Idaho National Laboratory Cultural Resource Monitoring Report for Fiscal Year 2015

INL Cultural Resource Management Office

October 2015

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

This information was prepared as an account of work sponsored by an agency of the U.S. Government. Neither the U.S. Government nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness, of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. References herein to any specific commercial product, process, or service by trade name, trade mark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the U.S. Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the U.S. Government or any agency thereof.
Idaho National Laboratory Cultural Resource Monitoring Report for Fiscal Year 2015

INL Cultural Resource Management Office

October 2015

Idaho National Laboratory
Energy Resource Recovery and Sustainability
Idaho Falls, Idaho 83415

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

This report describes the cultural resource monitoring activities of the Idaho National Laboratory’s (INL) Cultural Resource Management (CRM) Office during fiscal year (FY) 2015. Throughout the year, 67 total monitoring visits were completed, with several especially sensitive resources visited on more than one occasion. Overall, FY 2015 monitoring included surveillance of the following 49 individual cultural resource localities: three locations with human remains, one of which is also a cave; nine additional caves; twenty prehistoric archaeological sites; five historic archaeological sites; two historic trails; Experimental Breeder Reactor I (EBR-I), a National Historic Landmark; Aircraft Nuclear Propulsion (ANP) objects located at EBR-I; and eight Arco Naval Proving Ground (NPG) property types.

Several INL work processes and projects were also monitored to confirm compliance with original INL CRM recommendations and assess the effects of ongoing work. On two occasions, ground disturbing activities within the boundaries of the Power Burst Facility/Critical Infrastructure Test Range Complex (PBF/CITRC) were observed by INL CRM staff prepared to respond to any additional finds of Native American human remains. Finally, the current location housing INL Archives and Special Collections was evaluated once.

Most of the cultural resources monitored in FY 2015 exhibited no adverse impacts, resulting in Type 1 impact assessments. However, Type 2 impacts were noted 13 times. In one case, a portion of a historic trail was graded without prior review or coordination with the INL CRM Office, resulting in impacts to the surface of the trail and one archaeological site. Evidence of unauthorized artifact collection/looting was also documented at three archaeological sites located along INL powerlines. Federal agents concluded a FY 2012 investigation by filing civil charges and levying fine under the Archaeological Resource Protection Act against one INL employee for this kind of illegal removal of artifacts from INL lands. Goodale’s Cutoff of the Oregon Trail showed evidence of heavy use associated with grazing. A number of previously reported Type 2 impacts were also once again documented at the EBR-I National Historic Landmark, including spalling and deterioration of bricks due to inadequate drainage, minimal maintenance, and rodent infestation. The ANP engines and locomotive on display at the EBR-I Visitors Center also exhibited impacts related to long term exposure. Finally, most of the Arco NPG properties monitored at Central Facilities Area exhibited problems with lack of timely and appropriate maintenance as well as inadequate drainage.

No new Type 3 or Type 4 impacts that adversely affected significant cultural resources and threatened National Register eligibility were documented in FY 2015.
CONTENTS

ABSTRACT ................................................................................................................................................. iii

ACRONYMS .............................................................................................................................................. vii

1. INTRODUCTION .............................................................................................................................. 1

2. MONITORING PROGRAM DETAILS ............................................................................................ 2
   2.1 Process of Selection ................................................................................................................. 2
   2.2 Findings and Documentation ................................................................................................... 3

3. RESULTS OF 2015 MONITORING ................................................................................................. 4
   3.1 Individual Resources ................................................................................................................ 3
      3.1.1 Resources with Human Remains ................................................................................ 3
      3.1.2 Caves ........................................................................................................................... 6
      3.1.3 Prehistoric Archaeological Resources ......................................................................... 7
      3.1.4 Historic Archaeological Resources ............................................................................. 8
      3.1.5 Modern Resources ..................................................................................................... 10
   3.2 Projects ................................................................................................................................... 12
      3.2.1 INL Power Grid Test Bed Enhancements ..................................................................... 12
      3.2.2 INL Fiber Optic Cable Installation ............................................................................... 14
      3.2.3 Routine INL Powerline Maintenance ............................................................................. 16
      3.2.4 MFC Firewater Upgrade ............................................................................................... 17
      3.2.5 INL Power Grid Testing and Reconfiguration .......................................................... 17
      3.2.6 Firing Range Buried Fiber Optic Line ........................................................................... 17
      3.2.7 RHLLW Facility Construction .................................................................................... 17
      3.2.8 Maintenance of Road T-5 ......................................................................................... 18
      3.2.9 Grazing Impacts ........................................................................................................ 19
      3.2.10 PBF/CITRC Ground Disturbance ............................................................................. 20
   3.3 INL Archives and Special Collections ....................................................................................... 20

4. RECOMMENDATIONS ......................................................................................................................... 23

5. REFERENCES CITED ............................................................................................................................ 24

FIGURES

Figure 1. INL CRM and HeTO staff members prepare to monitor at an INL Cave site (coveralls worn to protect bats). .................................................................................................................... 2

Figure 2. Class ring found among the wreckage of a B24 bomber that crashed on the INL Site in 1942. ............................................................................................................................................. 5

Figure 3. Fire break created through site 10-BT-1123 in response to a 2010 range fire. ......................... 13

Figure 4. Artifact discard pile left by looter at site 10-BT-1188 on a rock outcrop near a power pole. .................................................................................................................................................... 15

Figure 5. Surface disturbance associated with routine maintenance of INL Powerline......................... 16
Figure 6. Portion of historic trail T-5 graded through prehistoric archaeological site BEA-15-02-01. ............................................................................................................................................... 18

Figure 7. Significant surface disturbance associated with livestock grazing on INL lands. ....................... 20

Figure 8. Cramped, inadequate conditions in the INL Archives and Special Collections currently housed in Idaho Falls building IF-627. ................................................................................................. 22

TABLES

Table 1: Arco NPG buildings proposed for DD&D.......................................................................................... 11
ACRONYMS

ANP  Aircraft Nuclear Propulsion
ARPA  Archaeological Resources Protection Act
BEA  Battelle Energy Alliance
BLM  Bureau of Land Management
BM  Bingham (County)
BT  Butte (County)
BV  Bonneville (County)
CF  Central Facilities (INL building designator)
CFA  Central Facilities Area
CFR  code of federal regulations
CITRC  Critical Infrastructure Test Range Complex
CL  Clark (County)
CRM  cultural resource management
CRMP  Cultural Resource Management Plan
CWI  CH2M Hill-Washington Group Idaho, LLC
DD&D  Deactivation, Decontamination, and Demolition
DOE-ID  Department of Energy, Idaho Operations Office
EBR-I  Experimental Breeder Reactor-I
EDMS  Electronic Document Management System
ESER  Environmental Surveillance, Education, and Research (program)
FY  fiscal year
GSS  Gonzales-Stoller Surveillance
HeTO  Heritage Tribal Office (Shoshone-Bannock Tribes)
ICP  Idaho Cleanup Project
HALS  Historic American Landscape Survey
HTRE  Heat Transfer Reactor Experiment
INL  Idaho National Laboratory
JF  Jefferson (County)
LWP  Laboratory Wide Procedure
MAP  Making Archaeology Public (nationwide historic preservation project)
MCP  Management Control Procedure
MFC  Materials and Fuels Complex
MOA  Memorandum of Agreement
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>NARA</td>
<td>National Archives and Records Administration</td>
</tr>
<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
</tr>
<tr>
<td>NHPA</td>
<td>National Historic Preservation Act</td>
</tr>
<tr>
<td>NPG</td>
<td>Naval Proving Ground</td>
</tr>
<tr>
<td>NRHP</td>
<td>National Register of Historic Places</td>
</tr>
<tr>
<td>PA</td>
<td>Programmatic Agreement</td>
</tr>
<tr>
<td>PBF</td>
<td>Power Burst Facility</td>
</tr>
<tr>
<td>RWMC</td>
<td>Radioactive Waste Management Complex</td>
</tr>
<tr>
<td>SHPO</td>
<td>State Historic Preservation Office</td>
</tr>
<tr>
<td>U.S.</td>
<td>United States</td>
</tr>
<tr>
<td>WERF</td>
<td>Waste Experimental Reduction Facility</td>
</tr>
</tbody>
</table>
Idaho National Laboratory Cultural Resource Monitoring Report for Fiscal Year 2015

1. INTRODUCTION

The Idaho National Laboratory (INL) is an 890 square mile federal reserve covering portions of five counties on the northeastern edge of the Snake River Plain in southeastern Idaho (Irving 1993, DOE-ID 1996). Lands included within the boundaries of the INL are under the jurisdiction of the 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, four main contractors perform work for DOE-ID at INL. Battelle Energy Alliance (BEA) is DOE-ID’s primary INL management and operations contractor, where the INL Cultural Resource Management (CRM) Office is based. CH2M Hill/Washington Group (CWI) takes the lead on many cleanup operations related to the Idaho Cleanup Project (ICP), and Idaho Treatment Group leads the Advanced Mixed Waste Treatment project located within the Radioactive Waste Management Complex. INL’s Naval Reactor Facility is under the jurisdiction of the U.S. DOE’s Office of Naval Reactors and is currently managed and operated by Bechtel-Bettis.

Public access to INL 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 with official citations. Largely as a result of long term access restrictions, many cultural resources on the INL are relatively undisturbed. Vandalism is also reduced due to 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. Despite the patrols and education outreach, over the past decade unauthorized access has been noted at some INL cultural resource sites, particularly those within hunting and grazing easements, or with easy access from the paved roads that bisect or are adjacent to INL boundaries. This may be related to reductions in INL Security programs (i.e. elimination of daily helicopter patrols), popular national media programs that encourage artifact collection, and a long-standing tradition of casual artifact hunting and collecting in the West.

When impacts to cultural resources occur despite access restrictions, security patrols, and outreach programs, there are five primary sources of impact:

- Natural processes such as erosion from wind and water or animal burrowing;
- Livestock grazing, herding, and associated operations (i.e., watering stations/troughs, feed transport, stock camps);
- Trespassing in highly sensitive areas, unauthorized artifact collection, and intentional or inadvertent damage to fragile cultural resources by members of the public and possibly INL employees and subcontractors unaware of, or indifferent to, penalties associated with these activities;
- INL projects that fail to comply with recommendations to protect cultural resources as outlined in Environmental Checklists or other environmental guidance;
- Demolition, lack of regular maintenance, or inappropriate preservation treatments for historic structures.

Under DOE-ID’s “INL Cultural Resource Management Plan” (DOE-ID 2013), BEA’s INL CRM Office maintains an ongoing program for monitoring, assessing, and developing strategies to mitigate impacts to cultural resources as a result of these sources of impact. This report provides a summary of the cultural resource monitoring activities completed in fiscal year (FY) 2015.
2. MONITORING PROGRAM DETAILS

A detailed description of the INL CRM Office monitoring program is located in Appendix L of the INL Cultural Resource Management Plan (CRMP, DOE-ID 2013). Monitoring enables INL CRM staff to determine if the integrity of known resources is being compromised by any of the activities listed in Section 1.0 or unexpected conditions. Integrity is essential to cultural resources’ eligibility for listing on the National Register of Historic Places (National Register, or NRHP). As defined by the National Register evaluation criteria (36 CFR 60.4), integrity has seven aspects including: location, design, setting, materials, workmanship, feeling, and association. To be eligible, cultural resources must exhibit most, if not all, of these seven aspects. When impacts to cultural resources are identified that may adversely affect integrity, actions to avert further deterioration can be initiated and federal stewardship responsibilities are fulfilled.

2.1 Process of Selection

Specific cultural resources are chosen for monitoring based on INL CRM Office priorities as well as feedback from DOE-ID, the Shoshone-Bannock Heritage Tribal Office (HeTO), and INL stakeholders. The INL CRM files, which include documentation of over 2,700 archaeological resources and nearly 300 historic architectural properties, are also consulted for appropriate candidates for yearly monitoring. Both DOE-ID and HeTO staff are often directly involved in fieldwork during the monitoring activities and INL project managers and other stakeholders, such as the Idaho State Historic Preservation Office (SHPO), also participate occasionally. Certain resources, like Middle Butte, Prickly, and Aviators Caves, sensitive localities inside the Power Burst Facility (PBF, now Critical Infrastructure Test Range Complex, CITRC), and the Experimental Breeder Reactor-I (EBR-I) National Historic Landmark, are monitored every year. Others, such as historic homesteads, some prehistoric archaeological sites, and important World War II structures are also visited routinely because of their location in high traffic areas or near publicly accessible portions of the INL Site, where trespassing and adverse impacts have been documented in the past. Each year INL CRM staff members also conduct surveillance of resources in a wide variety of settings to address ongoing research interests and the overall focus of INL construction and project activities.

Monitoring of INL projects is completed under direct project funding and may be required as part of an INL Environmental Checklist or other environmental guidance. Project-specific monitoring is also routinely completed in the sandy aeolian soils inside the boundaries of the PBF/CITRC area, where Native American human remains have been discovered in both primary and secondary (i.e. disturbed) contexts. Cultural resource monitoring of projects that involve soil disturbance within this facility complex is required by company procedures (e.g., BEA’s LWP-8000 and CWI’s MCP-3480). This level of cultural resource oversight ensures that any new discoveries of human remains will be managed appropriately.

Official INL CRM Office field monitoring forms are completed for every cultural resource monitoring visit. Hard-copy and electronic versions of these documents are maintained in the INL CRM files and are reproduced for FY 2015 in Appendix A of this report. A few of the forms included in Appendix A record multiple visits to single locations. For example, two monitoring visits conducted to support bat research at Middle Butte Cave in FY 2015 are documented on a single form. Forms completed to assess historic architectural properties may also be based on property types, such as pump houses or munitions bunkers, rather than individual properties. Photographs are also an important part of the documentation of INL CRM monitoring and these are archived with the appropriate monitoring forms in INL CRM files. A few of these electronic images are reproduced here to illustrate parts of the narrative.
2.2 Findings and Documentation

Under the INL CRM monitoring program, there are four possible findings for a given monitoring session, based on the level of disturbance noted:

- **Type 1**: no visible changes to a cultural resource and/or a project is operating within the limits of cultural resource clearance recommendations,
- **Type 2**: impacts are noted but [they] do not threaten the integrity and 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 monitoring, notifications are made to project managers, the DOE-ID cultural resources coordinator, and various other parties, as appropriate and according to the nature and severity of the disturbance. Typically, Type 2 impacts can be corrected by INL CRM staff with the cooperation of INL 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 prompt formal investigations initiated by the INL CRM Office. INL project managers, security, and/or landlord organizations, DOE-ID, federal agents, and Shoshone-Bannock tribal representatives may also participate in these investigations. Results of these formal investigations are typically summarized in individual technical reports prepared by the INL CRM Office (cf., Pace et al. 2014). Independent investigations led by federal agents and DOE-ID Security may be documented in files that are maintained separately by the officers in charge.

