having tourism potential.

1.0 Purpose and Need

The Department of Energy (DOE) needs to disposition World War-II (WW-II) properties located at the Central Facilities Area (CFA) of the Idaho National Laboratory (INL) Site. These properties were built to support the Naval Proving Ground (NPG) that was located on the land that later became the National Reactor Testing Station (NRTS) and is now known as the INL Site. The land and properties were transferred to the Atomic Energy Commission (AEC) (later renamed the Department of Energy) through Public Land Order 691 on December 5, 1950. The DOE used the buildings to house administrative and laboratory activities for many years in support of various INL missions. As the site grew and missions evolved, better suited facilities were constructed and use of the NPG buildings diminished by the 1990's. Eventually, the buildings were vacated with all utilities permanently cut off and capped. The facilities are in a condition referred to as cold, dark, and dry, and access is limited to periodic walk-throughs by maintenance personnel.

The purpose of the proposed action is to accomplish the appropriate disposition of those properties. It is a responsibility and requirement (DOE 2011) of the DOE to plan for and eliminate excess real property when it becomes extraneous to the government's needs in order to reduce risks and minimize life-cycle costs. Given the properties' age, condition, and location, there is no reasonable potential for their reuse, transfer, or sale.

Concerns supporting the DOE need to take action include:

- The NPG buildings have been vacant for several years and are rapidly deteriorating
- All the buildings have numerous health and safety hazards
- None of these NPG buildings meet current building code
- The buildings and associated infrastructure do not support current or anticipated mission needs
- Resources are not available at the level necessary to rehabilitate the structures or maintain safe occupancy in their current state
- Dispositioning the properties would reduce the costs associated with their continued surveillance and maintenance

The NPG structures are historic properties. They are eligible for listing on the National Register of Historic Places (NRHP) under National Historic Preservation Act (NHPA) criteria, through their association with WW-II and the nation's nuclear pioneering era. Historic INL Site structures are evaluated and categorized based on their relative historic significance into one of four established categories (Signature Properties, Category 1, Category 2, and Category 3). The WW-II properties DOE proposes to disposition are considered *Signature Properties* (see Glossary). Signature Properties are the most historically important of the four categories (DOE 2013).

2.0 Proposed Action and Alternatives

2.1 Proposed Action

The proposed action would entail deactivating and demolishing (D&D) the currently vacant buildings listed in Table 1. Appendix A gives a detailed description of these facilities.

Table 1. Facilities within the Scope of the Proposed Action

Facility	Description	Construction Type	Sq. Ft	Current Status
CF-606	Marine Barracks (NPG)	Masonry	7,363	Cold, Dark & Dry
CF-613	Bunkhouse (NPG)	Masonry	2,697	Cold, Dark & Dry
CF-607	Scoville Officers Quarters (NPG)	Masonry	2,504	Cold, Dark & Dry
CF-632	Single Car Garage (NPG)	Masonry	300	Cold, Dark & Dry
CF-633[1]	Ordnance Offices (NPG)	Masonry	19,833	Cold, Dark & Dry

[1]Sections of CF-633 would be retained as part of the proposed action.

The proposed action would include the following activities:

- Characterizing facilities, including waste stream determinations and development of plans for disposition;
- Preparing project sites, including mobilization and staging of equipment and trailers, installation of electrical connections, and surface improvements, as necessary, to conduct D&D activities;
- Isolating building utilities such as potable water, firewater, sewer, electrical, communication, ventilation, life safety, and steam lines;
- Removing and managing any radiological contamination, asbestos, or other hazards;
- Removing entire building structures, including concrete footers/piers to 3 feet below grade, wooden structural components, walls, structural steel, and roofing. Below grade structures and intact concrete slabs will remain in place if deemed appropriate;
- Disposing and/or, as practicable, recycle/reuse removed building components and equipment ; and
- Grading the site to match the surrounding contour and ground cover (such as lawn, gravel, or native vegetation) to control wind and water erosion.

In characterizing these facilities, project personnel do not expect to take soil samples, unless stains, unfamiliar odors, or other signs of a spill or contamination are present during D&D. DOE will collect and analyze chemical and radiological samples to help minimize health and safety risk to D&D project workers and for developing and completing hazardous waste determinations for waste dispositions.

