INL/RPT-22-67720

Idaho National Laboratory Site Cultural Resource Management Annual Report for Fiscal Year 2021

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Cultural Resource Management Office Staff

March 2023

INL is a U.S. Department of Energy National Laboratory
operated by Battelle Energy Alliance

INL/RPT-22-67720

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Cultural Resource Management Office Staff

March 2023

Idaho National Laboratory
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http://www.inl.gov

Prepared for the
U.S. Department of Energy
Office of Nuclear Energy
Under DOE Idaho Operations Office
Contract DE-AC07-05ID14517

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ABSTRACT

This report describes the cultural resource activities of the Idaho National Laboratory's (INL) Cultural Resource Management Office (CRMO) during fiscal year 2021 (FY2021), including Section 110 research, annual monitoring, and compliance efforts associated with Section 106 of the National Historic Preservation Act (NHPA). The INL Archives and Special Collections is recognized for its numerous accomplishments that provide the support documentation necessary to accurately assess the historic significance of the INL Site.

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CONTENTS

FIGURES

TABLES

ACRONYMS

ACHP Advisory Council on Historic Preservation

APE area of potential effects

ARA Auxiliary Reactor Area

ASI Archaeological Survey of Idaho

ATR Advanced Test Reactor

BEA Battelle Energy Alliance, LLC

BLM Bureau of Land Management

BORAX Boiling-Water Reactor Experiment

CEMML Center for Environmental Management of Military Lands

CFA Central Facilities Area

CITRC Critical Infrastructure Test Range Complex

CRMO Cultural Resource Management Office

CRMP Cultural Resource Management Plan

CRR Cultural Resource Review

CRWG Cultural Resource Working Group

DD&D deactivation, decontamination, and decommissioning/demolition

DOD U.S. Department of Defense

DOE U.S. Department of Energy

DOE-HQ U.S. Department of Energy, Headquarters

DOE-ID U.S. Department of Energy, Idaho Operations Office

EA Environmental Assessment

EBR-I Experimental Breeder Reactor I

EBR-II Experimental Breeder Reactor II

EC Environmental Checklist

ECP Environmental Compliance Permit

EFF Experimental Fuel Facility

EIS Environmental Impact Statement

ERAP Emergency Response Assessment Plan

F&SS Facilities and Site Services

FASB Fuels and Applied Science Building (formerly the Fuel Assembly and Storage Building)

FGDC Federal Geographic Data Committee

FONSI Finding of No Significant Impact

FY fiscal year

HABS Historic American Building Survey

HAER Historic American Engineering Record

HALEU high assay low enriched uranium

HALS Historic American Landscape Survey

HeTO Heritage Tribal Office (Shoshone-Bannock Tribes)

HVAC heating, ventilating, and air conditioning

I&C instrumentation and control

ICPP Idaho Chemical Processing Plant (now INTEC)

IDT Idaho Transportation Department

IHSI Idaho Historic Sites Inventory

IMNH Idaho Museum of Natural History

INL Idaho National Laboratory

INTEC Idaho Nuclear Technology and Engineering Center (formerly ICPP)

IORC Information Operations and Research Center

ISRC INL Site Records Center

ISU Idaho State University

ITDS Interagency Trail Data Standards

LCC local control cabinet

MARVEL Microreactor Applications Research, Validation and Evaluation

M&O Management and Operating

MFC Materials and Fuels Complex

MOA Memorandum of Agreement

MOI Museum of Idaho

N&HS National and Homeland Security

NDA Non-Destructive Assay

NHT National Historic Trail

NEPA National Environmental Policy Act

NHL National Historic Landmark

NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPS	National Park Service
NRAD	Neutron Radiography Reactor
NRCQDP	Narrow Range Core Differential Pressure
NRF	Naval Reactors Facility
NRHP	National Register of Historic Places
NRIC	National Reactor Innovation Center
NSTR	National Security Test Range
OCTA	Oregon California Trail Association
PA	Programmatic Agreement
PBF	Power Burst Facility
PEL	Program Environmental Lead
R&D	Research and Development
ROW	right-of-way
RRTR	Radiological Response Training Range
RTC	Reactor Technology Complex (now ATR Complex)
RWMC	Radioactive Waste Management Complex
SHPO	State Historic Preservation Office
SMC	Specific Manufacturing Capability
STEM	Science, Technology, Engineering, and Mathematics
TAN	Test Area North
TREAT	Transient Reactor Test (facility)
US	United States
USFS	United States Forest Service
VTR	Versatile Test Reactor
WERF	Waste Experimental Reduction Facility
WRRTF	Water Reactor Research Test Facility
WTB	Wireless Test Bed
ZPPR	Zero Power Physics (Plutonium) Reactor
ZPR	zero power reactor

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KEY INFORMATION

Project Name: Idaho National Laboratory Site Cultural Resource Management Annual Report for Fiscal Year 2021

Project Number: INL/RPT-22-67720

Location: Bingham, Butte, Clark, and Jefferson counties

USGS Quads: Idaho 7.5′ quadrangles – Antelope Butte, Big Southern Butte, Circular Butte, Circular Butte 3 NW, Circular Butte 3 NE, Circular Butte 3 SW, Circular Butte 3 SE, Little Butte SW, Scoville

Legal Location of Surveys:
BEA-20-27 Township 06N Range 31E Sections 3, 10
BEA-21-09 Township 03N Range 32E Section 12
BEA-21-14 Township 02N Range 28E Section 24, Township 02N Range 29E Sections 11, 15, 21, 22
BEA-21-16 Township 03N Range 30E Section 34
BEA-21-24 Township 06N Range 31E Section 13 and Township 03N Range 30E Section 8
BEA-21-25 Township 03N Range 29E Section 36 and Township 02N Range 29E Section 1
BEA-21-29 Township 05N Range 33E Section 12 and Township 03N Range 30E Sections 27, 26, 34
BEA-21-31 Township 03N Range 29E Section 25 and Township 03N Range 30E Section 30
BEA-21-33 Township 03N Range 30E Section 33
BEA-21-34 Township 03N Range 29E Sections 13, 14, 24
BEA-21-35 Township 03N Range 32E Sections 12, 13
BEA-21-37 Township 03N Range 29E Section 13 and Township 03N Range 30E Sections 6, 7, 8
BEA-21-39 Township 03N Range 29E Sections 14, 11, 9, 1 Township 04N Range 29E Section 36, Township 04N Range 30E Sections 31, 30
BEA-21-44 Township 03N Range 32E Sections 11, 14, 23, 24, 25, 36
BEA-18-37 (REVS 3, 4, 6) Township 04N Range 28E, Sections 25 and 36 and Township 04N Range 29E, Sections 19, 30, and 31

BEA-21-110 Township 03N Range 30E Sections 16, 17, 5 and Township 04N Range 30E Sections 31, 32, 10

Project Area: For FY2021, the area of new survey for individual projects was recorded and geospatial information is provided, but individual locations are not provided within this report, other than Township Range Section noted above.

Area Surveyed:
☒ Intensive Survey: 2612.08 acres surveyed for 18 Section 106 projects and one Section 110 proactive inventory. This total includes survey that was conducted for the Power Management Options 2 & 4 Inventory – BEA-21-02 (1,387 acres, see section 6.1.2.1) and FY2021 activities for BEA-18-37 Carbon Free Power Project (249.03 acres, see Section 6.1.3.2) which will also be reported with individual reports, currently in progress.
☒ Reconnaissance Survey: None

Project Data:
☒ Previously Recorded Cultural Resources: Cultural resources that have been monitored or updated as part of FY2021Section 110 activities and appropriate forms are attached in Appendix A (see Table 8).

☒ Newly Recorded Cultural Resources: Newly recorded cultural resources are listed within (see Table 9 and Table 10) as part of FY2021 activities, and the appropriate forms are attached in Appendix B.

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Federal Agency:
U.S. Department of Energy

Report Prepared For:
U.S. Department of Energy, Office of Nuclear Energy, Idaho Operations Office

Repository:
Idaho National Laboratory (INL), Cultural Resource Management Office

Date: March 31, 2023

Idaho National Laboratory Cultural Resource Management Annual Report for Fiscal Year 2021

1. OVERVIEW

The Idaho National Laboratory (INL) Site is an 890 square mile federal reserve covering portions of five counties on the northeastern edge of the Snake River Plain in southeastern Idaho (Figure 1). Lands included within INL Site boundaries are under jurisdiction of the United States (U.S.) Department of Energy Idaho Operations Office (DOE-ID) and have been set aside since the 1940s to support many kinds of scientific and engineering research. Currently, two main contractors perform work for DOE-ID at the INL Site. Battelle Energy Alliance, LLC (BEA), is DOE-ID's primary INL management and operating (M&O) contractor, where the INL Cultural Resource Management Office (CRMO) is based. Fluor Idaho, LLC, manages the Idaho Cleanup Project Core operations at the INL Site. The Naval Reactors Facility (NRF) is under jurisdiction of the U.S. DOE Office of Naval Reactors and is currently managed and operated by Fluor Marine Propulsion, LLC.

Public access to the INL Site has been restricted since the land was initially set aside for government use in the 1940s and an active security force has always patrolled the lands and facilities. When encountered, trespassers are removed immediately, and violators can be served official citations. Largely because of long-term access restrictions, many cultural resources on the INL Site are relatively undisturbed. Vandalism is also reduced by ongoing security patrols and outreach programs that are intended to educate the public and INL employees regarding the importance of leaving artifacts in place and the laws that protect these irreplaceable resources.

The INL Site Cultural Resource Management Program is maintained through the mandates of the National Historic Preservation Act (NHPA), Section 110, which requires all federal agencies to maintain historic preservation programs for identification, evaluation, and protection of historic properties, including nomination of historic properties to the National Register of Historic Places (NRHP). The INL Site Cultural Resource Management Program, as defined by Section 110, ensures that historic preservation is fully integrated into ongoing programs and projects by fulfilling DOE-ID's responsibility for identifying, protecting, and avoiding unnecessary damage to historic properties. Section 110 also charges federal agencies with the affirmative responsibility for considering projects and programs that further the purposes of the NHPA, for undertaking planning and actions as necessary to minimize harm to historic properties and declares that the costs of preservation activities are eligible project costs in all undertakings conducted or assisted by a federal agency. As the prime contractor for INL, BEA is obligated under the M&O contract (DOE-ID 2018) to maintain the historic preservation program housed in the CRMO, established under DOE-ID through consultation with the Idaho State Historic Preservation Office (SHPO).

Section 110 defines specific benchmarks for the INL Site historic preservation program per the *INL Cultural Resource Management Plan* (CRMP; DOE-ID 2016) including:

- Historic properties under jurisdiction or control of DOE-ID are to be managed and maintained in a way that considers preservation of their historic, archeological, architectural, and cultural values.

- Historic properties not under DOE-ID jurisdiction or control but potentially affected by INL Site actions are to be fully considered in agency planning.

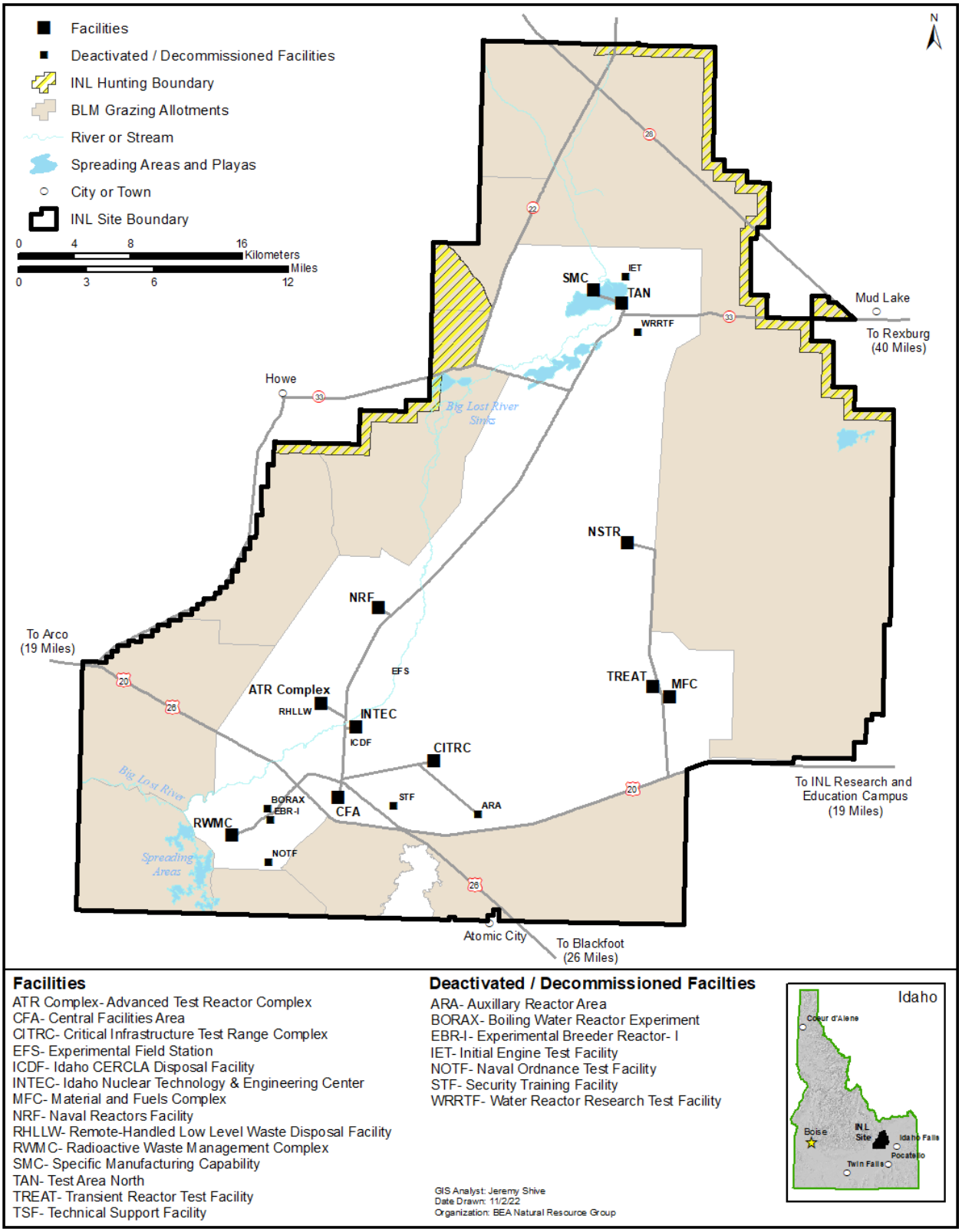

Figure 1. Regional setting of INL showing locations of major facilities.

- DOE-ID preservation-related activities are to be carried out in consultation with other federal, state, and local agencies, the Shoshone-Bannock Tribes, and the private sector.

- INL Site and DOE-ID procedures for compliance with Section 106 of NHPA are to be consistent with policies issued by the Advisory Council on Historic Preservation (ACHP).

- DOE-ID may not grant assistance or a license or permit to an applicant who damages or destroys historic property with the intent of avoiding the requirements of Section 106 unless specific circumstances warrant such assistance.

The preservation and use of historic properties and their careful consideration in planning and decision making are in the public interest, are consistent with the declaration of policy set forth in the NHPA and must be a fundamental part of the INL mission. The INL historic preservation program housed in the CRMO is fully integrated into both general and specific INL operating procedures through the INL CRMP and environmental management system and adheres to the standards for federal agencies set forth in Section 110.

1.1 The Secretary of Interior's Standards for Federal Agency Historic Preservation Programs

- Standard 1: Each federal agency establishes and maintains a historic preservation program that is coordinated by a qualified preservation officer, and that is consistent with and seeks to advance the purposes of the NHPA. The head of each federal agency is responsible for preservation of historic properties owned or controlled by the agency [NHPA, Sections 110(a)(1), 110(a)(2), 110(c), and 110(d)].

- Standard 2: An agency provides for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions [NHPA, Sections 110(a)(2)(A) and 112].

- Standard 3: An agency nominates historic properties under the agency's jurisdiction or control to the NRHP [NHPA, Section 110(a)(2)(A)].

- Standard 4: An agency gives historic properties full consideration when planning or considering approval of any action that might affect such properties [NHPA, Sections 110(a)(2)(B), 110(a)(2)(C), 110(a)(2)(E), 110(f), and 402 (16 U.S.C. 470a 2)].

- Standard 5: An agency consults with knowledgeable and concerned parties outside the agency about its historic preservation related activities [NHPA, Section 110(a)(2)(D)].

- Standard 6: An agency manages and maintains historic properties under its jurisdiction or control in a manner that considers preservation of their historic, architectural, archeological, and cultural values [NHPA, Sections 110(a)(1), 110(a)(2)(B), and 110(b)].

- Standard 7: An agency gives priority to the use of historic properties to carry out agency missions [NHPA, Section 110(a)(1)].

The top priorities of the INL CRMO are proactive management of DOE-ID's historic properties (those properties, both archaeological and architectural, which are eligible for listing on the NRHP) and cultural resources on INL Site lands, as well as the museum collections and data associated with these resources. Federal funding for the CRMO is provided to support proactive management of historic properties.

1.2 Fiscal Year 2021 INL Site Historic Preservation Program Accomplishments

In 2021, INL CRMO and DOE-ID continued their commitment to open and productive dialogue between the INL CRMO staff and DOE-ID. The monthly meetings between INL CRMO and DOE-ID staff have created opportunities for staff to provide the results of recent surveys, progress updates on reports and commitments, and information on unforeseen developments. In return, DOE-ID has shared information regarding upcoming complex projects, has facilitated the resolution of concerns that can arise with project implementation, and has discussed issues raised by Idaho SHPO or the Shoshone-Bannock Tribes. In addition, INL CRMO Manager and DOE-ID Cultural Resource Coordinator and DOE-ID and BEA Environmental staff meet on a weekly basis to discuss progress on legacy projects, current undertakings, plan annual activities, set priorities, and discuss any issues management developments.

The INL CRMO performed a variety of INL Site Historic Preservation Program responsibilities on behalf of DOE-ID, including, but not limited to maintaining working and consultation relationships with Shoshone-Bannock Tribes, issuance of procedural documents that outline the INL Site Historic Preservation Program, and conducting and seeking training opportunities for INL CRMO staff. INL CRMO assisted DOE-ID with the Programmatic Agreement negotiations with Idaho SHPO, ACHP, the Shoshone-Bannock Tribes, and other consulting parties during FY2021. Section 110 activities included but were not limited to: annual monitoring and site updates, conducting proactive Section 110 Class III inventories along the Big Lost River, updating the built environment inventory for INL Site facilities, performing public and educational outreach activities, and conducting active research. INL CRMO also performed Section 106 reviews supporting a variety of projects, contributed to environmental documents, and fulfilled stipulations outlines in Memoranda of Agreement (MOA). INL is also making continual progress in the establishment of the INL Archives and Special Collection and improving accessioning processes, storage, and accessibility of the records.

1.2.1 Shoshone-Bannock Tribes

For more than two decades, DOE-ID and the INL CRMO have participated in an important partnership with the Shoshone-Bannock Tribes with commitment detailed in the Agreement-in-Principle (AIP). This partnership enables tribal and INL CRMO staff to jointly conduct many general and project-specific activities including archaeological surveys and site evaluations, identification and protective strategies for tribally sensitive resources, recommendations for cultural resource protection and/or mitigation, educational outreach and tours, tribal access to and use of significant areas and resources on the INL Site, and general planning and feedback on INL Site activities.

Regular, face-to-face meetings of the INL Site Cultural Resources Working Group (CRWG), with representatives from DOE-ID, the INL CRMO, the Shoshone-Bannock Tribes, and INL Site project managers facilitate this important partnership and foster an atmosphere of mutual respect that is conducive to open communication and effective consideration of tribal views in decisions regarding INL Site cultural resources and overall land management. As part of the 2017 revision of the AIP, Section 110 research will be conducted as a cooperative effort between members of the Heritage Tribal Office (HeTO) and INL CRMO staff members.

In FY2021, five meetings of the CRWG were held and Tribal representatives were directly involved in several of the DOE-ID undertakings that required survey for Section 106 compliance, as well as all annual monitoring efforts that help to ensure the protection of sites that have special importance to the Shoshone and Bannock people.

In FY2021, information was provided on the INL Site undertakings reviewed by the INL CRMO and Tribal representatives participated in several field surveys, site recordation and monitoring visits. In total, the Shoshone-Bannock Tribes HeTO contributed 49 person-days of field work (approximately 392 hours), participated in over 2,600 acres of survey, and recorded approximately 60 cultural resources.

In May 2021, INL CRMO hired Taylor Haskett, a Shoshone-Bannock Tribal member as an archaeological intern. Ms. Haskett was a valuable member of the INL CRMO team and focused her efforts on site monitoring,

recording, and survey for a variety of Section 110 and Section 106 projects, but also participated in discussions on cultural resource management on the INL Site with her mentor, peers, and CRMO Manager. Ms. Haskett's internship was supported by Nuclear Reactor Innovation Center (NRIC) and extended to early October when she accepted a position with the Shoshone-Bannock Tribes.

1.2.1.1 Shoshone-Bannock Tribal Tours

On July 9, 2021, INL CRMO archaeologists, Shoshone-Bannock HeTO staff, and the DOE-ID Cultural Resource Coordinator facilitated access to the INL Desert Site for members of the Fort Hall Business Council. Council members that were able to attend visited Middle Butte Cave and two sites adjacent to the Big Lost River: 10BT0675 (Juniper Bends) and 10BT0676 (Pioneer). At 10BT0676, CRMO staff demonstrated current protocols for in-field x-ray fluorescence (XRF) analysis of obsidian artifacts that reduce the need for surface collection and curation.

In early July 2021, Jeremias Pink, an INL CRMO Archaeologist, and Taylor Haskett, an INL Intern, led two archaeology workshops for about 25 Shoshone-Bannock middle school Science, Technology, Engineering, and Mathematics (STEM) students. On Thursday July 2, they provided a brief overview of lithic technology before leading a mock archaeological survey exercise on the campus of Idaho State University in Pocatello, Idaho. A week later, on July 8, they led an on-site tour of the INL Site (Figure 2) where Shoshone-Bannock HeTO staff, Larae Bill and Anna Bowers, co-led the tour and provided students an opportunity to exercise their survey skills at an actual archaeological site, 10BT0019.

Figure 2. STEM Students visiting INL Site in July 2021.

1.2.1.2 Fort Hall Business Council Meetings specific to Cultural Resources

On March 16, 2021, INL CRMO Staff and DOE-ID presented on major program accomplishments and activities in 2019-2020 which included: Annual monitoring, development of a volcanic glass sourcing program, 2019-2020 Wildland Fires, and PGTB Data Recovery efforts.

On May 17, DOE-ID consulted with Fort Hall Business Council on a proposed expansion of the Idaho Comprehensive Environmental Response, Compensation, and Liability Act Disposal Facility located at the Idaho Nuclear Technology and Engineering Center on the INL Site (BEA-21-31, see Table 6).

On June 10, 2021, DOE-ID consulted with Fort Hall Business Council on INL Site archaeological artifact collections.

1.2.1 Program Description Document and Procedure Issuance

The Program Description Document (PDD) is an internal INL document that provides the procedures, forms and instructions that pertain to the comprehensive INL Site historic preservation program, including Section 106 and Section 110 responsibilities. In addition to other applicable regulations such as Archaeological Resources Protection Act (ARPA), Native American Graves Protection and Repatriation Act (NAGPRA) and managing collections under 36 CFR 79. The PDD was issued in July 2021, and the 48 procedures that support this document were issued between April and September 2021 (Table 1).

The issuance of procedures in FY2021 was necessary to provide structure and definition to the INL Site Historic Preservation Program, allowing INL CRMO Staff, Management, and DOE-ID to work toward standardization, consistency, and accuracy within the program. As procedures are utilized, they will be periodically assessed for their effectiveness and revisions will be reissued, as necessary.

Table 1. Procedure Issuance in FY2021.

Procedure Number*	Title	Associated Procedures and forms
PDD-8000	INL Historic Preservation Program	
MCP-8003	NAGPRA Inadvertent Discoveries	FRM-3010 CRMO Inadvertent Discovery Report
MCP-8004	Archaeological Resources Protection Act	FRM-3011 ARPA Violation Data Form
MCP-8005	Managing Paleontological Resources Administered by DOE	FRM-3007 INL Paleontological Locality Form
MCP-8006	Subsurface Investigation Plans and Reports	LI-1011 CRMO Subsurface Investigation (field work) FRM-2896 INL CRMO Unit Summary Form FRM-2896A INL CRMO Level Record FRM-2869B INL CRMO Excavation Unit Profile FRM-2896C INL CRMO Field Specimen Form for Subsurface Investigations
MCP-8007	Geospatial Data Management	
MCP-8008	Section 106 Compliance	LI-1013 Archaeological Section 106 Survey and Monitoring LI-1014 Architectural Properties Section 106 Reconnaissance Level Survey and Monitoring FRM-2898 INL CRMO Section 106 Monitoring Form FRM-3004 INL CRMO NHPA Section 106 Cultural Resource Review (CRR) FRM-3006 INL Archaeological and Historical Properties Inventory Record – No Historic Properties Affected
MCP-8009	Section 106 Visual Effects Analysis	FRM-3005 Visual Contrast Rating Worksheet
MCP-8010	Section 110 Compliance	LI-1015 Archaeological Section 110 Survey Monitoring (Fieldwork) LI-1016 Architectural Properties Section 110 Monitoring Field Procedure FRM-3001 CRMO Section 110 Monitoring Form
MCP-8011	Documentation of a Cultural Resource	
MCP-8012	CDRL F.46 Annual Report	
MCP-8013	Post-Review Discoveries	
MCP-8015	CRMO Subsurface Investigations	
MCP-8014	INL Section 106 Process for Emergency Actions	
MCP-8016	Management and Curation of DOE Administered Archaeological Collections	FRM-3008 CRMO Chain of Custody FRM-3009 CRMO Collection Use Log
MCP-8017	Section 106 Report Preparation	
MCP-8018	Section 106 Agreements	
MCP-8019	CDRL F.45 Secretary of Interior Report	
MCP-8020	CDRL F.49 Preserve America Report	
LI-1017	Field and Benchtop Use of the Olympus Vanta X-Ray Fluorescence Spectrometer	
FRM-2897	INL CRMO Photograph Catalog	
FRM-2894	INL CRMO Field Readiness Form	
GDE-893	Historic Context Preparation	
GDE-894	Creating ASI and IHSI Site Maps in ArcGIS Pro	
GDE-895	CRDP Field Client Procedure	
GDE-943	Global Positioning Satellite Guide	
GDE-958	Photograph Labelling	
PLN-6200	Cultural Resources Projects, Reporting, and Recordkeeping	
*PDD – Program Description Document; MCP – Management Control Procedure, LI – Laboratory Instructions, FRM – Forms, GDE – Guides, PLN – Plan.		