Results of all yearly monitoring and individual impact investigations, if available, are summarized annually in a year-end report to DOE-ID (cf., INL CRM 2014), which is frequently shared with interested stakeholders such as the Idaho SHPO and the Shoshone-Bannock Tribes. The results of cultural resource monitoring also appear in two additional high level yearly summaries of INL CRM activities: the annual Secretary of Interior’s Questionnaire on Federal Archaeological Activities and the annual INL Sitewide Environmental Report (cf., DOE-ID 2015).
3. RESULTS OF 2015 MONITORING

Throughout the year, 67 total monitoring visits were completed and 49 individual cultural resources were assessed. Several especially sensitive cave resources were visited on more than one occasion. Three of the locations monitored in FY 2015 included sensitive human remains:

- the Waste Experimental Reduction Facility (WERF) burial (10-BT-2046),
- Prickly Cave (10-BT-2037), and
- B-24 Bomber Crash (BEA-14-20-01).

A number of additional cave visits were conducted in FY 2015. Nearly all of these visits involved interior entries in the company of bat researchers from Gonzales-Stoller Surveillance (GSS) to support installation of temperature/humidity monitors and wintertime hibernation counts. Nine INL caves were included in 20 total cave visits throughout the year, including:

- Moonshiners (10-BM-48),
- North Tower – W (10-BM-96),
- North Tower – E (10-BM-137),
- East Boundary (10-BV-82),
- Aviators (10-BT-1582),
- Rattlesnake (BEA-08-05-CFM-02),
- College (10-BM-52),
- Middle Butte (10-BM-34),
- Igloo (BEA-12-08-04).

Surveillance was conducted at a large number of prehistoric archaeological sites in FY 2015. In two cases, this surveillance was part of the INL CRM Office’s routine yearly monitoring program. However, most of the monitoring in this category was conducted to assess the potential impacts of two proposed INL projects (INL fiber optic cable installation, and INL Power Grid Test Bed Enhancements) and develop recommendations for resource protection. One additional prehistoric site was visited to document the impacts that occurred as a result of unauthorized road grading of an unimproved two-track road. Throughout the year, the following prehistoric archaeological resources were visited:

- Pioneer (10-BT-676),
- Hellofasite (10-JF-88),
- BEA-15-02-01,
- BEA-15-30-01
- 10-BT-1732,
- 10-BT-1188,
- 10-BT-1189;
- 10-BT-1135,
- 10-BT-1142,
- 10-BT-1161,
- 10-BT-1143,
- 10-BT-1216,
- 10-BT-1207,
- 10-BT-1167,
- 10-BT-1209,
- 10-BT-1214,
- 10-BT-1172,
- 10-BT-1039,
- 10-BT-1044,
- 10-BT-1123.
Several sensitive historic archaeological sites and trails are routinely visited to monitor impacts that have in the past primarily involved natural agents such as burrowing animals. In addition to routine monitoring, FY 2015 also included a visit to one historic canal construction camp located in an active project area. Heavy maintenance work in FY 2015 also resulted in impacts to some portions of historic trails on the INL Site. Resources that were visited in FY 2015 included:

- Kuharski homestead (10-CL-1054),
- Reno homestead (10-BT-2362),
- Richards homestead (10-BT-2358),
- Powell stage station (10-BT-2194),
- canal construction camp (BEA-10-10-06),
- Goodale’s Cutoff T-1,
- Historic Trail T-5.

Significant cultural properties from the modern era are also present on INL and are subject to routine INL CRM Office monitoring. In FY 2015 this included:

- Experimental Breeder Reactor I (EBR-I) National Historic Landmark,
- Aircraft Nuclear Propulsion (ANP) equipment exhibited at the EBR-I Visitors Center,
- Arco Naval Proving Ground (NPG) Marine Barracks (CF-606),
- Arco NPG Commanding Officer Quarters and Garage (CF-607 and CF-632),
- Arco NPG Caretaker’s Quarters (CF-613),
- Arco NPG High Explosive Magazines (CF-638 and CF-639), and
- Arco NPG pump houses (CF-642 and CF-651).

INL work processes were also monitored on five occasions to confirm compliance with original INL CRM recommendations and assess the effects of ongoing work. Projects that were subject to monitoring in FY 2015 included:

- routine INL powerline maintenance,
- Materials and Fuels Complex (MFC) firewater upgrade,
- INL Power Grid Testing and Reconfiguration,
- Firing Range buried fiber optic line,
- Remote-Handled Low-Level Waste facility construction,
- maintenance of Road T-5,
- grazing activities.

On two occasions in FY 2015, ground disturbing activities within the boundaries of the PBF/CITRC area were observed by INL CRM staff prepared to respond to any additional finds of Native American human remains in this highly sensitive area. Finally, the current location housing INL Archives and Special Collections was evaluated once.
All FY 2015 monitoring visits were coordinated by INL CRM staff members. Throughout the year, several other parties also participated in the monitoring including, DOE-ID, GSS researchers, INL project managers, independent historians, and archaeologists from the Bureau of Land Management (BLM). Representatives from the Shoshone-Bannock Tribes HeTO were also important partners in the work (Figure 1).

Figure 1. INL CRM and HeTO staff members prepare to monitor at an INL Cave site (coveralls worn to protect bats).

Most of the cultural resources monitored in FY 2015 exhibited no adverse impacts, resulting in Type 1 impact assessments. However, Type 2 impacts were noted 13 times. In one case, a portion of a historic trail was graded without prior review or coordination with the INL CRM Office, resulting in impacts to the surface of the trail and one archaeological site. Goodale’s Cutoff of the Oregon Trail showed evidence of heavy use by equipment associated with grazing and a prehistoric archaeological site located near the Big Lost River also exhibited heavy grazing-related damage. A number of previously reported Type 2 impacts were also once again documented at the EBR-I National Historic Landmark, including spalling and deterioration of bricks due to inadequate drainage, minimal maintenance, and rodent infestation. Type 2 impacts related to inadequate drainage and long term exposure were also observed at the ANP engines and locomotive on display at the EBR-I Visitors Center. Similarly, most of the Arco NPG properties monitored at Central Facilities Area (CFA) exhibited problems with lack of timely and appropriate maintenance as well as inadequate drainage that constituted Type 2 impacts. Inadequate facilities and problematic conditions that constitute Type 2 findings were documented in the current
buildings and rooms that house the INL Archives and Special Collections. Finally, evidence of unauthorized artifact collection/looting and two instances of Type 2 impact were also documented at three archaeological sites located along INL powerlines in FY 2015. As part of investigations initiated in FY 2012, federal agents filed civil charges and levied a fine under the Archaeological Resource Protection Act (ARPA) against one INL employee for illegal removal of artifacts from INL lands within a powerline corridor, clearly demonstrating DOE-ID and INL commitments to cultural resource protection at the site.

No new Type 3 or Type 4 impacts that adversely affected significant cultural resources and threatened National Register eligibility were documented in FY 2015. In an effort to address Type 2 and Type 3 impacts to archaeological sites documented in previous years, INL CRM staff continued to interact with DOE-ID Physical Security and U.S. federal agents experienced in enforcing the Archaeological Resource Protection Act (ARPA). In FY 2015, agents successfully prosecuted an INL employee for a civil violation of ARPA for removing artifacts from INL lands in FY 2012 and additional cases of looting and vandalism remain open. It is anticipated that interaction and cooperation between the federal agents, DOE-ID Security, and the INL CRM Office will be ongoing through FY 2016 and beyond, leading to more effective tools to deter trespassing, looting, and vandalism, and establishing an even stronger program of protections for sensitive INL cultural resources. INL employee awareness and education will be an important part of this effort and in FY 2015, INL CRM staff expanded outreach efforts in this regard, reaching more than 200 INL construction and maintenance personnel through targeted training.

3.1 Individual Resources

In FY 2015, INL CRM staff conducted official surveillance of 49 individual cultural resources. As noted in the discussions to follow, some select resources were visited on more than one occasion. Forms that document individual observations and recommendations are included in Appendix A. In a few cases, multiple visits to a given resource were documented on a single form or single forms covered property types rather than individual resources.

3.1.1 Resources with Human Remains

Two INL locations that include sensitive Native American human remains are visited at least once a year for monitoring and stabilization, as necessary. These are the WERF burial (10-BT-2046) located within the PBF/CITRC area, and Prickly Cave (10-BT-2037) located in an undeveloped area. In FY 2015, a third location containing sensitive human remains was added to the INL inventory and monitoring schedule. This is the site of a B-24 bomber (BEA-14-20-01) that crashed in 1944 while on a practice run over the Twin Buttes Bombing Range, killing all seven crew members on board the aircraft. In FY 2015, no new or adverse impacts were observed at any of the INL resources that contain sensitive human remains.

3.1.1.1 WERF Burial

The WERF burial (10-BT-2046) consists of sensitive human remains that were found eroding from the floor surface of an artificial drainage basin in FY 1996. Investigations confirmed that these sensitive materials were resting in their original position and, in consultation with the Shoshone-Bannock Tribes, steps were taken to secure them and prevent any future disturbance. Today these remains are protected from additional disturbance beneath four large truckloads of clean soil that was brought in specifically for that purpose. Animal burrows have been established in the soil cap, but biologists have confirmed that it is unlikely these disturbances will ever reach the depth of the sensitive human remains. For several years, monitors have also observed some damage to the wire fence that surrounds the soil cap. Again however, these impacts are unlikely to affect the sensitive remains.

In FY 2015, rodent activity in the area seemed to be less intrusive than it had been in previous years, but it was again noted that the fence surrounding the burial was in some disrepair along one corner. Neither the rodent activity nor the bent fence corner present any challenge to the stability of the sensitive remains. During a tribal visit to the site, HeTO representatives requested that future project activities be
minimized around the burial site, even within existing buildings and paved parking areas. These concerns will be considered and support will be sought to place “No Admittance” signs along the edge of the pavement near the sensitive area. With a potential increase in project activities throughout the PBF/CITRC area, routine monitoring of this sensitive location should continue.

3.1.1.2 Prickly Cave

Prickly Cave (10-BT-2037) is a relatively small lava tube cave with a correspondingly small opening that is flush with the exterior ground surface in a remote area of the INL Site. Cultural materials located on the surface around the mouth of the Cave include a light scatter of lithic debris along with a few stone tools. The Cave interior houses sensitive human remains along with various perishable (wood, bone, antler) artifacts. The human remains consist of human skeletal elements originally interred in the Cave by prehistoric Native Americans and human remains that were recovered from a disturbed location in the PBF/CITRC area (10-BT-1991) and later placed inside Prickly Cave by Shoshone-Bannock tribal members. Impacts are rarely observed at Prickly Cave during yearly monitoring. The primary agents of change inside the Cave are resident packrats or possibly other animals that cause modest movement of surface soils, loose artifacts, bones, and vegetation. To date, the animals have not caused any breakage or gnawing of loose bones or artifacts from the original prehistoric interment. Remains repatriated to the Shoshone-Bannock Tribes and placed in the cave in the 1990s have remained secure and undisturbed beneath a rock cover, with no mixing of these items with the original remains and artifacts of the cave.

In FY 2015, no evidence of unauthorized visitation was observed at Prickly Cave and no impacts from natural causes (animals, fire, erosion, etc.) were present. Bat monitoring equipment is still in place and is a visual marker of the Cave location on the landscape, providing additional justification for yearly monitoring visits.

3.1.1.3 B-24 Crash

The lands that make up the INL of today essentially began as a U.S. military land set-aside in 1942 designated as the Arco Naval Proving Ground (NPG). From 1942 – 1949, the U.S. Navy and U.S. Army built a variety of buildings, structures, and other developments to support testing of weaponry and ordnance critical to national needs in the context of World War II. Two large bombing test ranges were among the important features of the Arco NPG landscape, which was the subject of research and documentation according to national Historic American Landscapes Survey (HALS) standards in FY 2015 (INL CRM Office 2015). While this research was getting underway, in January of 2014, Marc McDonald with Project Remembrance, an organization that memorializes military plane wrecks, contacted the INL CRM Office and shared a 1944 U.S. Army accident report that suggested a B-24J Liberator Bomber had crashed on January 8, 1944, near Middle Butte while on a training mission over one of the Arco NPG bombing test ranges. A few months later, INL archaeologists helped McDonald to locate the crash site using satellite imagery, photographs from the accident report, and written accounts of two sheepherders that witnessed the crash. McDonald was able to confirm the crash site was that of a B-24J based on serial numbers found on some of the aluminum parts found among the wreckage that remains at the crash site. Later that year, following the practice of Project Remembrance, a modest stone monument and American flag were placed at the crash site to honor the crew.

During the initial survey and recordation, amongst the twisted melted wreckage, a woman’s 1935 class ring was found (Figure 2). On the inside of the ring, the initials “MAH” were engraved. Taking the names from the accident report of the seven men that died in the crash, McDonald began researching and contacting living family members. He eventually located the daughter (Nancy Gavalis) of Sergeant George Pearce who wore his wife’s (Madeline A. Hopkins) class ring around his neck for luck. The discovery of the ring and crash site spurred widespread interest and a story was published in local newspapers over the 2014 Memorial Day weekend. For Veterans Day, a few months later, DOE-ID returned the ring to Gavalis and another story was written and published again in local newspapers. The story was then picked up by the Associated Press and shared nationally.
In FY 2015, the B24 bomber crash site was added to the list of sensitive INL cultural resources subject to monitoring on a yearly basis and INL CRM staff visited the site on two occasions. No adverse impacts or evidence of trespassing were observed at the site, although prevailing winds had cleanly removed the large American flag, leaving only a bare, bent pole behind. During the year, the crash site was also unanimously selected by a panel of Idaho archaeologists and historians to represent the entire State of Idaho in a nationwide celebration marking the 50th anniversary of the National Historic Preservation Act (NHPA). The “Making Archaeology Public” project (MAP) is designed to showcase some of the interesting and exciting finds that have been made as a result of work mandated by the NHPA. Criteria for MAP designation included:

- Something important and specific that we have learned about life in the past,
- Something that we have learned as a result of NHPA-driven archaeology that we probably wouldn’t have learned otherwise,
- Something that will make a good story – engaging, surprising, fascinating to a general public audience from across the country, and
- Something that can be conveyed to a public audience a 10-15 minute video.

The INL CRM Office has engaged a diverse team from the INL Communications Department, the Bureau of Land Management, Project Remembrance, DOE-ID, and the family of Sergeant George Pearce.
to produce a video highlighting the discovery of the site, the research conducted to fill in the human dimensions of the story, and the public values that it embodies. The video will be completed in FY 2016, with screenings scheduled at national archaeology and history conferences and hosting on various local, regional, and national internet locations. Yearly monitoring of the site will also continue.

3.1.2 Caves

Lava tube caves are numerous on the basaltic landscape of the northeastern Snake River Plain and within the boundaries of the INL Site. Cultural materials present within INL caves are fragile, unique, irreplaceable, scientifically and culturally important, and of great significance to the Shoshone-Bannock Tribes. One cave located on the INL Site (Aviators Cave, 10-BT-1582), is listed on the National Register of Historic Places in recognition of these important values and other INL caves remain eligible for this distinction.