Operational Controls:

If DOE selects the proposed action, they would implement the following operational controls as an integral part of the action to reduce any potential impacts of the action. Mitigations related to cultural resources are discussed in Section 4.1.1 Cultural Resources.

Air Emissions

- If fugitive dust is expected, reasonable precautions must be taken to prevent particulate from becoming airborne in accordance with the methods specified in the Rules for the Control of Air Pollution in Idaho
- Industrial Hygiene work controls would be implemented, and air quality requirements will be met for the removal of asbestos
- Protecting workers during removal of any radiologically contaminated materials would be controlled by using the INL Radiological Control Program, engineering and administrative controls, and personal protective equipment

Ecological

- Prior to demolition, review Endangered Species Act (ESA) listing status for bats
- Demolishing buildings in the time period from August through October would have the lowest potential to impact birds and bats. Demolishing buildings during that time would minimize potential impacts to nesting birds and to bats during hibernation and parturition. If demolition needs to occur outside of that time frame, preventative controls would be conducted to the extent practicable. Preventative controls would include the following:
    - Prior to nesting season, preclude nesting on the exterior of the building by manual means or by covering exterior structures such as eaves, overhangs, and platforms.
    - Well before demolition begins, review the buildings for holes or penetrations that would allow birds to enter and make nests inside the facilities. If reasonable, the holes will be covered to prevent birds from entering the buildings. The buildings will be toured to ensure that nesting birds and or bats are not already inside prior to sealing the holes.
- If demolition activities take place during the nesting season (May through September), conduct a survey of the buildings within two weeks before demolition to determine if birds are nesting or if the buildings are being used as maternity roosts for bats. If nests are evident, delay demolition until young have fledged
- If large numbers of bats are discovered, DOE will work with biologists to determine all practical means to ensure minimal impact on the bats during demolition
- Implement invasive and noxious species control on the building sites after demolition until those areas are placed in a condition where it is no longer needed

Health and Safety

- Perform a hazards assessment to evaluate the hazards associated with D&D facilities
- Based on the hazards, implement work controls necessary to comply with the Safety and Health Management Programs while implementing the proposed action

2.2 No Action Alternative

If DOE takes no action, the structures will continue to deteriorate and eventually collapse. DOE will continue to periodically enter the building and monitor the degradation of the facilities.

2.3 Alternative Eliminated from Detailed Analysis

Reuse Alternative

The NPG buildings are not planned for any future DOE activities and have deteriorated to a condition that would require a substantial amount of resources to correct and make the structures habitable. Since the buildings are located on the INL Site, the security-controlled access prevents the facilities from being leased or sold to the general public for private use. All of the buildings have significant health and safety hazards. In general, the deterioration and health and safety concerns (see Appendix A) are so severe that re-use is not practical. Additionally, the structural members and foundations are likely in need of replacement, which would require demolishing the current structure.

3.0 Affected Environment

3.1 General Description of Idaho National Laboratory Site and Surrounding Area

The INL Site consists of several facilities, each taking up less than 2 square miles, located across an 890 square miles expanse of otherwise undeveloped, high desert terrain (Figure 1). DOE is responsible for all of the INL Site land, which is located in southeastern Idaho and includes portions of five Idaho counties: Butte, Bingham, Bonneville, Clark, and Jefferson. Population centers in the region include the cities (>10,000 people) of Idaho Falls, Pocatello, Rexburg, and Blackfoot, located further than 30 miles to the east and south; there are also several smaller cities/communities (<10,000 people), including Arco, Howe, Mud Lake, Fort Hall Indian Reservation, and Atomic City, located around the site less than 30 miles away. Craters of the Moon National Monument is less than 20 miles to the west of the western INL Site boundary; Yellowstone and Grand Teton National Parks and the city of Jackson, Wyoming are all located more than 70 miles northeast of the closest INL Site boundaries. There are no permanent residents on the INL Site.

The five Idaho counties that are part of the INL Site are all in an *attainment area* (see Glossary) or are unclassified for *National Ambient Air Quality Standards* (see Glossary) status under the *Clean Air Act* (see Glossary). INL Site is classified under the *Prevention of Significant Deterioration* (see Glossary) regulations as a Class II area—an area with reasonable or moderately good air quality.

Surface waters on the INL Site include the Big Lost River and Birch Creek. Both streams carry water on an irregular basis, with the majority of the flow diverted for irrigation before entering the INL Site. Most of the INL Site is underlain by the Snake River Plain Aquifer, which lies between 220 feet (at the north end of the Site) to 610 feet (at the south end of the Site) below the surface of the Site.