1.2.2 Programmatic Agreement

DOE-ID, Idaho SHPO, ACHP began negotiations on an updated Programmatic Agreement (PA) in FY2021. INL CRMO and DOE-ID drafted a PA in October 2020 and requested input from Idaho SHPO to incorporate into the draft. Beginning in May 2021, the draft PA was undergoing regular negotiations with DOE-ID, INL CRMO, Idaho SHPO, ACHP, Shoshone-Bannock Tribes, and other consulting parties. Through several months of negotiations, several successful improvements were made to clearly delineate roles and responsibilities, define the section 106 process, and commit to section 110 deliverables. As negotiations continue into FY2022, it is anticipated the Programmatic Agreement will be signed and fully executable by September 2022.

1.2.3 Training

Documents pertaining to training and qualifications for CRMO staff, including Archaeologists, Architectural Historians, and Technician/Interns, were issued in September 2021. The documents identified tasks specific to each job code, and identify initial training, long-term courses and training, reading assignments, and a qualification checklist to discuss and demonstrate knowledge and competency in related tasks and how to

perform those duties safely. INL CRMO Manager and staff and INL Training anticipate developing in-depth virtual and/or in-person Section 110 and Section 106 training for current staff and incoming staff in FY2023. While the comprehensive course work is being designed, INL CRMO Manager and INL Training have developed specific tailgates for the recently issued procedures, and INL Manager will continue to perform tailgates and workshops for INL CRMO staff. Tailgates for procedures, were conducted on April 15, May 4, June 21, July 19, July 26, and August 2, 2021.

Job codes and training requirements for the Archivist, Archives Technician, and Archives Intern positions began in FY2021, and are anticipated to be completed in FY2022. This work will align with revisions being made to PLN-5920 INL Archives and Special Collections Management Plan that focus on a more comprehensive and process driven plan. INL Archivist participated in lectures put on by NAGARA (National Association of Government Archives and Records Administrators) to maintain continuing education requirements of their certification.

In FY2021, DOE-ID staff completed training in cultural resources and historic preservation. The DOE-ID Cultural Resource Coordinator provided cultural resource awareness training to DOE-ID Environmental, Safety, Health, and Quality Assurance staff as well as Facility Representatives. The DOE-ID Manager completed ACHP's Section 106 Essentials course.

2. SECTION 110 ACCOMPLISHMENTS

INL CRMO Section 110 activities specific to Archaeological and Native American resources are detailed below within cultural resource monitoring, active research, public outreach and education, partnerships, stabilization of cultural resources, management and curation of artifacts, records, etc. Although some activities in the beginning of FY2021 were still restricted, due to Covid-19 precautions, the INL CRMO was able to accomplish a variety of Section 110 responsibilities.

2.1 INL Site Cultural Resource Monitoring

The purpose of the comprehensive INL Site cultural resource monitoring program is to identify, track, and reduce impacts to known resources throughout the INL Site. The INL CRMO conducts monitoring activities for DOE-ID to determine the effectiveness of DOE-ID and contractor policies and to safeguard cultural resources from destruction and deterioration caused by natural or human processes. Each year, the INL CRMO selects a few locations for monitoring based on such factors as DOE-ID and Tribal input, stakeholder feedback, National Register status/eligibility, ease of public access, history of adverse effects, and proposed INL Site project activities. Certain localities are routinely monitored as part of the AIP between the Shoshone-Bannock Tribes and DOE-ID (DOE-ID 2017). Monitoring forms are completed and a report is submitted to DOE-ID, who then undertakes appropriate actions to address findings.

Under the INL Site cultural resource monitoring program there are four possible findings for a given monitoring activity, based on the level of disturbance noted:

> **Type 1**: No visible changes to a cultural resource and/or a project that is operating within the limits of cultural resource clearance recommendations.
>
> **Type 2**: Impacts are noted but do not threaten the National Register eligibility of a cultural resource and/or a project is operating outside of culturally cleared limitations, but no cultural resources have been adversely impacted.
>
> **Type 3**: Impacts are noted that threaten the National Register eligibility of a cultural resource and/or a project has been operating outside of culturally cleared limitations and impacts to non- eligible cultural resources have occurred.

Type 4: Impacts that threaten the National Register eligibility of a cultural resource have occurred or are occurring during the monitoring visit, justifying the use of the INL Stop Work Authority (LWP-14002, MCP-553).

If Type 2, 3, or 4 impacts are documented during a monitoring activity, notifications are made to project managers, the DOE-ID Cultural Resource Coordinator, and various other parties, as appropriate, according to the severity of the disturbance. Typically, Type 2 impacts can be corrected at once with the cooperation of project managers, security personnel, and/or landlord organizations. In these instances, the impacts are only reported in summary fashion in year-end reports. Some Type 2 and all Type 3 or 4 impacts are reported to the DOE-ID Cultural Resource Coordinator and may prompt formal investigations. INL CRMO staff, Shoshone-Bannock Tribal representatives, project managers, security, and/or landlord organizations may also participate in these investigations.

During monitoring of project activities in FY2021, no impacts to historic properties were observed. In FY2021, INL CRMO staff conducted monitoring of seven sites. Results of these monitoring efforts (including updated site forms for four sites) are discussed Appendix A – Official Use Only – Not publicly available.

2.2 Active Research

There are currently two active multi-year Section 110 research proposals including: *Pluvial Lake Terreton: Building a Multidisciplinary Dataset to Understand Human Land Use During the Terminal Pleistocene* (INL/EXT-17-41959) and *Decoding the Southern Idaho Cultural Landscape Through Volcanic Glass Source Analysis* (INL/EXT-20-57891). The CRMO staff is coordinating these research efforts with the Shoshone-Bannock Tribes.

2.2.1 Obsidian Provenance Research - *Decoding the Southern Idaho Cultural Landscape Through Volcanic Glass Source Analysis*

In order to fully characterize the geographic distribution of Southern Idaho obsidian source groups, the INL CRMO has compiled a comprehensive Idaho obsidian reference collection. On March 16, 2021, CRMO staff provided the Fort Hall Business Council a progress report on source characterization efforts. Several more obsidian and fine-grained volcanic sources were added to the reference collection in FY2021. The current dataset contains over 2,000 samples of geologic obsidian from 155 locations that correspond to 30 geochemically distinct source groups, a few of which have not been previously defined or recognized by archaeologists. This is the most comprehensive reference database of obsidian sources yet compiled for Southern Idaho. In FY2022, the CRMO will publish results of analyses conducted in FY2020 and FY2021, including sources defined in the reference collection and provenance determinations for legacy collections of Terminal Pleistocene/Early Holocene projectile points held at the Earl Swanson Archaeological Repository.

At the end of FY2020, the CRMO acquired a second Olympus Vanta portable XRF spectrometer for exclusive use in field settings. In the spring of FY2021, the two instruments were cross-calibrated to insure consistency of results in the field and in the lab. The field instrument was later used to characterize obsidian fine-grain volcanic source use at site 10JF0088 as a component of FY2021 annual monitoring and Section 110 efforts. Source use at the site, combined with conventional survey data, suggests it functioned as a seasonal base camp occupied on a limited number of occasions during the Late Precontact period. In FY2022, CRMO staff will characterize source use at similar sites near 10JF0088 to assess broader patterns of settlement, site function, and lithic resource use in the area.

2.2.2 Owl Cave Research - *Pluvial Lake Terreton: Building a Multidisciplinary Dataset to Understand Human Land Use During the Terminal Pleistocene*

To better understand Shoshone and Bannock peoples use of the landscape within the Pioneer Basin, the physiographic region which encompasses the INL Site, INL CRMO archaeologist graduate student interns began investigations at the oldest and only stratigraphic site in the region. Working in conjunction with

Museum of Idaho (MOI) collection managers, INL researchers inventoried and classified the entire stone tool collection for the purpose of establishing the collection's extent and potential for future research. It was discovered that Owl Cave contains extensive Holocene deposits and associated cultural material that has never been published or analyzed. In addition to organizing lithic artifacts, INL researchers reviewed and digitized notes on features, units, and layers from the 1960s-1980s excavations to evaluate the potential for undisturbed stratigraphic sections of the site, resulting in a 3-dimensional model of excavations, artifacts, and features at Owl Cave. Finally, a selection of obsidian stone tools of differing functional type and stratigraphic context were subjected to XRF analysis with the results of all these efforts to be published in a peer-reviewed journal article in FY2022.

2.3 Public Outreach and Education

Public outreach and education are fundamental components to the INL Site cultural resource management program. The CRMO staff are constantly mindful of the local community, general public, INL employees, and key stakeholders such as the Idaho SHPO and the Shoshone-Bannock Tribes. Public outreach and education with these groups and stakeholders are facilitated through presentations, newspaper articles and interviews, periodic tours, regular face-to-face meetings, and various INL-specific media outlets such as the INL Public Outreach Program, INL external web page (www.inl.gov) and internal intranet, INL employee training, and iNotes, an email-based internal INL communication tool.

In FY2021, the CRMO staff continued public outreach components amidst the continuation of the Covid-19 pandemic. Educational exhibits at the Experimental Breeder Reactor I (EBR-I) Visitor's Center (a National Historic Landmark) and the Big Lost River Rest Area on U.S. Highway 20/26 within the boundaries of the INL Site are important tools for public outreach. Unfortunately, due to the Covid-19 pandemic and necessary restrictions, face-to-face employee and public tours at these facilities were not possible in FY2021. However, visitors could download a free app that provided a virtual tour of the EBR-I museum.

Following the success of the virtual tours of the EBR-I museum, the INL CRMO developed and conducted (in coordination with DOE-ID and HeTO staff) two virtual archaeology tours for over 100 INL employees and members of the public. These tours included discussions of DOE-ID's archaeological responsibilities, general overview of eastern Idaho precontact history, and specific examples of historic sites. Two virtual tours were held on August 25 and September 27, 2022. A total of 116 people were present during the virtual tours.

In April 2021, INL CRMO Archaeologist, Jeremias Pink, provided a presentation to the INL Site Monitoring and Surveillance Committee discussing Section 106 and Emergency Response Procedures to wildland fires. Approximately 60 individuals were in attendance and topics covered included INL CRMO as resource advisors, Emergency Response Action Plans and associated reporting timelines, and INL CRMO input on remediation of fire suppression activities.

In May 2021, Marie Holmer, a Marcom subcontractor, presented "Travelling the Jeffrey-Goodale's Cutoff" virtually as part of the Herrett Center for Arts and Science Forum lecture series.

In July 2021, INL CRMO staff hosted two onsite tours for the INL Senior Leadership Team (SLT) focusing on Section 106 and Section 110 responsibilities and visited historic archaeological sites and built environment locations to discuss history of the INL Site. As part of continual outreach opportunities to INL employees and leadership, the information presented to SLT during these tours is crucial to keeping leadership engaged in the INL CRMO processes, promotes stewardship, and explains how INL CRMO is critical to the success of the INL mission.

In August 2021, INL CRMO Intern, Christa White, presented a poster on *The Big Lost River Irrigation Project* as part of her internship project and won best poster in the INL Business – Communications – Support Operations category (Figure 3). This award was given as part of the annual INL Intern Poster Session, an opportunity for students to share their research and work accomplished during their summer internships, and for general staff to learn about the ways that interns are contributing to the INL's mission. A total of 455 interns were hosted at INL in FY2021; the INL CRMO was proud to host six interns.

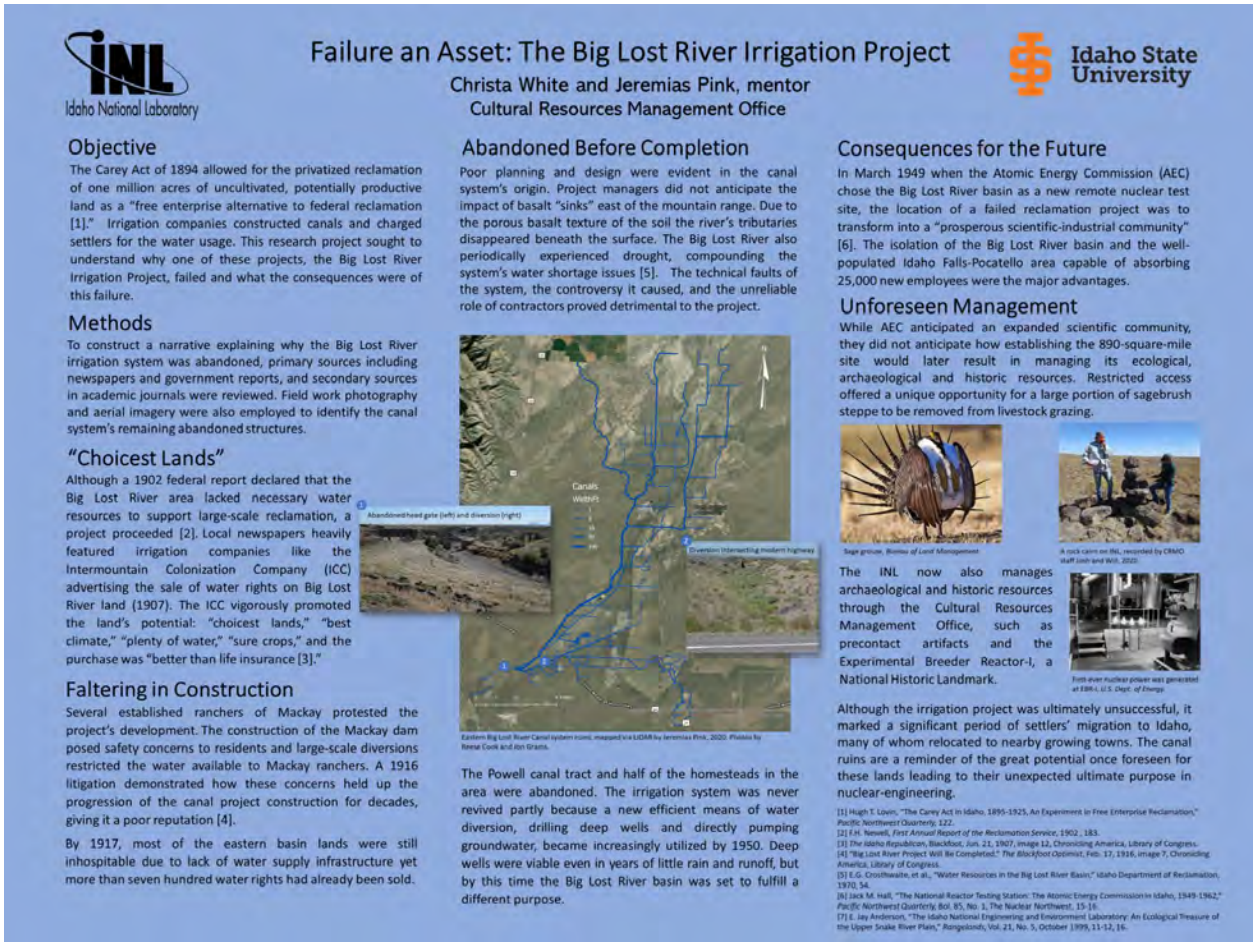

Figure 3. The Big Lost River Irrigation Project, poster by Christa White.

2.4 Partnerships

Partnerships have long been an important component of cultural resource management (CRM) at the INL Site. In FY2021, the INL CRMO program continued to participate in long term relationships with the Shoshone-Bannock Tribes, federal agencies, and other entities involved in work activities on or near the INL Site including the U.S. Bureau of Land Management (BLM) and the MOI.

Portions of undeveloped range lands within the boundaries of the INL Site are under joint administration by DOE-ID and the Idaho Falls District of the BLM. In addition, the Idaho Transportation Department, Idaho Power, and Rocky Mountain Power maintain rights-of-way along public roads and power line utilities that pass through the INL Site. INL CRMO staff have established productive working relationships with cultural resource managers and other personnel in these organizations and routinely share information for cultural resource identification, assessment, and protection.

Specific partnership accomplishments during FY2021 are highlighted below. The long-term relationship and partnership with Shoshone-Bannock Tribes is discussed in Section 1.2.1.

2.4.1 Museum of Idaho Contributions to Way Out West Exhibit

Museum of Idaho's "Way Out West" permanent exhibit opened on January 23, 2021. "Way Out West" is aimed at explaining southern Idaho from the days of Lake Terreton, at the terminal Pleistocene, until present day. DOE-ID and INL CRMO worked with MOI staff in 2019 and 2020 as part of multi-effort collaboration with Shoshone Bannock Tribes and other historical and cultural preservation organizations to create the "Way Out West" exhibit. Although actual projectile points from DOE-ID's collection were not used in the exhibit, INL CRMO had exact replicas cast of prominent projectile point types for display and education (Figure 4). DOE-ID also contributed photos and historic artifacts to add to the portions of the exhibit pertaining to early homesteading southern Idaho. MOI receives between 90-100,000 visitors a year.

Figure 4. Dr. Suzann Henrikson holds a replica of a Clovis point at the "Way Out West" exhibit. Photo Credit: INL Chris Morgan

2.4.2 Museum of Idaho Teacher's Workshop

In addition to tours, INL CRMO archaeologists working with the MOI provided professional expertise and assistance in teaching a brief archaeology summer course for local public schoolteachers on July 28-29, 2021 (Figure 5). This included providing instruction on Idaho's Precontact period, archaeological survey and excavation techniques, and the protection of cultural resources. The class also highlighted a local archaeological site managed by the Archaeological Conservancy. The class concluded with a practical exercise in archaeological survey, excavation techniques, and a tour. This outreach effort included 16 public school teachers in history, science, and social studies curriculum.

Figure 5. Jeremias Pink discussing archaeological history at the MOI Teacher's Workshop.

2.4.3 Bureau of Land Management (BLM) Memorandum of Understanding

Efforts to renew an existing 2016 Memorandum of Understanding (MOU) between DOE-ID and BLM Upper Snake Field Office began in 2021. The existing MOU discusses a cooperative management approach to certain lands within the INL Site including but not limited to grazing and range improvements, predator control, noxious weeds and insect infestations, rights-of-way, mineral and material exploration and disposal, and fire suppression management. A meeting was held on August 17, 2021, to discuss adequacy of the MOU, and areas to cover or expand upon, including cultural resource management.

The renewed MOU will include a cultural resources management section, where BLM and DOE-ID define the cooperative process to determine Section 106 Lead Federal Agency for undertakings; denotes the frequency and topics of reoccurring meetings; encourages joint Section 110 projects; issue a standardized data-sharing agreement; and creates opportunities to request assistance in NAGPRA, ARPA, paleontological resources, and wildland fire resource advising expertise held with either DOE-ID and INL CRMO or BLM. The updated MOU is anticipated to be signed in FY2022.

2.5 Stabilization and Preservation of Cultural Resources

2.5.1 Birch Creek

On September 16, 2021, DOE-ID, INL Natural Resources, Facilities and Site Services (F&SS), INL CRMO, HeTO, and BLM staff conducted a field meeting at the Birch Creek site to discuss potential for restoration efforts at this site. The proposal discussed included techniques, strategies, and timing of restoration to areas that have been denuded of vegetation due to past grazing trailing and bedding patterns. The grazing allotment was converted from sheep to cattle, and cattle are now trailed approximately two miles away from this site location. Stabilization of the soils and vegetation in the area would reduce or remove the impacts currently noted at the site including deflation, erosion, and exposure of artifacts from subsurface contexts. In FY2022,

DOE-ID and BLM will pursue coordination on soil testing, seed and plant mixes for restoration, strategies to increase revegetation success, and environmental documents necessary to support the work.

2.5.2 Middle Butte Cave Weed Management

In June 2021, the areas surrounding Middle Butte Cave were filled with musk thistle, noxious weed, and are not able to be sprayed due to the sensitive nature of the cave resources. INL CRMO and HeTO staff were present when weed management took place to remove the musk thistles by hand before root systems become more mature. These efforts were undertaken to ensure access to the cave entrance and reduce additional musk thistle propagation which in turn allows other vegetation to establish in the area, which stabilizes the soils, and can protect intact surface cultural deposits. and impact more of the subsurface deposits when root systems became mature. This reduces the potential impacts that can cause disturbance to intact subsurface deposits.

2.5.3 Aviator's Cave Tumbleweed Management

In June 2021, INL CRMO, Natural Resources staff, and HeTO staff removed tumbleweeds by hand and rakes that settled in the cave depression to allow for improved access to the cave by humans and bats (Figure 6). The accumulation of tumbleweeds is relatively low in terms of impact to the physical contents of the site; however, accessibility to monitor is necessary and the presence of tumbleweeds has the potential to impact interior climate of the cave, and in turn potentially preservation conditions.

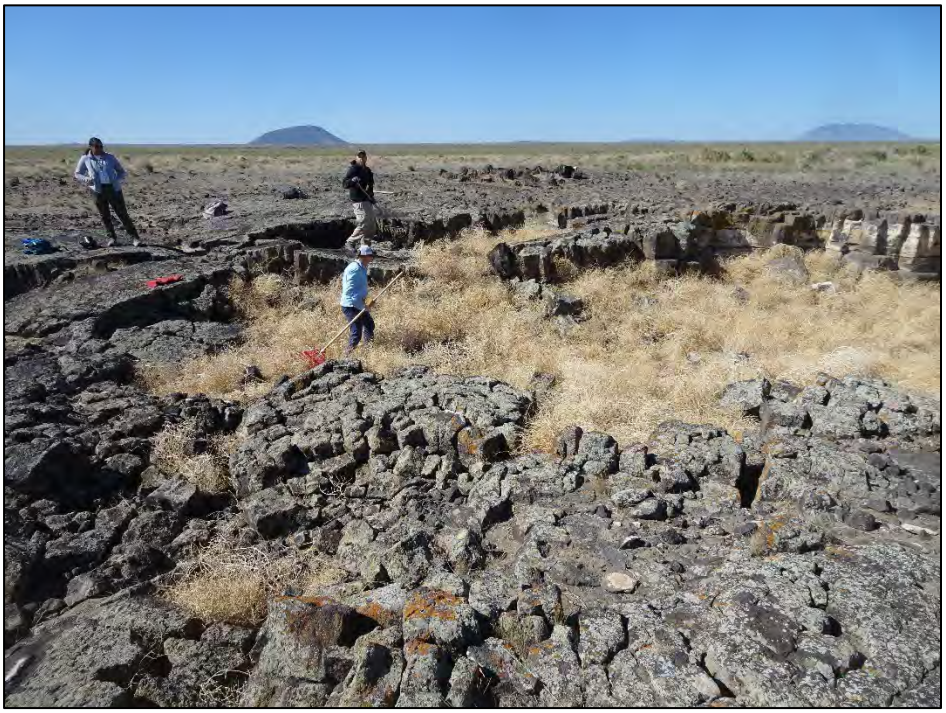

Figure 6. Tumbleweed removal by INL Cultural and Natural Resource staff and HeTO staff, June 2021.

2.6 Section 110 Archaeological Survey and Recordation

To satisfy annual Section 110 Survey requirements, the CRMO conducted a Class III archaeological inventory of 450 acres on the Big Lost River Floodplain in August and September of 2021 (Figure 7). These surveys were planned and conducted in coordination with the Shoshone-Bannock HeTO. Four survey locations were selected by HeTO staff in areas of the floodplain that had not been subject to previous archaeological inventory. At each location, a 150-acre survey block was plotted roughly perpendicular to paleo-channels of the Big Lost River visible in aerial imagery and 2019 Light Detection and Ranging data. Archaeological

inventory of the first three survey blocks was completed on September 21, 2021. Survey of the fourth block was not completed due to insufficient time.

A total of 17 cultural resources were recorded during the 2021 Section 110 surveys (Project No. BEA-21-110-02) and are summarized in Table 2. These include 12 archaeological sites and five isolated finds. Nine resources were recorded in Survey Block 1, including sites BEA-21-110-02-01, BEA-21-110-02-02, BEA-21-110-02-03, BEA-21-110-02-04, and isolated finds BEA-21-110-02-I01, BEA-21-110-02-I02, BEA-21-110-02-I03, BEA-21-110-02-I04, and BEA-21-110-02-I05. Two sites were recorded in Survey Block 2: BEA-21-110-05 and BEA-21-110-02-06. The remaining six sites were recorded in Survey Block 3: BEA-21-110-02-07, BEA-21-110-02-08, BEA-21-110-02-09, BEA-21-110-02-10, BEA-21-110-02-11, and BEA-05-41-09. No resources meeting CRMO criteria for Isolated Finds were observed in either Survey Block 2 or 3.