INL caves also include a number of sensitive biological resources and many provide critical winter habitat for hibernating bats and rattlesnakes. Recently, several bat species have become endangered due to heavy mortality from White Nose Syndrome, a bat-specific disease that may be moving westward from the eastern U. S. Many caves across the U.S. have been closed in an effort to prevent the spread of this disease and the U.S. Fish and Wildlife Service has recommended procedures for entry and decontamination in caves that remain open for access. At the INL Site, DOE-ID now allows cave entry only under the guidance of approved permits and strict decontamination protocols according to a Laboratory-Wide Procedure (LWP) for Cave Protection and Access at the INL Site (LWP-8500). On multiple occasions in FY 2015, INL CRM staff members cooperated with colleagues from GSS to conduct cultural resource monitoring inside and outside eight INL caves that were being entered to conduct bat-related research.

Due to their high cultural and tribal sensitivity, a variety of INL caves are monitored by the INL CRM Office every year and some locations are visited more than once. In FY 2015, DOE-ID issued a permit for this routine cultural resource monitoring in and around INL caves. INL CRM staff and HeTO representatives visited three culturally important caves in FY 2015: Prickly Cave, Middle Butte Cave, and Aviators Cave. INL CRM staff also completed additional trips to monitor surface conditions at Middle Butte, Aviators, and Igloo Caves. Observations recorded for the exterior areas surrounding these caves are included in forms provided in Appendix A. Only one cave entry was completed by INL CRM staff and HeTO representatives together in FY 2015 to check on a sensitive artifact placed inside Aviators Cave by the Shoshone-Bannock Tribes. Multiple entries to eight caves were made in the company of bat researchers from GSS.

3.1.2.1 Middle Butte Cave

Middle Butte Cave (10-BM-34) is a large lava tube, with a cavernous opening and a subterranean extent of nearly 0.4 mile. Artifacts and paintings on the walls, both ancient and modern, indicate that the cave has been a destination for human populations for a very long time. Middle Butte Cave is of particular significance to the Shoshone-Bannock Tribes and DOE-ID has recognized their interests in a Memorandum of Agreement that assures continued access for ceremonial, cultural, and educational activities (DOE-ID 1994).

Restrictions on access by the general public to Middle Butte Cave have been in place for decades but the Cave’s location appears on topographical maps of the area and unauthorized visitation continues to be a problem. In the past, vandals have left graffiti on cave walls, built rock rings for fires, camped, littered, fired bullets into signs at the area, used the area for target practice, and driven around existing gates and barriers. Over the years, several individuals have been prosecuted for these activities. At the present time, INL security and interested employees have taken greater interest in preventing trespass at Middle Butte Cave and inform INL CRM staff of fresh tire tracks or suspicious vehicles on the main access roads. INL Security guards also investigate unauthorized access when it is observed. For several years,
Middle Butte Cave has been part of an ongoing bat study and is therefore visited at least once a month by research personnel from GSS to collect data from equipment installed near the mouth of the cave and this routine visitation has also increased the level of general oversight at the cave.

In FY 2015, the area surrounding Middle Butte Cave was visited by INL CRM staff on multiple occasions, including one visit with HeTO personnel. No new evidence of trespass or vandalism was noted during any of these visits. INL CRM staff also assisted with GSS bat research at Middle Butte Cave in FY 2015, observing no trespass at the surface as well as the interior during one wintertime entry.

3.1.2.2 Aviators Cave

Aviators Cave (10-BT-1582) is listed on the National Register of Historic Places. It is another large INL lava tube with extensive evidence of prehistoric use and contemporary significance to the Shoshone-Bannock Tribes. It is monitored for impacts at least once a year. Tribal participation in annual monitoring has become increasingly important since 2002 because, at this time, tribal representatives returned an especially sensitive item to an area in the cave that is known only to them. On visits to the cave’s interior, they inform INL CRM staff of any changes. There have been no official reports of disturbances to this item noted to date. However, since FY 2000, when a large range fire burned through the area, unauthorised visitation has increased. Incursions were initially via 4-wheel drive vehicle in FY 2000, but since vegetation has returned, trespassers have arrived primarily on foot. Small concentrations of artifacts left in “discard” piles near the cave entrance in 2009 represent the unauthorized activities. These activities have been reported in previous years as Type 3 impacts to DOE-ID and investigations are ongoing.

In FY 2015, no new evidence of unauthorized visitation or looting was observed at Aviators Cave. INL CRM and HeTO personnel also confirmed no impacts or vandalism inside the cave and a knowledgeable tribal representative confirmed that the sensitive artifact placed inside the cave in 2002 is present, unharmed, and stable. Given the high level of cultural sensitivity of Aviators Cave, past evidence of unauthorized visitation, and high interest and concomitant increased visitation to the cave for bat-related research, monitoring will continue at Aviators Cave through FY 2016 and beyond.

3.1.2.3 Caves Involved in Bat-Related Research

In an effort to better understand vulnerable bat populations on the INL Site, DOE-ID is sponsoring biological research through the INL Site Environmental Surveillance, Education, and Research program (ESER) administered by GSS. In FY 2015, cave entry permits were awarded to conduct wintertime hibernation counts and install temperature/humidity monitors inside eight INL caves including: Moonshiners, North Tower Complex (two caves), East Boundary, Aviators, Rattlesnake, College, and Middle Butte Caves. INL CRM Office staff participated in the bat research-related cave entries to ensure no sensitive cultural resources were impacted by the work, to learn more about bats and other sensitive biological resources, and to provide assistance when possible. HeTO representatives were also invited to participate in this work. Although bat research clearly remained the primary focus of all cave entries, the thorough searches of cave interiors required by the bat research also allowed for quick observations of cultural materials present, the overall archaeological potential of each cave, and any impacts to the cultural materials observed. No evidence of trespassing, looting, or vandalism was observed during any of these visits inside or outside the caves that were visited. The cooperative relationship forged between GSS and the INL CRM Office has proven to be an effective way of minimizing all cave entries to protect bats and has encouraged a mutual understanding of biological and cultural sensitivities.

3.1.3 Prehistoric Archaeological Resources

There are thousands of prehistoric archaeological sites within INL boundaries, ranging in age from more than 13,000 to 150 years old. The great antiquity and excellent condition of many of these sites are notable and provide justification for routine visitation and care to prevent adverse impacts. Several
locations are routinely monitored due to their research significance, settings in high traffic areas, and past evidence of damage.

The Pioneer site is a large archaeological resource located along the banks of the Big Lost River in an area that has clearly been a destination for Native American hunter-gatherers for many thousands of years. Archaeological excavations from 2010 – 2014 have revealed deeply stratified cultural deposits with important details on the activities of the people who lived along the River, hunted game and harvested plants in the sagebrush grasslands, and obtained obsidian toolstone from Big Southern Butte and other nearby sources. Archival studies have revealed a more recent human story at the site involving the boom and bust cycles of historic homesteading, agricultural development, ranching, and freighting in the late 1800s and early 1900s. Evidence of these activities is preserved today in concrete foundations, extensive trash scatters, and several features associated with the Oregon Shortline railroad. In FY 2015, no new impacts were observed to prehistoric or historic archaeological deposits at the site. Backfilled/sandbagged excavation units appeared to be stable with native vegetation being slowly re-established.

Monitoring was also conducted at the rock walls and dense artifact scatter associated with the prehistoric campsite known as “Hellowasite” (10-JF-88). No new impacts from vibrations associated with explosive testing at the nearby National Security Test Range were observed at the site. Federal agents continue an investigation of vandalism that occurred in FY 2011 and FY 2012 (unauthorized artifact removal, heavy equipment travel, mowing). In FY 2015, surface soils at the site continued to be influenced by wind, alternately exposing and covering the artifacts that remain on the surface. No new evidence of looting or human-caused disturbance was found.

Additional prehistoric archaeological sites were monitored in FY 2015 to assess impacts in relation to ongoing or proposed INL project activities. Section 3.2 provides additional detail on all project-specific monitoring.

3.1.4 Historic Archaeological Resources

During the period from 1884 to roughly 1930, hundreds of hopeful settlers filed homestead claims on lands that would eventually be designated as the INL. Federal laws that encouraged settlement of western deserts were often catalysts for these activities and, in the arid INL region, the Desert Land Act of 1877, Carey Land Act of 1894, and the Desert Reclamation Act of 1902 were especially influential. Many types of historic archaeological sites remain from this time, including trails, homesteads, stage and freighting stations, town sites and railroad sidings, ditches and canals, and the construction camps that were often necessary to build and support them. INL CRM Office staff monitoring of several of these historic archaeological resources is routine. In FY 2015, two historic stage stations and two homesteads were visited as part of this yearly effort. As with prehistoric archaeological sites, Section 3.2 also provides detail on an additional historic archaeological site and a historic trail that were monitored in FY 2015 to assess impacts related to ongoing INL project activities.

3.1.4.1 Stage Stations

The Powell Stage Station (10-BT-2194) is named after its founder, George Washington Powell, and operated in the late 1800s near the Big Lost River. Remnants of the Station include a basalt foundation and partial wall structure. Evidence of other structures (i.e., bridge, outbuildings) is also extant. Through FY 2011- 2013, Type 2 impacts were noted as a result of animal burrowing in the southeast and southwest corners of the rock foundation. During 2014 monitoring, it was determined that a badger had excavated a temporary burrow inside the southwest corner of the rock structure and had caused additional damage to the southeast corner, probably while hunting for small rodents. Later that year, badger activity had ceased, but packrats appeared to have taken over the den and diggings. During monitoring in July of FY 2015, it was noted that packrats had been relocating old cans, butchered (sawn) bone and cacti in order to fortify their burrows. It was determined that the new packrat activity is not adversely impacting the rock structure. However, if impacts are noted during future monitoring visits, the INL nuisance
wildlife specialist will be contacted for possible trapping and relocation of the rodents. This site will continue to be visited in FY 2016 and closely monitored for increased rodent activity.

The Birch Creek Stage Station (10-BT-2362), also known as the Reno Homestead, is another site that is routinely monitored due to its remote location and close proximity to public land. In the past, it has been referred to as a stage station based on survey documentation. However in 2011, descendants of the Frank Jerome Reno family contacted the INL CRM Office and presented family photographs along with additional documentation establishing it as the Reno Homestead. Evidence of both uses of this area exists. For clarity, INL CRM Office staff chose to discuss the site in this section of the report but recognize its importance as a homestead, as well as a stage station. During FY 2015, as an internship project, the area around the site was intensely surveyed and mapped in order to recreate the cabins, corrals and the ca. 1880 surrounding environment in a 3-D visual model. Additional features that had not been previously mapped in past recordation included a ca. 1880 abandoned stage road that led directly to the dugout and associated bridge abutments. Recent ranching activities have all but erased recognizable road features within the recorded area of the stage station/homestead. No new impacts were observed at the site in FY 2015 and INL CRM Office surveillance will continue into FY 2016.

3.1.4.2 Historic Homesteads

In FY 2015, two historic homesteads were visited by INL CRM staff. They included the Richards Homestead (10-BT-2358) and the Kuharski homestead (10-CL-1054).

The Richards Homestead (10-BT-2358) was occupied from 1884 to approximately 1902. The site is named after John Richards, a British immigrant who is known to have filed the first water rights on the INL. Along with his wife Evelyn, he raised eight children on their homestead. The site consists of several basalt foundations (house, sheds and barns), two possible dugout features, fence posts, hand dug ditches, a small reservoir, field scars and an extensive trash scatter. In FY 2013, grazing impacts to the site were noted but no new grazing or other impacts had occurred at the site in FY 2015. The site will continue to be monitored annually.

The Kuharski Homestead (10-CL-1054) is a ca. 1885 site named after Stanovich Kuharski, a German immigrant. The site consists of a basalt foundation, a suspected handmade brick forge, fence posts, field scars and an extensive trash scatter. Weathering continues to affect the condition but not the integrity of the site and its proximity to public lands may result in unauthorized visitation. In FY 2015, no new impacts were noted and previously observed and reported animal burrowing has diminished. Monitoring will continue at this site annually.

3.1.4.3 Historic Trails

INL lands are crossed by a multitude of unimproved trails, many dating to historic times around the turn of the 20th Century. These trails were important links between communities along the Snake River (e.g., Blackfoot and Eagle Rock/Idaho Falls) and those located in mountain valleys to the west and north (e.g., Mackay, Howe, Arco). People, goods, and stock passed freely along the established paths and encouraged economic growth in the region. Continued sporadic travel on the trails today by modern vehicles ensures that they remain visible on the contemporary landscape. However, wildland fires, heavy vehicle and stock traffic, and inappropriate maintenance can adversely impact the trails, destroy their context and setting, and adversely impact archaeological resources nearby.

In FY 2015, the INL CRM Office conducted routine yearly monitoring of Goodale’s Cutoff, a northern spur of the Oregon Trail that crosses through INL lands and is designated for modern purposes as road T-1. The southwestern portion of the INL Site is subject to heavy cattle and sheep grazing under permit by the BLM. Roads in this area are heavily used to transport and bring water to thirsty stock. Roads in the area, including Goodale’s Cutoff, have seen heavy use resulting in deep ruts, widening, and erosion. These impacts were observed during monitoring in FY 2015, but the level of impact to the road had not increased substantially. Routine yearly visits will continue and INL CRM staff will engage BLM
archaeologists in discussions of how to avoid future impacts to the trail as well as adjacent archaeological resources.

3.1.5  **Modern Resources**

Historic resources constructed during INL’s period of historic significance (1942 - 1970) provide an important material record of the development of what is now the INL. In FY 2015, INL CRM staff conducted routine visits to the EBR-I reactor building and its associated guardhouse, ANP objects on outdoor display at the EBR-I Visitors Center, and to select World War II properties.

3.1.5.1  **Experimental Breeder Reactor-I Facility Area**

Experimental Breeder Reactor-I is INL’s single designated National Historic Landmark, recognized as such because of its association with the early development of nuclear power and reactor technology. It is the only INL facility open to the public on a seasonal basis (Memorial Day through Labor Day, annually). In past years, EBR-I has benefited from a “Save America’s Treasures” grant, which supported updated exhibits to enhance the Visitors Center and addressed some preservation issues such as brick and mortar restoration (Braun 2006). Nuclear artifacts exhibited at the site include two Heat Transfer Reactor Experiment (HTRE) airplane engines and the specialized locomotive used to position them during experiments associated with the Aircraft Nuclear Propulsion (ANP) program in the 1950s. These resources are eligible for nomination to the National Register.

In FY 2015, monitoring of the EBR-I reactor facility and associated guardhouse was completed. As was reported in previous years, an inadequate water drainage system continues to threaten the integrity of bricks and mortar on the EBR-I building and the guardhouse continues to lack basic maintenance. If these Type 2 impacts are not corrected, Type 3 impacts are likely to result. A meeting was held in the fall of 2015 with the EBR-I landlord, Communications EBR-I Point of Contact, and an INL CRM historian to discuss upcoming FY 2016 maintenance and preservation projects at EBR-I and the guardhouse. The proposed projects will be designed to improve the condition and retain the integrity of the historic landmark and follow the formal NHPA Section 106 consultation process as stipulated by the INL CRM Plan. INL CRM staff will continue to work closely with the INL landlord and Communications organizations in FY 2016 to address ongoing maintenance and preservation of these important and highly visible public resources.