The natural vegetation of the INL Site consists of a shrub overstory with a grass and forb understory. Big sagebrush (*Artemisia tridentata)* and green rabbitbrush (*Chrysothamnus viscidiflorus*) are the most common shrubs. Forb composition can be quite variable across the INL Site, but some of the most widely distributed and abundant species include flaxleaf plainsmustard (*Schoenocrambe linifolia*), Hood's phlox (*Phlox hoodii*), cushion buckwheat (*Eriogonum ovalifolium*), and freckled milkvetch (*Astragalus lentiginosus*). Dominant grasses in native, herbaceous communities may include needle and thread grass (*Hesperostipa comata*), western wheatgrass (*Pascopyrum smithii*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Indian ricegrass (*Achnatherum hymenoides*), and Sandberg bluegrass (*Poa secunda*) (Hafla, et al. 2014).

A wide range of vertebrate species are located within the INL Site. Inventories have documented 164 bird, 39 mammal, nine reptile, six fish, and one amphibian species on the INL Site (including single observations and accidental occurrences), for a total of 219 vertebrate species. The most prominent of these species include large herbivores, such as elk (*Cervus elaphus*) and pronghorn antelope (*Antilocapra americana*). Additionally, various species of carnivores occur on the INL Site and are represented by coyotes (*Canis latrans*), badgers (*Taxidea taxus*), and bobcats (*Lynx rufus*). Avian species occurring on the INL Site include Brewer's sparrows (*Spizella breweri*), sage thrashers (*Oreoscoptes montanus*), sage sparrows (*Amphispiza belli*), bald eagles (*Haliaeetus leucocephalus*), ferruginous hawks (*Buteo regalis*), golden eagles (*Aquila chrysaetos*), prairie falcons (*Falco mexicanus*), ravens (*Corvus corax*), red-tailed hawks (*B. jamaicensis*), rough-legged hawks (*B. lagopus*), and Swainson's hawks (*B. swainsoni*).

There are currently no species that occur on the INL Site that are listed as Endangered or Threatened; however, the Greater sage-grouse (*Centrocercus urophasianus*) is a Candidate Species for protection under the ESA. Also, several Species of Concern, including Townsend's big-eared bat (*Corynorhinus townsendii*), pygmy rabbit (*Brachylagus idahoensis*), Merriam's shrew (*Sorex merriami*), long-billed curlew (*Numenius americanus*), ferruginous hawk, northern sagebrush lizard (*Sceloporus graciosus*), and loggerhead shrike (*Lanius ludovicianus*), do occur on the site.

In 2010, the little brown myotis (*Myotis lucifugus*), a migratory species of bat that roosts in caves and buildings on the INL Site, was petitioned for emergency listing under the ESA. The U.S. Fish and Wildlife Service is collecting information on this species—as well as the big brown bat (*Eptesicus fuscus*), a resident species that uses caves and buildings year round on the INL Site—to determine if existing threats increase the extinction risk of these bats. Additionally, Townsend's big-eared bats, pallid bats (*Antrozous pallidus*), western small-footed myotis (*M. ciliolabrum*), hoary bats (*Lasiurus cinereus*), and silver haired-bats (*Lasionycteris noctivagans*) are species of varying degrees of conservation concern, and these bats may use areas near the Signature Properties (Hafla et al., 2014).

Figure 1. Location of CFA on the INL Site and the city of Idaho Falls

3.2 Central Facilities Area

CFA is located in the south-central portion of the INL Site and is about three miles northwest of the intersection of Highways 20 and 26. The NPG Residential Area is centrally located within CFA, and the Proof Area is located about 1.0 mile by road northeast of the Residential Area (Figure 2).

CFA is an industrial support area originally developed for use by the Navy and has since served as the location for many support services for operations at the INL Site. Functions housed at CFA include laboratories, security operations, fire protection, a medical facility, communication systems, warehouses, a cafeteria, vehicle and equipment pools, and the bus system. An industrial waste landfill lies at the northern edge of CFA.