Of the 12 sites recorded during the 2021 Section 110 Surveys, 11 have a Precontact component, three have an Historic component, and two are multicomponent. Four of the five isolated finds were Precontact; the other was an historic animal trap. Two sites are recommended eligible for the National Register under criterion D: BEA-21-110-02-03 and BEA-21-110-02-11. Both are Precontact sites with strong potential for intact, stratified sub-surface deposits. The NRHP eligibility of two additional sites cannot be evaluated without subsurface testing: BEA-21-110-02-09 and BEA-21-110-02-10. These are small lithic scatters located in stratified alluvial sediment, but subsurface testing would be required to demonstrate the presence of buried cultural deposits. The remaining eight sites are recommended ineligible, including BEA-21-110-02-01, BEA-21-110-02-02, BEA-21-110-02-04, BEA-21-110-02-05, BEA-21-110-02-06, BEA-21-110-02-07, BEA-21-110-02-08, and BEA-05-41-09. Site BEA-05-41-09, a historic homestead, was first recorded in 2005 but it has not been previously reported to Idaho SHPO. None of the other 11 sites have been previously recorded.

A Section 110 Cultural Resource Investigation Report and associated site and isolate forms are being submitted concurrently with the FY2021 Annual Report.

Table 2. Results of Section 110 Proactive Inventory in FY2021.

Temporary Number	Survey Block	Resource Type	Temporal Class	NRHP Eligibility
BEA-21-110-02-01	110 Block 1	Site	Precontact	Ineligible
BEA-21-110-02-02	110 Block 1	Site	Precontact	Ineligible
BEA-21-110-02-03	110 Block 1	Site	Precontact	Eligible
BEA-21-110-02-04	110 Block 1	Site	Multicomponent	Ineligible
BEA-21-110-02-05	110 Block 2	Site	Precontact	Ineligible
BEA-21-110-02-06	110 Block 2	Site	Precontact	Ineligible
BEA-21-110-02-07	110 Block 3	Site	Precontact	Ineligible
BEA-21-110-02-08	110 Block 3	Site	Historic	Ineligible
BEA-21-110-02-09	110 Block 3	Site	Precontact	Unevaluated
BEA-21-110-02-10	110 Block 3	Site	Precontact	Unevaluated
BEA-21-110-02-11	110 Block 3	Site	Precontact	Eligible
BEA-05-41-09	110 Block 3	Site	Multicomponent	Ineligible
BEA-21-110-02-I01	110 Block 1	Isolated Find	Historic	Ineligible
BEA-21-110-02-I02	110 Block 1	Isolated Find	Precontact	Ineligible
BEA-21-110-02-I03	110 Block 1	Isolated Find	Precontact	Ineligible
BEA-21-110-02-I04	110 Block 1	Isolated Find	Precontact	Ineligible
BEA-21-110-02-I05	110 Block 1	Isolated Find	Precontact	Ineligible

Figure 7. Christa White, Larae Bill, Jeremias Pink conducting Section 110 inventory, August 2021.

2.7 EBR-I National Historic Landmark Update

In FY 2021, period engagement was necessary with the recently reestablished preservation committee and working group comprised of INL staff and managers for project planning at the EBR-I National Historic Landmark (NHL). Funding to maintain this historic property and its landscape features continues to be a challenge for the F&SS staff. As a result, a strategic approach to planning routine and preservation maintenance is on-going. Conversations between the INL CRMO and facility managers, as well as project managers, occur often. No major modifications to EBR-I were completed in FY2021.

2.7.1 Projects completed or initiated in FY2021 at EBR-I

Completion of Section 106 reviews included the placement of a visitor sign for virtual tours, and fiber optic installation on existing poles (see Sections 6.1.3.4 and 6.1.3.11 for more details). Furthermore, initial discussions began on the creation of a potential living room display within EBR-I museum; however, this project was cancelled (see Section 6.1.3.8).

INL CRMO anticipates updating the National Register Nomination for EBR-I and the EBR-I Preservation Plan, and pursuing options to protect the Heat Transfer Reactor Experiment engines from weather, wind and birds in FY2022-FY2023 (see Section 8.2.1).

2.8 CEMML Built Environment Inventory Update

In October 2020, the INL CRMO contracted with the Center for Environmental Management of Military Lands (CEMML), housed at Colorado State University, to inventory approximately 600 buildings and nearly 400 structures located at the Advanced Test Reactor Complex (ATR), Main Gate (B-27), Lincoln Boulevard Gate (B-8), Central Facilities Area (CFA), EBR-I and Boiling-Water Reactor Experiment (BORAX) Facilities, Idaho Nuclear Technology and Engineering Center (INTEC), and the Materials and Fuels Complex (MFC). The inventory is to include field survey of each building or structure built between 1941 and 1980. Each resource will be recorded as per Idaho SHPO Guidelines and Procedures for Cultural Resource Review

and Consultation in Idaho. All resources will be recorded using reconnaissance-level standards, except for the facilities designated Significant/Category 1 properties, which will be documented in accordance with intensive-level standards, including interior inventory and recordation.

CEMML began preparatory research in November 2020, including reviewing INL-provided GIS data, past inventories and survey forms, draft historic contexts, and site histories. The CEMML team conducted on-site field work at Critical Infrastructure Test Range Complex (CITRC), CFA, and ATR during the same month. During the next four months, CEMML prepared architectural descriptions and property summaries for the inventoried buildings. This included approximately 1/3 of all properties to be surveyed. By the end of May 2021, CEMML completed the remaining text for the first volume, including abstract, key information, environmental context, project description, pre-field research, results, and conclusion.

CEMML conducted on-site field work at MFC in June 2021 and developed the template for the MFC inventory, which will comprise the second volume of the comprehensive inventory. During July, August, and September, CEMML wrote architectural descriptions, property histories, and condition descriptions for the surveyed MFC properties. In total, during FY2021, CEMML surveyed approximately 2/3 of the extant pre-1980 built environment resources at the INL Site. The first volume of the inventory, including CITRC, CFA, and ATR, is approximately 60% complete. The second volume, including MFC, is approximately 41% complete. CEMML anticipates conducting additional on-site field work during FY2022. Full drafts of each volume will also be forthcoming in FY2022 for submission to Idaho SHPO.

3. DATA AND COLLECTIONS MANAGEMENT

3.1 Curation of DOE-ID Owned Collections

DOE-ID's permanent archaeological collections are curated at the Earl H. Swanson Archaeological Repository in the Idaho Museum of Natural History (IMNH), on the Idaho State University Campus in Pocatello, Idaho. A contract between DOE-ID and the Museum provides specific guidance for management of the permanent collections according to the requirements of 36 CFR Part 79 and DOE-ID's overarching policy for cultural resource management. No collections were made in FY2021. Tracking, inventory, and documentation for DOE-ID curated collections is ongoing.

DOE-ID and the INL CRMO conduct yearly inspections of the repository and visited the facilities on August 4, 2021, with representatives from DOE-ID, INL CRMO, HeTO staff, and IMNH in attendance. Specific agenda topics included examining collections from several DOE-ID sites that required site updates. Additional interactions between INL CRMO and IMNH in FY2021 included the loan and return of collections at IMNH for the purpose of the INL CRMO updating site forms in coordination with FY2021 monitoring efforts and returning the loan for site 10BT1052.

3.2 Management of DOE-ID Architectural, Archaeological, and Paleontological Records and Data

The INL CRMO currently manages, updates, and ensures security of all DOE-ID archaeological and paleontological geodatabases, as well as federal records associated with management of cultural resources on the INL Site. In conjunction with DOE-ID cultural resource data reconciliation activities, a subcontractor is in the process of digitizing all paper copies of legacy records. The INL CRMO also continues to improve the Cultural Resource Database, initially launched in FY2020, containing digital data collection that conforms to federal archival and records management standards. Paleontological data is continuing to be managed by INL CRMO staff, and the issuance of MCP-8005 Managing of Paleontological Resources in September 2021 outlines the procedures.

3.2.1 Reconciliation Process

An agreed upon reconciliation process between DOE-ID and Idaho SHPO in 2019 continued in FY2021. The reconciliation process includes reconciling the Idaho SHPO data provided to DOE-ID and INL CRMO in 2019 with the information currently available for the INL Site. There were discrepancies in the number and location of sites between the 2019 data received from Idaho SHPO and the INL Site datasets. Therefore, a full review of the site forms, databases, and geospatial data was conducted and updated with the most current and accurate information available.

The data were gathered from an extensive review of the INL CRMO records and used to create a new geospatial database for all archaeological resources as well as a corresponding archaeological site database from existing digital and paper records. The Idaho SHPO geospatial database, several previous versions of an INL Site master geospatial database, project specific locational data, and paper records were simultaneously compared to determine the original or most accurate locational information which was utilized to create the geometry. After the compilation of the locational data, all Idaho SHPO required information fields were completed in addition to several administrative fields for INL CRMO purposes. All decisions made during this process were reviewed and tracked for quality assurance. To avoid similar problems of multiple datasets in the future the current means of collecting geospatial data has been adjusted to mirror this new master geospatial database facilitating locational data standardization and management.

Efforts to compile the most up to date and accurate site databases also occurred during FY2021, which included INL CRMO working with computer programmers to ensure merging, compilation, and creation of a database that contains all required and useful information to compile into Archaeological Survey of Idaho (ASI) site databases and records. Both comprehensive ASI and geospatial databases will represent the most up to date data INL CRMO has on every known resource. However, it should be noted that many previously unsubmitted sites do not meet current recording standards as full site re-records were outside the scope agreed upon with Idaho SHPO and DOE-ID. Reconciliation of the archaeological geospatial and site databases are anticipated to occur in July 2022.

3.2.2 Cultural Resources Legacy Scanning Project

The INL CRMO currently manages, updates, and ensures security of all DOE-ID archaeological and paleontological geodatabases, as well as federal records associated with management of cultural resources on the INL Site. As a portion of DOE-ID cultural resource data reconciliation activities, a subcontractor is in the process of digitizing all paper legacy records. At the end of FY2021, a total of 6,572 records were entered into the restricted cultural section of Electronic Data Management System and included, but are not limited to: project files, correspondence files, cultural resource reports, photo files, ASI and IHSI forms, and MOA and MOU documents. These efforts will continue into FY2022 and are anticipated to be completed by September 2022.

3.2.3 Cultural Resources Database Development and Progress

The INL CRMO has also continued the process of instituting a standard of digital data collection that conforms to federal archival and records management standards. The institution of new file structures and naming systems designed to streamline data storage and future access, as well as developing more stringent and streamlined data collection protocols have continued to evolve with the development of 48 new procedures. The archivist and records management specialists helped initiate, with the input of the INL CRMO staff, the development and implementation of metadata standards and standardized file and folder naming template for FY2022 and created a linked document of guides, forms, and procedures. These changes continued to develop in FY2021.

4. ARCHAELOGICAL RESOURCE PROTECTION ACT

Efforts to improve protection of archaeological sites at the INL Site are ongoing. An active security force monitors INL Site lands through ground patrols and security surveillance of public points of access. Trespassers are removed immediately upon detection and when evidence of recent trespass is found, referrals are made to local or federal law enforcement authorities for investigation. Yearly on-line training modules remind INL Site employees of prohibitions on disturbing archaeological sites. Targeted training is also conducted by INL CRMO staff and in coordination with Shoshone-Bannock Tribes for INL Site employees likely to encounter archaeological sites during their work activities.

No new potential ARPA violations were discovered in FY2021. However, an incident involving unauthorized trespass and ground disturbance to a newly recorded site (BEA-18-15-03) was reported as a potential ARPA violation in FY2018 by INL CRMO Staff to DOE-ID. In FY2021 it was determined by the Inspector General assessing the case that it did not meet the thresholds archaeological interest, and therefore, the decision was to not pursue civil or criminal ARPA.

5. NATIVE AMERICAN GRAVES PROTECTION & REPATRIATION ACT

The following guidelines from the AIP between the Shoshone-Bannock Tribes and DOE-ID (DOE-ID 2017:10)) outline specific requirements for inadvertent discoveries as follows:

> *In the event that human remains or burial sites are inadvertently discovered, accidentally exposed, or potentially threatened, DOE agrees to contact the Tribe immediately and consultation, as outlined in the cultural resources consultation procedures, will be initiated.*
>
> *DOE agrees that Tribal representatives will be permitted to view any discoveries or remains and cultural artifacts, will be authorized to do site inspections of any archaeological discovery or excavation, and will be permitted to be present during any archaeological excavation, survey, study, or testing on the INL site.*

The cultural resources consultation procedures as outlined in the AIP between the Shoshone-Bannock Tribes and DOE-ID state the following (DOE-ID 2017, Attachment 1:1):

> *For purposes of this Agreement, the consultation process includes: 1) notifications and discussions at a working level; 2) technical briefings and discussions to mitigate impacts and effects; and 3) where required or necessary to resolve disputes, formal government-to-government consultation between the Tribal Council and the DOE-Idaho Operations Office Manager.*

There were no new discoveries, monitoring, or actions resulting in initiation of NAGPRA processes in FY2021. In the future, if inadvertent discoveries are made, the processes outlined in the AIP and NAGPRA would be followed and reported in the appendix of the Annual Report which would contain information that is Official Use Only (OUO) and not be publicly available.

6. SECTION 106 REVIEW

Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their undertakings on historic properties and afford the ACHP a reasonable opportunity to comment on such undertakings (36 CFR §800.1). Actions proposed within the INL Site must meet the requirements of the National Environmental Policy Act (NEPA). Most of these activities meet the criteria of previously approved categorical exclusions (CX) which do not exhibit the potential to have a significant environmental impact; however, these actions may still require a cultural review to determine whether there is any potential to affect historic properties. CX activities are outlined in an Environmental Compliance Permit (ECP; previously the form was titled Environmental Checklist [EC]) which outlines the scope of work, discusses its environmental aspects and impacts including any hold points or project-specific instructions, and cites the appropriate justification for the NEPA decision. In certain circumstances, the proposed actions may meet the threshold of an environmental assessment (EA) or an environmental impact statement (EIS). The INL CRMO is well-integrated with NEPA staff and is involved in early planning efforts to ensure the timely completion of the Section 106 process prior to the signing of NEPA decisions.

A Section 106 review is initiated when a project scope is submitted through the Environmental Review Process (ERP). The Idaho Cleanup Project, NRF, and BLM do not participate in the ERP system. The BLM contacts DOE-ID when their undertakings require cultural survey on the INL Site. NRF and ICP notify the INL CRMO staff of their federal actions. The BLM, NRF, and ICP are responsible for completing Section 106 consultation with SHPO. The INL CRMO, environmental, and NEPA staff review the proposed action and anticipated environmental impacts. The project scope within the ERP system is reviewed by both the archaeological and the architectural staff to determine whether the proposed action meets the definition of a federal undertaking (36 CFR 800.16(y)) and whether built environment properties, archaeological properties outside facility fences, or both are involved. Reviews are identified by unique project identifiers beginning with the "BEA" acronym followed by the two-digit fiscal year, and the sequential number. The sequential number on built environment project identifiers is preceded by an H and consists of three-digits, whereas archaeology project identifiers have just two digits.

In 2004, DOE-ID signed a Programmatic Agreement with the Idaho SHPO and the ACHP which stipulated the finalization and implementation of the Cultural Resources Management Plan. As outlined in the CRMP, DOE-ID has adopted a tailored approach to the NHPA Section 106 process in consultation with the Idaho SHPO, the ACHP, the National Park Service (NPS), and the Shoshone-Bannock Tribes. DOE-ID has developed a list of property types that are not considered significant or potentially eligible for nomination to the National Register under the NHPA (Table 3; DOE-ID 2016:47). Actions that affect these property types are exempt from further cultural review. However, these exempt property types only apply to existing structures; undertakings associated with the construction or replacement of these property types are not exempt from cultural resource review (DOE-ID 2016:49).

Unless a property exhibits extraordinary significance, 50 years is the threshold a cultural resource must reach for its historic significance to be evaluated and for the cultural resource to be eligible for the NRHP. To allow for the time necessary to plan projects and prepare the necessary NEPA and NHPA documents, Idaho SHPO requires buildings and structures to be evaluated for potential effects when they reach 45 years of age (Vilhene 2015:33-34).

Table 3. Property types for which actions are exempt from cultural review.

ID	Property Type	Description
P1	Post-1970 buildings, with exceptions	Activities or actions associated with buildings and structures constructed after 1970 are exempt from review, with the following exceptions: A property built after 1970 may be subject to review if it has been determined the exceptional historical importance of the property makes it eligible for
P2	Subsurface structures	These structures have minimal or no visible surface manifestations and include earthen and concrete-lined trenches, French drains, underground tanks, vaults, underground pipelines, sewer lines, and other structures that are typically located below ground and were never intended to be routinely accessed by people.
P3	Storage tanks	These structures include surface and subsurface utility tanks used in routine facility operations. Associated concrete slab foundations, scaffolding, piping, or spill-management retaining walls are also included.
P4	Wells and boreholes	These structures include characterization wells, monitoring wells, drinking water wells, industrial water wells, injection wells, and various types of test wells and boreholes. Wells associated with homesteading and other early historic uses of the area are not included.
P5	Utility poles and towers	These structures include power lines, microwave towers, seismic data collection and transmission facilities, and other types of communication towers.
P6	Utility structures	These structures provide housing or control of utility equipment or access to underground utility equipment, such as pump houses, electrical substations, boiler tanks, or equipment monitoring
P7	Mobile trailers	These structures are used for temporary office space and/or storage.
P8	Isolated finds	These archaeological resources consist of <10 artifacts and no architectural features. They are unlikely to yield any information beyond that collected during initial recording.

DOE-ID has also identified routine activities that do not have the potential to cause effects to historic properties (DOE-ID 2016:51). Except as noted in Table 4, these exemptions do not apply to the EBR-I NHL. If the proposed action meets the criteria of an exempted activity or would occur within an exempt property, no further cultural review is required and DOE-ID's obligations under Section 106 are met. CRMO staff apply professional judgement to determine the applicability of these exemptions on a case-by-case basis. For some projects, an exemption may apply to certain proposed activities or to some of the properties within which the activity would occur, but not all. For these projects, a full cultural review would be required.

Table 4. INL Site activities exempt from cultural review.

ID	Activity Type	Description
A1	Emergency response	Activities declared by the appropriate INL official, U.S. president, a tribal government, or the governor of a state as necessary to safeguard human health and the environment during declared disasters, emergencies, or national security threats (including EBR-I)
A2	Routine maintenance activities	Activities that include, but are not limited to, normal custodial services; electrical and plumbing installation or repair; repair of fire suppression systems, alarms, or communication systems; moving or assembly of interior furnishings; resurfacing of road, sidewalk, and parking areas; routine decontamination (through such activities as wiping down with rags, using strippable latex, and minor vacuuming, but excluding scabbing) of the surfaces of equipment, rooms, or other interior surfaces.
A3	Replacement in kind	Replacement of fixtures or components of a property, such as matching paint with existing or similar paint color, refinishing materials with existing or similar colors, or replacing or installing carpeting with water-soluble glue. This exemption includes refinishing with products that have improved safety, environmental, or health considerations over the existing or original, as long as the color of the refinishing product is similar to or matches the existing original color.
A4	Energy conservation measures	Activities that include, but are not limited to, modifications to heating, ventilation, and air conditioning systems; insulation to roofs, crawl spaces, walls, and floors; and caulking and weather stripping that are not visible or do not significantly alter or detract from those qualities that make the property eligible for nomination to the NRHP.
A5	Security systems	Installation, maintenance, or repair of security systems, including computer security, detection, monitoring, surveillance, and alarm systems.
A6	Safety systems	Installation, maintenance, and repair or modification of personnel safety systems and devices within the built environment, such as radiation monitoring devices; emergency exit lighting systems; protective additions to electrical equipment; improvements to walking and working surfaces; and installation of protective railings, guards, or shielding.
A7	Asbestos abatement	Removing or fixing asbestos for safety and health concerns, including lagging, insulating, painting, pipe and duct work, and panel removal. None of these activities may cause structural modifications or alter character-defining features. Asbestos abatement activities strictly associated with the DD&D of properties and that result in permanent, significant structural modification or alteration of the property are not included in this exemption.
A8	Internal reconfiguration of active laboratories	Changes to the internal configuration of active laboratories or other existing experimental or testing properties within the built environment to accommodate new experiments or tests.

A9	Ground disturbance within fenced facility perimeters	Modifications to the ground surface within existing facilities (TAN, EBR-I, WRRTF, NRF, RTC, INTEC, RWMC, MFC)[1] or within 50 ft of existing buildings in unfenced facility areas (CFA, ARA, BORAX)[2]. All activities under this exemption are subject to the INL Timeout and Stop Work Authority (Appendix A) should cultural resources be unexpectedly encountered at any time. This exemption does not apply to the CITRC facilities.

[1]Test Area North (TAN), Experimental Breeder Reactor-I (EBR-I), Water Reactor Research Test Facility (WRRTF), Naval Reactors Facility (NRF), Reactor Technology Complex (RTC; now Advanced Test Reactor [ATR] complex), Idaho Nuclear Technology and Engineering Center (INTEC), Radioactive Waste Management Complex (RWMC), and Materials and Fuels Complex (MFC).
[2]Central Facilities Area (CFA), Auxiliary Reactor Area (ARA), and Boiling-Water Reactor Experiment (BORAX).

If an action does not meet one of the exemptions, the area of potential effect (APE) is determined. The NHPA implementing regulations provide the following definition [36 CFR 800.16(d)]:

> *The area of potential effects means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.*

When determining the APE, a consideration of the full range of effects must be applied to the undertaking. Access to the project area, vehicle parking, and laydown areas must be considered in addition to the primary activity area. If the proposed actions would only occur within the interior of a building, the APE would be confined to the building itself. However, modifications to the exterior of a building would affect the appearance of the building as well as the view or setting of neighboring buildings or structures and these effects must also be evaluated.

A review of CRMO literature and records is conducted to determine if the APE was previously surveyed, partially surveyed, or was originally surveyed using methods less stringent than required under the CRMP or by the Secretary of Interior's standards. Previously recorded sites are reviewed to determine documentation completeness and accuracy. If necessary, a field survey of the APE is conducted with newly identified cultural resources documented and previously recorded sites updated on an ASI or Idaho Historic Site Inventory (IHSI) form depending upon the property type and following the Idaho SHPO guidelines (Vihlene 2015). Documented properties are evaluated for their historic significance and whether they meet the established criteria for inclusion in the National Register (36 CFR 60). The eligibility recommendation must be concurred on by Idaho SHPO and until Idaho SHPO has an opportunity to review the cultural property's documentation, the site is treated as if it is eligible. The results of the cultural review are documented on a Cultural Resource Review (CRR) record that is submitted to the project manager and NEPA staff. This applies both to those reviews that identify exempt properties or exempt actions as well as those that require field survey. Based upon the results, the CRR provides the finding of effect with the appropriate box for *No Effect*, *No Adverse Effect*, or *Adverse Effect* checked.

The NHPA implementing regulations address two results from the identification and evaluation of properties within the APE: 36 CFR 800.4(d)(1) *No historic properties affected* and 36 CFR 800.4(d)(2) *Historic properties affected.* The regulations specify that for a no historic properties affected finding there are no historic properties (defined as those properties that are listed in or are eligible for inclusion in the NRHP) present or there are historic properties present but the undertaking will have no effect upon them. On the CRR, the no historic properties affected finding is shortened to no effect. In situations where historic properties will be affected but the characteristics of the property that qualify it for NRHP inclusion are not altered, the finding would be no adverse effect. Avoidance measures may be required to ensure these historic properties are protected and not affected. An annual report, such as this document, is prepared that summarizes the information on the CRRs that result in a no effect or no adverse effect finding and is provided to the Idaho SHPO, Shoshone-Bannock Tribes, and stakeholders (DOE-ID 2016:52).

If adverse effects to historic archaeological properties cannot be avoided, a full report of the cultural review is prepared and submitted to Idaho SHPO which initiates consultation regarding measures to minimize or mitigate the potential impacts and resolve the adverse effects. The ACHP is also provided a copy of the report and is invited with the Shoshone-Bannock Tribes, other interested parties, and stakeholders to participate in developing an MOA between DOE-ID and Idaho SHPO which outlines the stipulations to be followed in compliance with mitigation.

Property types managed as part of the INL Site historic built environment include buildings, structures, objects, and sites. Management of INL Site buildings and structures follows 36 CFR 800 and is guided by four architectural property categories identified in the INL CRMP under which these properties may be considered eligible for listing on the NRHP (36 CFR 60). The four architectural property categories are (DOE-ID 2016:160):

1. **Signature Properties:** a term coined by DOE-Headquarters (DOE-HQ) that denotes its most historically important properties across the complex (e.g., EBR-I) and/or those properties that are viewed as having tourism potential (e.g., World War II structures). These properties will be documented through Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER) reports regardless of their ultimate disposition.

2. **Category 1 Properties:** Key individual INL properties (reactor buildings such as the Advanced Test Reactor) that, through periodic reviews, could be reclassified as signature properties.

3. **Category 2 Historic Properties:** Contributing INL properties directly associated with signature or key individual properties (e.g., control buildings, hot shops, and artifacts such as the Test Area North shielded locomotive).

4. **Category 3 Properties:** Contributing INL properties not directly associated with signature or key individual properties (e.g., cafeterias and warehouses).

When an effect on a historic architectural property will be adverse, mitigation to minimize the adverse effect will be necessary. Based on the relative importance of the affected property, as defined by the property category, mitigation includes varying types of documentation and potentially other activities based on its relative significance (DOE-ID 2016:166).