3.1.5.2  **Arco Naval Proving Ground**

During World War II, the U.S. Navy used approximately 173,440 acres within what is now the interior area of the INL as a naval ordnance proving ground. Several structures were built at what is now INL’s CFA to accommodate residents and to provide an area to test fire a wide variety of ordnance including the large guns used on the Pacific Fleet. The structures were reused when the Atomic Energy Commission established the National Reactor Test Station on what is now the INL Site in 1949.

FY 2015 saw the completion of Historic American Landscape Survey (HALS) documentation (INL CRM Office 2015) for the Arco Naval Proving Ground (NPG), mandated through a 2014 Memorandum of Agreement (MOA) between DOE-ID, the Idaho SHPO, and the Advisory Council on Historic Preservation (ACHP) as mitigation for the proposed DD&D of the vacant buildings listed in Table 1. Evaluations of historic resources conducted in 1993 and 1997 determined that the then-remaining Arco NPG structures were significant to the nation’s history through their association with World War II. Through ensuing discussions with the Idaho SHPO, it was further determined that the related infrastructure and associated landscape were integral and significant components. According to provisions of INL’s CRM Plan, which is legitimized through a 2004 Programmatic Agreement (PA) among the DOE-ID, the Idaho SHPO, and the ACHP, the Arco NPG structures were identified as DOE Signature Properties, defined by DOE-Headquarters as those resources that “denote its [DOE’s] most historically important properties across the complex… and/or those properties that are viewed as having tourism potential.”
In early 2013, DOE-ID notified the Idaho SHPO, the ACHP, and, as required by the INL CRMP and PA, the DOE-Headquarters Federal Preservation Officer, of their intent to DD&D the vacant Arco NPG buildings, at which time the proposed end-state of the buildings was either grass and/or gravel pads. Through the NHPA Section 106 consultation process, measures to mitigate the adverse impacts of demolition were determined and agreed upon through the 2014 MOA. The measures included the development and installation of interpretive signs to be placed at a publically accessible location (along U.S. Highway 20/26 at the Big Lost River Rest Area), retention of original components of CF-633, and completion of HALS documentation.

The Arco NPG was one of five specialized ordnance facilities established in the United States during World War II to support ordnance testing and research and experiments related to safe storage and transportation of live ordnance. Victory in the Pacific theater relied partly on the performance of battleship guns and the Arco NPG was the only proving ground where the large caliber guns used by the Pacific Fleet were tested. The Arco NPG was the terminus of an elaborate logistical system that began with the guns on ships like USS Missouri and USS Wisconsin. After repeated combat firing wore down the rifling, the guns were taken to coastal ports, unloaded, and sent by rail overland to Pocatello, Idaho, where they were refurbished and relined. Finally, the guns were sent to the Arco NPG to be test-fired and scored for accuracy. The guns then returned to action the way they had come and entered battle once more.

In addition to naval ordnance testing, the U.S. Navy allowed the U.S. Army to use lands adjacent to the Arco NPG for two aerial bombing ranges. During World War II, over 40,000 pilots were trained at the Pocatello Army Air Base and many flew day and night training missions over the Arco High Altitude Bombing Range and the Twin Buttes Bombing Range. Hundreds of men lost their lives while serving at the Pocatello Army Airbase, including seven crewmen whose B-24 Liberator went down in 1944 near the Twin Buttes Bombing Range while on a night mission. Later, the two military branches joined forces to conduct tests at the Arco NPG, which contributed greatly to determining safe storage and transport of conventional ordnance.

The Arco NPG provided the core setting for the establishment of the National Reactor Testing Station in the late 1940s and the evolution of present-day INL. Arco NPG buildings in the residential and proofing areas and other infrastructure such as roads and rail sidings influenced the location and footprints of the later facilities. Beyond the proofing and residential centers, the Arco NPG also altered the wider desert landscape. Explosives tests and gun firings required their own infrastructure such as roads, concrete and wood targets, and camera and instrument shelters. The tests and firings produced impact craters and left a variety of ruins on the desert floor – piles of shattered concrete and twisted metal, wood pieces and window glass shards, bomb shells and even unexploded projectiles. The latter, a hazardous legacy that remained unattended until many decades later.

The Arco NPG serves as a tribute to the logistical excellence of the U.S. military and its association with the great battleships of World War II and postwar military research and testing are nationally

---

Table 1: Arco NPG buildings proposed for DD&D.

<table>
<thead>
<tr>
<th>INL Building Number</th>
<th>Building Name</th>
<th>Anticipated DD&amp;D</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF-606</td>
<td>Marine Barracks</td>
<td>FY 2016</td>
</tr>
<tr>
<td>CF-607</td>
<td>Commanding Officer’s Quarters</td>
<td>FY 2016</td>
</tr>
<tr>
<td>CF-632</td>
<td>Commanding Officer’s Quarters Garage</td>
<td>Completed FY 2015</td>
</tr>
<tr>
<td>CF-613</td>
<td>Caretaker’s Quarters</td>
<td>FY 2016</td>
</tr>
<tr>
<td>CF-633</td>
<td>Concussion Wall</td>
<td>FY 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(non-original portions)</td>
</tr>
</tbody>
</table>
significant. The Arco NPG was the only proving ground of its kind west of the Mississippi River and is one of very few sites in Idaho that contributed to American victory during World War II. Post-war testing in the Arco NPG was also instrumental in revising national standards for the safe storage and transport of conventional ordnance.

As original Arco NPG buildings and structures aged, INL programs sought more suitable working spaces and most of the buildings were unoccupied and idled. Although DOE-ID actively sought other uses for the vacant, unused Arco NPG buildings, none were identified. Heritage tourism was also ruled out for the properties due to their location in the core of INL property, where public access is strictly limited. A variety of health and safety concerns were also identified during subsequent condition assessments, including: lead-based paint, asbestos, rodent infestation/droppings, small animal carcasses, mold, and, in one building (CF-633), areas of radiological contamination.

### 3.2 Projects

Project-specific cultural resource monitoring is conducted at INL to meet three distinct purposes. In one situation, previously recorded cultural resources may be revisited to assess current conditions and assist in the development of recommendations for addressing potential impacts during proposed project activities. In FY 2015, INL CRM staff revisited 16 archaeological resources in two proposed INL project areas. The timely involvement of INL CRM staff in these projects ensured that the sensitive archaeological sites were protected from project impacts and that cultural resource considerations are effectively incorporated into plans for future activities. In a second type of project monitoring, INL projects are audited for compliance with cultural resource recommendations made during the INL environmental review process. In this context in FY 2015, INL CRM staff conducted spot checks of five active INL projects and conducted an investigation of project activities associated with unauthorized maintenance of road T-5. In a third type of project monitoring, ground disturbance associated with INL project activities in archaeologically sensitive areas is directly observed by INL CRM staff. This type of project monitoring is frequently done when ground disturbance occurs within the boundaries of the PBF/CITRC area, where Native American human remains were unexpectedly uncovered in disturbed and undisturbed contexts in the 1990s. In FY 2015, ground disturbance was observed on two occasions for various projects located at PBF/CITRC. In FY 2015, ground disturbing activities associated with the Remote-Handled Low-Level Waste facility construction project on the INL were also monitored for cultural resource impacts per the requirements of an Environmental Assessment for the project.

Short discussions of the project-related cultural resources monitoring activities that were completed in FY 2015 are included in the sections to follow and forms that document all observations are provided in Appendix A. Monitoring forms completed for observation of ground disturbance at the PBF/CITRC area may include multiple visits on a single form.

#### 3.2.1 INL Power Grid Test Bed Enhancements

The INL Power Grid Test Bed represents an adaptive reuse of existing buildings, roads, and powerline infrastructure at the PBF/CITRC area to support new testing and missions within INL’s National and Homeland Security group that will enable development and system scale testing of smart grid-related technologies and smart devices for interoperability, operational performance, reliability, and resiliency at multiple distribution scales and voltage classes. On the ground, the proposed Power Grid Test Bed enhancements include installation of new transformers and switchgear at the CITRC substation, new communications hardware attached to existing power poles, three new power grid distribution meshes and associated access roads that will connect to existing radial distribution lines, twelve 50 x 50 ft gravel pads for staging tests and a new command/control center, and select replacement of deteriorated poles on existing distribution lines.
The INL CRM Office provided a variety of information for project managers to design the new developments to avoid direct and indirect impacts to cultural resources within the PBF/CITRC area. This involved new cultural resource surveys, re-visits to thirteen previously recorded archaeological sites, and development of a plan for full time cultural resource monitoring during future construction, as well as procedures to handle any additional discoveries of sensitive Native American human remains (Pace 2015). The following resources were revisited to assess potential effects from future construction and update locational information with Global Positioning System (GPS) technology: 10-BT-1135, 10-BT-1142, 10-BT-1161, 10-BT-1143, 10-BT-1216, 10-BT-1207, 10-BT-1167, 10-BT-1209, 10-BT-1214, 10-BT-1172, 10-BT-1039, 10-BT-1044, and 10-BT-1123. Most of these sites were undisturbed and exhibited no substantial changes from conditions that were observed when the sites were originally recorded in the mid-1980s. Light impacts from a 2010 range fire and subsequent erosion were observed in many places and one site (10-BT-1123) exhibited heavier Type 2 impacts resulting from the placement of a fire break through one portion of the surface artifact scatter (Figure 3). Evidence of unauthorized artifact removal was also observed at two sites located near existing powerlines, a pattern that has also been observed in other similar situations on the INL (see Sections 3.2. and 3.2.3).

Figure 3. Fire break created through site 10-BT-1123 in response to a 2010 range fire.

In FY 2016, the INL CRM Office will continue to work with INL project managers and construction subcontractors to ensure that the identified resources are not impacted by this project. To accomplish this goal, power pole locations will be micro-sited to ensure that sensitive areas are spanned by the new powerlines and to prevent installation of new poles inside the boundaries of cultural resources. Access roads will also be designed to go around rather than through sensitive sites. As work planning and execution progress, Shoshone-Bannock HeTO representatives will also be involved in this effort.
including opportunities to participate in fulltime cultural resource monitoring of all ground disturbance. In recognition of the unique sensitivities presented by the occurrence of a Native American human burial near one of the proposed new powerlines, HeTO representatives will also be involved in the design of employee cultural resource sensitivity training for all project personnel as well as the design and installation of “No Admittance” signs to be placed around the perimeter of the sensitive area.

3.2.2 INL Fiber Optic Cable Installation

Fiber optic connectivity and wireless communications across portions of the INL Site were upgraded early in FY 2015 through installation of new fiber optic cable to existing power poles extending from the Radioactive Waste Management Complex (RWMC) through CFA, and over to PBF/CITRC. Equipment used during this upgrade was restricted to existing roads and established turnouts at existing power poles. The INL CRM Office revisited three previously recorded archaeological sites to assess potential impacts prior to the start of this project. This included: 10-BT-1732, 10-BT-1188, and 10-BT-1189. Conditions observed at these sites were largely unchanged since the mid-1980s, when they were originally recorded. However, one site was found to have been subject to unauthorized artifact removal since its original recording in 1985 (Figure 4). No additional impacts of any significance were noted at the sites monitored to support this project and the work was completed with no new impacts to sensitive resources.
Figure 4. Artifact discard pile left by looter at site 10-BT-1188 on a rock outcrop near a power pole.
3.2.3 Routine INL Powerline Maintenance

Successful operation of INL facilities is reliant upon a safe and reliable electrical transmission system. Nearly all of the powerlines that service INL facilities were built in the 1950s before cultural resource evaluations were routinely required. As a result, some of the power poles installed during this initial phase of development were placed inside the boundaries of cultural resources.

In an effort to ensure that ongoing maintenance of the INL power grid does not cause additional impacts, in FY 2015 the INL CRM Office began to work more closely with INL power management personnel to conduct cultural resource surveys ahead of routine maintenance work and provide recommendations to avoid impacts. During monitoring of two pole replacements completed in FY 2015, significant recent ground disturbance was discovered (Figure 5). No cultural resources were impacted by this activity, but it was conducted prior to the cultural resource survey and would have cause impact to any cultural resources located in the area.

Throughout FY 2016, INL CRM staff will continue to work with power management personnel to discourage the large-scale offroad vehicle travel and resulting surface ground disturbance that has been associated with routine powerline maintenance for many years. Support will be sought for complete surveys of all active INL powerline corridors with full recording of all cultural resources and recommendations to protect significant resources during ongoing maintenance and repair. Based on the discovery of evidence showing that unauthorized artifact collection has occurred at several cultural resource sites associated with INL powerlines, archaeological awareness/protection training will also be a part of this evolving dialog and relationship.

Figure 5. Surface disturbance associated with routine maintenance of INL Powerline.
3.2.4 MFC Firewater Upgrade

Significant new developments at INL’s Materials and Fuels Complex (MFC), including the pending re-activation of the Transient Reactor Test facility, have prompted upgrades to several infrastructure elements at the facility. In FY 2014, a new firewater system was proposed to replace an old, unreliable, and undersized system originally constructed in the 1960s. Archaeological surveys of the proposed footprint of this buried line were completed in FY 2014 with no cultural resources identified. Although project managers expected that the installation would only cause impacts in a narrow corridor, approximately 15 meters in width, standard INL CRM procedures call for examination of buffer zones around all proposed ground disturbance, so the FY 2014 cultural survey covered a corridor approximately 40 meters in width. In FY 2015, project activities associated with installation of the line were found to be contained within the 40 meter-wide surveyed corridor where no cultural resources were identified. However, the work had clearly exceeded the original project estimate that disturbance would be limited to a 15 meter-wide corridor. In this case, the practice of surveying buffer zones around proposed ground disturbance was an important tool in ensuring that no sensitive cultural resources were impacted by the work.

3.2.5 INL Power Grid Testing and Reconfiguration

From 2008 to FY 2015, a variety of INL projects have been hosted at testing facilities built along the East Loop of the INL powerline system to conduct important research for National and Homeland Security customers. Surveys of the proposed footprints for these testing facilities were completed for the original facilities, with no cultural resources identified in the construction areas. Per internal INL CRM procedures, these original surveys also included a 20-30 meter buffer zone around all new developments. As new projects have arrived, they have been advised to contain all activities within the previously approved area, but over the years, the disturbed footprint associated with these facilities has grown without any additional cultural resource review. In FY 2015, field visits were scheduled to address this scope creep and determine if any impacts to cultural and other environmental resources had occurred. This monitoring demonstrated that the projects had expanded well into the 20-30 meter buffer zone included in the original cultural resource surveys. Fortunately, no impacts to cultural resources were identified and project personnel have committed to stricter control of project personnel and equipment in the future. The monitoring once again demonstrated the value of including buffer zones for surveys around INL projects. In FY 2016, the buffers around the Power Grid testing facilities will be expanded to accommodate potential future expansion.