The Signature Properties that are slated for removal are all located within the CFA, in an area that has been maintained as landscaped and manicured since constructing the original buildings. The buildings are surrounded by concrete, gravel, or some combination of lawn grass (likely Kentucky bluegrass [*Poa pratensis*]) and ornamental trees and shrubs. Buildings surrounded by gravel may have some native vegetation, typically green rabbitbrush, but not in an abundance to support any type of habitat (Hafla, et al. 2014).

Many species of birds and bats use buildings at CFA, likely including the Signature Properties, during certain times of the year. Past surveys during the breeding season have often documented owls, American robins (*Turdus migratorius*), barn swallows (*Hirundo*

rustica), house finches (*Carpodacus mexicanus*), ravens, and Say's phoebes (*Sayornis saya*) nesting on buildings or in areas near facilities. Most species of birds that could occupy areas near the Signature Properties are protected under the Migratory Bird Treaty Act (MBTA) (Hafla, et al. 2014).

Past surveys for bats have documented western small-footed myotis and big brown bats roosting in five buildings at CFA during summer. Additionally, recent acoustical monitoring of bats at waste-water ponds near CFA indicates that big brown bats, western small-footed myotis, silver-haired bats, western long-eared myotis (*M. evotis*), Townsend's big-eared bat, hoary bat, and little brown myotis use the waste-water ponds and the surrounding habitat from February to August, with peak use occurring from April through June (Hafla, et al. 2014).

Figure 2. Location of the Signature Properties within the CFA

3.3 Cultural Environment

The WW-II facilities were originally constructed in the early 1940s to support the war effort when the site was operated as the United States NPG. The NPG opened on August 2, 1943 and included a Residential Area, Proof Area, and nearly 80,000 acre test range. The southern-most "Residential Area" was divided into two sections by a railroad spur and was where military and civilian workers and, often, their families lived. The complex contained

double width red brick bungalows that served as military housing, a few matching garages, and a barracks for the Marine guards. It also contained support structures such as dog kennels, a warehouse, pumphouse, paint house, commissary, and a combination locomotive shed, garage, and fire station. Completing the Residential Area were roads, utilities, fences, a water tank, and smaller elements including a prominent, centrally located flagpole (Braun 1995).

At first, most civilian workers and their families lived in communities around the NPG including Arco, Idaho Falls, and Blackfoot. However, rough roads and severe winters made the drive to the proving ground treacherous from all directions. This danger, combined with the scarcity of available housing, led the Navy to construct a civilian complex. It contained seventeen small, white wood frame houses and two barracks (Stacy 2000).

Approximately a half-mile north of the Residential Area was the Proof Area. This area consisted of an oil storage structure, two temporary wood frame buildings, a guardhouse, pumphouse, railroad spur, and 250-ton gantry crane used to unload ordnance after its arrival from Pocatello's Naval Ordnance Plant via railroad tracks located across the NPG and terminating just west of the Proof Area. Other structures included a heating plant, tool room, office building, and restroom. Two electric substations, rows of concrete gun abutments, and earthen and concrete munitions bunkers also existed at the Proof Area. A control tower sat atop a heavily reinforced eight-foot wide concussion wall intended to protect the workers who loaded and fired the weapons. Additional concrete observation towers, range markers, and concrete block targets were located downrange (Braun 1995).

The NPG was one of six specialized ordnance-testing sites across the country and the primary one to test the 16-inch guns used on battleships in the Pacific Fleet during WW-II. Ordnance that were manufactured, rebuilt, or repaired at the Naval Ordnance Plant in Pocatello, Idaho, were shipped to the NPG and test-fired for accuracy. The WW-II vintage facilities have been modified over the years to accommodate a number of different projects and were used for various purposes, including a health physics instrument laboratory, chemistry laboratories, materials and field-engineering laboratory, office space, storage, and heating plant. In the early 1950s, CFA was established as the main service and support facility for nuclear programs conducted at other INL Site facility locations. Today, services provided at CFA consist of support activities that include transportation, maintenance, security, fire protection, warehouses, calibration laboratories, and cafeteria.

Archival and records searches in 2013 of the INL Site Built Environment (refers to buildings, structures, objects, and systems built from 1942 to present) revealed that the historic structures which are the subject of the proposed action are within an *area of potential effects* (see Glossary) for the proposed action. This *area of potential effects* includes the Marine Barracks (CF-606), Commanding Officer's House (CF-607) and matching Garage (CF-632), Officers' Quarters (CF-613), and the Proof Area (CF-633). The structures were reused after the AEC acquired the NPG and established the NRTS (Reisenauer 2014).