- **Signature Properties.** DOE-ID will follow 36 CFR 800.3 through 800.7. In addition, the DOE-HQ federal preservation officer will become a consulting party and a signatory to any agreements that may develop, and the ACHP will be invited to participate. Serious consideration will be given to preservation in place.
- **Category 1 Properties.** If an architectural property housed a reactor or a significant process, was constructed during the defined period of significance (1942–1970), or is determined to have exceptional importance, that architectural property will form the primary property in a HABS/HAER study. The primary facility and its historic features will be thoroughly documented to HABS/HAER Level II standards. The complex of buildings, structures, and objects directly supporting the primary facility or process will be incorporated into the HABS/HAER study (HABS/HAER Collections 1983). A single HABS/HAER document might include several structures across the categories. Category 1 buildings will not be adversely impacted prior to approval of the appropriate HABS/HAER report by the Idaho SHPO and National Park Service.
- **Category 2 Properties.** If an architectural property is an integral component in the reactor or process complex (e.g., cooling tower, heat exchanger, or reactor coolant pump house), its interior, when possible, and exterior will be photographed with large-format, archivally processed, black-and-white film. Photographs will include one photograph of each side of the building or structure, oblique photographs showing the relationship of the building or structure to associated buildings or structures or landscape, and interior photographs that illustrate historic features. The photographs will be preserved along with architectural and engineering drawings that depict elevations, sections, details, and historic features and available historic photographs of

construction, manufacture, and other activities or experiments, when possible. When a HABS/HAER study is required for the key building or structure in a complex, these photographs and other documents will become part of the study.

- **Category 3 Properties.** If an architectural property such as a guardhouse, cafeteria, or warehouse was contributing, but was not directly related to the key building or process, it will be documented with 35-mm reconnaissance-level photographs and the completion of an Idaho Historic Sites Inventory form. This documentation will be preserved by the INL CRMO and made available to scholars, researchers, and other interested parties. When appropriate, some 35- mm photographs will be included in HABS/HAER reports to illustrate the narrative.

If an undertaking is proposed that involves properties that have not been surveyed or evaluated, surveys and evaluations will be completed and, in the event that they will be adversely impacted, the mitigation methodology previously described will be used, or new methodology will be developed in consultation with the Idaho SHPO, ACHP, Tribes, and other stakeholders, as appropriate. The new methodology will be incorporated into this plan or a memorandum of agreement will be developed.

6.1 Reviewed FY2021 Undertakings

Cultural resources review project numbers were issued for 301 projects in FY2021. In addition, 14 projects numbers issued in FY2020 were finalized in FY2021. This number includes one review conducted for actions proposed within the Naval Reactors Facility (NRF) fenced area. This number includes three reviews for undertakings that occurred within the BLM right-of-way (ROW) or conducted to assist the BLM with their Section 106 compliance. Three projects were Section 110 projects, that were issued Section 106 project numbers in error. Therefore, the total number of project numbers that are not Section 110 projects or other federal agency undertakings that were initiated or finalized in FY2021 is 280. The following presents the categories of reviews. However, a more in detail individualized review is contained in Table 6.

- Ninety-four (94) project numbers were issued to projects that do not trigger Section 106 review according to Appendix A. These project numbers have been removed from Table 6.
- Ten (10) project numbers were issued in error, often duplicating project reviews between a draft environmental checklist (EC) and the finalized version or assigning a built environment project number to a project that had already been assigned an archaeology review number. These project numbers have been removed from Table 6.
- Four (4) projects have reports currently in progress with anticipated completion during FY2022. In addition, one project is going through revisions to scope, and two projects are related to the historic built environment update and historic context updates.
- Forty-four (44) projects have not been finalized through signature and anticipated completion is during FY22.
- Six (6) projects were cancelled, postponed, or did not have an undertaking defined during or after the review period.
- Nine (9) projects did not require a CRR because the material under review consisted of an annual ECP. The CRMO issued hold points requiring Cultural Resource Management Office (CRMO) review prior to any activities taking place under these ECPs that may affect historic properties.
- Sixty-nine (69) projects involved exempt activities or exempt property types, resulting in a finding of no effect to historic properties.
- Five (5) projects resulted in a finding of no adverse effect, as only portions of the proposed actions included exempt activities or exempt property types.
- Thirty-seven (37) projects resulted in a finding of no effect and did not include either exempt activities or exempt property types.
- Four (4) projects resulted in a finding of no adverse effect and did not include either exempt activities or exempt property types.

Of the activity exemptions and property type exemptions utilized for Section 106 reviews in FY2021, there were 103 applications of exemptions for 69 projects. The following table summarizes the frequency of exemptions applied to all or portions of Section 106 undertakings reviewed in FY2021.

Table 5. Frequency of Exempted Activities and Property Types.

Activity Exemption	Frequency	Property Type Exemption	Frequency
A1	0	**P1**	2
A2	28	**P2**	3
A3	4	**P3**	0
A4	3	**P4**	0
A5	1	**P5**	6
A6	7	**P6**	9
A7	2	**P7**	3
A8	25	**P8**	0
A9	10		

Intensive, pedestrian survey of 2,162.08 acres was completed in FY2021 to identify historic properties for 18 Section 106 projects.

Three Section 106 reviews were finalized or had additional scope which required addendums in FY2021 that met the threshold for an EA or EIS (see Section 6.1.6).

There are four projects that were initiated in FY2021 but have outstanding reports in progress. They are discussed in Section 6.1.2.

6.1.1 Compiled List of Reviews

The following table discusses the individual Section 106 review of the FY2021 and FY2020 projects that were finalized in FY2021. If additional information was necessary, the table will point to the appropriate section in the report. Also included in the table are the projects that were initiated in FY2021 and are still in review.

Section 106 has not yet been completed for some undertakings and these are not listed in Table 6. The following reviews were not finalized by the end of FY2021:

BEA-20-26, 2020 Fires
BEA-18-H008, DD&D of CF-688 and CF-689
BEA-18-H012, CF-664 Fire Water Upgrade and Building Modifications
BEA-18-H045.01, ATR Excess Facilities/Structures Deactivation and Demolition
BEA-18-H054, 2018 CFA Excess Facilities Deactivation and Demolition
BEA-18-59.01 Removal of Obsolete Equipment in MFC-774, ZPPR Support Wing.

The cultural report for BEA-18-20, Power Management, was not finalized in FY2021 but additional information is provided in 6.4.9. Additional information for BEA-20-17, Cultural Evaluation of Sites for Advanced Reactor Demonstrations, is provided in 6.1.4.1.

Table 6. Section 106 reviews for FY2021 including FY2020 projects finalized in FY2021.

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
N/A	BEA-20-24	Quaking Aspen and Deadman Allotment Pipelines	Construction of pipelines and trough locations to support range improvements for grazing permit renewal – BLM undertaking	Submitted to BLM	Several – Submitted to BLM	N/A	N/A	N/A	August 18, 2021 J. Pink	DOE-ID submitted completed site forms to BLM on September 2, 2021. BLM will submit sites with the Section 106 report.	N/A
BEA-20-H100 R1	BEA-20-18	TAN-691 Maintenance and Vehicle Storage Building Construction and Perimeter Fence Extension	Revision to place underground conduit and a direct buried cable, remove the berm, and place excess soil east of the berm.	N/A	N/A	N/A	N/A	No Historic Properties Affected	March 2020 Revised June 2022 S. Plager L. Cook	Previous Class III Inventories adequate to assess effects. No HPs in the APE.	N/A
BEA-20-H100 R2	BEA-20-18	TAN-691 Maintenance and Vehicle Storage Building Construction and Perimeter Fence Extension	Revision to change the location of excess soil placement and to designate an area for employee parking.	N/A	N/A	N/A	N/A	No Historic Properties Affected	January 21, 2021 Revised June 2022 S. Plager L. Cook	Previous Class III Inventories adequate to assess effects. No HPs in the APE.	N/A
N/A	BEA-20-23	Weather Station Installations on Highways 20, 26, 33 and 93	Installation of 10 new weather stations along highways.	N/A	N/A	N/A	N/A	No Historic Properties Affected	May 2021 R. Cook	BEA submitted the report to DOE-ID in May 2021. This is a BLM undertaking. DOE-ID submitted the report to BLM in October 2021.	Class III inventory 1.05 acres (BLM)
BEA-20-H156	BEA-20-27	Upgrade T-Road Between T-28 and T-53	Upgrade two-track road that connects T-28 and T-53 to a Priority 3 road.	N/A	Isolates: BEA-20-27 ISO1, BEA-20-27-ISO2	N/A	N/A	No Historic Properties Affected	October 6, 2020 S. Plager		Class III Inventory 7 acres
BEA-20-H188	BEA-20-36	Cultural Resource Investigations for the Construction and	Three locations at CITRC and three buildings and two	See Section 6.1.6.2	See Section 6.1.6.2	N/A	No Adverse Effect	No Historic Properties	S. Plager	See Section 6.1.6.2	CITRC and MFC

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
		Demonstration of a Prototype Advanced Mobile Nuclear Reactor (Project PELE)	structures at MFC may be selected for testing.					Affected			
BEA-20-H166	N/A	Microreactor Applications Research, Validation and Evaluation Project (MARVEL) EA	Installation of MARVEL microreactor in the storage pit in TREAT. Fuel Fabrication in MFC-787.	MFC-720 – TREAT Reactor Building Eligible – A) MCF-726 TREAT Reactor – Eligible A MFC-787 (Eligible A)	N/A	Portions: A8	No Adverse Effect	N/A	December 21, 2020 M. Scales-English	See section 6.1.6.3 for more details.	MFC
BEA-20-H201	N/A	Replacement and Relocation of Lower EIFS Position Indicator Switch	Replace and relocate position indicator switch on GT-1-84.	N/A	N/A	A2	No Historic Properties Affected	N/A	October 5, 2020 C. Olson	N/A	ATR
BEA-20-H202	N/A	Walking Working Surfaces	Installation of safety systems at SMC, including safety gates and replacement of ladder system	N/A	N/A	A6	No Historic Properties Affected	N/A	October 5, 2020 C. Olson	N/A	SMC
BEA-20-H205	N/A	Miscellaneous Roof repairs	Repair roofs at SMC to address minor leaks and wear issues.	N/A	N/A	A2	No Historic Properties Affected	N/A	October 5, 2020 C. Olson Revised June 2022 L. Cook	N/A	SMC
BEA-20-H207	N/A	Cold Waste Pit Ladder	Upgrade ladder and opening at TRA-703 to meet OSHA standards.	N/A	N/A	P6	No Historic Properties Affected	N/A	October 6, 2020 C. Olson	N/A	ATR
N/A	BEA-21-01	Veolia Sagebrush	Plant sagebrush	N/A	N/A	N/A	N/A	No	October 7,	Conditions:	N/A

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
		Planting	seedlings at 50-meter intervals over 400 acres in 2019 Sheep Fire impacted area.					Historic Properties Affected	2020 J. Pink	Cultural Resource Awareness Training	
N/A	BEA-21-02	INL Power Grid Connections	Potential - Options 2 & 4 Corridors	In Progress	In Progress	N/A	Report in Progress	Report in Progress	Report In Progress R. Allen	No Section 106 undertaking action. Preliminary efforts taken to identify historic properties within a preliminary APE. ASI and IHSI Forms in Progress. Anticipated August 2022.	Class III inventory 1,387 acres
N/A	BEA-21-03	USG #112	Conduct radio frequency (wireless testbed) tests in 38 locations on and off the INL Site	N/A	N/A	N/A	N/A	No Historic Properties Affected	November 5, 2020 R. Cook	Previous Class III inventory adequate to assess effects. No HPs in APE.	N/A
N/A	BEA-21-04	N&HS Shockwave Mitigation	Conduct shockwave/explosive tests at NSTR.	N/A	N/A	N/A	N/A	No Historic Properties Affected	November 19, 2020 R. Cook	Previous Class III inventory adequate to assess effects. No HPs in APE.	N/A
N/A	BEA-21-05	Hansel and Gretel	Test vehicle tracking devices on dirt and gravel roads and intersections in the CITRC and CFA areas.	-	-	-	-	-	N. Holmer	Undertaking has been postponed.	-
N/A	BEA-21-06	Radiological Response Training Range (RRTR) Facility Upgrades	Upgrade facilities at RRTR with solar array.	N/A	N/A	N/A	N/A	No Historic Properties Affected	March 11, 2021 R. Cook	Previous Class III inventory adequate to assess effects. No HPs in APE.	N/A
BEA-21-	BEA-21-07	Storm Surge Radio	Test radio frequency	PBF-612	N/A	A8	No	N/A	January 28,	All activities occur	N/A

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
H112		Frequency Propagation Test	devices and disruption equipment at structures in and around CITRC.	IHSI No. 23-10227 (Eligible Criterion A)			Historic Properties Affected		2021 Revised May 2022 L. Cook N. Holmer	within buildings.	
N/A	BEA-21-08	Field Testing and Demonstrations R5	Conduct radio frequency (wireless testbed) tests in seven locations on and off the INL Site.	N/A	N/A	N/A	N/A	No Historic Properties Affected	February 9, 2021 R. Cook Revised May 2022	Previous Class III inventory adequate to assess effects. No HPs in APE.	N/A
N/A	BEA-21-09	Relocatable Storage Unit Storage Area	Establish a storage area southeast of Radioactive Scrap and Waste Facility (RSWF).	10BM247 (Eligible Criterion D)	N/A	N/A	N/A	No Historic Properties Affected	May 25, 2021 R. Cook J. Grams	Condition: Project redesigned to avoid impacts to 10BM247. Archaeologist to monitor project activities. Project postponed due to funding.	Class III Inventory 51 acres
N/A	BEA-21-10	5G Network	Installation of 5G towers in and around CITRC.	N/A	N/A	P5; P6	No Historic Properties Affected	No Historic Properties Affected	April 5, 2021 Revised May 2022 R. Cook L. Cook	Previous Class III inventory adequate to assess effects. No HPs in APE.	N/A
N/A	BEA-21-11	MFC Construction Support Yard	Construction of support yard north of the eastern guard station at MFC, outside the fenced facility.	N/A	N/A	N/A	No Historic Properties Affected	No Historic Properties Affected	April 7, 2021 Revised May 2022 R. Cook L. Cook	Previous Class III inventory adequate to assess effects. No HPs in APE.	N/A
N/A	BEA-21-13	Interim Action for VTR Site Geotechnical Investigation Work	Drill 56 boreholes and excavate test pits for geotechnical investigations.	MFC-767 EBR-II ISHI #11-17786 Eligible Criteria A	N/A	Portions: A9	No Adverse Effect	No Historic Properties Affected	August 7, 2021 S. Plager	Change in scope required addendum to the INL/LTD-21-63221 report. See Project BEA-19-34	N/A

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
				and C MFC-752 Analytical Laboratory ISHI #11-17907 Not eligible. MFC-765 Fuel Conditioning Facility (No IHSI yet) Eligible A MFC-785 (No IHSI yet) Hot Fuel Examination Facility Eligible A						description in Section 6.1.6.1. Previous Class III inventory adequate to assess effects. Previous site 10BM249 is an isolated find and not eligible to the NRHP.	
N/A	BEA-21-14	Wireless Test Best Farragut Blvd. Radio Frequency Characterization	Conduct radio frequency (wireless testbed) tests at six locations in the Farragut area.	N/A	N/A	N/A	N/A	No Historic Properties Affected	April 12, 2021 R. Cook	Previous Class III inventory was adequate to assess effects in some portions of the APE. No HPs identified in the APE.	Class III Inventory 0.85 acres
N/A	BEA-21-15	USG #92 Wireless Test Bed	Conduct radio frequency (wireless testbed) tests at 11 locations.	N/A	N/A	N/A	N/A	No Historic Properties Affected	April 7, 2021 Revised May 2022 R. Cook	Previous Class III inventory was adequate to assess effects. No HPs identified in the APE.	N/A
N/A	BEA-21-16	PBF-637 Power and Fiber Installation	Hang new fiber optic line on existing powerline structures from Power Burst Facility (PBF)	N/A	N/A	N/A	N/A	No Historic Properties Affected.	June 2, 2021 Revised May 2022 N. Holmer	Conditions: INL CRMO to monitoring of power pole installation. FRM-	Class II Inventory 3.17 acres

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
			substation to PBF-637 and one additional power pole installation.							2898 (Section 106 Monitoring) was completed on July 16, 2021.	
N/A	BEA-21-17 BEA-21-17 Rev 1	Trail Mix/ Powerline Testing	Annual testing along the East Loop powerline from CITRC to MFC substation. Additional scope and locations added.	N/A	N/A	N/A	N/A	No Historic Properties Affected	April 7, 2021 N. Holmer Rev 1. Sept 7, 2021. N. Holmer	Previous Class III inventory was adequate to assess effects. No HPs identified in the APE.	N/A
N/A	BEA-21-19	Power Management Maintenance Activities	Perform aerial maintenance work on poles at five locations. No ground disturbance associated.	N/A	N/A	N/A	N/A	No Historic Properties Affected	April 8, 2021 N. Holmer	Previous Class III inventory was adequate to assess effects. No HPs identified in the APE. Conditions to monitor were not imposed due to the lack of ground disturbance of the work.	N/A
N/A	BEA-21-20	RRTR Fire Protection Barrier	Mow vegetation around the RRTR southern entrance trailer for fire protection.	N/A	N/A	N/A	N/A	No Historic Properties Affected	R. Cook	Previous Class III inventory was adequate to assess effects. No HPs identified in the APE.	N/A
N/A	BEA-21-21	NRF Parking Lot Underground Storage Tank Permanent Closure and Removal	Permanent closure of the unleaded gasoline and diesel underground fuel storage tanks located at the parking lot near NRF.	N/A	N/A	P2	N/A	No Historic Properties Affected	May 19, 2021 R. Cook	The APE is within the parking lot and has been paved over by asphalt. No Class III Inventory was conducted. No HPs in the APE.	N/A
N/A	BEA-21-22	A Cultural Resources	Expansion of parking	23-10488	BEA-21-22-	N/A	N/A	No	August	Prepared INL/LTD-	Class III

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
		Inventory for the Laydown Area Expansion at the Naval Reactors Facility	lot on the east side of fenced facility within the administrative boundary.	Powell Tract North Canal System Not eligible	02 Irrigation Ditch Not eligible BEA-21-22-03 Historic Road Not eligible			Historic Properties Affected	2021 R. Cook J. Grams	21-63140 for Naval Reactors Facility for consultation. APE was identified as 63.72 acres. Previous Class III inventories were adequate.to assess effects to portions of the APE. No HPs in the APE.	Inventory 19.13 acres
N/A	BEA-21-24 Revs 1, 2, 3, 4 and 6	Power Management Annual Maintenance Activities	Annual maintenance of existing infrastructure, includes replacing poles, wire, tightening, etc.	N/A	N/A	N/A	N/A	No Historic Properties Affected	FY2021 – R. Allen	See Section 6.1.3.1 for more information	Class III inventory 4.16 acres
N/A	BEA-21-25	CFA Brine Fill Station	Installation of brine fill station for INL application on road during winter conditions. Includes gravel pad, power (trenching), water and a poly tank.	CF-704/CF-633 Concussion Wall IHSI # 23-9958 Eligible A		P1, P6	No Historic Properties Affected	No Historic Properties Affected	May 14, 2021 Revised May 2022 L. Cook N. Holmer	No Archaeological HPs in APE. Additional Information for BE Finding. No integrity of setting remains at CF-704, although feeling and association remain, the size and distance of the undertaking do not have the potential to affect the characteristics that qualify CF-704 for eligibility to the NRHP.	Class III Inventory 2.96 acres
N/A	BEA-21-26	Electrical Power Grid Research (R2)	Test power grid infrastructure equipment at two	PBF-612 (IHSI 23-10277)	N/A	P5, P6	No Historic Properties	No Historic Properties	May 2021 Revised May 2022	Previous Class III Inventories were adequate to assess	N/A

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
			test pads in the CITRC area (Test Pad A and D). All equipment will be placed on previously disturbed and established pads, no ground disturbance is planned, and all equipment is temporary.	Not eligible PBF-613 (IHSI 23-10228) Not eligible			Affected	Affected	N. Holmer L. Cook	effects. No HPs in APE.	
N/A	BEA-21-28	Unmanned Aerial System Testing	An area measuring 150' x 300' requires removal of vegetation, grading, graveling, and compaction for placement of trailers.	N/A	N/A	N/A	N/A	No Historic Properties Affected	May 19, 2021 Revised May 2022 R. Cook	Previous Class III Inventories were adequate to assess effects. No HPs in APE.	N/A
N/A	BEA-21-29	Temporary Wind Tower and Ambient Air Monitoring	Placement of sensors at test locations near NSTR, junction of T-roads, and CITRC. Equipment is temporary.	N/A	N/A	N/A	N/A	No Historic Properties	June 6, 2021 N. Holmer	No HPs in the APE.	Class III inventory 4.03 acres
N/A	BEA-21-30	NIAC Decontamination Line	Training activities within PBF-612 and installation of a temporary (one week duration) decontamination tent.	PBF-612 (IHSI 23-10277) Not eligible	N/A	N/A	No Historic Properties Affected	No Historic Properties Affected	June 6, 2021 Revised May 2022 N. Holmer L. Cook	Tent was located on pavement. No Class III inventory conducted. No HPs in the APE.	N/A
N/A	BEA-21-31	Idaho CERCLA Disposal Facility (ICDF) Expansion	Expansion of existing ICDF pit at INTEC at preferred location which includes	Revision to Review in progress	Big Lost River South Canal (Temporary	N/A	Revision to Review in progress	Revision to Review in progress	June 11, 2021 N. Holmer	Cultural Resource Review Revision in Progress to assess new scope of the	Class III Inventory 139.2 acres

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
			landfill, evaporation ponds, and support buildings.		No. BLRIP-SC) Not eligible					cap on the old ICDF landfill. Big Lost River Canal IHSI form submitted with AR (Appendix B).	
N/A	BEA-21-32	Microgrid Demonstration Project R1	No undertaking yet. Reviews at later date when locations are selected.								
BEA-21-H176	BEA-21-33	DHS RF Power Line - CRIUS	Testing of radio frequency at test location along existing power line – CRIUS	10BT1562 Canal Eligible A	N/A	P5, P6	No Historic Properties Affected	No Historic Properties Affected	May 26, 2021 Revised May 2022 N. Holmer J. Grams L. Cook	Previous Class III inventory was adequate to assess effects in portions of the APE. Additional Class III inventory was required. Although 10BT1562 is eligible, the project activities of setting up temporary antennae in testing location, have no potential to impact the NRHP characteristics that make the irrigation feature eligible for the NRHP.	Class III inventory 11 acres
N/A	BEA-21-34	Power Management West Loop INTEC to ATR	Routine Maintenance on existing powerline between INTEC and ATR.	N/A	N/A	N/A	N/A	No Historic Properties Affected	June 15, 2021 R. Allen	No HPs in the APE.	Class III inventory 18.46 acres
N/A	BEA-21-35	Routine Maintenance – Mowing	MFC maintenance and facilities to mow	N/A	N/A	N/A	N/A	No Historic	June 9, 2021	No HPs in the APE.	Class III inventory

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
			50-foot defensible space buffer around the MFC sewage lagoons.					Properties Affected	R. Cook		8.02 acres
N/A	BEA-21-36	Deadman Fence	Construction of four miles of new fence.	Postponed until appeal to BLM grazing decision is resolved.							
N/A	BEA-21-37	Power Management Circuit 44	Routine power line maintenance on Circuit 44	N/A	N/A	P5	N/A	No Historic Properties Affected	July 1, 2021 R. Allen	No HPs in the APE.	Class III inventory 26 acres
N/A	BEA-21-38	Powerline Testing on Circuit 56	Conduct testing under Circuit 56 powerline including mowing along existing route.	N/A	N/A	N/A	N/A	No Historic Properties Affected	June 16, 2021 N. Holmer	Previous Class III inventory adequate to assess effects. No HPs in the APE.	N/A
N/A	BEA-21-39	Power Management West Loop ATR to NRF	Routine power line maintenance on existing powerline West Loop ATR to NRF.	N/A	Isolated Finds: BEA-21-39- R1, TH1, TH2, TP1, TP2. Not eligible	N/A	N/A	No Historic Properties Affected	June 28, 2021 R. Allen	No HPs in the APE.	Class III inventory 170 acres
N/A	BEA-21-40	TREAT 721 Office Building Septic Tank Rehabilitation	Replacement of 1,000-gallon septic tank with 2,500-gallon septic tank at TREAT office building	N/A	N/A	P2	N/A	No Historic Properties Affected	July 14, 2021	Previous Class III inventory adequate to assess effects. No HPs in the APE.	N/A
N/A	BEA-21-41	ERDC Soil Sampling	The US Army Engineer Research and Development Center (ERDC) is analyzing soil composition to develop finite set of soil types.	N/A	N/A	N/A	N/A	No Historic Properties Affected	July 13, 2021 S. Plager	Previous Class III inventory adequate to assess effects. No HPs in the APE. Conditions: Cultural Resource Awareness	N/A

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
										Training, CRMO Monitor present during activities	
N/A	BEA-21-42	Off-Road Weed Spraying Activities	One-time pass travel to weed infestations using ATV/side-by-side vehicle.	N/A	N/A	N/A	N/A	No Historic Properties Affected	September 30, 2021 R. Cook	Conditions: One-time pass travel on dry soils. Although there is not a current exemption activity for this, CRMO believes it is a minimal, non-invasive, and limited activity and does not have the potential to affect HPs.	N/A
N/A	BEA-21-43	RRTR and T-28 Road Area Mowing	Mow east and west sides of T-28 road between RRTR and TAN.	Undertaking postponed							
N/A	BEA-21-44	MFC Perimeter Road Mowing	Mowing 50 feet around perimeter of facility and associated roads.	N/A	N/A	N/A	N/A	No Historic Properties Affected	July 28, 2021 R. Cook	Previous Class III inventory adequate to assess effects in portions of the APE. Additional Class III inventory was performed in July 2021. No HPs in the APE.	Class III inventory 80.20 acres
NA	BEA-21-45	Biological Threat Test and Evaluation Range	The proposed scope of work is to expand the use scenarios for outdoor ranges (SOX range and other areas around RRTR) and restoring a	CRMO staff met with project managers and explained a full Section 106 review would be required. There is no work in SOX being proposed at this time.							