3.2.6 Firing Range Buried Fiber Optic Line

As part of a wider effort to provide modern fiber optic connectivity to several INL facilities, a new buried cable extension out to INL Security’s Main Firing Range was proposed in FY 2015. In consultation with the INL CRM Office, project managers selected a path for this buried line that was restricted to the disturbed bed of a two-track road associated with original construction around the Firing Range. Archaeological surveys revealed no sensitive cultural resources in the road bed. Cultural resource monitoring of the project in FY 2015 showed that ground disturbance was contained within the road bed, with no impacts outside and consequently, no impacts to cultural resources.

3.2.7 RHLLW Facility Construction

In anticipation of the start of construction activities for the new RHLLW facility in FY 2015, a temporary fence was constructed around the perimeter of a historic canal construction camp (BEA-10-10-06) that was identified during surveys of the project in FY 2010 (Pace et al. 2010). Employee cultural resource awareness training was also conducted for all project personnel prior to the start of work. These precautions were part of a cultural resources protection plan developed for the project in FY 2015 (Pace and Gilbert 2015). After construction began, cultural resource monitoring was also conducted per the requirements of the Environmental Assessment finalized in 2011 (DOE-ID 2011). This monitoring
demonstrated the effectiveness of the temporary fence around the historic site (BEA-10-10-06) in protecting that resource from the high level of construction activity around the project footprint and confirmed that no cultural artifacts had been or are likely to be unexpectedly found during ground disturbing activities.

3.2.8 Maintenance of Road T-5

The 890 square mile INL Site is crossed by many developed and undeveloped roads. These range from paved public highways, to improved gravel roads, to unimproved two-track trails. Many of the roads at the INL Site are historic trails, including a northern spur of the Oregon Trail and many wagon/freight roads that established important connections between eastern Idaho communities and late 19th/early 20th Century mining developments in central Idaho, as well as the 600+ homesteads and small communities that existed on INL lands at this time. The term “T-Road” is an INL designation given to a number of these unimproved historic roads, which have been adapted for modern use.

The network of improved and unimproved roads at the INL Site is an important component of the support infrastructure necessary for INL operations. In the maintenance system developed for INL roads, T-5 is subject to minimal maintenance (gravel fill placed in pot holes and deep ruts) to ensure that it remains passable for emergency vehicles and fieldworkers. Cultural resource and other environmental reviews are required in advance of significant road maintenance work (grading and re-contouring). In FY 2014, in response to reports that road T-5 had become impassable due to deep ruts created by Bureau of Land Management-permitted grazing permit holders, INL maintenance personnel graded five segments totaling 1.26 miles in length of the western end of road T-5. No environmental reviews were completed for this work (Figure 6).

Figure 6. Portion of historic trail T-5 graded through prehistoric archaeological site BEA-15-02-01.
A cultural resource investigation conducted early in FY 2015 (Pace et al. 2014) showed that grading was restricted to the narrow, previously disturbed corridor of the original road, with land on either side of the road remaining largely undisturbed. Surveys revealed that a prehistoric campsite (BEA-15-02-01) is bisected by the road and artifacts inside the road bed were directly impacted by road grading (Figure 5). However, a large portion of the resource (> 90%) is undisturbed on either side of the road corridor, and deposits that make this site potentially eligible for nomination to the National Register are preserved here. As a result, the road grading impacts constitute a Type 2 finding, with no harm to National Register eligibility.

Road T-5, itself, is also a significant cultural resource eligible for nomination to the National Register of Historic Places through its association with Turn-of-the-Century settlement and agricultural development. Like many of the historic roads that pass through the INL Site, the road retains remarkable integrity in spite of being adapted for modern uses. The unauthorized grading of T-5 has impacted the historic integrity of the road, but major sections of the road still retain distinctive ruts and the narrow profile typical of historic trails. Because grading did not effectively widen the road, even the stretches that have been directly impacted are still narrow and winding, again retaining some of the character of the original (Figure 6). Under the INL CRM Monitoring program, these impacts are also considered as Type 2, since the National Register eligibility of the road has not been compromised.

INL CRM staff will continue to monitor road T-5 and other unimproved roads on the INL Site for new impacts related to unauthorized maintenance. A comprehensive cultural resource awareness training effort was also completed in FY 2015, targeted specifically to workers responsible for work of this nature. The cooperative relationships forged during these training sessions will also enhance resource protection in the long term.

3.2.9 Grazing Impacts

During routine monitoring of Goodale’s Cutoff of the Oregon Trail in the southwestern portion of the INL Site in FY 2015, INL CRM staff documented significant impacts related to Bureau of Land Management permitted livestock grazing on INL lands. A brief examination of one heavily-used watering station (Figure 7) revealed heavy impacts to a previously unrecorded prehistoric archaeological site (BEA-15-30-01). This portion of the INL Site near the Big Lost River contains a very high density of significant prehistoric archaeological sites with fragile cultural features and dense artifact scatters exposed right at the current surface of the ground. FY 2015 monitoring has demonstrated that one archaeological site is being adversely impacted by these activities and impacts to additional resources are likely. The INL CRM Office will work with DOE-ID and BLM archaeologists in FY 2016 to assess and discuss mitigation for the ongoing damage.
3.2.10 PBF/CITRC Ground Disturbance

Company environmental procedures require project managers to contact the INL CRM Office in advance of ground disturbance within the fenced boundary of PBF/CITRC. This is due to the occurrence of human remains in original as well as secondary (i.e., disturbed) contexts at two separate locations within the facility (10-BT-2046 and 10-BT-1991). In FY 2015, a variety of small ongoing projects associated with the INL National and Homeland Security program continued at PBF/CITRC. On two occasions during the year, ground disturbance was monitored for additional finds of human remains or other sensitive cultural materials. No sensitive materials were observed at any time.

3.3 INL Archives and Special Collections

The INL Archives and Special Collections were established through a 2005 MOA between DOE-ID and Idaho SHPO as mitigation for DD&D of TAN-603, TAN-630, TAN-650, and TAN-607. The MOA mandated the following:

“Complete and implement the site wide INL Archival Plan...The plan will include securing qualified archival support, including a qualified archivist, to assist in meeting the requirements for management of the overall identification, retention, long-term storage and retrieval, and public access to historic program and project collections to include documents, personal and official
correspondence, photographs, drawings, tapes, and other information pertaining to the construction, adaptation and history of the buildings, structures, and sites at the INL Site, as well as the operational programs and projects housed in those facilities.”

To date nearly 3,600 cubic feet of archival materials have been collected and are currently being housed, including

- large format and aerial photography,
- original architectural and engineering drawings of INL facilities (for INL Records Management, the scanned copies of these drawings on file in INL’s Electronic Document Management System (EDMS) serve as the originals as per National Archives and Records Administration (NARA) and DOE record schedules),
- mid-20th century glass slides of reactor operations and experiments, and
- original AEC survey data.

Presently, these collections are housed in Idaho Falls at building IF-627 in three cramped rooms: 115B, 116, and 111C. This is not an archival facility as per National Archives and Records Administration (NARA) standards, nor does the facility provide adequate storage, processing space, environmental controls, or researcher access (Figure 8).

In addition, there is currently no appropriate storage facility available for large artifacts currently stored in the CF-633 high bay, which include irreplaceable artifacts with significance to the history of the INL (such as ETR control panels and scale model, SL-1 examination table shielding, and the TAN hot cell scale model). Theses artifacts are in danger of being lost if an appropriate repository is not identified prior to the DD&D of the CF-633 high bay scheduled for FY 2017. Also in danger of deterioration and loss are the INL collections currently housed in Idaho Falls in building IF-627; these records require a facility with adequate and appropriate storage and processing space, as well as researcher access.
Figure 8. Cramped, inadequate conditions in the INL Archives and Special Collections currently housed in Idaho Falls building IF-627.
4. RECOMMENDATIONS

Monitoring is an effective method of documenting impacts to INL cultural resources and is a necessary first step in prevention. Several broad recommendations resulted from FY 2015 surveillance. First, at a minimum, the condition of the following resources of high sensitivity should be reassessed in FY 2016:

- WERF Burial (10-BT-2046)
- Prickly Cave (10-BT-2037)
- B24 Bomber Crash (BEA-14-20-10)
- Middle Butte Cave (10-BM-34)
- Aviators Cave (10-BT-1582)
- Powell Stage Station (10-BT-2194)
- Birch Creek Stage Station (10-BT-2362)
- Goodale’s Cutoff
- Hellofasite (10-JF-88)
- Pioneer Site (10-BT-676)
- EBR-I National Historic Landmark
- ANP objects on outdoor display at EBR-I Visitors Center

Cultural resource monitoring in FY 2016 should also be focused on several broad classes of other INL cultural resources and projects, as funding allows. Minimally, this might include:

- Any soil disturbance at the PBF/CITRC area to monitor for additional occurrences of sensitive human remains, even in disturbed contexts;
- Archaeological sites located in high traffic areas such as the INL Boundary and Grazing Boundary or where unauthorized visitation is likely or has been observed before;
- Historic homesteads, including those identified during ongoing archival research;
- Buttes, craters, and caves (surface only unless there is evidence of unauthorized activity);
- Grazing areas
- INL Powerlines

To address ongoing Type 2 and Type 3 impacts related to unauthorized visitation, INL CRM staff will continue to work closely with DOE-ID, HeTO tribal representatives, federal agents experienced in ARPA enforcement, INL security and landlord organizations, and individual project personnel, as appropriate, to implement more effective protections. For Type 2 impacts repeatedly documented at EBR-I and associated guardhouse, INL CRM staff will continue to advise DOE-ID and BEA facilities’ managers on appropriate maintenance and preservation measures.
5. REFERENCES CITED


LWP-8000, BEA (INL), Laboratory-Wide Procedure, Environmental Instructions for Facilities, Processes, Materials and Equipment.

LWP-8500, BEA (INL), Laboratory-Wide Procedure, INL Cave Protection and Access.

LWP-14002, BEA (INL), Laboratory-Wide Procedure, Stop Work Actions.

MCP-553, CWI (ICP), Management Control Procedure, Step Back and Stop Work Authority.


Pace, Brenda R., Hollie K. Gilbert, and Julie B. Williams, 2014, “Investigation of Damage to Cultural Resources Resulting from Maintenance Activities on Road T-5 at the Idaho National Laboratory,” INL/LTD-14-33789, November 2014.

Appendix A:

Monitoring Forms
Appendix A: Monitoring Forms

Appendix A contains electronic versions of FY 2015 monitoring forms originally completed in the field. In a few cases, multiple visits to the same location are documented on a single form. The forms are organized according to the following categories presented in the preceding report:

- Human Remains
- Caves
- Prehistoric Archaeological Resources
- Historic Archaeological Resources
- Historic Trails
- Modern Resources
- Projects
- Archives and Special Collections
A: Human Remains
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

<table>
<thead>
<tr>
<th>Monitor Number:</th>
<th>2015 – Human Remains – 01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Name(s):</td>
<td>Brenda Pace, Hollie Gilbert, Carolyn Smith, Romelia Martinez, Carla Heathman, Shawn West, Scott McBride</td>
</tr>
<tr>
<td>Monitor Date:</td>
<td>June 11, 2015</td>
</tr>
<tr>
<td>Project:</td>
<td>INL Power Test Grid</td>
</tr>
<tr>
<td>Site Name/Number:</td>
<td>WERF Burial / 10-BT-2046</td>
</tr>
<tr>
<td>Reason for monitoring:</td>
<td>Tour of potential project developments in the vicinity of sensitive site</td>
</tr>
<tr>
<td>Findings:</td>
<td>Type 1 <strong>X</strong></td>
</tr>
<tr>
<td>Impact Agent(s):</td>
<td>No new impacts observed.</td>
</tr>
<tr>
<td>Significance of Impact:</td>
<td>Massive soil cap that covers burial remains intact with only light rodent intrusions. Fence that surrounds the soil cap is sagging in one corner as noted in previous years. This does not compromise the security of the area or the stability of the soil cap and the sensitive remains protected beneath it.</td>
</tr>
<tr>
<td>Did impacts extend into undisturbed areas?</td>
<td>Yes</td>
</tr>
<tr>
<td>Work Halted?</td>
<td>N/A</td>
</tr>
<tr>
<td>Notifications:</td>
<td>None required for Type 1 findings.</td>
</tr>
<tr>
<td>Contact Method:</td>
<td>E-mail</td>
</tr>
<tr>
<td>Cultural Materials observed?</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>Sensitive remains are secured beneath massive soil cap. No artifacts or bones are exposed.</td>
</tr>
<tr>
<td>Cultural Materials collected?</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>N/A</td>
</tr>
<tr>
<td>General Comments:</td>
<td>Site remains stable. Tribal representatives requested that project activities be minimized in this area, even within existing buildings and parking lots.</td>
</tr>
<tr>
<td>Recommendations:</td>
<td>Continue to monitor annually or on a more frequent basis if project activities increase throughout the CITRC area. Include access restrictions in CITRC employee training. Consider installation of &quot;No Access&quot; signs along the edge of the parking lot.</td>
</tr>
<tr>
<td>Attach additional documentation, as warranted (photos, profiles, etc.)</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>Photos on file. Locational information withheld for resource protection.</td>
</tr>
</tbody>
</table>
Idaho National Laboratory Cultural Resource Management Office  
Field Monitoring Form

| Monitor Number: | 2015 – Human Remains – 02 |
| Monitor Name: | Hollie Gilbert, Marie Holmer, Romelia Martinez |
| Monitor Date(s): | September 15, 2015 |

| Project: | INL Cultural Resource Management Office yearly monitoring |
| Site Name/Number: | Prickly Cave / 10-BT-2037 |
| Reason for Monitoring: | Routine periodic surveillance of significant archaeological sites |

| Findings: | Type 1 | Type 2 | Type 3 | Type 4 |
| Impact Agent(s): | None – no site disturbance noted. |
| Significance of Impact: |  |
| Did impacts extend into undisturbed areas? | Yes | No | x |
| If yes, describe: | N/A |

| Work Halted? | Yes | No | x |
| If yes, describe: | N/A |

| Notifications: |  |
| Contact Method: | Email | Phone | Official correspondence, CCN#: |

| Cultural Materials Observed? | Yes | x | No |
| If yes, describe: | Previously recorded surface artifacts are present across the site. |
| Cultural Materials Collected? | Yes | No | x |
| If yes, describe: |  |

| General Comments: | Site appears to be stable. Cave was not entered this year due to DOE moratorium on cave entry. From the lip of the cave it appeared that there has been no foot traffic into cave or unauthorized visitation. Stoller Environmental has placed bat detection equipment outside of cave above dripline. |

| Recommendations: | Continue to monitor annually |

| Attach additional documentation, as warranted (photos, profiles, etc.) | Yes | No | x |
| If yes, describe: | Photos on file. Locational information withheld for resource protection. |
Idaho National Laboratory Cultural Resource Management Office  
Field Monitoring Form

Monitor Number: 2015 – Human Remains – 03  
Monitor Name: Brenda Pace, Julie Williams, Marc McDonald, Suzann Henrikson (Bureau of Land Management), Amy Lapp (Bureau of Land Management)  
Monitor Date(s): April 7, 2015

Project: INL Cultural Resource Management Office yearly monitoring and tour for Bureau of Land Management  
Site Name/Number: B-24 Bomber Crash / BEA-14-20-01  
Reason for Monitoring: Routine, periodic surveillance of significant resources

Findings: | Type 1 | Type 2 | Type 3 | Type 4 |
---|---|---|---|---|

Impact Agent(s): No new impacts observed to artifacts or features at the site. Wind has removed the large American flag placed here in 2014, bending the steel pole nearly over in the process. Site remains otherwise undisturbed.