Prehistoric archaeological artifacts from approximately 13,000 to 150 years old, including short-term hunting campsites, lithic scatters (relating to stone tools), and isolated artifact locations, have been identified during surveys of the area surrounding CFA. Archaeological

resources dating to historic times (50-150 years old) are also present near the area (DOE 2013).

3.3.1 Ordnance Testing, 1942-1948

The NPG was established during WW-II and specialized in test firing the Pacific Fleet's 16-inch battleship guns. In addition to testing the Pacific Fleets "Big Guns", the workers at the NPG proof-tested small caliber anti-aircraft guns and 3-inch and 5-inch naval cannons. Between 1943 and 1947, 1,650 gun barrels were tested there. Activity peaked at the NPG in 1944 with over 15,000 projectiles requested and over 7,000 shells of varying calibers tested. Smokeless powder tests were conducted during 1944 and 1945 and helped to determine if confining the powder in a standard concrete bunker would cause it to explode or simply burn. One of the bunkers located near the "Proof Area" concussion wall stored 500,000 pounds of explosive powder for use in post-war testing. In late 1945, the military researchers also tested new types of projectiles, called star shells. This ammunition was shipped to the NPG from a large ammunitions depot in Hawthorne, Nevada.

From 1942 to 1948, the U.S. Army also used land adjacent to and near the NPG for two high-level bombing ranges. B24 Liberator aircraft dropped 100 pound sand-filled M38A2 practice bombs with black powder spotting charges at wooden targets. At other areas, the Navy and Army joined forces to conduct research concerning the safe storage of munitions while at docks or in transit. They built structures, such as barracks and storage cells, and stuffed nearby bunkers full of TNT to explode them and measure the damage done to the newly built structures. A 1945 test detonated 250,000 pounds of TNT which created a mile-high smoke and dust cloud and a crater, fifteen feet deep. Another test on October 31, 1945, detonated 500,000 pounds of excess high explosives to determine the safe distance for explosive ordnance storage in the open. At the time, this was believed to be the world's largest conventional ordnance explosion.

Although testing continued after WW-II ended, records are sparse between 1946 and 1949, when the AEC took over the NPG for nuclear reactor development and testing. However, it appears that ordnance testing decreased in 1946. In April 1947, the U.S. Treasury designated the NPG as the depot for stockpiling surplus manganese, and shipments began arriving in May (Braun 1995).

3.3.2 National Reactor Testing Station

In 1949, the U.S. AEC, a predecessor agency of the Department of Energy, acquired the former NPG, including land, structures, and infrastructure, and established the INL Site, then called the NRTS. The AEC established the NRTS to construct and test reactors in support of the nation's emerging nuclear program. The AEC chose this area for its immediate availability, size, remoteness, low surrounding population base, and access to the large quantities of subsurface water needed for reactor operations. The AEC converted the WW-II naval buildings, structures, and other infrastructure to its own use. CF-607 and CF-613 became offices, CF-606 was converted to the Security Headquarters Building, CF-632 became a storage facility, and CF-633 was used as the Health Physics

Instrument Laboratory. Over the next 30 years, the INL Site grew to include ten strategically placed facility areas; and 52 first-of-a-kind and one-of-a-kind reactors were constructed there, nearly all of which made significant contributions to developing nuclear reactor technology and safety. CFA provided support facilities and services to the other nine facility areas. The Arco NPG buildings (CF-606, CF-607, CF-613, and CF-632) were vacated in the mid-1990s. CF-633 was inactivated in 2004 (DOE 2013; Reisenauer 2014).

3.3.3 CFA Cultural Resources Investigations

Cultural resource investigations of CFA structures began in 1993 (Braun 1995) and comprehensive surveys of all DOE buildings were completed by 2006 (Arrowrock 1997; DOE 2013). The surveys identified forty-four buildings at CFA that were constructed during the INL's historic period of significance (1942-1970), including CF-606, CF-607, CF-613, CF-632, and CF-633. The Arco NPG buildings are eligible for the NRHP through their association with WW-II and the nation's pioneering nuclear era (DOE 2013).

4.0 Environmental Consequences

DOE considered the environmental aspects associated with the structures and the scope of the proposed action and determined the following resource areas would not be impacted to any degree requiring detailed analysis: Land Use, Socioeconomics, Aesthetic and Scenic, Geology and Soils, Water, Traffic and Transportation, Environmental Justice, and Utilities and Energy.