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			multistory office building testbed (Bio-Response Operational Testing and Evaluation).								
BEA-21-H001	BEA-18-14	PGTB – Powerline/Maintenance Road Evaluation	Addendum to the completed *Cultural Resource Investigations of the Proposed Power Grid Test Bed Expansion at Idaho National Laboratory (INL/LTD-19-53218)* (BEA-18-14) to evaluate and determine eligibility for two linear resources: East Loop Transmission Line Corridor and T-25 Access Road.	N/A	East Loop Transmission Line, Section 1: Not Eligible; East Loop Transmission Line, Section 2: Not Eligible; T-25 Access Road, Section 1: Not Eligible; T-25 Access Road, Section 2: Not Eligible	N/A	No Effect	No Effect	Oct. 1, 2020/M. Scales English, J. Grams	This project is associated with the recognition that the East Loop Transmission Line and T-25 were not evaluated in conjunction with PGTB - Power Grid Test Bed Expansion.	
BEA-21-H002	N/A	Modification to Demineralized Drain Line in TRA-608	Addition of valves and piping to demineralized water drain line located in TRA-608	23-10398	N/A	A2	No Effect	N/A	Oct. 1, 2020/C. Olson	N/A	ATR
BEA-21-H003	N/A	Architectural Properties Inventory, Phase I	Contract with Center for Environmental Management of Military Lands (CEMML) to inventory the pre-1980 built environment	Multiple	Multiple	N/A	Report in Progress	N/A	Oct. 1, 2020/ C. Olson, M. Scales English	Section 110 work	ATR, CFA, CITRC, INTEC, MFC, ERB-1
BEA-21-H004	N/A	Historic Context (Architectural	Research associated with revising the	N/A	N/A	N/A	Report in Progress	N/A	Oct. 1, 2020/ C.	Section 110 work	N/A

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		Properties)	architectural context						Olson, M. Scales English		
BEA-21-H005	N/A	Nakimura-Kitamura CNC Machines	Purchase, installation, operation, and maintenance of two new vertical machining centers and a turning and milling center in IF-682. Relocation of an existing lathe to TRA-653.	23-10415	N/A	A8	No Effect	N/A	Oct. 8, 2020/ C. Olson	N/A	ATR, REC
BEA-21-H006	N/A	Salt Phosphate Glass Waste Form Fabrication & UCl3 Synthesis in FCF	Installation of equipment in FCF to fabricate phosphate glass waste form and produce UC13 from the off-gas products.	MFC-765	N/A	A8	No Effect	N/A	Oct. 8, 2020/C. Olson; Revised May 2022/L. Cook	N/A	MFC
BEA-21-H007	N/A	Installation of Mark II Larinda Furnace in FCF Argon Cell	Installation of a new furnace in FCF argon hot cell.	MFC-765	N/A	A8	No Effect	N/A	Oct. 12, 2020/C. Olson; Revised May 2022/L. Cook	N/A	MFC
BEA-21-H008	N/A	Acoustic Cavitation of Tristructural-Isotropic Fuel Particles for Efficient Recovery of HALEU	Mission associated fuel production and research.	N/A	N/A	A8	No Effect	N/A	Oct. 15, 2020/ C. Olson; Revised June 2022/ L. Cook	N/A	MFC, REC
BEA-21-H010	N/A	INL – Experimental Breeder Reactor II (EBR-II) Fuel Movement from FSA	Project activities expanded to include the installation of a personnel trailer	N/A	N/A	A9; P2	No Effect; No Historic Properties	No Historic Properties Present	Oct. 15, 2020/M. Scales English;	N/A	MFC

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		in CPP-666 to RSWF at MFC-771, Rev. 2	west of MFC-TR-64.				Present		Revised June 2022, L. Cook, S. Plager		
BEA-21-H011	N/A	Installation of Permanently Mounted System for Circuit Breaker LOTO in Electrical Panels at ATR Complex	Installation of lock-out/tag out device for electrical work	23-10399, 23-10398, 23-10276, 23-9940, 23-10415, 23-10396, 23-10397, 23-10403, 23-10405, 23-10408, 23-10410, 23-10262, 23-10265, 23-9941, 23-10268, 23-10277	N/A	A2; P6, P7	No Effect	N/a	Oct. 29, 2020/C. Olson	N/A	ATR
BEA-21-H012	N/A	CF-609 Awning	Installation of awning on north elevation of the building.	N/A	N/A	N/A	No Effect; No Historic Properties Present	N/A	Nov. 4, 2020/M. Scales English	N/A	CFA
BEA-21-H016	N/A	Gaseous Hydrogen Supply and Exhaust System for Experiments in TREAT	The design, construction, installation and operation of a gaseous hydrogen supply and exhaust system for experiments in TREAT as part of a NASA program.	TRA-670, MFC-720, MFC-726, MFC-784, MFC-785, MFC-771	N/A	N/A	No Effect	N/A	Feb. 2, 2021/M. Scales English	EC INL-20-188 was cancelled	ATR, MFC
BEA-21-H017	N/A	VTR Fuel Fabrication Demonstration	VTR intends to install a prototype casting glovebox in	MFC-794	N/A	A8	No Effect	N/A	Nov. 4, 2020, M. Scales	N/A	MFC

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			the Experimental Fuel Facility (EFF). This furnace represents an expansion of the scope for EC INL-19-112. In the original EC, all of the prototyping work would have been done in FMF.						English		
BEA-21-H019	N/A	752AL Room B-130 Security Mods	Modifications to an existing janitor's closet to house a safe from room C-130.	11-17907	N/A	A2, A8	No Effect	N/A	Nov. 12, 2020/C. Olson; Revised May 2022/ L. Cook	N/A	MFC
BEA-21-H020	N/A	New visitor signage at EBR-I Parking Island	INL Communications has requested a review of the proposed placement of visitor signage at EBR-I for virtual tours and welcome messaging.	EBR-I; Guard House	N/A	N/A	No Effect	N/A	Nov. 2020/J. Grams; Revised May 2022/L. Cook	N/A	EBR-I
BEA-21-H029	N/A	Flash Neutron Radiography at the Transient Reactor Test Facility (TREAT) to Examine Two-Phase Flow	This project will develop and analyze the performance of a world leading experimental facility for flash neutron radiography utilizing the Transient Reactor Test (TREAT) facility and apply this capability to proof-of-principle two-phase flow	MFC-720, MFC-785	N/A	N/A	No Effect, with stipulations	N/A	Jan. 2020/M. Scales English	CRR provides a finding of No Effect for the research and development (R&D) activities proposed by the project scope but includes a stipulation that further review will be necessary prior to any	MFC

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			experiments							modification of MFC-720 should the project successfully reach Phase III.	
BEA-21-H042	N/A	Integrated Fast Flux Test Facility and EBR-II Driver Fuel Treatment	Revision to compensate for the adding of new lab equipment for driver fuel treatment program.	MFC-771, MFC-765, MFC-785	N/A	A8	No Effect	N/A	Apr. 2, 2021/M. Scales English; Revised May 2022/ L. Cook	N/A	MFC
BEA-21-H047	N/A	Install Polymer Window on Switch 605-DSW-104	Replacement of existing window with a specialized IR window to accommodate thermal imaging.	23-10396	N/A	A2	No Effect	N/A	Nov. 9, 2020/C. Olson; Revised May 2022/L. Cook	N/A	ATR
BEA-21-H048	N/A	Research and Development Activities at the Idaho National Laboratory (Overarching)	EC INL-20-201 was cancelled prior to review completion								
BEA-21-H059	N/A	Overarching In-town R&D ECP	N/A	N/A	N/A	N/A	Hold Point included, requiring Section 106 review for activities occurring within specified properties	N/A	Nov. 2020/J. Grams	N/A	REC
BEA-21-H067	N/A	RCL Exhaust fan motor replacement and exhaust fan shaft	Replacement and modification to an exhaust fan, and its	N/A	N/A	A2	No Effect	N/A	Dec. 2, 2020/J. Grams;	N/A	MFC

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		guard modification	components, within MFC-1702.						Revised May 2022/L. Cook		
BEA-21-H074	N/A	Experimental Breeder Reactor (EBR)-II Modifications to Support NRIC	Modifications to the EBR-II containment building to support microreactor testing	MFC-767, MFC-768	N/A	N/A	Report in Progress	N/A	J. Grams	N/A	MFC
BEA-21-H075	N/A	MFC-752AL B-148 Lab Space Renovation Design and Facility Modifications for ICP-OES Installation	Refurbish lab space B-148, including installation of new equipment, replacement of outdated equipment, and improvements to energy efficiency.	11-17907	N/A	A8	No Effect	N/A	Jan. 28, 2021/M. Scales English	N/A	MFC
BEA-21-H076	N/A	670-E-11 Wire Re-route	Reroute four bottom entry cables between HVB-1 and 670-E-11 via new conduit runs to enter new switches directly.	23-10276	N/A	N/A	No Effect	N/A	Nov. 24, 2020/M. Scales English	N/A	ATR
BEA-21-H077	N/A	Install HVAC diffusers in ATR Complex 2nd level offices	Upstairs ATR offices rooms 221. 222 and 223 do not have enough air flow to heat and cool the rooms properly. the duct work terminates above the ceiling and needs to be routed to exhaust out of the ceiling in each office.	23-10276	N/A	A2	No Effect	N/A	Nov. 30, 2022/C. Olson	N/A	ATR
BEA-21-H078	N/A	TRA 670 ATR HVAC Upgrade	Update the outdated HVAC	23-10276	N/A	A4, A9	No Effect	No Effect	Feb. 4, 2020/J.	N/A	ATR

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			system in TRA-670.						Grams; Revised June 2022/L. Cook & S. Plager		
BEA-21-H079	N/A	R&D Activities for the Microreactor Applications Research Validation and Evaluation (MARVEL) Project	Design, construct and test electrically heated test loop; design, fabricate and test general tooling and fixtures; test electronics and detectors	MFC-720, MFC-787	N/A	A8	No Effect	N/A	Dec. 10, 2020/J. Grams; Revised May 2022/L. Cook	N/A	MFC
BEA-21-H080	N/A	Convert 670-M-11 Emergency Coolant Pump to Alternating Current	Replacement of the DC motor and motor controller of the ATR coolant pump.	23-10276	N/A	A2	No Effect	N/A	Feb. 7, 2021/J. Grams; Revised May 2022/L. Cook	N/A	MFC
BEA-21-H081	N/A	Re-carpeting 670 Room 130	Recarpet Room 130 in TRA-670	23-10276	N/A	A3, A7	No Effect	N/A	Dec. 22, 2020/M. Scales English	N/A	MFC
BEA-21-H084	N/A	Modify SRD Hoist, Trolley and Support Assembly	Modify hoist, trolley, and support assembly on all 6 SRD.	23-10276	N/A	A2	No Effect	N/A	Feb. 7, 2021/J. Grams; Revised May 2022/L. Cook	N/A	ATR
BEA-21-H088	N/A	Expansion of MFC-789, Engineering Development Laboratory	On the east end of MFC-789, add two 20-foot bays to create a prototyping environment where reactor-related	MFC-789, MFC-772, MFC-782, MFC-789A	N/A	A8, A9; P6, P7	No Adverse Effect	N/A	Feb. 4, 2021/J. Grams; Revised May 2022/L.	N/A	MFC

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			components would be developed.						Cook		
BEA-21-H089	N/A	Install wall in Electrical Foreman Office	Install a wall to divide the space in electrical foreman's office.	23-10415	N/A	N/A	No Effect	N/A	Feb. 7, 2021/J. Grams; Revised June 2022/L. Cook	N/A	ATR
BEA-21-H090	N/A	Install new stations for safety glasses in ATR670	Install new stations for safety glasses and remove old stations as needed.	21-10276	N/A	A6	No Effect	N/A	Feb. 7, 2021/J. Grams; Revised June 2022/L. Cook	N/A	ATR
BEA-21-H093	N/A	HFEF Visual Examination Machine Optical Upgrade	Replacement of HFEF periscope, Part of overarching INL-19-153	MFC-785	N/A	N/A	No Effect	N/A	Feb. 2, 2021/J. Grams	N/A	MFC
BEA-21-H094	N/A	Dust Collector System Installation in MFC-753	Modify the interior of MFC-753 and install a concrete pad and metal structure for a new dust collector system.	MFC-752; MFC-753; MFC-765; MFC-769; MFC-785; MFC-787	N/A	A6, A9	No Effect	N/A	Feb. 2, 2021/ J. Grams; Revised June 2022/L. Cook	N/A	MFC
BEA-21-H095	N/A	Install Cardboard Baler at MFC-781	Install, anchor, run conduit, and wire cardboard baler in MFC-781 east entrance.	MFC-781	N/A	N/A	No Adverse Effect	N/A	Jan. 13, 2021/M. Scales English; Revised June 2022/L. Cook	N/A	MFC
BEA-21-H098	N/A	ATR Administration Building (Construction)	Construction of a new Administration Building southwest	23-10276	N/A	A9	No Adverse Effect	No Effect	Feb. 1, 2021/M. Scales	N/A	ATR

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			of TRA-670						English; Revised June 2022, L. Cook & S. Plager		
BEA-21-H100	N/A	Installation of New Bottle Filling Stations	Replace drinking water fountains with new ones that have bottle filling stations.	23-10262 TRA-658	N/A	A2	No Effect	N/A	Jan. 27, 2021/J. Grams; Revised June 2022/L. Cook	N/A	ATR
BEA-21-H101	N/A	Remove old soap dispenser in 616 walls	Remove and replace soap dispensers for the dishwasher in TRA-616	23-10405	N/A	A2, A7	No Effect	N/A	Jan. 18, 2021/J. Grams; Revised June 2022/L. Cook	N/A	ATR
BEA-21-H102	N/A	TREAT Experiment Support Building Upgrades (TESB)	To strengthen and enhance experiment preparation and disassembly capabilities for the TREAT organization, the TREAT warehouse (MFC-723) will be modified. The facility known to this point as the TREAT warehouse will now be referred to as the TREAT Experiment Support Building (TESB), and its mission will be changed. The	N/A	N/A	A8	No Effect	N/A	Jan. 21, 2021/M. Scales English	N/A	MFC

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
			purpose of this document is to describe planned modifications to the building.								
BEA-21-H103	N/A	Install Lighting in 607 (TRA) Basement	Install lights and outlets in the basement of 607 utilizing a spare 3/4 conduit.	23-10397	N/A	A2	No Effect	N/A	Jan. 21, 2021/M. Scales English	N/A	ATR
BEA-21-H104	N/A	TRA-622 Voice Paging Speaker Installation	This project will extend the voice paging speaker circuit in the TRA-616 north dining room, route conduit and conductors through the north wall and install a new voice paging speaker in building TRA-622. The voice paging system in not configuration controlled so this will not require an engineering specification.	23-10407, 23-10410	N/A	A2	No Effect	N/A	Jan. 21, 2021/M. Scales English	N/A	ATR
BEA-21-H105	N/A	LOTUS (ZPPR) Test Bed Project (Conceptual Design)	Modifications of the ZPPR cell to support reactor test beds	MFC-775 and MFC-776	N/A	N/A	Report in Progress	N/A	J. Grams, M. Scales English	N/A	MFC
BEA-21-H108	N/A	TRA-670 Xeriscaping Project for CY 2021	Replacement of grass east of TRA-670 with xeriscaping and installation of pergola	23-10276	N/A	A9	No Effect	No Effect	Jan. 27, 2021/J. Grams; Revised June 2022/L.	N/A	ATR

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									Cook & S. Plager		
BEA-21-H110	N/A	Special Nuclear Material Test Bed (Beartooth)	Internal modification of MFC-765 to support the new Beartooth test bed.	MFC-765	N/A	A8	No Effect	N/A	Mar. 1, 2021/J. Grams; Revised June 2022/L. Cook	N/A	MFC
BEA-21-H111	N/A	752AL Hot Cell #3 Entry Mods Summary	Modifications to the hot cell shielding inside hot cell 3.	11-17907	N/A	A6, A8	No Effect	N/A	Feb. 2, 2021/M. Scales English; Revised June 2022	N/A	MFC
BEA-21-H112	N/A	Storm Surge RF Propagation Study	Place antennas, generators, and spectrum analyzers at B27-609, PBF-608, PBF-612, and PBF-622 to conduct RF tests.	23-10227	N/A	A8; P6	No Effect	N/A	Jan. 28, 2021/J. Grams; Revised June 2022/L. Cook	N/A	CITRC
BEA-21-H113	N/A	RSWF Liner Replacement	Replace existing liner at MFC-771.	MFC-771	N/A	A3, A9	No Effect	N/A	Feb. 10, 2021/J. Grams; Revised June 2022/L. Cook & S. Plager	N/A	MFC
BEA-21-H114	N/A	Removal of FCF Potable Water System Strainer STR-5458 and Flowmeter FQI-5459	Upgrade potable water system in MFC-765.	MFC-765	N/A	A2	No Effect	N/A	Feb. 7, 2021/J. Grams; Revised June 2022/L. Cook	N/A	MFC
BEA-21-	N/A	EBR-I Living Room	Renovate EBR-I	EBR-I	N/A	N/A	N/A	N/A	Feb.	Project cancelled.	EBR-I

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
H116		Interpretation Installation	Living Room Interpretive area with new furniture, floor, partial walls						2021/J. Grams & M. Scales English		
BEA-21-H117	N/A	Install cabinet for ATR crane radio controllers	Mount cabinet on east end of ATR canal, north of RI's modular storage shed	23-10276	N/A	A8	No Effect	N/A	Mar. 1, 2021/J. Grams	N/A	ATR
BEA-21-H119	N/A	FY-21 LDRD Projects	Twenty-seven proposed experiments under the Laboratory Directed Research and Development Program	N/A	N/A	N/A	Hold Point included, requiring Section 106 review for any proposed activity that involves the potential to disturb cultural resources.	N/A	Feb. 8, 2021/M. Scales English	N/A	Sitewide
BEA-21-H120	N/A	Need blue LO/TO boxes labeled and hung in PCCC	Install painted board in TRA-670 PCCC Office to hang LO/TO boxes.	23-10276	N/A	A2	No Effect	N/A	Feb. 8, 2021/J. Grams; Revised June 2022/L. Cook	N/A	ATR
BEA-21-H121	N/A	ATR Complex Bird Proofing Project	Remove and clean bird nests and feces at various ATR Complex buildings to install bird deterrents.	23-10265, 23-10415, 23-10268,	N/A	A2	No Effect	N/A	Feb. 11, 2021/J. Grams; Revised June 2022/L.	N/A	ATR

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
									Cook		
BEA-21-H122	N/A	INTEC - Transfer of the NuPac 125B Casks	Modify the interior of CPP-603 and CPP-666 to support the wet-to-dry transfer from CPP-666 to CPP-603.	CPP-603	N/A	N/A	No Adverse Effect	N/A	Feb. 11, 2021/J. Grams; Revised June 2022/L. Cook	N/A	INTEC
BEA-21-H123	N/A	LOCS DPUMR2 and Windows 10 Upgrade	Computer software and hardware upgrade for ATR Experimental Loop Operating Control System	23019275	N/A	A2	No Effect	N/A	Mar. 1, 2021/J. Grams; Revised June 2022/L. Cook	N/A	ATR
BEA-21-H124	N/A	Site-Wide HVAC Replacement	Replace outdated HVAC units across the INL Site	23-10276, 23-10415, 23-10272	N/A	A4, A9	No Effect	N/A	Feb. 24, 2021/J. Grams; Revised June 2022/L. Cook & S. Plager	N/A	Sitewide
BEA-21-H126	N/A	Building and Equipment Instrumentation	Installation of, or improvements to building and equipment instrumentation activities covered under DOE-ID Categorical Exclusion (CX) B2.2	Sitewide	N/A	N/A	Hold Point included, requiring Section 106 review prior to implementing projects in specified properties	N/A	Feb. 25, 2021/J. Grams	N/A	Sitewide
BEA-21-H127	N/A	MFC-753 Break Room 102 HVAC Upgrade	HVAC upgrade to MFC-753	MFC-753	N/A	A4	No Effect	N/A	Mar. 1, 2021/J. Grams;	N/A	MFC

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
									Revised June 2022/L. Cook		
BEA-21-H128	N/A	Replace the fire sprinkler system in CF-664	Upgrades to the fire suppression system in CF-664	23-9972	N/A	A2, A9	No Effect	No Effect	Mar. 2, 2021/J. Grams; Revised June 2022/L. Cook & S. Plager	N/A	CFA
BEA-21-H129	N/A	Air Conditioning Systems for Existing Equipment/Workplace Enhancements	Multiple systems installations across multiple facilities	Sitewide	N/A	N/A	Hold Point included, requiring Section 106 review prior to implementing projects in specified properties	N/A	Mar. 2, 2021/J. Grams	N/A	Sitewide
BEA-21-H131	N/A	Conference Room Upgrade	Equipment installation for virtual meetings (electronics)	MFC-721, MFC-765A, 11-17907	N/A	A2; P7	No Effect	N/A	Mar. 4, 2021/J. Grams; Revised June 2022/L. Cook	N/A	MFC
BEA-21-H136	N/A	Installation of M-215 Alpha Friskers in MFC-784	Replace obsolete glovebox monitors in MFC-784.	MFC-784	N/A	A6	No Effect	N/A	Mar. 17, 2021/J. Grams; Revised June 2022/L. Cook	N/A	MFC

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BEA-21-H138	N/A	Photo Lab Silver Recovery System Replacement	Replace the silver recovery system in MFC-785.	MFC-785	N/A	A8	No Effect	N/A	Mar. 17, 2021/J. Grams; Revised June 2022/L. Cook	N/A	MFC
BEA-21-H143	N/A	In-Vivo Detection Facility	Expand CF-1612 to include new in-vivo detection facility on west elevation.	N/A	N/A	N/A	In Review	N/A	J. Grams	N/A	CFA
BEA-21-H144	N/A	Install hot water recirculation pump in TRA-649 Room 158	Install recirculation unit to maintain hot water in women's restroom.	TRA-649	N/A	A2	No Effect	N/A	Mar. 18, 2021/J. Grams	N/A	ATR
BEA-21-H146	N/A	MFC 785 Restoration of Control Power to DD-ROV-002	Restore power to relays in MFC-785 to allow DD-ROV-002 to open and close.	MFC-785	N/A	A2	No Effect	N/A	Mar. 25, 2021/J. Grams; Revised June 2022/L. Cook	N/A	MFC
BEA-21-H148	N/A	Narrow Range Core Differential Pressure (NRCQDP) System Upgrade	Modify components within the reactor vessel and install new equipment to upgrade the NRCQDP.	23-10276	N/A	A6	No Effect	N/A	Mar. 21, 2021/J. Grams; Revised June 2022/L. Cook	N/A	ATR
BEA-21-H149	N/A	MFC-781 and 782 Network Upgrade	Upgrade and improve the MFC-781 Warehouse & 782 Machine Shop network capability including computer and telephone systems. This project will also install the	MFC-781, MFC_782	N/A	A3, A8	No Effect	N/A	Mar. 31, 2021/J. Grams	N/A	MFC

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
			copper in support of a wireless system upgrade.								
BEA-21-H152	N/A	Contact-Handled Waste Non-Destructive Assay (NDA) System	Internal modifications to support the new UDASS NDA system.	MFC-785	N/A	A8	No Effect	N/A	Apr. 13, 2021/J. Grams; Revised June 2022/L. Cook	N/A	MFC
BEA-21-H153	BEA-21-23	EBR-I Museum Fiber Optic Cable	Installation of fiber optic cable into the administration area of EBR-I	EBR-I	N/A	P5	No Adverse Effect	No Effect	Apr. 22, 2021/J. Grams; Revised June 2022/L. Cook	Previous Class III inventories were adequate to assess effects. No archaeological HPs in APE. Additional rationale for BE No Adverse Effect	EBR-I
BEA-21-H154	N/A	TRA-670 Security Upgrades	Install new equipment to support installation and testing of a new radiation area monitor.	23-10276	N/A	A2, A6	No Effect	N/A	Apr. 22, 2021/J. Grams/ Revised June 2022/ L. Cook	N/A	ATR
BEA-21-H155	N/A	Replace Display Clock on TRA-670 Reactor Floor	Replace the display clock.	21-10276	N/A	A2	No Effect	N/A	Apr. 21, 2021/J. Grams	N/A	ATR
BEA-21-H156	N/A	Pyroprocessing	Experiments to obtain data to support the development of molten salt systems, electrochemical separations, waste from production and	23-10276 MFC-789, 11-17907 MFC-785, MFC-765, MFC-768B, MFC-771, CPP-603	N/A	A8	No Effect	N/A	Apr. 20, 2021/J. Grams	N/A	ATR, MFC

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
			development, and other technology development.								
BEA-21-H157	N/A	Heat Capacity Measurements for Terrestrial Energy USA	Research to determine how changes in molten salt and fission product concentrations affect physical properties of the salt.	MFC_787, 11-17907	N/A	A8	No Effect	N/A	Apr. 21, 2021/J. Grams	N/A	MFC
BEA-21-H158	N/A	Annual CX for Installing or Relocating Machinery and Equipment at Idaho National Laboratory	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	Sitewide	N/A	N/A	Hold Point included, requiring Section 106 review prior to activities implemented at EBR-I and modifying or demolishing any eligible or historic building or structure.	N/A	Apr. 19, 2021/J. Grams	N/A	Sitewide
BEA-21-H159	N/A	Annual CX for Facility Safety and Environmental	Perform safety and environmental improvements of a	Sitewide	N/A	N/A	Hold Point included, requiring	N/A	Apr. 19, 2021/J. Grams	N/A	Sitewide