Did impacts extend into undisturbed areas? Yes | No | x
If yes, describe: N/A

Work Halted? Yes | No | x
If yes, describe: N/A

Notifications: None required for Type 1 finding.

Contact Method: E-mail | Phone | Official correspondence, CCN#:

Cultural Materials Observed? Yes | x | No
If yes, describe: The site contains a dense scatter of metal and other debris, with many diagnostic artifacts from the plane and sensitive items from the men who lost their lives. A fire pit built by workers sent to clean up the site shortly after the crash in 1944 is also present. In 2014, after the site was rediscovered, a stone monument and large American flag were placed at the site. On this visit, the flag pole was found to be bent over and the large flag was gone. Otherwise there was no evidence of trespassing, looting, or vandalism. The stone monument is undisturbed and important artifacts like the Lieutenant’s bar are still present. A small flag was left near the monument.

Cultural Materials Collected? Yes | No | x
If yes, describe: Site appears to be stable, with no new unauthorized visitation or vandalism. BLM tour of site conducted to gather information to support a video project highlighting the rediscovery of the site for the Making Archaeology Public project and celebration of the 50th anniversary of passage of the National Historic Preservation Act.

Recommendations: Continue routine annual monitoring of this sensitive site.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes | No | x
If yes, describe: Photos on file. Locational information withheld for resource protection.
Monitor Number: 2015 – Human Remains – 04
Monitor Name: Brenda Pace, Christina Olson, Marie Holmer, Payton McGriff
Monitor Date(s): August 6, 2015

Project: INL Cultural Resource Management Office yearly monitoring
Site Name/Number: B-24 Bomber Crash / BEA-14-20-01
Reason for Monitoring: Routine, periodic surveillance of significant resources

Findings:

Impact Agent(s): No new impacts observed. Site remains undisturbed.
Significance of Impact: No evidence of unauthorized visitation or other impacts.
Did impacts extend into undisturbed areas? Yes

Work Halted? Yes
Notifications: None required for Type 1 finding.
Contact Method: E-mail

Cultural Materials Observed? Yes
If yes, describe: The site contains a dense scatter of metal and other debris, with many diagnostic artifacts from the plane and sensitive items from the men who lost their lives. A fire pit built by workers sent to clean up the site shortly after the crash in 1944 is also present. In 2014, after the site was rediscovered, a stone monument and large American flag were placed at the site. The large flag was lost to wind sometime later that year. On this visit, there was no evidence of unauthorized visitation, looting, or vandalism. The stone monument is undisturbed and important artifacts like the Lieutenant’s bar are still present. The small flag left at the monument during the last visit is still present. The pole that originally held the large flag is still present, but damaged by wind.

Cultural Materials Collected? Yes
If yes, describe: 

General Comments: Site appears to be stable, with no new unauthorized visitation or vandalism.
Recommendations: Continue routine annual monitoring of this sensitive site. Consider removal of the bent pole and dispersal of the rock cairn that was built to hold it.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes
If yes, describe: Photos on file. Locational information withheld for resource protection.
A: Caves
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Cave Interior – 01 |
| Monitor Name(s): | Christina Olson, Brenda Pace, Jericho Whiting, Bryan Bybee, Quinn Shurtleff |
| Monitor Date: | October 29, 2014 and February 11, 2015 |

**Project:**
Bat research – Temperature/Humidity Monitors and Hibernation Counts

**Site Name/Number:**
Moonshiners Cave / 10-BM-48

**Reason for monitoring:**
Observe and assist with projects to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Impact Agent(s):**
No impacts from bat research. Cave deposits inside and out appear to be undisturbed.

**Significance of Impact:**
Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No other significant impacts noted. Empty plastic water bottle noted in 2013 was seen. No new evidence of unauthorized visitation.

**Did impacts extend into undisturbed areas?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>X</th>
</tr>
</thead>
</table>

**Work Halted?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>X</th>
</tr>
</thead>
</table>

**Notifications:**
None required under Type I finding.

**Contact Method(s):**
E-mail ☒ Phone ☒ Official correspondence, CCN#:

**Cultural Materials observed?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>☒</th>
<th>No</th>
</tr>
</thead>
</table>

Moonshiners Cave is well known for historic archaeological evidence of moonshining activity. Paleontological excavations were conducted by Idaho State University in the 1980s and significant faunal remains demonstrated the importance of the cave as a carnivore trap. Historic artifacts are still present inside the cave, including: milled wood, cans, barrel staves, wooden box/crate pieces, sheet metal, nails, large mammal bones, springs from bed or car seat, and stove pieces. A stove/furnace made of tabular rock and iron stove pipe still stands near the mouth of the longest arm of the cave. A slender pole of wood is jammed into the ceiling above the stove/furnace. Artifacts outside the cave include a metal kettle south of the road and cave entrance and a concentration of historic cans east of the cave entrance.

**Cultural Materials Collected?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>☒</th>
<th>No</th>
</tr>
</thead>
</table>

Repeat visit, as allowed, for further evaluation of archaeological and paleontological potential and documentation of historic use. Complete archive search for reports and info on earlier excavations. Visit and assess collections at Idaho Museum of Natural History.

**General Comments:**
Cave presents drop-in access that requires a ladder. The debris cone at the entrance is covered in ferns that remain green on the edge of the snow cone that also accumulates there. Entrance room is tall and contains the bulk of historic artifacts and an old stove/furnace. One long arm extends ~86 meters to the west, requiring a crawl as it angles upward. Toward the end, roots penetrate through the ceiling and water can percolate through to form drops on ceiling. Soils are deeper closer to the entrance and have clear potential for archaeological deposits associated with historic and prehistoric use as well as additional paleontological deposits. Two shorter arms extend to the east, where soils are dry and dusty.

**Recommendations:**
Repeat visit, as allowed, for further evaluation of archaeological and paleontological potential and documentation of historic use. Complete archive search for reports and info on earlier excavations. Visit and assess collections at Idaho Museum of Natural History.

**Attach additional documentation, as warranted (photos, profiles, etc.)**

<table>
<thead>
<tr>
<th>Yes</th>
<th>☒</th>
<th>No</th>
<th>X</th>
</tr>
</thead>
</table>

Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Cave Interior – 02
Monitor Name(s): Christina Olson, Brenda Pace, Jericho Whiting, Bryan Bybee, Quinn Shurtliff
Monitor Date: October 29, 2014 and February 11, 2015

Project: Bat research – Temperature/Humidity Monitors and Hibernation Counts
Site Name/Number: North Tower Cave – Wakenhut / 10-BM-96
Reason for monitoring: Observe and assist with projects to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.

Findings: Type 1 x Type 2 Type 3 Type 4
Impact Agent(s): No impacts from bat research. No evidence of unauthorized visitation. Cave appears to be undisturbed.
Significance of Impact: Bat researchers were aware of cultural resource sensitivities and avoided all impacts. Old informal excavations were noted inside the cave and these could represent animal dens or unauthorized excavation long ago. No recent disturbances or indications of unauthorized entry were observed.

Did impacts extend into undisturbed areas? Yes No x
Did impacts extend into undisturbed areas? Yes No x
If yes, describe: N/A

Work Halted? Yes No x
If yes, describe: N/A
Notifications: None required under Type I finding.
Contact Method(s): E-mail Phone Official correspondence, CCN#: 

Cultural Materials observed? Yes No x
If yes, describe: The North Tower Cave complex (10-BM-96 and 10-BM-137) was originally recorded during an archaeological survey along Highway 20 in the 1980s. The underground portions of these lava tubes were not explored at this time, but extensive lithic scatters were documented around the cave entrances. In the past, a wooden plank and an obsidian flake have been observed at the cave entrance at 10-BM-96 and large mammal bones and possible sage torches have been observed throughout the single arm. No additional artifacts were observed in or around the cave in FY 2015.

Cultural Materials Collected? Yes No x
If yes, describe:

General Comments: Cave entrance is located in a shallow crater that affords stooped walk-in access to a single underground chamber ~70 meters in length. Soils are dry and dusty and also quite deep as evidenced in several very large informal excavations located a short distance past the first ceiling constriction in the cave. Most of these holes appeared to be animal dens, but they could also represent unauthorized looting for artifacts at some time in the past. Undisturbed deposits remain in the cave and these exhibit good potential for archaeological investigation.

Recommendations: Repeat visit, as allowed, for further evaluation of archaeological potential and to watch for unauthorized activities in this location adjacent to Highway 20.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes No x
If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

**Monitor Number:** 2015 – Cave Interior – 03  
**Monitor Name(s):** Christina Olson, Brenda Pace, Jericho Whiting, Bryan Bybee, Quinn Shurtleff  
**Monitor Date:** October 30, 2014 and February 27, 2015

**Project:** Bat research – Temperature/Humidity Monitors and Hibernation Counts  
**Site Name/Number:** East Boundary Cave / 10-BV-82  
**Reason for monitoring:** Observe and assist with projects to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
</table>

**Impact Agent(s):** No impacts from bat research. Old badger dens noted on the northeast edge of cave entrance and shallow pits, which may also be animal dens, are present inside both main arms of the cave. Packrat nesting activity is present throughout all arms. No evidence of unauthorized visitation.

**Significance of Impact:** Bat researchers were aware of cultural resource sensitivities and avoided all impacts. Old excavations/animal dens are present, but no evidence of recent digging or unauthorized visitation. Cave appears to contain significant undisturbed cultural deposits.

**Did impacts extend into undisturbed areas?** Yes [x] No  
**Work Halted?** Yes [x] No  
**Notifications:** None required under Type I finding.

**Contact Method(s):** E-mail [ ] Phone [ ] Official correspondence, CCN#:

**Cultural Materials observed?** Yes [x] No  
**If yes, describe:** Obsidian flakes were observed around the mouth and in the entrance. Sage torches and large mammal bones were found throughout internal passages. Entire cave has evidence of significant historic activity probably related to moonshining. South arm contains stove, pipe, and milled wood and north arm contains dense artifact scatter including: metal strainer, wire, canvas, paint cans, wooden boxes (Karo), sheet metal, barrel staves, metal plumbing components, rubber and canvas hosing, glass jars and jugs, enamel pots, rusty cans, blue denim coveralls, cut bones, canvas bags of solidified concrete, metal still kettle and mash basin, and modified metal tubs. North arm may have been closed off at one time and vertical floor-to-ceiling timbers and partial walls remain in place. A full inventory has not been completed.

**Cultural Materials Collected?** Yes [x] No  
**If yes, describe:**

**General Comments:** Cave entrance is a short drop (2.5 m). Two main arms extend north and south: north arm is ~190 m long with some curves and periodic breakdown; south arm is ~60 m long. High alcoves in each arm have not been explored. Soils are dry and dusty with packrat evidence, coyote scat, live insects, and antelope and rabbit carcasses. Shallow runoff channels extend down each arm. Research potential is high for archaeological investigation of early 1900s moonshining activity and also for prehistoric archaeology throughout the Cave.

**Recommendations:** Repeat visit, as allowed, for further evaluation of archaeological potential and detailed documentation of historic use.

**Attach additional documentation, as warranted (photos, profiles, etc.)** Yes [ ] No [x]  
**If yes, describe:** Photos on file. Locational information withheld for resource protection.
## Idaho National Laboratory Cultural Resource Management Office
### Field Monitoring Form

<table>
<thead>
<tr>
<th>Monitor Number:</th>
<th>2015 – Cave Interior – 04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Name(s):</td>
<td>Christina Olson, Brenda Pace, Jericho Whiting, Bryan Bybee</td>
</tr>
<tr>
<td>Monitor Date:</td>
<td>October 30, 2014 and March 4, 2015</td>
</tr>
<tr>
<td>Project:</td>
<td>Bat research – Temperature/Humidity Monitors and Hibernation Counts</td>
</tr>
<tr>
<td>Site Name/Number:</td>
<td>Aviators Cave / 10-BT-1582</td>
</tr>
<tr>
<td>Reason for monitoring:</td>
<td>Observe and assist with projects to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.</td>
</tr>
<tr>
<td>Findings:</td>
<td></td>
</tr>
<tr>
<td>Impact Agent(s):</td>
<td>Type 1 x Type 2 Type 3 Type 4</td>
</tr>
<tr>
<td>Impact Agent(s):</td>
<td>No impacts from bat research. No evidence of unauthorized visitation. Cave appears to be undisturbed. As noted in previous years, tumbleweeds have filled the crater and are effectively blocking access to the cave. These blockages may be altering interior conditions (temperature and humidity), resulting in potential impacts to perishable artifacts.</td>
</tr>
<tr>
<td>Significance of Impact:</td>
<td>Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No new disturbances noted inside the Cave. Tumble weed blockages may be changing airflow, which could result in degradation of artifacts.</td>
</tr>
<tr>
<td>Did impacts extend into undisturbed areas?</td>
<td>Yes x No</td>
</tr>
<tr>
<td>Work Halted?</td>
<td>Yes x No</td>
</tr>
<tr>
<td>Notifications:</td>
<td>None required under Type I finding.</td>
</tr>
<tr>
<td>Contact Method(s):</td>
<td>E-mail Phone Official correspondence, CCN#:</td>
</tr>
<tr>
<td>Cultural Materials observed?</td>
<td>Yes x No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>The Cave contains significant archaeological deposits as demonstrated by test excavations in 1989 (stratified cultural deposits and features, perishable remains, radiocarbon dates - last ~1,000 years, etc.). Cave is culturally significant to the Shoshone-Bannock Tribes and they have relocated a sensitive artifact to a location in the Cave known only to them and have also left painted markings on one cave wall. The Cave was listed on the National Register of Historic Places in 2010 for information potential. A dense scatter of lithic artifacts is located on the surface surrounding the crater, with hundreds of flakes, diagnostic projectile points and other chipped stone tools, and bone fragments. Looters created two artifact discard piles on the surface in 2009, but no evidence has been found of looting inside the Cave. During the visits in FY 2015, a large notched point made of white silicate was observed ~10 m SE of the main entrance. No evidence of unauthorized visitation or looting was observed inside the Cave. Packrats continue to move portable artifacts like sage torches and large mammal bones. Plastic-lined test pits are stable.</td>
</tr>
<tr>
<td>Cultural Materials Collected?</td>
<td>Yes x No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td></td>
</tr>
<tr>
<td>General Comments:</td>
<td>The entrances to Aviators Cave are walk-in over tumbled rocks located inside a small crater. Two main arms are present, with human activity concentrated in the largest arm. Packrat activity is intensive throughout and some evidence of animal denning activity is also present. No new disturbance of sensitive items.</td>
</tr>
<tr>
<td>Recommendations:</td>
<td>Continue routine annual monitoring of surface and interior of Cave. Remove tumbleweeds that are blocking entrances and restricting natural air flow.</td>
</tr>
<tr>
<td>Attach additional documentation, as warranted (photos, profiles, etc.)</td>
<td>Yes x No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>Photos on file. Locational information withheld for resource protection.</td>
</tr>
</tbody>
</table>
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