4.1 Effects of Proposed Action

This section addresses the potential impacts of the proposed action on the following five affected resource areas (Cultural Resources, Air Resources, Waste Management, Biological Resources, and Sustainability).

4.1.1 Cultural Resources

INL structures must be inventoried and evaluated for their NRHP eligibility before initiating projects that may impact them. Modifying or demolishing historic INL Site structures are evaluated for potential impacts based on the nature of the proposed changes and the relative historic significance of the properties within four established categories (Signature Properties, Category 1, Category 2, and Category 3). Signature Properties are the most historically important of the four categories (DOE 2013).

The NPG buildings are Signature Properties and their removal or, in the case of CF-633, partial removal will result in adverse impacts. DOE will take the following actions to mitigate the impacts of D&D. The measures include:

- Retaining the original portions of CF-633, including the concussion wall, observation tower, powder rooms, gantry crane, gun abutments, and railroad tracks. The demolition process will be monitored to ensure that all precautions are taken to

preserve the significant historic elements. In the event that portions of the concussion wall or observation tower show signs of distress during demolition, reasonable efforts will be made to structurally secure those elements. If they cannot be reasonably preserved or present a personnel safety concern, that portion will be removed as necessary;

- Developing and installing interpretive signage that would explain the facilities and their contribution to the war effort erected in a location easily accessible to the public; and
- Completing a Historic American Landscape Study report that would thoroughly document the INL buildings and landscape associated with WW-II and immediate post-war activities through 1949 and ultimately reside in the Library of Congress' permanent collections.

4.1.2 Air Resources

DOE does not expect radiological or asbestos emissions when demolishing the structures. Friable asbestos and asbestos containing materials would be removed before demolishing the structures. Engineering and administrative controls would be established to protect both the workers and co-located workers from asbestos materials.

Small amounts of radiological contamination exist in CF-633. The entire building would be surveyed for radiological contamination. After completion of the survey, the contamination would be removed in accordance with DOE requirements before demolishing the structure. DOE would ensure engineering and administrative controls to protect workers from radiological contamination. Based on the potential for radiological contamination and distance from the nearest public access, the public would not receive any radiological dose. Fugitive dust would be generated during demolition work. Fugitive dust controls would be implemented to minimize any fugitive dust emissions (Reisenauer 2014).

4.1.3 Waste Management

DOE does not expect to generate any hazardous or polychlorinated biphenyl (PCB) waste. The project may generate the following estimated quantities of waste:

Low-Level Radioactive	< 1 cubic yard (yd^3)
Industrial	1,500 yd^3
Asbestos	14 yd^3 friable
	343 yd^3 other asbestos containing material (ACM)

The industrial and asbestos waste would be sent 1.5 miles to the CFA landfill Complex. The friable asbestos material would be disposed of in a portion of the CFA Landfill designated for friable asbestos waste. The ACM would be disposed of as normal industrial waste. The Low-Level Radioactive Waste (LLW) would be sent off the INL

Site for disposal. If PCB or hazardous waste is generated, they would be packaged and sent off-site to a permitted commercial disposal facility (Reisenauer 2014).

In 2013, the INL Site disposed of 980 yd^3 of LLW, 40,895 yd^3 of industrial waste, and 75 yd^3 of friable asbestos waste. The disposal of 1 yd^3 of additional LLW from the proposed project would be a negligible change to the total LLW disposed of by the INL Site. The disposal of the additional 1,843 yd^3 of industrial waste (industrial and ACM) and 14 yd^3 of friable asbestos waste would also result in negligible increases to the total quantities normally disposed of at the INL Site (Reisenauer 2014).

4.1.4 Biological Resources

Vegetation

The proposed action would have very little impact to the vegetation surrounding the Signature Properties. Although there would be some disturbance to soil and the vegetation adjacent to the buildings, it will be limited in size and easily remediated back to lawn grass. If the Signature Properties surrounded by gravel/concrete are maintained as gravel/concrete following demolition, there would be no impact to vegetation at these locations. Revegetation with native species is not being recommended for this proposed action because the footprint is small and the cost of revegetation is prohibitive when planting small areas with competitive species adjacent to the revegetation area (Hafla, et al. 2014).