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		Improvements at Idaho National Lab	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				Section 106 review prior to activities implemented at EBR-I and modifying or demolishing any eligible or historic building or structure				
BEA-21-H160	N/A	DNN NA-22 Pu Production Detection Reactor Venture	Establish a clean containment to handle smears of irradiated and non-irradiated fuels.	MFC-787, MFC-785	N/A	A8	No Effect	N/A	Apr. 21, 2021/J. Grams	N/A	MFC
BEA-21-H162	N/A	Fission Product Retention Furnace	Install a fission product release testing system in MFC-785.	MFC-785	N/A	A8	No Effect	N/A	Apr. 29, 2021/J. Grams; Revised June 2022/L. Cook	N/A	MFC
BEA-21-H163	N/A	INSTALL spool piece FCV-10 EXP. Loop 2A (PROJECT)	Replace 2A control valves as part of the FCV-10 replacement	23-10276	N/A	A3	No Effect	N/A	Apr. 26, 2021/J. Grams	N/A	ATR
BEA-21-H166	N/A	ATR Facility Modifications	Upgrade of interior and exterior security systems at TRA-670 and TRA-614.	23-10276, 21-10403	N/A	A2, A5	No Effect	N/A	May 28, 2021/J. Grams; Revised	N/A	ATR

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									June 2022/L. Cook		
BEA-21-H167	N/A	Route Potable Water to LOCS	Modify the potable water distribution system to supply water to the Loop Operating Control System (LOCS) mockup in the second basement of TRA – 670	23-10276	N/A	A8	No Effect	N/A	May 11, 2021/J. Grams	N/A	ATR
BEA-21-H168	N/A	Personnel Safely and Health Equipment	Installation of, or improvements to, equipment for personnel safety and health, including, but not limited to, eye washes, safety showers, radiation monitoring devices, fume hoods, and associated collection and exhaust systems	Sitewide	N/A	N/A	Hold Point included, requiring Section 106 review prior to activities implemented at EBR-I and modifying or demolishing any eligible or historic building or structure	N/A	May 10, 2021/J. Grams	N/A	Sitewide
BEA-21-H169	N/A	Replacement of 671-HVR-9 Roof Exhaust Fan	Replace roof ventilator on TRA-671.	TRA-671	N/A	A2	No Effect	N/A	May 13, 2021/J. Grams; Revised June 2022/L.	N/A	ATR

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									Cook		
BEA-21-H174	N/A	FY-22 Annual LDRD	Twenty-nine proposed experiments under the LDRD Program	N/A	N/A	N/A	Hold Point included, requiring Section 106 review prior to any proposed activity that involves the potential to disturb cultural resources.	N/A	May 24, 2021/J. Grams.	N/A	Sitewide
BEA-21-H176	BEA-21-33	DHS RF Power Line - CRIUS	Using existing power infrastructure and equipment to conduct RF tests.	CF-761, PBF-707	N/A	P5, P6	No Effect	No Effect	June 1, 2021/J. Grams & N. Holmer; Revised May 2022/L. Cook & N. Holmer	N/A	CFA, CITRC
BEA-21-H180	N/A	AFF Tapecaster Install	Project cancelled prior to review								
BEA-21-H181	N/A	IMCL Labwide Chiller Install	Provide chiller water to instruments and systems within the MFC-1729 Irradiated Materials Characterization Laboratory (IMCL)	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H183	N/A	MFC-704 P10 Gas System Modification	Modifications to the MFC_704 P10 gas	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC

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			system to bring it into compliance.								
BEA-21-H184	N/A	IF-603 Effluent Monitoring System Upgrade	Modification of the IF-603 Effluent Monitoring System to bring it into compliance	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H188	N/A	IMCL Sewer Repair	Repair sewer line leak east of the IMCL mechanical room driveway	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H189	N/A	IMCL Supply Air Diffuser Replacement	Replace existing horizontal throw supply air diffusers with vertical flow diffusers.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H191	N/A	ATR Reactor Control Room Halon System Modification	Replace existing fire alarm releasing panel, Halon releasing panel, smoke detectors, heat detectors, horns, monitoring modules, and control modules.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	ATR
BEA-21-H192	N/A	HFEF Second Manipulator Repair Glovebox	Install a glovebox system to maintain and repair hot cell manipulators	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H193	N/A	IF-688 A-Wing Electric Roof Hatch Installation	Install a motor-operated hatch on the IF-688 A-Wing Roof	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H194	N/A	CF-696 Paint Booth Replacement	Replace spray booth with larger booth, including removal of intake and exhaust ductwork, HVAC and	N/A	N/A	N/A	In Review	N/A	N/A	N/A	CFA

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			air Make0up systems, electrical and fire water piping.								
BEA-21-H195	N/A	Overlay the IF-602 Roof With A 60 Mil EPDM Membrane	Install approximately 12,500 square feet of 60 mil EPDM membrane on IF-602 roofs	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H197	N/A	ATR TRA-658 Mold Remediation	Remediate mold and replace all sheetrock and insulation on the north and east walls of TRA-658 but could extend to the entire building.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	ATR
BEA-21-H198	N/A	IF-606 Fiber Optic Cable Installation	Install new conduit, fiber optic cabling, junction boxes, and fiber termination for security systems.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H199	N/A	IF-670 BCTC Network Installation	Update telecommunication equipment associated with IF-670.	N/A	N/A	A2; P1	No Effect	N/A	July 23, 2021/J. Grams; Revised June 2022/L. Cook	N/A	REC
BEA-21-H200	N/A	MFC 767 Power to EBR-II Project #33644	Restore permanent power to MFC-767 to support NRIC	N/A	N/A	A2	No Effect	N/A	July 19, 2021/J. Grams	N/A	MFC
BEA-21-H201	N/A	CITRC Substation Circuit Switcher Installation	Demolish and remove existing steel support structures, fabricate and install new steel support structure and platform, install	N/A	N/A	N/A	In Review	N/A	N/A	N/A	CITRC

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			new circuit switchers.								
BEA-21-H202	N/A	B27-609 Wireless Test Bed Generator Controls	Install a new control enclosure with associated components and route conduit and wire to an existing network switch, ATS, electrical panel, and the generator controller.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	N/A
BEA-21-H203	N/A	MFC-782 Air Compressor System Modifications	Remove and replace air compressor, air dryer, and compressor shed, install compressed air tanks	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H204	N/A	IF-654 EROB 2nd East Telecommunications upgrade	Remove existing Cat 3 and Cat 5 telecom cables and install new cabling and support equipment.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H205	N/A	He-CTF Project	Extend helium flow loop to a test stand where mounting and connections to power, cooling, and instrumentation will be made.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H206	N/A	ATR West Sidewalk Project	Install sidewalks among new buildings on Swordfish Ave. and between Cod and Perch Streets.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	ATR
BEA-21-H207	N/A	HALEU Fuel Fab	Develop High Assay Low Enriched	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC

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			Uranium (HALEU) Fuel, including modifying an existing building for a new mission, feedstock development, and production of fuel.								
BEA-21-H208	N/A	PBF-622 and PBF-623 Fiber Optic Cable Installation	Installation of fiber optic cable through existing underground conduit between PBF-622 and PBF-623	N/A	N/A	N/A	In Review	N/A	N/A	N/A	CITRC
BEA-21-H209	N/A	FCF CAM Removal/Replacement	Remove obsolete CAMS, update drawings, install new portable CAMS	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H210	N/A	Restore MFC Plant Cooling Loop	Restore the MFC cooling loop supply line from MFC-768 to MFC-765	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H211	N/A	IF-654 (EROB) Rm. 143 CRAC Unit Replacements	Replace existing computer room air condition (CRAC) unis with new Veritiv/Liebert units	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H212	N/A	IF-655 IRC HVAC Replacement	IF-655 HVAC is at the end of its useful life and needs to be replaced.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H213	N/A	Repair of Environmental Chambers at ESL C-Wing	Repair refrigeration systems for the battery program	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H214	N/A	Purchase and Installation of	Revision of ECP INL-20-052 to include	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC

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		Equipment for the Process Demonstration Unit R1	purchase and installation of additional equipment								
BEA-21-H215	N/A	TRA-718 Vault Lid Replacement and Foundation Repair	Replace TRA_718 vault lid and repair concrete foundation, install new ladder, guardrail, and safety gate	N/A	N/A	N/A	In Review	N/A	N/A	N/A	ATR
BEA-21-H216	N/A	Materials and Fuels Complex (MFC) Protective Force Security Building	Construct a new building for expanded protective force and security operations at the MFC campus	N/A	N/A	N/A	No Effect; No Historic Properties Present	N/A	Sept. 23, 2021/J. Grams & L. S. Henrikson	N/A	MFC
BEA-21-H217	N/A	Concrete Pad for Transport Staging Area at MFC	Construction of a raised concrete pad at that Transport Staging Area	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H218	N/A	IF-688 (EIL), IF-685 (ESL), IF-616 (WCB) Electric Roof Hatch Installation	Revision to ECP INL-21-120 to include installation of automatic roof hatch openers, safety gates, ladder replacements, and new conduit, wiring, and receptacles.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H219	N/A	Installation and Operation of Thermo Scientific Mass Spectrometer	Install new mass spectrometer, will require electrical power and will be tied to facility compressed air and suspect exhaust	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-	N/A	INTEC CPP-1674 UPS	Replace	N/A	N/A	N/A	In Review	N/A	N/A	N/A	INTEC

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H220		Replacement	Uninterrupted Power Supply system at CPP-1674								
BEA-21-H221	N/A	INTEC LCC Panel Replacement	Remove existing local control cabinet (LCC) and replace it with a new I-Line panel	N/A	N/A	N/A	In Review	N/A	N/A	N/A	INTEC
BEA-21-H222	N/A	Install Cell Phone Booster, External/Internal Antennas and Wire in IMCL	Install cell phone booster, polyphase equipment, external and internal antennas, and cabling	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H223	N/A	MCRE (Molten Chloride Reactor Experiment)	Southern Company Services, Inc. (Southern Company) and TerraPower, LLC (TerraPower) and other industry partners endeavor to design, construct, and operate a liquid fueled, fast spectrum, chloride salt fueled experimental reactor called the Molten Chloride Reactor Experiment (MCRE). MCRE is a crucial step toward commercial deployment of TerraPower's Molten Chloride Fast Reactor (MCFR) technology.	N/A	N/A	N/A	Report in Progress	N/A	J. Grams	N/A	MFC

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BEA-21-H224	N/A	MFC-752 Analytical Laboratory Exhaust Ventilation (EF-3/4) Installation	Remove the NDA Stack (Analytical Lab) at MFC-752 and replace it with upgrades to the existing ventilation system, including moving the HEPA filter housings and exhaust blowers outside.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H225	N/A	Replace the Emergency DECON Shower Collection Tank in FCF Basement	Replace steel Emergency Decontamination Shower tank with polyurethane foam tank of similar size	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H226	N/A	Install Rain gutter and Heat trace on MFC 768E	Installation of rain gutter on the east side of MFC-768E over the sidewalk	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H227	N/A	Real Time Monitor Replacement	Replace ATR Real Time Monitor with commercially available hardware and software	N/A	N/A	N/A	In Review	N/A	N/A	N/A	ATR
BEA-21-H228	N/A	IF-685 (ESL) Cooling Tower Drain Tie-In	Extend the cooling water drain piping out approximately 4 ft. and tie into a nearby underground storm water drainpipe.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	REC
BEA-21-H229	N/A	Characterization Heating Apparatus for Reactor Irradiations at Neutron Radiography	Design and fabricate an in-tank dry-tube heater assembly to act as a sample furnace in the NRAD	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
		Reactor (NRAD) (CHARIN)	core during reactor operations.								
BEA-21-H230	N/A	Create Water Chiller Cover for MFC-794, Experimental Fuels Facility	Cover water chiller to attenuate the noise generated by the chiller.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC
BEA-21-H231	N/A	CF-609 Wall Repair	Repair exterior wall of CF-609, including demolition of existing wall, removal of components for reinstallation, install new metal stud wall	N/A	N/A	N/A	In Review	N/A	N/A	N/A	CFA
BEA-21-H232	N/A	Industrial Waste Flow Meter Flume and Sample Upgrade	Replace existing industrial wastewater pipeline fume with a new flume designed for accurate measurements over the entire range of expected flows within the pipeline.	N/A	N/A	N/A	In Review	N/A	N/A	N/A	MFC

Built Environment Project No.	Archaeology Project No.	Project Name	Project Description/ Summary	Previous IHSI or ASI Number	Newly Recorded Resource(s)	Exempt ID(s) - Tables 3-4	BE Finding	Arch Finding	Review Date/ Reviewer	Remarks	Acres/ Location
BEA-21-H233	N/A	Annual 2022 LDRD	Multiple projects proposed under LDRD program	N/A	N/A	N/A	Hold Point included, requiring Section 106 review prior to proposed activity that involves the potential to disturb cultural resources.	N/A	Sept. 2021/J. Grams	N/A	Sitewide

6.1.2 Outstanding FY2021 Reports In Progress

The following sections provide additional information on the status of projects that were discussed with SHPO in FY2021 or that were initiated in FY2021 but due to the survey acreage required and the number of cultural resources identified, were not completed by the end of the fiscal year. Projects that are still in the preliminary stages are also discussed to apprise SHPO of the future undertakings.

6.1.2.1 BEA-21-02 Proposed INL Power Grid Connections: Option 2 (RWMC to ATR) and Option 4 (ATR to MFC)

The current conceptual project was born out of recently planned infrastructure upgrades to the INL Site. On August 15, 2019, the Department of Energy (DOE) announced the launch of the National Reactor Innovation Center (NRIC). NRIC, led by INL, is authorized by the Nuclear Energy Innovation Capabilities Act to provide private sector technology developers access to the strategic infrastructures and assets of the national laboratories. NRIC plans to support demonstrations of microreactor concepts within the next five years (Office of Nuclear Energy 2019). Evaluations of the INL Site's current electric power infrastructure and operation have demonstrated that there will be a deficit of electric power needed to operate the critical infrastructure if these improvements are made. Current power demands on the INL Site's electric grid are barely met. Additional capacity and redundancy to the power grid at the site is needed to meet the needs of imminent projects as well as to meet future growth at the INL Site. In 2020, INL Power Management evaluated their power infrastructure and made recommendations that outlined improvements to the power grid which will be needed to meet future electrical capacity needs.

Power Management identified four separate upgrades to the system which are individually needed to increase electricity capacity at the site. These infrastructure upgrades have been called "options" by the project team. Power Management has identified these upgrades as the most reliable means to increase power capacity at the site. The upgrades are currently in the conceptual phase, and INL decided to carry out preliminary studies to help them assess the viability of two of these upgrades to the INL Site's power grid system. The most urgent piece of infrastructure that the system would require is a transmission line from the Radioactive Waste Management Complex (RWMC) to ATR (Option 2). INL Power Management was tasked with deciding where to place the proposed transmission line. Because of high construction and maintenance costs, new power lines are designed to run the shortest distance possible between two points while also avoiding other infrastructure or obstacles. INL Power Management provided a concept for the proposed RWMC to ATR power line corridor (Option 2) and ATR to MFC power line corridor (Option 4) in October 2020. INL Cultural Resources Management Office (CRMO) has been tasked with assessing the concept for the proposed power line corridors. No location selection for the RWMC to ATR power line corridor, or ATR to MFC power line corridor, has been made and no undertaking is proposed at this time.

A Class III inventory report (403 acres for Option 2 and 984 acres for Option 4) and ASI and Isolate forms are in progress and will be provided to Idaho SHPO and Shoshone-Bannock Tribes for review. Anticipated completion date is August 2022.

6.1.2.2 BEA-21-H074 Experimental Breed Reactor (EBR)-II Modifications to Support National Reactor Innovation Center (NRIC)

Pre-conceptual design modifications for EBR-II and associated room in the power plant were initiated in January 2021. These modifications to refurbish these buildings are to support potential future advanced reactor demonstration activities. The project is referred to internally as "DOME" or Demonstration of Microreactor Experiments. The INL CRMO and DOE-ID conducted an informational conference call with Idaho SHPO on February 24, 2021, to discuss preliminary plans, design work, and project timelines. The design process continued through FY2021 with periodic INL CRMO and DOE-ID involvement. Conceptual, preliminary and final designs are expected throughout the first half of FY2022, and Section 106 review is anticipated to be completed by the end of FY2022.

6.1.2.3 BEA-21-H105 LOTUS (ZPPR) Test Bed

Pre-conceptual design modifications for the Zero Power Physics Reactor (ZPPR) were initiated in January 2021. Referred to internally as "LOTUS," or Laboratory for Operation and Testing in the United States, the project proposes to modify and refurbish the ZPPR cell to support future advanced reactor demonstration activities at the forthcoming NRIC. The INL CRMO and DOE-ID conducted an informal briefing on the project with Idaho SHPO on May 18, 2021, and again in late June 2021 to address changes to the project scope. Conceptual, preliminary, and final designs are expected through the first half of FY2022 and Section 106 review is anticipated to be completed by the end of FY2022.

6.1.2.4 BEA-21-H112 MCRE (Molten Chloride Reactor Experiment)

The Molten Chloride Reactor Experiment (MCRE) was initiated in July 2021. MCRE is a first of a kind fast-spectrum molten salt reactor. The proposed experiment will be done in collaboration with industry partners. The INL's role includes assembling safety information and analysis, synthesizing fuel-salt for experiments, and developing measurement procedures. Conceptual, preliminary, and final designs are expected through the first half of FY2022 and Section 106 review is anticipated to be completed by the end of FY2022.

6.1.3 Additional Detail for Completed FY2021 Section 106 Reviews

The efficiency of listing projects in a table does not allow for the provision of details that explain the actions taken or imposed in some Section 106 reviews. Additional information is provided for those reviews and to demonstrate innovations that DOE-ID incorporates to support the INL's mission and to meet its compliance responsibilities.

6.1.3.1 BEA-21-24 Power Management FY2021 Annual Maintenance

Each fiscal year the INL Power Management group identifies activities and pole locations that need some level of maintenance action performed for the current fiscal year. The activities that may occur include applying fire retardant to power poles, the visible evaluation of structures, the inspection and replacement of other powerline components (e.g., anchors, insulators, cross-arms, wire, etc.), the installment of ground rods, ground plates, and avian protection devices, the installment and repair of air switches, the removal and replacement of gravel at established pads, the removal and replacement of deficient powerlines and power poles, and the testing and treatment of power poles. Maintenance includes a varying number of poles each fiscal year and is typically over 200 in total, although the actual number worked on is often much less.

To expedite the annual cultural review of Power Management activities as well as any potential emergency actions that may result from fires or extreme weather, a master list of all known power poles on the INL Site and their locations was compiled by the INL CRMO in FY2019. A 200-foot radius was established around each pole location to identify cultural resources. This area has been determined as the maximum area needed for all work on power poles by the Power Management group. Each pole was assigned a color code based on the level of cultural review required: Red = pole has cultural resources within the working area or is in a culturally sensitive location (CITRC); Yellow = the pole area has either not been surveyed or needs to be re-surveyed; Green = the pole area has been intensively surveyed and does not contain cultural resources.

In FY2021, Power Management proposed maintenance on over 150 poles. Applying the code system, 24 were designated as 'Red', 71 were designated as 'Yellow', and 55 were designated as 'Green'. A total of five additional reviews were prepared to document the FY2021 Annual Maintenance for Power Management that included additional locations/poles to the annual maintenance scope. The following revisions document these reviews and the dates they were performed (Table 7). For these reviews, no historic properties were located in the APE, therefore, there were no historic properties affected from this undertaking.

Table 7. Information specific to each cultural resource review revision of BEA-21-24.

BEA-21-24*	Date	Class III Inventory Acres	Results	Effect Finding
Rev 1	July 2021	1.0	No Historic Properties in APE	No Historic Properties Affected
Rev 2	August 17, 2021	Previous Class III inventory adequate to assess effects	No Historic Properties in APE	No Historic Properties Affected
Rev 3	August 18, 2021	3.61	No Historic Properties in APE	No Historic Properties Affected
Rev 4	September 8, 2021	Previous Class III inventory adequate to assess effects	No Historic Properties in APE	No Historic Properties Affected
Rev 6**	October 6, 2021	Previous Class III inventory adequate to assess effects	No Historic Properties in APE	No Historic Properties Affected

*Rev 5 – Project number issued in error.
**Although Rev 6 was completed in FY2022, it is being reported here for clarity.

6.1.3.2 FY2021 Activities for BEA-18-37 Small Modular Reactor Utah Associated Municipal Power Systems Carbon Free Power Project Site Characterization

Activities continued in FY2021 to support the Carbon Free Power Project for Utah Associated Municipal Power Systems. A total of 249.03 acres were surveyed with five sites and one historic road (T-11) recorded. Sites recorded during the cultural resource review and inventory for Rev 3 were submitted in June 2021 to Idaho SHPO for concurrence on eligibility. The following table (Table 8) summarizes the work completed in FY2021. All remaining ASI Site and Isolate forms will be submitted to Idaho SHPO and Shoshone-Bannock Tribes in FY2022.

Table 8. Cultural resource review revisions for BEA-18-37 in FY2021.

BEA-18-37 Revision*	Date	Description	Class III Inventory/ Acres	Sites/Isolates in APE	Conditions
Rev 3	May 2021	Additional core boring and well drilling, improvements to T-11, mowing	178.64	10BT2527. Not eligible T-11 IHSI 23-10504. Not eligible	Avoidance until SHPO concurrence
Rev 4	June 2021	Supplemental SASW surveys	32.98	BEA-18-37-29 Rock Cairn Recommended eligible – A	Avoidance until SHPO concurrence
Rev 6**	November 2021	Additional subsurface geophysical testing, limited overland travel	37.41	BEA-18-37-06* recommended not eligible BEA-18-37-36 recommended eligible – D BEA-18-37-37 recommended eligible – D BEA-18-37-38 recommended not eligible Isolates - Not Eligible BEA-18-37-32 BEA-18-37-33 BEA-18-37-34	Avoidance until SHPO concurrence

				BEA-18-37-35	

*Rev 5 project number does not exist; number was skipped in error.
**The cultural resource review for Rev 6 activities technically occurred in FY2022 (early November); however, for clarity, the review is included in FY2021.

6.1.3.3 BEA-21-H001 PGTB – Powerline/Maintenance Road Evaluation

In October 2020, a question arose of whether two linear resources, the East Loop Transmission Line and the adjacent T-25 access/maintenance road, previously identified within the APE of the Power Grid Test Bed (PGTB) Expansion (BEA-18-14) had been evaluated for eligibility and potential effects. The 2019 PGTB Report did not address these resources. An addendum report was prepared under Project Number BEA-21-H001 to evaluate and address potential effects to these resources.

The discovery of new archival data in 2020 provided a more defined developmental timeline and understanding of these resources. Through archival research and reconnaissance-level survey, conducted in October 2020, the East Loop Transmission line running from CFA to MFC and its adjacent access road (T-25), were recorded for potential eligibility to the National Register. These linear resources, particularly the East Loop Line, date to the earliest developmental periods of the National Reactor Testing Station. Based on construction dates associated with substations along the East Loop Line and operations known to have occurred at respective facility areas, the line and T-25 were constructed between 1950 and 1962 in two phases.

The East Loop Transmission Line was ultimately recommended not eligible due to the inability to verify integrity of location, the inability to verify historic pole designs, substantive changes to the built setting, replacement of materials over time, the lack of specific craft knowledge necessary to install the poles, and loss of the integrity of feeling. Only the integrity of association was found to remain intact. The T-25 access road was recommended not eligible, as its eligibility was dependent on that of the East Loop Transmission Line, which was recommended not eligible.

6.1.3.4 BEA-21-H020 New Visitor Signage at EBR-I Parking Island

INL Communications requested a review of the proposed placement of visitor signage at EBR-I for virtual tours and welcome messaging. INL Communications proposed a 4’ x 6’ metal sign to be mounted to the southern fence to replace an extant vinyl sign that has deteriorated. An alternative location in the parking lot island was also evaluated, with the 4’ x 6’ metal sign mounted on 4” x 4” or 6” x 6” posts. The second location on the west end of the parking lot was ultimately selected so that the new sign would not obstruct the direct line of sight for EBR-I or the Guard Shack. As the parking lot has already been substantively altered from its original appearance during the period of significance, any reduction of integrity of setting will be so minimal that it would not introduce an effect to the property. The CRMO recommended a finding of *No Effect*.

6.1.3.5 BEA-21-H029 Flash Neutron Radiography at the Transient Reactor Test Facility (TREAT) to Examine Two-Phase Flow

This project proposes to conduct research and development at the NRAD reactor, located within MFC-785 (Hot Fuel Examination Facility, considered eligible under Criterion A: Science), to produce an operational flash neutron radiography system. After conceptual testing and planning, the newly developed flash neutron radiography system will be installed at MFC-720 (TREAT Reactor Building, considered eligible under Criterion A: Science). The research and development activities will utilize MFC-785 as intended with no modifications to the building, and therefore has no potential to introduce effects. However, the installation of the new system within MFC-720 may require modifications to the building. Until the system has been designed (projected in FY 2022), it is impossible to know how its installation may impact MFC-720. Therefore, the CRMO determined that the research and development activities would have no effect on

historic properties, but included a stipulation that once the system design is finalized and potential modifications are known, those modifications must be reviewed by the CRMO prior to implementation.

6.1.3.6 BEA-21-H088 Expansion of MFC-789, Engineering Development Laboratory

This project proposed expanding and reconfiguring the interior of MFC-789 (Engineering Development Laboratory, considered eligible under Criterion A: Science). Activities included an addition consisting of two 20-foot bays to the east of the existing building and of the same width as the existing building. Construction would be similar to that of the existing building with steel frames, metal panels, and concrete flooring. A mezzanine would be added to the two new bays and the existing eastern bay to house instrumentation and controls. Additionally, an out-of-service furnace located in a pit would be removed and a ladder or staircase installed to make the pit accessible for storage.