<table>
<thead>
<tr>
<th>Monitor Number:</th>
<th>2015 – Cave Interior – 04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Name(s):</td>
<td>Hollie Gilbert, Brenda Pace, Marie Holmer, Romelia Martinez, Larae Bill</td>
</tr>
<tr>
<td>Monitor Date:</td>
<td>September 23, 2015</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project:</th>
<th>INL Cultural Resource Management Office yearly monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Name/Number:</td>
<td>Aviators Cave / 10-BT-1582</td>
</tr>
<tr>
<td>Reason for monitoring:</td>
<td>Routine, periodic surveillance of significant resources</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Findings:</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact Agent(s):</td>
<td>None – no new site disturbance noted. Stoller Environmental has placed bat detection equipment outside of Cave, north of depression, pointing at main cave entrance.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significance of Impact:</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did impacts extend into undisturbed areas?</td>
<td>Yes</td>
<td>No</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Halted?</th>
<th>Yes</th>
<th>No</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notifications:</td>
<td>None required under Type I finding.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Method(s):</td>
<td>E-mail</td>
<td>Phone</td>
<td>Official correspondence, CCN#</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural Materials observed?</th>
<th>Yes</th>
<th>x</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td>The Cave contains significant archaeological deposits as demonstrated by test excavations in 1989 (stratified cultural deposits and features, perishable remains, radiocarbon dates - last ~1,000 years, etc.). Cave is culturally significant to the Shoshone-Bannock Tribes and they have relocated a sensitive artifact to a location in the Cave known only to them and have also left painted markings on one cave wall. The Cave was listed on the National Register of Historic Places in 2010 for information potential. A dense scatter of lithic artifacts is located on the surface surrounding the crater, with hundreds of flakes, diagnostic projectile points and other chipped stone tools, and bone fragments. Looters created two artifact discard piles on the surface in 2009, but no evidence has been found of looting inside the Cave. Brenda, Marie and Larae monitored inside the Cave and Larae confirmed that the hair bundle was still located where the tribe had placed it. She indicated that there was some packrat activity on the floor of the cave below the hair bundle, but she thought it was safe.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural Materials Collected?</th>
<th>Yes</th>
<th>No</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Comments:</th>
<th>Cave entrance was choked with tumbleweeds, so it is assumed that no unauthorized entrance has occurred. Some tumbleweeds were removed from both east and west entrances.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendations:</td>
<td>Continue routine annual monitoring of surface and interior of Cave. Remove tumbleweeds that are blocking entrances and restricting natural air flow.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attach additional documentation, as warranted (photos, profiles, etc.)</th>
<th>Yes</th>
<th>No</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td>Photos on file. Locational information withheld for resource protection.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Cave Interior – 05
Monitor Name(s): Brenda Pace, Jericho Whiting, Bryan Bybee, Quinn Shurtliff
Monitor Date: December 22, 2015

Project: Bat research - Hibernation Counts
Site Name/Number: Rattlesnake Cave / BEA-08-05-CFM-02
Reason for monitoring: Observe and assist with projects to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Impact Agent(s): No impacts from bat research. No evidence of unauthorized visitation. Cave appears to be undisturbed.

Significance of Impact: Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No new disturbances noted.

Did impacts extend into undisturbed areas? Yes [ ] No [x]
If yes, describe: N/A

Work Halted? Yes [ ] No [x]
If yes, describe: N/A

Notifications: None required under Type I finding.
Contact Method(s): E-mail [x] Phone [ ] Official correspondence, CCN#:

Cultural Materials observed? Yes [x] No [ ]
If yes, describe: Paleontologists from Idaho State University completed excavations in the east arm of the Cave in 1977. Significant paleontological deposits were documented and obsidian artifacts were encountered, but not carefully documented or analyzed. During quick visits during bat counts in 2013 and 2015, portable artifacts such as sage torches, an arrow shaft, cut cane pieces, and large mammal bones were observed on the surface in the western arm. However, a detailed inventory of cultural materials has not been completed. Old test pits show that soils are very deep in the east arm and they also appear to be deep in the longer west arm. Archaeological and paleontological potential is very high in the undisturbed deposits that remain in both arms.

Cultural Materials Collected? Yes [ ] No [x]
If yes, describe: N/A

General Comments: The entrances to Rattlesnake Cave are massive and via a large collapsed crater. One long arm extends to the west ~310 m. Wood and cane artifacts have been observed in this arm and packrat activity is high. Deep soil deposits may contain significant additional archaeological materials and features. Further reaches of this long arm exhibit unique geological features (flow patterns in floor and ceiling, high ledges, multiple flows, lava drips and rivulets, mineral inclusions, jasper nodules). A full evaluation of archaeological potential has not been possible, but it appears to be very high with deep soil deposits and existing surface artifacts. Rattlesnakes will obviously be the limiting factor for any future investigations. The shorter east arm is very open for most of its length and exhibits deep soils in two old test pits.

Recommendations: Repeat visit, as allowed, for further evaluation of archaeological potential. Complete archive search for reports and information on earlier excavations. Visit and assess collections at Idaho Museum of Natural History

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x]
If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Cave Interior – 06 |
| Monitor Name(s): | Brenda Pace, Jericho Whiting, Bryan Bybee, Quinn Shurtliff |
| Monitor Date: | February 11, 2015 |

**Project:** Bat research - Hibernation Counts  
**Site Name/Number:** College Cave / 10-BM-52; also known by paleontologists as Middle Butte Cave

**Reason for monitoring:** Observe and assist with projects to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Impact Agent(s):** No impacts from bat research. No evidence of unauthorized visitation. Cave appears to be relatively undisturbed. Deep excavation exhibits some erosion from surface water movement and pooling.

**Significance of Impact:** Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No new disturbances were noted.

**Did impacts extend into undisturbed areas?** Yes [x] No [ ]
**If yes, describe:** N/A

**Work Halted?** Yes [ ] No [x]
**If yes, describe:** None required under Type I finding.

**Notifications:** None required under Type I finding.

**Contact Method(s):** E-mail [ ] Phone [ ] Official correspondence, CCN#:

**Cultural Materials observed?** Yes [x] No [ ]
**If yes, describe:** College Cave was excavated by paleontologists from Idaho State University in the 1980s, when significant faunal deposits were discovered. Prehistoric rock art is also reported on the original site form, but has not been re-identified during recent visits. Pits, back dirt piles, stakes, various metal items, and broken pieces of an old wooden ladder remain inside the Cave from the excavations. Excavations show at least 2+ m of soil deposits and clear layer of Mazama ash. Deep soil deposits that remain undisturbed inside the Cave may contain additional significant archaeological and paleontological deposits. Only a few flakes of obsidian have been found on the surface around the Cave. Other recent artifacts, including cable and a bucket full of rocks may be associated with excavations in the 1980s.

**Cultural Materials Collected?** Yes [ ] No [x]
**If yes, describe:**

**General Comments:** Entrance to College Cave is drop-in and requires a ladder. Below ground, the Cave is one large room. Old research excavations are still open and wood and metal debris are present. Archaeological and paleontological research potential remains high in undisturbed deposits that are still present.

**Recommendations:** Repeat visit, as allowed, for further evaluation of research potential and to check for unauthorized visitation and looting in this far corner of the INL site. Complete archive search for reports and info on earlier excavations. Visit and assess collections at Idaho Museum of Natural History.

**Attach additional documentation, as warranted (photos, profiles, etc.)** Yes [ ] No [x]
**If yes, describe:** Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

**Monitor Number:** 2015 – Cave Interior – 07  
**Monitor Name(s):** Brenda Pace, Jericho Whiting, Bryan Bybee, Quinn Shurtliff  
**Monitor Date:** February 11, 2015

**Project:** Bat research – Hibernation Counts  
**Site Name/Number:** North Tower Cave – Earl / 10-BM-137  
**Reason for monitoring:** Observe and assist with projects to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Impact Agent(s):** No impacts from bat research. Old, shallow excavations may indicate past looting and unauthorized visitation. No new disturbances noted. Pigeon droppings are beginning to accumulate at the entrance.

**Significance of Impact:** Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No footprints or recent excavations were apparent to indicate ongoing looting or unauthorized visitation. Bird droppings do not currently present a significant problem.

**Did impacts extend into undisturbed areas?**  
If yes, describe: N/A

**Work Halted?**  
If yes, describe: N/A

**Notifications:** None required under Type I finding.

**Contact Method(s):** E-mail  
**Official correspondence, CCN#:**

**Cultural Materials observed?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If yes, describe: The North Tower Cave complex (10-BM-96 and 10-BM-137) was originally recorded during an archaeological survey along Highway 20 in the 1980s. The underground portions of these lava tubes were not explored at this time, but extensive lithic scatters were documented around the cave entrances. In the past, milled wood fragments, sage torches, and large mammal bones have been observed throughout the single arm at 10-BM-137. No additional artifacts were observed in or around the cave in FY 2015. Milled wood, sage torches, large mammal bones on surface. Older, informal, shallow excavations are present and one includes obvious charcoal layer, which may represent a cultural feature.

**Cultural Materials Collected?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If yes, describe: N/A

**General Comments:** Cave presents easy walk-in access. Underground, the Cave has one single long cavern (~110m) with two short arms (10-20m) near the end. Interior is dry, dusty soil with some rocky stretches. Archaeological potential is high. Pigeons appear to have a permanent roost at entrance (~25 birds).

**Recommendations:** Repeat visit, as allowed, for further evaluation of archaeological potential and to watch for unauthorized activities in this location adjacent to Highway 20.

**Attach additional documentation, as warranted (photos, profiles, etc.)**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If yes, describe: Photos on file. Locational information withheld for resource protection.
### Idaho National Laboratory Cultural Resource Management Office

**Field Monitoring Form**

**Monitor Number:** 2015 – Cave Interior – 08  
**Monitor Name(s):** Brenda Pace, Jericho Whiting, Bryan Bybee, Bob Boston  
**Monitor Date:** March 20, 2015

**Project:** Bat research - Hibernation Counts  
**Site Name/Number:** Middle Butte Cave / 10-BM-34; also known as Indian Cave  
**Reason for monitoring:** Observe and assist with projects to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Impact Agent(s):** No impacts from bat research. Old shallow pits inside the Cave may represent past looting, but no new evidence of unauthorized visitation was observed. Cave appears to be undisturbed since last visit.

**Significance of Impact:** Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No new impacts noted. Old excavations and trash associated with unauthorized activities in the past are still present, but nothing new noted.

**Did impacts extend into undisturbed areas?** Yes [ ] No [ ] [x]  
**If yes, describe:** N/A

**Work Halted?** Yes [ ] No [ ] [x]  
**If yes, describe:** N/A

**Notifications:** None required under Type I finding  
**Contact Method(s):** [E-mail] [ ] [Phone] [ ] Official correspondence, CCN#:

**Cultural Materials observed?** Yes [ ] No [x]  
**If yes, describe:** Middle Butte Cave is well-known for its Native American pictograph panels. Historic and modern graffiti has also been left on the walls. Several fire rings are located just inside the high dripline of the Cave and on the surface around the large crater. Soils inside appear to have significant depth and high potential for significant archaeological deposits. Portable artifacts are sparse on the current ground surface inside and outside the Cave, and include obsidian flakes, a piece of pottery, sage torches, wood, and large mammal bones. The Cave is also of cultural importance to the Shoshone-Bannock Tribes. No new artifacts or rock art panels were observed inside or outside the Cave during this visit.

**Cultural Materials Collected?** Yes [ ] No [x]  
**If yes, describe:**

**General Comments:** Middle Butte Cave includes one long (~615 m) north arm and two shorter south arms (~60 m). Entrances are located in a large crater. Old shallow dig areas, footprints, trash items, and graffiti are still present, but no new impacts were observed. SE arm has uniform dirt floor like main north arm and one old excavation near the wall. Sage torches and other wood items are present. Archaeological potential is very high.

**Recommendations:** Continue routine annual monitoring of surface and interior of Cave.

**Attach additional documentation, as warranted (photos, profiles, etc.)** Yes [ ] No [x]  
**If yes, describe:** Photos on file. Locational information withheld for resource protection.
<table>
<thead>
<tr>
<th>Field Monitoring Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monitor Number:</strong> 2015 – Cave Exterior – 01</td>
</tr>
<tr>
<td><strong>Monitor Name(s):</strong> Christina Olson, Jericho Whiting, Bryan Bybee</td>
</tr>
<tr>
<td><strong>Monitor Date:</strong> October 30, 2014</td>
</tr>
</tbody>
</table>

**Project:** Bat research - Temperature/Humidity Monitors

**Site Name/Number:** Middle Butte Cave / 10-BM-34; also known as Indian Cave

**Reason for monitoring:** Observe and assist with project to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.

**Findings:**
- **Type 1**
- **Type 2**
- **Type 3**
- **Type 4**

**Impact Agent(s):** No impacts from bat research. Cave appears to be undisturbed since last visit.

**Significance of Impact:** Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No new impacts noted by bat researchers inside Cave and no new evidence of unauthorized visitation at the surface around the Cave.

**Did impacts extend into undisturbed areas?** Yes [x] No [ ]

**Work Halted?** Yes [ ] No [x]

**Notifications:** None required under Type I finding.

**Contact Method(s):** E-mail [ ] Phone [ ] Official correspondence, CCN#:

**Cultural Materials observed?** Yes [x] No [ ]

**If yes, describe:** Middle Butte Cave is a significant archaeological site that is also of enduring cultural importance to the Shoshone-Bannock Tribes. Notable cultural features and objects inside the Cave are prehistoric rock art, historic and modern graffiti, fire rings, large mammal bones, occasional obsidian flakes. At the surface, obsidian flakes, pottery, and historic cans and glass are present. No new artifacts were observed at the Cave during this visit, but broken glass and historic rusty cans were noted. Biologists who entered the Cave reported no new finds.