Wildlife

Impacts to birds and bats could occur when demolishing buildings at the Signature Properties depending on the season. For birds, the time of year when most impacts could occur would be during the nesting season (May through September). The MBTA includes a prohibition to "…take, kill, possess any migratory bird…or any part, nest, or egg of any such bird." DOE would implement operational controls to help the project activity comply with the MBTA. Most impacts to bats would occur during hibernation in winter (November to March) or during parturition and weaning of young at maternity roosts (May through July). Disturbance to bats at these times could cause death of adults or cause adults to abandon their young (Hafla, et al. 2014).

4.1.5 Sustainability

DOE would use fossil fuels in equipment demolishing the structures, while transporting waste, and in stationary combustion sources such as generators. The estimated quantity of greenhouse gas (GHG) emissions for the life of the project is estimated to be 7.76 tons of CO_2. The GHG emissions at the INL Site in fiscal year 2013 were about 82,740 tons of CO_2. The additional GHG produced from the project represents less than 0.01% of the total INL 2013 Site GHG emissions. During demolition, every practical effort will be made to reuse, recycle, and reclaim materials to the extent practicable (Reisenauer 2014).

4.2 No Action Alternative

If DOE implemented the No Action alternative the facilities would be abandoned and collapse in place sometime in the future. This may result in the potential to release hazardous and radiological contamination to the environment and present a potential hazard to those working at CFA. If the facilities would be left in place, they will become a safety risk to the maintenance personnel who periodically enter them. At some point in time, the facilities would collapse and may require a more complicated cleanup at a higher cost.

5.0 Coordination and Consultation

Section 106 of the NHPA requires Federal agencies to "take into account" the effect of their projects on historical and archeological resources and to give the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on such effects.

Where both National Environmental Policy Act (NEPA) and the NHPA are applicable, the federal agency must integrate NHPA considerations along with other environmental impact analyses and studies. DOE has chosen to fulfill its public involvement and consultation requirements for the proposed action by integrating the Section 106 and NEPA review.

Following guidelines established in the INL Cultural Resources Management Plan (DOE 2013), if the proposed action will involve Signature Properties, consultation among DOE, the Idaho State Historic Preservation Office (SHPO), the DOE Federal Preservation Officer, and if they choose to participate, the ACHP, is initiated and when necessary, mitigation is completed based on the results of consultation (DOE 2013).

DOE determined that the NPG buildings were Signature Properties and initiated consultation with the Idaho SHPO and ACHP. On April 24, 2013, representatives from the Idaho SHPO in Boise and the ACHP in Washington D.C., toured CFA and viewed the exterior of the NPG buildings. Unsafe conditions prohibited entry into certain parts of the buildings. On April 25, DOE held a meeting with representatives from the Idaho SHPO and ACHP to discuss the properties' ultimate disposition and alternatives to demolition. During the meeting, ACHP suggested that DOE consider retaining CF-613, and the Idaho SHPO stated the importance of CF-633. DOE agreed to consider retaining the CF-633 concussion wall but determined that CF-613 is an increasing liability and should be proposed for removal with the other buildings . A Memorandum of Agreement between the DOE, the ACHP, and the Idaho SHPO will be prepared to document the final agreements.

DOE also gave information on the proposed disposition to the Shoshone-Bannock Tribes Heritage Tribal Office. The Tribes were provided formal notification on the intent to prepare an environmental assessment and were contacted regarding a possible briefing and discussion on the proposed actions.

6.0 References

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Appendix A: Descriptions of the WW-II Facilities

2.1 Marine Barracks – CF-606

CF-606 was constructed in 1943. It is a 5,325 square foot brick one story building with a basement. The building is in a cold and dark condition with all utilities disconnected (hazardous, not compliant with code), and the boiler has been removed. The exterior appears to be in relatively good condition with both the above-grade structure and the basement walls in good condition, with very few settlement cracks. The concrete has significant deterioration around the front entrance, window wells, and basement entrance, possibly from freeze-thaw action and inadequate air entrainment in the concrete. These areas would require repair or replacement.

There does not appear to be significant water damage to the structure itself. There is some cosmetic damage to some basement walls from inadequate caulking around conduit. The interior is significantly damaged; this includes the wall board, paneling, ceiling tiles, flooring, and insulation. The ceilings in some rooms have collapsed. In addition, numerous health and safety hazards are present throughout the building; these include asbestos, hantavirus from rodent infestation/droppings, mold, and lead based paint.