The furnace removal and mezzanine installation fall under Exempt Activity Type 8: Internal Reconfiguration of Active Laboratories, and so will have no effect on MFC-789. The two-bay addition will be visible to four eligible properties (MFC-772, EBR-II Engineering Laboratory; MFC-782, Machine Shop Building; MFC-789A, Equipment Building; and MFC-789) and three exempt properties (MFC-717, Modular Office Building, [Exempt Property Type 7: Mobile Trailer]; MFC-773, 500 Kva Yard Substation [Exempt Property Type 6: Utility Structure]; MFC-TR-20, EBR-II Engineering Laboratory Trailer, [Exempt Property Type 7: Mobile Trailer]). Collectively, the eligible properties retain their integrity of location, materials, design, and workmanship. The integrity of setting has been diminished due to in-fill construction, including MFC-717 and MFC-TR-20, which disrupted the original spatial relationships among the buildings. Integrity of feeling has similarly been diminished as the in-fill construction impacted the mid-century aesthetic of a nuclear research campus. Integrity of association remains for these properties, given their location at the MFC campus and their continued use as active laboratory spaces. Given that the integrity of setting and the integrity of feeling have already diminished, the introduction of a new vertical element in the form of the MFC-789 expansion will not adversely affect the historic properties. The CRMO recommended a finding of *No Adverse Effect*.

6.1.3.7 BEA-21-H098 ATR Administration Building

This project proposed to construct a modern building that incorporates three primary space types to meet the needs of resident staff and visitors. This includes offices, administrative support spaces, and a versatile fast-casual style cafeteria where dining hall space also serves as a meeting and training center. The preferred building design uses a modular design concept with pre-fabricated construction components. The building will be constructed southwest of ATR (TRA-670) and located north of the recently constructed ATR Complex Maintenance Support Building (TRA-1643). Building utilities (electrical power, sewer, fire and potable water, and fiber optic cable) will be distributed from existing ATR Complex utilities. The exterior facility design concepts have been developed to fit within and complement the varied and extensive materials, finishes, and colors of the existing ATR Complex facilities. The primary exterior materials proposed for this new facility are architectural pre-cast concrete panels, pre-finished metal wall panel accents, and aluminum framed glazing systems. The colors and finishes of these new systems will be selected and finalized during the design process to complement existing ATR Complex facilities. The facilities that will be utilized for design precedence include the ATR building (TRA-670) and new ATR Complex Maintenance Support Building (TRA-1643).

The APE for this project included nine buildings and four structures, of which only TRA-670 (Advanced Test Reactor) is considered eligible (Criterion A: Science). As analysis of TRA-670's integrity of setting, of feeling, and of association determined that the property's setting and association would be impacted by the construction of the new building. However, because those aspects of integrity have been heavily diminished by the demolition of other historic properties at the ATR Complex and non-historic in-fill construction, those impacts would be minimal. Given that TRA-670 would not be physically affected and that the aspects of integrity that would be impacted had already diminished over time, the CRMO recommended a finding of *No Adverse Effect*.

6.1.3.8 BEA-21-H116 EBR-I Living Room Interpretation Installation

Douglas McEldowney, Site Maintenance Manager at EBR-I, initiated this project via email in February 2021. New period-appropriate furniture for the "Living Room Display" in the entry of EBR-I had been received and the project proposed updating the area with an elevated period appropriate living room mockup. CRMO staff offered input regarding site lines, materials, and non-invasive installation methods but Mr. McEldowney confirmed that the project did not receive approval. The project number has been cancelled. Should a Section 106 review be required in the future for the period-appropriate living room display at EBR-I, it will be assigned a new project number.

6.1.3.9 BEA-21-H122 INTEC – Transfer of NuPack 125B Casks

This project proposed to transfer two NuPac 125B casks currently stored in the CPP-666 Cask Receiving Area to CP-603 South Basin Decontamination Pad. The Spent Nuclear Fuels Facilities Programs project is a wet-to-dry transfer. The spent nuclear fuel loaded cans have been moved out of the water into the two NuPac 125B casks and are currently stored in interim storage in the CPP-666 Cask Receiving Area. This project will transfer the two NuPac 125B casks to a dry storage facility, specifically CPP-603, which completes the wet-to-dry transfer. To support the wet-to-dry transfer, modifications to CPP-603 (Fuel Receiving and Storage Building, considered eligible under Criterion A: Science) included installing a new nitrogen cask vent and purge system in the east-west truck bay and converting the south Basin Decontamination Pad for use as a Cask Storage Pad. Conversion included removing the existing liner from the pad and pouring new concrete pad on top of existing floor.

CPP-603 was one of the first generation of buildings at the Idaho Chemical Processing Plant (ICPP; now INTEC). Spent nuclear materials were brought to CPP-603 in lead shipping casks via truck or rail and stored until materials could be processed in an ICPP campaign. Character defining features of the building include the below-ground storage basins and transfer basins, the crane bay and 15-ton crane, and the fuel transfer system of monorail, trolley, bumper, and bucket, as well as the industrial vernacular construction and aesthetic.

The proposed installation of a nitrogen vent and purge system will not impact any of the above-named features. Resurfacing the Basin Decontamination Pad does alter the physical characteristics of a location that performed a key role in the fuel transfer process. Removing the liner and pouring a new concrete floor will alter the surface elevation of the Basin Decontamination Pad. In addition, the pad's function will change as it shifts from temporary storage during decontamination to longer term cask storage. However, as the types of spent nuclear fuels have evolved over time, so has the infrastructure necessary to safely handle the storage of those fuels. The proposed modifications are therefore consistent with the continued mission and operation of the building. While the alterations to the Basin Decontamination Pad will introduce changes to an element of a character-defining feature, those changes correspond with the evolution of the property's mission. Therefore, the CRMO recommended a finding of *No Adverse Effect*.

6.1.3.10 BEA-21-H128 Replace the Fire Sprinkler System in CF-664

The proposed activities include replacing the firewater isolation valve for CF-664 (Storage Building, considered eligible under Criterion A: Science), removing and replacing the existing fire sprinkler piping with new piping and sprinkler heads, and removing and replacing the existing fire alarm panel. While the activities reviewed under this project number, as proposed in ERP 1379, are limited to replacing the fire suppression system, the associated EC, INL-18-015, includes several proposed activities, some of which have been previously reviewed under Project Number BEA-18-H012. Those activities were determined to have an adverse effect and mitigation is in process (see Section 6.4.5). As this review included only repairs to the fire suppression system, it was determined all activities fell under either Exempt Activity Type 2: Routine Maintenance Activities or Exempt Activity Type 9: Ground Disturbance within Fenced Facility Perimeter. The CRMO recommended a finding of *No Effect*, limited solely to activities necessary for the fire suppression system replacement.

6.1.3.11 BEA-21-H153 EBR-I Fiber Optic Line

This project proposed to install approximately 3900 feet of 48 strand overhead fiber optic cable from Cell Site #3 to the EBR-I Museum using existing power poles 42-79 to 42-95 on existing Circuit 42. The cable will drop and terminate inside the Cell site #3 shelter and inside the admin area of the EBR-I Museum. This will provide more reliable communication for services such as Life Safety, Power Monitoring, Security, and communications for Museum tours. Running the fiber optic cable from the power poles into the interior of EBR-I will required a new penetration to be made on the west side of the building near the service entrance. A slim box was mounted on the wall in the third-floor mezzanine in such a way as to minimize visibility to the public. New conduit was run from the slim box to the extant meter on the first floor, following the path of extant conduit wherever possible.

The APE encompasses the interior and exterior laboratory area of EBR-I-601 (EBR-I Reactor Building and Annex, National Historic Landmark), and a 200 ft. wide corridor (or up to the Van Buren Blvd. berm) from pole 42-79 at Cell Site #3 to 42-95 at the EBR-I facility fence. The corridor provides access to and around all poles slated for fiber optic installation using bucket trucks and to Cell Site #3. Areas within the 200-ft wide powerline corridor that are subject to ground disturbance through the installation of the fiber-optic cable were surveyed recently (BEA-18-20) and no historic properties were identified in the APE; consequently, there is no potential for effects to archaeological resources here. In the case of inadvertent and late discoveries of archaeological resources, activities will cease, and a re-assessment of the cultural resource review will be conducted.

Power poles and utility structures are Exempt Property Types 5 and 6 and require no further cultural resource review.

The need for a new penetration on the west side of EBR-I introduces a physical impact to the building, diminishing slightly the integrity of materials and of design for the property. The mounting of the slim box similarly diminishes the integrity of design by introducing a non-historic piece of equipment. The visual effects of the interior components of the project (slim box and new conduit) have been minimized to the extent possible by placing the slim box in a visually unobtrusive area and running the new conduit in parallel to existing conduit and to an existing meter. The new exterior penetration will result in a loss of materials; however, at only 2 ½ inches in diameter, the penetration is small and will not significantly diminish any of the character defining features of the building. Due to the project minimizing new visual elements within the building, the small loss of materials at the site of the new penetration, and the lack of impact to any character-defining features, the CRMO recommended a finding of *No Adverse Effect*.

6.1.4 Legacy Reviews completed in FY2021

A total of two legacy reviews were completed in FY2021, BEA-20-17 NRIC Section 110 and BEA-20-24 Quaking Aspen and Deadman Allotment Pipelines for BLM. Details on these projects are included below.

6.1.4.1 BEA-20-17 NRIC Section 110

In March of 2020, a siting evaluation identified a list of candidate site locations at the INL Site for onsite demonstration of advanced reactors. Candidate sites were evaluated and ranked per their ability to meet DOE-ID and Nuclear Regulatory Commission siting criteria for advanced reactors. Based on this analysis, the study recommended that advanced reactor demonstrations at the INL Site consider utilizing one of the nine preferred locations: three existing facilities, four undeveloped areas, and two previously developed areas.

A selection from the preferred candidate locations for microreactor demonstrations has not been made and no undertaking is proposed at this time. However, a Section 110 Class III cultural survey was conducted in block areas encompassing the preferred candidate locations that had not been previously surveyed for cultural materials. Seventeen cultural resources - nine archaeological sites, one historic object, and seven isolated finds – were newly identified and three previously recorded sites were revisited with current

information and condition documented. The results of this survey and previously conducted surveys will be used to assist in future project planning and design such that impacts to historic properties will be avoided whenever feasible.

In June 2021, DOE-ID submitted the NRIC Section 110 Evaluations of Sites for Advanced Test Reactor Demonstrations at the Idaho National Laboratory (CLN211167) to Idaho SHPO and Shoshone-Bannock Tribes. Idaho SHPO responded in July 2021 concurring with eligibility determinations made in the report, with the exception of one resource. BEA-20-17-SP08, a rock cairn quarter section marker placed in 1909 in conjunction with the land survey conducted for the Carey Act, which later identified the corner of four homesteads, was recommended as eligible. SHPO determined the rock cairn was not eligible.

6.1.4.2 BEA-20-24 Quaking Aspen and Deadman Allotment Pipelines (BLM)

In 2020, the BLM requested INL CRMO assistance with a BLM undertaking. Proposed pipelines were being evaluated for the Quaking Aspen and Deadman Allotment Grazing Permit Renewals Environmental Assessments. In FY2021, INL CRMO completed the site records for this Class III inventory and DOE-ID submitted the forms to BLM in August 2021. The Cultural Resource Inventory Report and site records will be submitted by BLM.

6.1.5 Section 106 Monitoring Activities

INL LWP-8000 (INL 2018) requires a cultural resource review for any ground disturbance activities within the CITRC boundary, including areas that have already been disturbed. Likewise, the INL CRMP states that monitoring any soil disturbance in this area is "routine and required" (DOE-ID 2016:434). Due to active projects in the CITRC area, regular monitoring by INL CRMO staff occurred in FY2021. HeTO personnel were invited to participate in these monitoring activities and often accompanied CRMO staff. These monitoring events were prompted by multiple projects operating within the CITRC facility boundaries and monitoring efforts took place on approximately 31 days. No post-review or inadvertent discoveries were noted during these projects in FY2021. Based on the routine and repetitive monitoring in some locations within CITRC, INL CRMO staff and HeTO staff anticipate working collaboratively in FY2022 on a CITRC monitoring plan that reflects the results of the monitoring efforts in these areas.

6.1.6 FY2021 Reviews and Activities Supporting EA/EIS (New or Previous)

For projects that supported EA or EIS, three previously initiated Section 106 reviews were finalized, or addendums were provided in FY2021: Versatile Test Reactor (VTR) and Project PELE, and Microreactor Applications Research Validation and Evaluation (MARVEL).

6.1.6.1 BEA-19-H093/BEA-19-34 Versatile Test Reactor (VTR)

In FY2021, an addendum to the cultural resources report was submitted to DOE-ID in August 2021.The addendum covered additional necessary geotechnical studies, not originally covered in the EIS.

While the cultural resource review identified four historic properties within the VTR geotechnical investigation APE, other buildings and structures within the MFC facility may qualify for inclusion in the National Register. The proposed activities are short term in duration and the project design includes plans for backfilling boreholes and test pits. Once the vegetation recovered, the desert landscape setting of the MFC facility would be restored. However, the proposed actions support the VTR construction. While the geotechnical investigations would have no effect on the setting of any historic properties, the scale of the VTR development would alter the setting of MFC's historic and potentially historic properties. While the NRHP-qualifying characteristics and the importance of setting has not been determined for potentially historic properties, the construction of the VTR facility would not alter the characteristics that would qualify these properties for inclusion in the National Register. This addendum cultural review assessment resulted in a finding of *no adverse effect* and is being submitted concurrent with the FY2021 Annual Report.

6.1.6.2 Project PELE BEA-20-36/BEA-20-H188

The U.S. Department of Defense (DoD), Office of the Secretary of Defense, acting through the Strategic Capabilities Office (SCO), and in partnership with the U.S. Department of Energy (DOE), proposes to construct and demonstrate a prototype advanced mobile nuclear microreactor (prototype microreactor) to support DoD domestic energy demands and DoD operational energy demands. Three buildings and two structures at MFC have been selected for indoor activities and three outdoor locations at INL's PBF/CITRC area have been selected. The Proposed Action includes construction of the prototype microreactor and demonstration activities. The demonstration activities may include testing of project materials, startup and transient testing and evaluation of the constructed prototype microreactor, transportation and operational testing of the prototype microreactor or its components within the boundaries of the INL Site to test and evaluate prototype microreactor mobility, and post-irradiation testing of project materials.

The APE for cultural resources associated with the PELE Project includes 44.8 acres in the CITRC area and three buildings and two structures at MFC for a total of 53.82 acres. In April 2021, a cultural report which provides a summary of archaeological and built environment resources inventoried and assessed within the 54-acre APE and an effect finding, *no historic properties affected*, was submitted to Idaho SHPO and Shoshone-Bannock Tribes. Idaho SHPO responded in May 2021 that they did not concur with determinations of eligibility of two resources and determination of effects. Through additional consultation meetings with Idaho SHPO, DOE-ID agreed to submit an addendum to the report addressing concerns and clarifying the APE, which was submitted in June 2021. Idaho SHPO responded in July 2022, concurring with *no historic properties affected* determination for Project PELE. No comments were received from the Shoshone-Bannock Tribes.

6.1.6.3 BEA-20-H166 Microreactor Applications Research, Validation, and Evaluation (MARVEL)

This undertaking includes fuel fabrication and siting and operations of a microreactor at the INL Site. Fuel fabrication at the INL Site is the preferred path for obtaining the MARVEL microreactor fuel and uses traditional powder metallurgy processes and laboratory equipment already in use at the INL Site at MFC in the Experimental Fuels Facility (EFF). DOE-ID proposes to install the MARVEL microreactor in a concrete storage pit in the north high bay of the TREAT Reactor building near MFC at the INL Site. TREAT provides the MARVEL microreactor with an existing operating Category B reactor facility, operating crews, and recent restart experience. Modifications to the TREAT Reactor building to accommodate the MARVEL microreactor are anticipated to take 5 to 7 months. Constructing, assembling, and performing preoperational testing is expected to last another 2 to 3 months prior to fuel loading.

The preferred location for the instrumentation and control (I&C) system hardware is near the pit inside the TREAT Reactor building. Other options include using a portable shipping container, which will be located outside the TREAT Reactor building. Fluid piping for a closed heat rejection unit connects the power conversion of the reactor to the heat rejection units. Other ancillary equipment may be located outside the building. The location of equipment outside of the reactor pit and outside of the TREAT Reactor building could change, but this configuration is limited to the high bay area and the area within the fenced TREAT Facility perimeter.

Modifications of the TREAT Reactor building are necessary to support the MARVEL microreactor. These modifications include installing shield blocks and a Heating, Ventilation, and Air Conditioning (HVAC) system in the north storage pit, installing industry standard I&C components, electrical power and electronic racks, reactor and control room infrastructure, fire suppression system, and heat rejection and electric load dissipation equipment north of the TREAT Reactor building.

The MARVEL microreactor will be placed in a storage pit located in the northern bay of MFC-720. Venting components from the enclosed space during operations require penetrations to accommodate heat and

emergency piping and equipment located on the exterior aspect of the building. The proposed use of the storage pit and indicated modifications to MFC-720 and MFC-721 are consistent with the ongoing R&D activities associated with science and engineering at the INL Site. Furthermore, placing and operating the MARVEL microreactor in proximity to the TREAT Reactor will not affect the historic property. Use of EFF and the Fuels and Applied Science Building (FASB, formerly the Fuel Assembly and Storage Building) for fuel production is consistent with science and engineering research activities and does not pose a threat to the historic integrity of FASB. As described, the MARVEL microreactor will have *no adverse effect*s to historic properties.

6.2 FY2021 Emergency Response Assessment Plans

As part of the procedure creation and update process, INL CRMO issued MCP-8014 INL Section 106 Process for Emergency Actions on May 27, 2021. An emergency action is any undertaking resulting from a declared emergency, activation of the INL Emergency Operations Center, or any other immediate threat to life or property that has the potential to affect historic properties, both known and unknown.

Within fourteen days of an emergency response, DOE-ID will provide Idaho SHPO and the Shoshone-Bannock Tribes an Emergency Response Assessment Plan (ERAP) outlining measures to assess effects to historic properties, both known and unknown, potentially affected by the emergency response. They will have 30 days to comment on proposed methods of cultural resource assessment and mitigation. In coordination with DOE-ID, the CRMO will arrange participation of tribal representatives in both assessments of effects to tribal cultural resources and monitoring of mitigation or stabilization activities through consultation with Tribes. Results of all ERAPs will be reported to Idaho SHPO and Tribes within one year of the emergency action in a report that meets Idaho SHPO guidelines and INL standards for NHPA Section 106 reports.

There were no declared emergency actions in FY2021 that required an ERAP and therefore, there are no activities to report in FY2021.

6.3 FY 2021 MOAs Progress and Completion of Stipulations

In FY2021, a total of three MOAs between DOE-ID, Idaho SHPO, ACHP and Shoshone-Bannock Tribes (in some cases) had remaining stipulations to be completed. Progress on and completion of specific stipulations are described below in detail.

6.3.1 Power Grid Test Bed (PGTB) Expansion BEA-18-14

In 2018, a proposal to expand the PGTB at the INL Site prompted a Section 106 review of the undertaking to assess potential effects to historic properties. The results of the cultural resource investigation (DOE-ID 2019a) determined that five historic properties (10BM0109, 10BT1049, 10BT1052, 10BT1059, and 10BT1062) will be adversely affected by project activities, more specifically road upgrades. The Idaho SHPO concurred with the adverse effect determination. The DOE-ID entered into an MOA with the Idaho SHPO on June 26, 2019.

MOA Stipulations

The MOA has five identified stipulations, and a monitoring and reporting requirement which includes the preparation of a summary annual report detailing work undertaken pursuant to its terms. DOE-ID submitted the FY2020 PGTB Annual Report to Idaho SHPO and Shoshone-Bannock Tribes in August 2021. No response was received. The FY2021 PGTB Annual Report will be submitted to DOE-ID in May 2022. Stipulations I and II.A. were completed in FY2019-2020.

Stipulation II.B. *Pursuant to Section 110(b) of the NHPA, DOE-ID shall ensure that a data recovery plan is developed in consultation with the Idaho SHPO and the Shoshone-Bannock Tribes for the recovery of archaeological data from sites 10BM0109, 10BT1049, 10BT1052, 10BT1059, and 10BT1062. DOE-ID shall ensure that the data recovery plan is consistent with the Secretary of Interior Standards and*

Guidelines for Archaeological Documentation (48 CFR 44734-37). DOE-ID submitted the PGTB Data Recovery Report in April 2021. Idaho SHPO responded on July 1, 2021, that they concur with the eligibility determinations of the sites subjected to data recovery efforts, and that the data recovery report demonstrates DOE-ID has fulfilled Stipulation II.B.

Stipulation II.C. *DOE-ID shall ensure that all construction and project personnel receive cultural resource training prior to any project activities. The training will be created and conducted by INL Cultural Resource Management Office personnel through online and/or instructor-led courses*. Stipulation II.C. continued to be fulfilled during project activities conducted in FY2021 and is documented in the FY2021 PGTB Annual Report. As recommended in the PGTB annual report, project activities are not scheduled for FY2022, and DOE-ID recommends that Stipulation II.C. is fulfilled.

Stipulation II.D. *DOE-ID shall ensure that the publicly accessible INL website be updated to include a section on preserving and protecting cultural resources at the DOE-ID site. DOE-ID will work with the Idaho SHPO and the Shoshone-Bannock Tribes to develop the content and design of the web page.*

INL CRMO continued to work on content development for the update to the publicly accessible webpage in FY2021 and presented content to INL Communications, DOE-ID and Shoshone-Bannock Tribes. The content is still in review with Shoshone-Bannock Tribes; however, an updated webpage with just a section on preserving and protecting cultural resources at the INL Site was launched (https://inl.gov/cultural-resources/). DOE-ID anticipates continued coordination in FY2022 on additional content with Idaho SHPO and Shoshone-Bannock Tribes.

Other Actions

In April 2021, the Addendum to Cultural Resource Investigation of the Proposed Power Grid Test Bed Expansion at the Idaho National Laboratory was submitted to Idaho SHPO and Shoshone-Bannock Tribes. This addendum summarized the evaluation of two linear resources, East Loop Transmission Line Corridor and T-25 Access Road which were determined not eligible by DOE-ID. Idaho SHPO concurred with these determinations through email on July 14, 2021.

6.3.2 Spreading Areas BEA-16-07

Cultural resource investigations were conducted in 2016 to identify cultural resources within the area of potential effect for proposed borrow operations in Spreading Areas A and B in the southwestern portion of the INL Site. Segments of the Goodale's Cutoff trail were identified, and all visible surface features were mapped, classified, and compared with other segments of the trail located outside the Spreading Areas to ensure consistency in the data as well as current and future assessments of potential impacts. INL CRMO staff documented all physical evidence of the trail using Interagency Trail Data Standards (ITDS) adopted by the Federal Geographic Data Committee (FGDC) comprised of NPS, the BLM, and the U.S. Forest Service (USFS) officials (FGDC 2011). The ITDS standards present formal National Historic Trail (NHT) condition categories designed to assess the comparative character of visible historic trail remnants. These categories are based on the original descriptive classification system established in the Oregon California Trail Association's (OCTA) Mapping Emigrant Trails Manual (OCTA 2002).

Because impacts from future borrow operations in Spreading Area B would greatly diminish the integrity of the eligible segment of Goodale's Cutoff, adverse effects could not be avoided. Visual intrusions and alterations to the landscape would greatly diminish the setting, feeling and association of the trail, characteristics that convey the trail's historic significance. As stipulated in 36 CFR 800.6 and Appendix C of the CRMP (Revision 6, 2016), decisions regarding the most appropriate methods for mitigating or minimizing adverse impacts to historic properties were made in consultation with the Idaho SHPO, the ACHP, Shoshone-Bannock Tribes, and other stakeholders and interested parties, including the OCTA. An MOA was finalized March 13, 2020.

MOA Stipulations

The MOA has three identified stipulations. Stipulation I.A. to prepare a comprehensive historic context statement for Goodale's Cutoff (10BT2145) was submitted to Idaho SHPO in June 2020.

Stipulation I.B. *The DOE-ID shall submit the Goodale's Cutoff Context, as well as the updated site record for 10BT2145 (including classification of the INL trail segments according to National Park Service Standards) to the Idaho SHPO in advance of ground disturbing operations at Spreading Area B and the relevant information will be used to complete Stipulation I.C. to make the information available to the public.* The updated ASI site record for 10BT2145 was finalized and submitted to Idaho SHPO in August 2021. This stipulation is fulfilled.

Stipulation I.C. *The DOE-ID shall ensure that an interpretive panel measuring four feet by eight feet is developed and constructed to provide historic information regarding the role of Goodale's Cutoff (10BT2145) in Euroamerican migration. This panel will be designed in coordination with the Idaho SHPO and placed either at the Lost River Rest Area, located on Highway 20, or in a public area adjacent to Experiment Breed Reactor I.* Based on the information collected in Stipulations I.A. and I.B., INL CRMO drafted an interpretive panel and DOE-ID submitted to Idaho SHPO in August 2021 for final review. Production and placement of the panels are scheduled for FY2022.

6.3.3 High Assay Low Enriched Uranium (HALEU)

The High Assay Low Enriched Uranium (HALEU) Project was initiated in early FY2019 through an environmental assessment (EA) for the undertaking (DOE/EA-2087) which would establish fuel fabrication processes in two facilities at the INL Site, either the Materials and Fuels Complex (MFC) or the Idaho Nuclear Technology and Engineering Center (INTEC). However, the EA did not identify which buildings will house the operations. After discussions with Idaho SHPO in October 2018, DOE-ID requested deferral of the Section 106 process until the buildings were selected. In reference to Idaho SHPO granting a deferment of Section 106 for this undertaking, the draft environmental assessment states that: *DOE will prepare an MOA outlining how the Section 106 process will be completed, once determinations are made regarding the specific buildings involved in the undertaking; and, the MOA will be signed prior to the signing of the FONSI. The FONSI will include stipulations for completing the Section 106 process.*

The HALEU MOA was signed on December 17, 2018, with two stipulations. Stipulation 1 was fulfilled, and stipulation 2 was partially fulfilled in 2019 with the signing of the HALEU Finding of No Significant Impact (FONSI).