2.2 Scoville Officers Quarters – CF-607

CF-607 was constructed in 1942. It is a 2,228 square foot brick masonry building with 1,396 square feet above grade and 832 square feet below grade. The building is in a cold and dark condition with all utilities disconnected (hazardous, not compliant with code), and the boiler, although still in place, is not operable. The exterior is in good condition; the basement wall does have structural cracking at several locations. The entrance and window well concrete is deteriorated and would require replacement. The cedar shake roof is in good condition but requires maintenance such as sealing to prevent deterioration. The exterior wood trim requires painting and caulking maintenance. The windows and exterior doors in this structure will need to be replaced. The floor joists and roof trusses appear to be dry and no evidence of rot was found; both adequately support the loads applied. The interior is generally in poor condition, with a few rooms appearing to be in relatively good condition. The finishes would need to be removed and replaced throughout, including flooring, ceiling tile, restroom fixtures, etc. There is mold on some walls, and it is assumed to be behind other walls. Numerous health and safety hazards are present throughout the building; these include asbestos, hantavirus from rodent infestation/droppings, mold, and lead based paint.

2.3 Bunkhouse – CF-613

CF-613 was constructed in 1942. It is a 2,697 square foot brick building with a concrete foundation and basement. The building is in a cold and dark condition with all utilities disconnected (hazardous, not compliant with code), and the boiler, although still in place, is not operable. In 1994, doors with weather-stripping and automatic door closers were installed to bring the existing smoke resistive walls up to code. The building is in good condition with no signs of structural cracking or excessive settlement noted in the masonry structure or the foundation. The window well concrete and exterior stair wing-wall concrete is deteriorated and should be replaced. The roof appears to be in good condition. The front steps were replaced several years ago and are in good condition. The interior is in better condition than that of other NPG buildings; however, in some rooms the ceiling appears to be sagging and near collapse. During the assessment, the sound of rodents in the ceiling was noted. It is unknown what is causing the ceiling to appear to be sagging until further inspections are conducted. Numerous health and safety hazards are present throughout the building; these include asbestos, hantavirus from rodent infestation/droppings, and lead based paint.

2.4 Single Car Garage – CF-632

CF-632 was constructed in 1945. It is a 300 square foot brick single car garage with a concrete foundation and a concrete pad. The building is in a cold and dark condition with all utilities disconnected (hazardous, not compliant with code). The brick exterior appears to be in relatively good condition. The concrete foundation is deteriorating in several locations. The roof has signs of damage, and the doors need further inspection to verify integrity. The interior is in poor condition, and there are signs of a significant pest infestation problem. Numerous health and safety hazards are present including asbestos, hantavirus from rodent infestation/droppings, mold, and lead based paint.

2.5 Ordnance Offices – CF-633

CF-633 was constructed in 1942. It is a 19,833 square foot building with original construction consisting of reinforced concrete that was designed to withstand the blast effect from naval gun testing. An eight foot thick concrete blast wall protected the building from the blast forces. The building has been modified, enlarged, and added on to multiple times over the years and lastly occupied by the INL Health Physics Instrument Laboratory. The additions have used a variety of construction materials and methods such as precast double tees, precast panes, steel joists and decking, timber beams, and concrete slabs. The building is in a cold and dark condition with all utilities disconnected (hazardous, not compliant with code).

The exterior of the building shows significant signs of deterioration. A structural evaluation and analysis was performed in 1996 (LITCO, 1996). The conclusion is summarized as follows:

The portion of the facility located on the south side of the blast wall poses the greatest seisimic risk with little margin of safety. Many components of the facility are overstressed, resulting in low allowable load capacities. The poor condition of the facility is indicative of age and response to the imposed loads. The deterioration of the facility will only continue at an increased rate. The 1996 report recommends making plans to discontinue use of the facility, which has occurred, and the condition of the facility has only decreased. Based on the analysis performed, use of CF-633 was discontinued.

The interior shows signs of significant deterioration; the condition varies depending on location within the building. The floors, ceilings, and walls all have damage. In several places, water damage has occurred due to leaks from the roof or from ruptured water pipes. Numerous hazards are present throughout the building, these include radiological contamination (fixed), asbestos, hantavirus from rodent infestation/droppings, mold, and lead based paint.