Stipulation 2.a-d: *The FONSI will include the following stipulations for completion of the Section 106 process.*

a. The Section 106 process will begin once the project scope and description has been finalized.
b. The Project will be responsible for funding the Section 106 process.
c. INL Cultural Resource Management Office (CRMO) staff Architectural Historian meeting the Secretary of the Interior's Professional Qualification Standards for Architectural History will complete the Section 106 process.
d. Completion of the Section 106 process will include:
i. Survey of proposed project area and identification of Area of Potential Effect (APE);
ii. Identification of historic properties within the APE;
iii. Evaluation of potential effects - immediate and cumulative direct and indirect - to historic properties from project activities.
iv. Adverse Effects will be mitigated as identified in the INL Cultural Resource Management Plan, which may require consultation and concurrence between DOE-ID, the Shoshone-Bannock Tribes and the Idaho SHPO.

In June 2021, MFC-798, Radioactive Liquid Waste Treatment Facility, was selected as the first building to be equipped with HALEU fuel production. Utilizing procedures in the INL CRMP, a Secretary of Interior qualified architectural historian performed the Section 106 review on the proposed undertaking within the first selected building for HALEU project. Based on the results of the Section 106, a reconnaissance inventory, nor identification of the APE was not completed based on the activity occurring solely within the interior of a building that is exempt from NRHP evaluation due to age. Furthermore, the building does not meet criterion consideration G. Therefore, the activity was exempt from further Section 106 review. Therefore, the selection of this first building would have no effect to historic properties.

As of the end of FY2021, another building has yet to be selected, and therefore Stipulations 1.a-d of the MOA have only partially been fulfilled. Once the second building is selected, DOE-ID will provide a report documenting the reviews and findings for both locations to Idaho SHPO and Shoshone-Bannock Tribes for review.

6.4 Legacy Projects and Section 106 Reviews Still in Progress

In some situations, cultural resource reviews cannot be fully completed in the year the undertaking was initially proposed. In FY2021, documentation of cultural resource inventory and the completion of site records were still in progress for three undertakings initially proposed in FY2017 (see Sections 6.4.1, 6.4.2 and 6.4.3), for six FY2018 undertakings (see Sections 6.4.4, 6.4.5, 6.4.6, 6.4.7, 6.4.8 and 6.4.9), and three FY2019 undertakings (see Sections 6.4.10, 6.4.11and 6.4.12) and one FY2020 undertaking (see Section 6.4.13).

6.4.1 BEA-17-04 MFC Live Fire Range

Status provided in 2020 Annual Report did not change in FY2021. A report covering the 2018 cultural resource inventory continued to be in preparation and submitted to DOE-ID in January 2021 and went through reviews from DOE-ID and CRMO Manager. When finalized, a copy of the cultural report including the10BM245 excavation results will be submitted to Idaho SHPO and the Shoshone-Bannock Tribes. Estimated to be submitted in November 2021.

6.4.2 BEA-17-05 BEA-Monroe Gravel Pit

Status provided in the 2020 Annual Report did not change in FY2021. A report covering the three seasons of field work continued to be in preparation. INL CRMO submitted the report to DOE-ID in January 2021 and went through reviews from DOE-ID and CRMO Manager. When finalized, a copy of the cultural report, including the 10BT1996 test excavation results will be submitted to Idaho SHPO and the Shoshone-Bannock Tribes. Estimated to be submitted in March 2022.

6.4.3 BEA-17-33 North Boundary Fence

Status provided in the 2020 Annual Report did not change in FY2021. A report and ASI forms covering the 2017 fieldwork which covered approximately 12 miles of fence, continues to be in preparation. When informed that the undertaking was being reinitiated in 2020, the CRMO provided DOE-ID and BLM with a map of the approved APE (area surveyed) and associated geospatial data to ensure that all fence construction activities were restricted to this area. As a result, this undertaking will have no effect on historic properties. When the ASI forms are finalized, they will be submitted to BLM and a copy of the cultural report will be submitted to Idaho SHPO and the Shoshone-Bannock Tribes from the BLM. ASI Forms are estimated to be completed in July 2022.

6.4.4 BEA-18-H008 DD&D of CF-668/689

Status provided in the 2019 and 2010 Annual Reports has not changed. The Engineering Building and CFA Technical Center (adjoining buildings CF-688 and CF-689) were identified for deactivation, decontamination, and demolition (DD&D) in EC INL-13-075 (Shirley, Winn, and Lord 2013:2). Both buildings were constructed in 1963.

The buildings were initially recorded by Braun in 1995 in conjunction with the INEL Historic Building Survey. She recommended that the buildings were not eligible and that they did not contribute in a potential district, but could be part of a multiple property study. She noted that their "use was accessory only" and that they were "not highly significant for science and engineering."

The buildings were part of the 1997 reconnaissance efforts of the Arrowrock Group conducted in preparation of their *INEEL, A Historical Context and Assessment, Narrative and Inventory* (2003). They did not evaluate the buildings for their individual significance but determined they would contribute in a potential district under criteria A (association with a significant event) and C (distinctive characteristics). As the buildings had not reached 50 years of age, they indicated that the buildings may meet criteria consideration G; however, they did not provide any justification for the buildings' extraordinary importance.

CF-688 (IHSI #23-9987) and CF-689 (IHSI #23-9988) are listed as eligible Category 3 properties in the INL CRMP (DOE-ID 2016:348). Table 2 of the FY2018 Annual Report provides an adverse effect finding for the proposed demolition; however, evaluations of the buildings' significance are imperative prior to determining the effect finding, particularly in light of the conflicting determinations made previously. Updated IHSI forms are in preparation and will be submitted with a full report in FY2022.

6.4.5 BEA-18-H012 CF-664 Fire Water Upgrade and Building Modifications

Status provided in the 2019 and 2020 Annual Reports have not changed. The proposed fire water system upgrade removes and replaces about 1,110 linear feet of fire water pipe, the system sprinkler heads, and fire water risers. Some facility steam and condensate pipes are wrapped with asbestos containing thermal system insulation that will be removed to accommodate the proposed upgrades.

Table 2 of the FY2018 Annual Report provides an adverse effect finding for the proposed upgrades and repairs; however, an evaluation of the building's significance must be conducted prior to determining the effect finding. An updated IHSI form is in preparation and will be submitted with a full report in FY2022.

6.4.6 BEA-18-H045.01 Advanced Test Reactor Complex Excess Facilities/Structures Deactivation and Demolition

Status provided in the 2019 and 2020 Annual Reports have not changed. EC INL-18-088 proposes the DD&D of surplus vacant, inactivated or soon to be inactivated facilities and structures to reduce lifecycle costs associated with surveillance and maintenance. The proposed action would return the locations to near original condition. There is limited risk to site personnel posed by remaining hazards within the buildings and structures. Principal hazards are asbestos, lead-based paint, polychlorinated biphenyls, small quantities of hazardous materials and waste, confined spaces, and possible residual radiological contamination.

The FY2018 cultural review addressed the proposed demolition of what was formerly the ATR Mock-up Building in the ATR Complex but is now used for storage (TRA-673). TRA-673 (IHSI #23-10278) consists of a silo approximately 26 feet in diameter and 61 feet in height. A single story, rectangular storage building is immediately adjacent. The silo and storage building were initially recorded by Braun in 1995, who did not evaluate the individual significance of the building and structure but recommended that they were contributing in a potential district and could be included in a multiple property study. The Arrowrock Group reexamined TRA-673 in 1997 and determined it was eligible for inclusion in the National Register. The INL CRMP lists TRA-673 as only the storage building and does not include the silo; therefore, the listing of not eligible is inaccurate (DOE-ID 2016:366). Arrowrock's site form suggests that TRA-673 would be classified as a Category 2 property.

Table 2 of the FY2018 Annual Report provides an adverse effect finding for the proposed demolition.

Due to concerns for sensitive information, photos of the interior of the TRA-673 are not possible, therefore standard mitigation for Category 2 properties as outlined in Section 3 could not occur. DOE-ID will consult

with Idaho SHPO to determine the level of documentation necessary to mitigate the adverse effect associated with the removal of TRA-673.

6.4.7 BEA-18-H054 2018 CFA Excess Facilities Deactivation and Demolition

Status provided in the 2019 and 2020 Annual Reports has not changed in FY2021. EC INL-18-086 proposes the DD&D of two CFA buildings, CF-638 and B25-601, to reduce lifecycle costs associated with surveillance and maintenance. Building B25-601 is the Subsurface Disposal Area (SDA) Engineered Barriers Test Facility. It is a concrete, earthen covered bunker constructed in 1996. Building CF-638, the Dosimetry Calibration Lab, was constructed in 1943. It is a 2,366-square foot, reinforced concrete, earthen covered bunker that DOE-ID used to calibrate dosimetry.

B25-601 has not reached 50 years of age. It has not achieved exceptional importance and is not eligible for inclusion in the National Register. Demolition of this property would have no effect.

CF-638 (IHSI #23-9938) was initially recorded by Braun in 1995. The recording did not evaluate the individual significance of the property but recommended that it could contribute in a potential district and could be included in a multiple property study. Revisiting the bunker in 1997, the Arrowrock Group also did not evaluate the property for its historic significance. The INL CRMP lists CF-638 as an eligible Category 2 property. Based on this listing, the finding of effect was listed as adverse in Table 2 of the FY2018 Annual Report. It also states that mitigation for CF-638 was completed with HALS ID-1.

The HALS titled *Idaho National Engineering Laboratory Arco Naval Proving Ground (Idaho National Laboratory)* was prepared when the demolition of vacant Arco Naval Proving Ground buildings was proposed. Buildings proposed for demolition were CF-606, CF-607, CF-613, CF-632, and CF-633. There were no plans to demolish CF-638 and the HALS document provides very little information regarding the building. The document cannot be used to mitigate the effects of currently proposed demolition; however, prior to determining the finding of effect, the property must be evaluated as to whether it qualifies for NRHP inclusion and under which of the criteria.

An updated IHSI form is being prepared for CF-638 which will provide a historic context and a justification for its NRHP eligibility. When completed, the undertaking's effect finding will be determined and a report with the updated IHSI form will be provided to Idaho SHPO for concurrence.

6.4.8 BEA-18-H059.01 Removal of Obsolete Equipment in ZPPR

Status provided in the 2019 and 2020 Annual Reports has not changed in FY2021. INL proposed removal of the contaminated waste characterization glove box, two fume hoods, and ancillary equipment located in the Fuels Manufacturing Facility (FMF, MFC-704); removal of the control consoles and ancillary equipment located in the ZPPR control room within the ZPPR Support Wing, MFC-774, now referred to as the Electron Microscopy Laboratory (EML); and removal of the Developmental Glove Box, hood and ancillary equipment in MFC-787, FASB. A review of the equipment removal was conducted under project number BEA-18-059.01 with the following results:

- MFC-704/FMF was constructed in 1986 and is not eligible for listing on the National Register.
- MFC-774/EML is listed as a Category 3 historic property in the INL CRMP (DOE-ID 2016:339). "The control consoles and panels to be removed are original features of the ZPPR, integral to the historic significance of the building. To mitigate the adverse effect created by removal of these features, the control console and panels should be preserved as much as possible and transferred to the INL Archives and Special Collections storage at West One in Idaho Falls. The console and panels may be used later for public exhibit and interpretation of INL history."
- MFC-787/FASB is listed as a Category 3 historic property in the INL CRMP (*ibid*.) The described project activities fall under exemption 8, internal reconfiguration of active laboratories (DOE-ID 2016:51).

The adverse effect finding was based on information in the INL CRMP. MFC-774 has not been recorded and has not been evaluated to determine what characteristics might qualify the building for listing in the National Register. An effect finding cannot be determined until the eligibility evaluation is completed. An IHSI form is being prepared and when completed, a full report will be submitted to Idaho SHPO that provides a supported finding of effect. The control console and panels have been removed and transferred to the INL Archives and Special Collections at West One.

6.4.9 BEA-18-20 Power Management Pole Maintenance

The fieldwork proposed for FY2021 as documented in the FY2020 Annual Report was completed. To gain a complete understanding of all the cultural resources within the powerlines' APE, INL CRMO conducted site revisits to update site location and document the current condition of previously recorded sites within the APE that have not been visited since they were initially recorded. A cultural resource report documenting the results of the 2018-2021 Class III inventories and site updates will be completed and submitted to Idaho SHPO and the Shoshone-Bannock Tribes by September 2022.

6.4.10 BEA-19-17 Radiological Response Training Range (RRTR)

Status provided in the FY2019 and FY2020 Annual Reports did not change in FY2021. A report covering the 2019 field work verifying the results of 1986 and 2010 surveys seasons continues to be in preparation. When finalized, a copy of the cultural report will be submitted to Idaho SHPO and the Shoshone-Bannock Tribes. Estimated to be completed in March 2023.

6.4.11 BEA-19-32 Sheep Fire Rehabilitation

Status provided in the FY2019 and FY2020 Annual Reports did not change in FY2021. A cultural resource report documenting the results of the 2019 Class III inventories and post-fire rehabilitation of containment lines will be completed and submitted to Idaho SHPO and Shoshone-Bannock Tribes by September 2022.

6.4.12 BEA-19-H081/BEA-19-35 Sample Preparation Laboratory

Status provided in the FY2019 and FY2020 Annual Reports did not change in FY2021, with the exception that fieldwork associated with assessing potential visual effects was conducted in September 2021. Reconnaissance architectural and intensive archeological surveys were conducted in FY2019, and additional analysis was conducted to assess visual effects in September 2021. A cultural report is in preparation that will provide the survey results and the undertaking's effect finding and is anticipated to be submitted by July 2022.

6.4.13 BEA-20-26 FY2020 Fire Rehabilitation

Status provided in the FY2020 Annual Report did not change in FY2021. A cultural resource report documenting the 2020 Class III inventories and post-fire rehabilitation of containment lines will be completed and submitted to Idaho SHPO and Shoshone-Bannock Tribes by September 2022.

7. ARCHIVES AND SPECIAL COLLECTIONS

The INL Archives and Special Collections was established as part of an October 2005 MOA between the DOE-ID and the Idaho SHPO and represents an additional component of the Cultural Resource Management Program, preserving tangible elements of the history of INL in a manner reflecting its importance at local, regional, and national levels.

Figure 8. Austin Schulz repairing archival documents.

The INL Archives and Special Collections contain the cultural record of the tangible and intangible development of the INL and surrounding area. This development includes the evolution of the landscape and built environment as well as that of the corporate culture of INL under various prime and subcontractors, and as its federal governing body transformed from the Atomic Energy Commission to the Energy Research and Development Administration and, finally, to the DOE-ID. However, the cultural identity of the INL landscape is not comprised solely of the scientific and technical research that began in 1949 and continues to take place today. It also encompasses the cultural identity of the landscape in its use by native groups, the industrialized manipulation of trappers, miners, and homesteaders during the late nineteenth and early twentieth centuries, and military operations during the mid–twentieth century. As with any landscape, natural features such as geology and climate of the area have also influenced the use of the space, both historically and in planning future projects.

As the historic and cultural resource research component of the Idaho National Laboratory, operating in coordination and consultation with INL Records Management and the INL Research Library, the INL Archives and Special Collections is responsible for the identification, preservation, management, long-term storage and access to the permanently valuable records and historical archival artifacts, relating to the establishment, development and land use of the area, and historic programs and projects of the INL (Figure 8).

7.1 FY2021 Accomplishments

During Fiscal Year 2021, the INL Archives and Special Collections was staffed by INL Archivist, Austin Schulz and retained full-time intern, Alana Haack. The work of these two individuals was paramount in the continual maintenance and establishment of the INL Archives and Special Collections. Austin Schulz provided a status update to DOE-ID and Idaho SHPO about the functions and accomplishments of the Archives and Special Collections in October 2020. Since the update provided in early FY2021, the following list the major FY2021 accomplishments:

- Completed the scanning, editing, and metadata entry for 554 large format architectural drawings and photographs requested by CEMML necessary to supplement the built environment inventory update.
- Completed scanning of 3,989 seismographs for INL Seismology and added relevant metadata to 1,691 of the scans.
- Archives staff worked with INL Site Records Center (ISRC) to survey 36 cubic feet of MFC historical photographs and created an inventory of the contents of each box and accessioned another 22.5 cu. ft. of historical photographs from ISRC.
- Reviewed the 600+ Records Retention Schedules and created a list of record series that may contain historically significant information to retain in the INL Archives.
- Three new internal acquisitions and one external were accessioned into the INL Archives. Included within these new collections are approximately 95,000 historical photographs for which a folder level inventory was completed.

- Archives staff updated, corrected, and completed 13 existing accessions for 633 architectural and engineering drawings that were present in the archives prior to 2019.
- Archives staff completed 11 accessions of existing, but not formally accessioned collections, which were comprised of items that were present in the archive prior to 2019, including: 991 architectural and engineering drawings, 1,532 archival photographs, 44 slides, 170 glass plate negatives, 304 audio media/visual media/ booklets/manuals, and 1,063 contractor newsletters.
- Archives staff also created item-level inventories for 1,740 historical publications (1989-1999), contractor newsletters (1968-1999), reports, booklets, historical photographs, compact disks, VHS tapes, film reels, and slides.
- Archives staff assisted the Idaho Falls Chamber of Commerce and MOI in retrieving a photograph of a constituent who participated in the 1989 INEL float for the 4th of July parade.
- Retrieved historic exhibits of Engineering Test Reactor, Idaho Chemical Processing Plant, Calcine Storage Facility, and Test Area North from West One storage for repair and eventual display at the EBR-I museum.
- Completed Museum of Idaho document review, created record separation sheets and an inventory of removed documents which were transferred to the INL Technical Library due to export control issues, and returned the majority of the Argonne-West materials, to MOI.
- Completed project to re-box and re-label separated LeRoy Lewis records and re-join them with the full collection.

Figure 9. INL Archives and Special Collections, 2021.

8. MANAGEMENT RECOMMENDATIONS

The following section discusses overall management recommendations related to the INL Historic Preservation Program and INL Archives and Special Collections. Discussed below are progress and status updates to previously suggested management recommendations within FY2019 and FY2020, followed by a discussion of the FY2021 management recommendations.

8.1 Updates on Previous Management Recommendations Discussed in FY2019 and FY2020 Annual Reports

The status of previous management recommendations from FY2019-FY2020 Annual Report are discussed in the following sections.

8.1.1 INL Site Wildland Fires

The 2019 Sheep Fire highlighted the fact that the INL Site does not have a fire protection plan that outlines critical cultural resource protection procedures in the event of fire.

Recommendation 1: The INL CRMO staff recommends development of a comprehensive fire protection plan to decrease the scale, intensity, and frequency of wildland fires on the INL Site in order to minimize adverse effects to historic properties resulting from emergency responses.

Initiation of discussions regarding the need for an updated Wildland Fire Environmental Assessment (EA) were initiated in FY2021. INL CRMO staff have been active members of the resource team developing initial alternatives and assessing needs. The EA will include a comprehensive management plan including strategies utilized to conduct emergency stabilization, but also restoration post-fire, in addition to proactive fire management strategies such as developing fuel breaks through road improvements, mowing, and weed management. The Section 106 work to support the Wildland Fire EA is anticipated to be completed by December 2023.

Recommendation 2: In addition, the INL CRMO recommends revision of the INL Wildland Fire Protocol (GDE-769) to put fire-qualified archaeologists on the ground during emergency actions.

Although GDE-769 has not been revised to discuss adding fire-qualified archaeologists on the ground during emergency actions, INL CRMO staff have been added to the ERO (Emergency Response Organization) notification system. These alerts can be used to screen the types of activities that INL CRMO staff would need to be involved. Additionally, INL CMRO staff have access to the GPS tracking system that is used during emergencies to monitor INL Site assets. These assets include fleet management for safety purposes, including but not limited to trucks, engines, and bulldozers that are active during fires. This allows INL CRMO staff to provide appropriate information for the areas in which activity is occurring. Furthermore, the development and issuance of MCP-8014 INL Section 106 Emergency Actions in April 2021, discuss the INL CRMO involvement during declared emergencies, including wildland fire incidents. This procedure discusses the role of the INL Cultural Resource Advisor and how they would contribute to the emergency action.

8.1.2 Power Management Maintenance – Section 106 Tool

In FY2019 and FY2020, a tool was developed and utilized to help INL CRMO staff and Facilities and Site Services (F&SS) managers quickly determine the level of involvement required (e.g., pre-work cultural survey or activity monitoring) in specific power pole locations. Section 106 review is still required under this code system. The system is simply designed to help streamline the review process and alert project managers to potential cultural resource issues near power poles. This system proved effective in protecting cultural resources and increasing communication between project managers, field workers, and the INL CRMO staff.

Recommendation 1: A similar tool may prove useful for other overarching and annual routine maintenance work at the INL Site, such as annual road maintenance of un-paved roads, gravel/borrow pit resources, and grounds keeping activities.

INL CRMO continued to use this tool for Power Management Annual Maintenance Section 106 review and activities in FY2021. The tool was not utilized for other types of projects in FY2021; however, the utility still remains, and INL CRMO will work to identify appropriate application of the tool for future projects.

8.1.3 INL CRMO and DOE-ID Coordination

As noted in 1.2 above, the INL CRMO and DOE-ID continued their commitment to open and productive dialogue between the INL CRMO staff and DOE-ID in FY2021.

Recommendation 1: Continue monthly meetings between DOE-ID and the INL CRMO staff.

The monthly meetings between INL CRMO and DOE-ID staff will continue to be a beneficial avenue for information exchange. They also serve to introduce new staff and to develop collaborative working relationships.

8.1.4 Cultural Resources Awareness Training

The INL CRMO is committed to working with project managers and contractors to ensure adequate awareness of cultural resource concerns on the INL Site. INL CRMO staff conducted pre-job briefings for several projects in FY2019-2020.

Recommendation 1: The INL CRMO recommends continued enforcement of existing INL protocols for cultural resource training during pre-job briefings for employees and contractors operating outside facilities.

In 2021, INL CRMO staff in coordination with HeTO staff conducted pre-job briefings for several projects to provide contractors and subcontractors cultural resource awareness training in an effort to avoid adverse impacts to historic properties.

8.1.5 INL Site Monitoring Efforts

In the FY2020 Annual Report, annual monitoring efforts highlighted the need for intensive survey, documentation, and mapping of the caves on the INL Site that are known or suspected of containing cultural materials. A complete inventory of all annual monitoring sites would provide the necessary baseline data to accurately assess site condition during annual monitoring visits. While access to the INL Desert Site is restricted with the area patrolled by security officers, unauthorized trespass was noted at Middle Butte Cave and along the northeastern INL Site boundary. Three recommendations came from these observations during FY2020 annual monitoring efforts.

Recommendation 1: Intensive inventory of exterior and interior (as necessary) of annual monitoring cave sites would provide the necessary baseline data to assess condition during annual monitoring visits.

In FY2021, annual monitoring sites were intensively evaluated, recorded, and site updates were completed to establish the baseline necessary to assess condition in future annual monitoring efforts. See INL Cultural Resource Monitoring Section 2.1 for details.

Recommendation 2: Revisits and site updates to other caves on the INL Site should be surveyed and documented to gain a better understanding of how the cave system is being utilized.

In FY2021, one additional site, Jennsen's Cave, was intensively evaluated, recorded, and site updates completed to establish the baseline necessary to assess condition in future annual monitoring efforts. The location was added to the annual monitoring list. See INL Cultural Resource Monitoring Section 2.1. for details.

Recommendation 3: More frequent monitoring of areas known to have unauthorized visitation would identify the activity closer to the time of occurrence.

In FY2021, DOE-ID initiated updates to the Middle Butte MOA that focuses on accessibility to particular sites on the INL Site to the Shoshone-Bannock Tribes. Not only were additional sites added to the list of access, but discussions on how to appropriately monitor non-tribal related activities that may occur near or at these sites are included. The MOA is anticipated to be updated and signed in FY2022.

8.2 FY2021 Management Recommendations

The following management recommendations are supported by discussions within the FY2021 Annual Report sections and reference will be made to appropriate sections for more detail.

8.2.1 EBR-I National Historic Landmark

Recommendation 1: Update EBR-I Nomination Form in FY2022-2023. Please see Section 2.7 for more details.

Recommendation 2: Update EBR-I Preservation Plan in FY2022-2023. Please see Section 2.7 for more details.

8.2.2 Stabilization Efforts at Birch Creek

Recommendation 1: Collaborate with BLM on shared and continued efforts to stabilize Birch Creek site in coordination with Shoshone-Bannock Tribes and Idaho SHPO. Please see Section for more details. Please see Section 2.5.1 for more details.

8.2.3 CITRC Monitoring Plan

Recommendation 1: INL CRMO Staff to coordinate with HeTO staff to create monitoring plan for CITRC. Please see Section 6.1.5 for more details.

8.2.4 Built Environment Update at SMC and RWMC Facilities

Recommendation 1: Initiate Section 106 strategy with Idaho Environmental Coalition (IEC) for RWMC activities proposed between FY2022-FY2023. Please see Section 2.8 for more details.

Recommendation 2: Initiate and pursue additional funding for SMC facility to receive built environment inventory update. Please see Section 2.8 for more details.

8.2.5 INL Archives and Special Collections

Recommendation 1: Update PLN-5920 to include updates and detailed processing guidance. Please see Section 7 for more details.

9. REFERENCES

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10. APPENDICES – OFFICIAL USE ONLY – FOIA EXEMPT 3

Appendix A – Annual Monitoring Results and Updated Site Forms

REMOVED

Appendix B – ASI Site, ASI Isolate Forms, and IHSI Forms - Official Use Only

REMOVED