**Cultural Materials Collected?** Yes [ ] No [x]

**If yes, describe:**

**General Comments:** Cave appears to be stable, with no new unauthorized visitation or vandalism.

**Recommendations:** Continue routine annual monitoring of surface and interior of Cave.

**Attach additional documentation, as warranted (photos, profiles, etc.)** Yes [ ] No [x]

**If yes, describe:** Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Cave Exterior – 02 |
| Monitor Name(s): | Christina Olson, Brenda Pace, Marie Holmer, Payton McGriff |
| Monitor Date: | August 6, 2015 |

| Project: | INL Cultural Resource Management Office yearly monitoring |
| Site Name/Number: | Middle Butte Cave / 10-BM-34; also known as Indian Cave |
| Reason for monitoring: | Routine, periodic surveillance of significant resources |

| Findings: | Type 1 x | Type 2 | Type 3 | Type 4 |
| Impact Agent(s): | No new impacts observed. Cave appears to be undisturbed since last visit. |
| Significance of Impact: | No new evidence of unauthorized visitation at the surface around the Cave. |
| Did impacts extend into undisturbed areas? | Yes | No x |
| Work Halted? | Yes | No x |
| Notifications: | None required under Type 1 finding. |
| Contact Method(s): | E-mail | Phone | Official correspondence, CCN# |

| Cultural Materials observed? | Yes x | No |
| If yes, describe: | Middle Butte Cave is a significant archaeological site that is also of enduring cultural importance to the Shoshone-Bannock Tribes. Notable cultural features and objects inside the Cave are prehistoric rock art, historic and modern graffiti, fire rings, large mammal bones, and occasional obsidian flakes. At the surface, obsidian flakes, pottery, and historic cans and glass are present. No new artifacts were observed around the surface of the Cave during this visit. Interior of Cave was not assessed, but no unauthorized visitation was indicated. |

| Cultural Materials Collected? | Yes | No x |
| If yes, describe: |

| General Comments: | Cave appears to be stable, with no new unauthorized visitation or vandalism. Since the Cave did not appear to have been disturbed or visited by trespassers, the moratorium on cave entry was observed. |

| Recommendations: | Continue routine annual monitoring of surface and interior of Cave. |

| Attach additional documentation, as warranted (photos, profiles, etc.) | Yes | No x |
| If yes, describe: | Photos on file. Locational information withheld for resource protection. |
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Cave Exterior – 03
Monitor Name(s): Hollie Gilbert, Marie Holmer, Romelia Martinez and Larae Bill
Monitor Date: September 22, 2015

Project: INL Cultural Resource Management Office yearly monitoring
Site Name/Number: Middle Butte Cave / 10-BM-34; also known as Indian Cave
Reason for monitoring: Routine, periodic surveillance of significant resources

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Impact Agent(s): None – no new site disturbance noted
Significance of Impact: N/A
Did impacts extend into undisturbed areas? Yes ☒ No ☐
If yes, describe: N/A

Work Halted? Yes ☐ No ☒
Notifications: None required under Type I finding.
Contact Method(s): E-mail ☒ Phone ☐ Official correspondence, CCN#:

Cultural Materials observed? Yes ☐ No ☒
If yes, describe: Middle Butte Cave is a significant archaeological site that is also of enduring cultural importance to the Shoshone-Bannock Tribes. Notable cultural features and objects inside the Cave are prehistoric rock art, historic and modern graffiti, fire rings, large mammal bones, and occasional obsidian flakes. At the surface, obsidian flakes, pottery, and historic cans and glass are present.

Cultural Materials Collected? Yes ☐ No ☒
If yes, describe:

General Comments: Site appears to be stable. Cave was not entered during this visit due to DOE moratorium on cave entry. From the lip of the Cave it appeared there had been no foot traffic into cave or unauthorized visitation. Stoller Environmental has installed bat detection equipment outside of the Cave above the dripline. It appears that the vehicle traffic past the gate has stopped.

Recommendations: Continue to monitor annually.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes ☐ No ☒
If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

<table>
<thead>
<tr>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Number:</td>
</tr>
<tr>
<td>Monitor Name(s):</td>
</tr>
<tr>
<td>Monitor Date:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bat research - Temperature/Humidity Monitors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site Name/Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Cave / 10-BM-52; also known by paleontologists as Middle Butte Cave</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe and assist with project to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Findings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
</tr>
<tr>
<td>Type 2</td>
</tr>
<tr>
<td>Type 3</td>
</tr>
<tr>
<td>Type 4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact Agent(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>No impacts from bat research. Cave appears to be undisturbed since last visit.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Significance of Impact:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No new impacts noted by bat researchers inside Cave and no new evidence of unauthorized visitation at the surface around the Cave.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Did impacts extend into undisturbed areas?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Halted?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notifications:</th>
</tr>
</thead>
<tbody>
<tr>
<td>None required under Type I finding.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Method(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural Materials observed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If yes, describe:</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Cave was excavated by paleontologists from Idaho State University in the 1980s, when significant faunal deposits were discovered. Prehistoric rock art is also reported on the original site form, but has not been re-identified during recent visits. Pits, back dirt piles, stakes, various metal items, and an old wooden ladder remain inside the Cave from the excavations. The Cave contains undisturbed deposits that could contain important archaeological and paleontological information. Previously identified historic artifacts (bucket, cable) located at the surface near the mouth of the Cave were re-identified and appeared unchanged. Biologists who entered the Cave reported no new finds.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural Materials Collected?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If yes, describe:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cave appears to be stable, with no new unauthorized visitation or vandalism.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeat visit, as allowed, for further evaluation of research potential and to check for unauthorized visitation and looting in this far corner of the INL site. Complete archive search for reports and info on earlier excavations. Visit and assess collections at Idaho Museum of Natural History.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attach additional documentation, as warranted (photos, profiles, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If yes, describe:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photos on file. Locational information withheld for resource protection.</td>
</tr>
</tbody>
</table>
Idaho National Laboratory Cultural Resource Management Office  
Field Monitoring Form  

| Monitor Number: | 2015 – Cave Exterior – 05 |
| Monitor Name(s): | Christina Olson, Jericho Whiting, Bryan Bybee |
| Monitor Date: | October 29, 2014 |

**Project:**  
Bat research - Temperature/Humidity Monitors  

**Site Name/Number:**  
North Tower Cave – Earl / 10-BM-137  

**Reason for monitoring:**  
Observe and assist with project to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.  

**Findings:**  

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Impact Agent(s):**  
No impacts from bat research. Cave appears to be undisturbed since last visit.  

**Significance of Impact:**  
Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No new impacts noted by bat researchers inside Cave and no new evidence of unauthorized visitation at the surface around the Cave.  

**Did impacts extend into undisturbed areas?**  
Yes [x] No [ ]  

**Work Halted?**  
Yes [ ] No [x]  

**Notifications:**  
None required under Type I finding.  

**Contact Method(s):**  
E-mail [ ] Phone [ ] Official correspondence, CCN#: [ ]  

**Cultural Materials observed?**  
Yes [x] No [ ]  

The North Tower Cave complex (10-BM-96 and 10-BM-137) was recorded as an archaeological resource during a survey along Highway 20 in the 1980s. Extensive lithic scatters were documented around the cave entrances at this time, but Cave interiors were not investigated. Subsequent visits have documented milled wood fragments, sage torches, and large mammal bones throughout the single arm at 10-BM-137. Older, shallow excavations that may represent past looting have also been observed. Undisturbed deposits that remain inside and outside the Cave have high potential for significant archaeological and paleontological materials. Biologists who entered the Cave during this visit noted no changes to artifacts and no evidence of looting or unauthorized visitation. At the surface, a concentration of flakes was noted in the nearby access road and one historic can was observed near the entrance.  

**Cultural Materials Collected?**  
Yes [x] No [ ]  

**General Comments:**  
Cave appears to be stable, with no new unauthorized visitation or vandalism.  

**Recommendations:**  
Repeat visit, as allowed, for further evaluation of archaeological potential and to watch for unauthorized activities in this location adjacent to Highway 20. Complete archive search for reports and information on earlier excavations. Visit and assess collections at Idaho Museum of Natural History.  

**Attach additional documentation, as warranted (photos, profiles, etc.)**  
Yes [ ] No [x]  

Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Cave Exterior – 06  
Monitor Name(s): Christina Olson, Jericho Whiting, Bryan Bybee  
Monitor Date: October 29, 2014

Project: Bat research - Temperature/Humidity Monitors  
Site Name/Number: Rattlesnake Cave / BEA-08-05-CFM-02  
Reason for monitoring: Observe and assist with project to avoid impacts to cultural resources, assist with tribal involvement, monitor condition of sensitive cultural deposits, and minimize cave entries to protect sensitive biological and cultural resources.

Findings:  

<table>
<thead>
<tr>
<th>Type</th>
<th>Impact Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No impacts from bat research. No evidence of unauthorized visitation. Cave appears to be undisturbed since last visit.</td>
</tr>
<tr>
<td>2</td>
<td>Bat researchers were aware of cultural resource sensitivities and avoided all impacts. No new impacts noted by bat researchers inside Cave and no new evidence of unauthorized visitation at the surface around the Cave</td>
</tr>
</tbody>
</table>

Did impacts extend into undisturbed areas? Yes ☒ No ☐  
If yes, describe: N/A

Work Halted? Yes ☐ No ☒  
If yes, describe: N/A

Notifications: None required under Type I finding.

Contact Method(s): E-mail ☒ Phone ☐ Official correspondence, CCN#:

Cultural Materials observed? Yes ☒ No ☐  
If yes, describe: Paleontologists from Idaho State University completed excavations in the east arm of the Cave in 1977. Significant paleontological deposits were documented and obsidian artifacts were encountered, but not carefully documented. During subsequent visits, portable artifacts such as sage torches, an arrow shaft, cut cane pieces, and large mammal bones have been observed on the surface in the western arm. However, a detailed inventory of cultural materials has not been completed. Old test pits show that soils are very deep in the east arm and they also appear to be deep in the longer west arm. Archaeological and paleontological potential is very high in the undisturbed deposits that remain in both arms. Biologists who entered the Cave during this visit noted no changes to artifacts and no evidence of looting or unauthorized visitation.

Cultural Materials Collected? Yes ☐ No ☒  
If yes, describe: N/A

General Comments: Cave appears to be stable, with no new unauthorized visitation or vandalism.

Recommendations: Repeat visit, as allowed, for further evaluation of archaeological potential and to watch for unauthorized activities.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes ☐ No ☒  
If yes, describe: Photos on file. Locational information withheld for resource protection.
Monitor Number: 2015 – Cave Exterior – 07
Monitor Name(s): Brenda Pace, John Irving
Monitor Date: September 24, 2015

Project: INL Cultural Resource Management Office yearly monitoring
Site Name/Number: Igloo Cave / BEA-12-08-4
Reason for monitoring: Routine, periodic surveillance of significant resources

Findings: Type 1 x Type 2  Type 3  Type 4
Impact Agent(s): No new impacts observed. Cave appears to be undisturbed since last visit by INL CRM personnel in 2012. In 2012, DOE-ID Security and federal agents began investigation of looting pits, which resulted in significant adverse impacts to the Cave interior. In 2015, this investigation remains open, but inactive.

Significance of Impact: No new evidence of unauthorized visitation or looting.
Did impacts extend into undisturbed areas? Yes No x
If yes, describe: N/A

Work Halted? Yes No x
If yes, describe: N/A
Notifications: None required for Type 1 finding.
Contact Method: E-mail Phone x Official correspondence, CCN:

Cultural Materials observed? Yes No x
If yes, describe: During original recording, a few obsidian flakes and a wagon part were found on the surface outside the Cave bubble and an obsidian biface fragment and rusty horse shoe were found inside near a slight circular arrangement of rocks that appeared to be a fire hearth near the center of the chamber. All interior artifacts and potential features were destroyed by looters in 2012. DOE-ID Security and federal agents maintain an open, but currently inactive, investigation of this damage. In 2015, obsidian flakes were noted outside the Cave. Although no entry was made, the view afforded by the entrance hole and skylight showed that the 2012 damage is still present and extensive, but essentially unchanged.

Cultural Materials collected? Yes No x
If yes, describe: N/A

General Comments: Igloo Cave was discovered in 2007 after the Twin Buttes wildfire removed juniper trees that had previously hidden it from view. The Cave is a small surface bubble that forms an enclosure with an entrance hole and skylight, but no subsurface arms or chambers. In 2012, when looting pits and modern trash were found inside the Cave, DOE-ID Security and federal agents began an investigation. In 2015, this investigation remains open, but inactive. During the visit in 2015, isolated obsidian flakes were noted outside the Cave. The Cave was not entered, but views through the entrance hole and skylight showed that previous looting pits and trash were still present, but no new looting was observed.

Recommendations: Continue routine monitoring for trespassing, looting, and vandalism at this remote location far from INL facilities and roads. Continue to support official investigations, as requested. Consider additional investigations of the Cave interior to formally assess damage and determine if National Register eligibility has been compromised.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes No x
If yes, describe: Photos on file. Locational information withheld for resource protection.
A: Prehistoric Archaeological Sites
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Prehistoric – 01
Monitor Name(s): Brenda Pace, Marie Holmer, Payton McGriff
Monitor Date: July 22, 2015

Project: INL Cultural Resource Management Office yearly monitoring
Site Name/Number: Pioneer Site / 10-BT-676
Reason for monitoring: Routine periodic surveillance of significant archaeological sites

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Impact Agent(s): No new disturbances noted. Gravity continues to erode river cutbank and bare soil is still present where archaeological excavations were conducted. No vehicle tracks, unauthorized visitation, or looting apparent.

Significance of Impact: No new disturbances observed.
Did impacts extend into undisturbed areas? Yes
If yes, describe: N/A

Work Halted? Yes
If yes, describe: N/A
Notifications: None required under Type 1 finding.
Primary contact(s): 
Date contacted: 
Contact Method: E-mail Phone Official correspondence, CCN#:

Cultural Materials observed? Yes
If yes, describe:
The Pioneer site is a stratified, multicomponent campsite and historic townsite with archaeological deposits extending back at least 6,000 years. Prehistoric and historic surface artifacts are densely concentrated at the surface and nearly 2 meters of cultural stratigraphy are exposed in the river cutbank. Archaeological research excavations have been conducted at the site and the area of these excavations appears to be stabilized. Significant historic components also remain undisturbed along the Oregon Shortline Railroad.

Cultural Materials collected? Yes
If yes, describe: N/A

General Comments: The site appears to be stable and not subject to any substantial erosion, animal burrowing, or unauthorized access. Gravity continues to pull soil and artifacts downstream from river cutbank, but impacts are gradual. Some animal burrowing is present too, but not adverse. Sandbags placed in excavation appear to be holding banks and preventing significant erosion. Vegetation is beginning to come back on the surface at the excavation site. Historic components have not been adversely impacted, though artifacts do appear to have been moved.

Recommendations: Continue routine monitoring on a periodic basis.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes
If yes, describe: Photos on file. Locational information withheld for resource protection.
**Field Monitoring Form**

**Monitor Number:** 2015 – Prehistoric – 02  
**Monitor Name:** Brenda Pace, Jackie Hafla  
**Monitor Date(s):** September 29, 2015

**Project:** INL Cultural Resource Management Office yearly monitoring  
**Site Name/Number:** Hellofasite / 10-JF-88  
**Reason for Monitoring:** Routine, periodic surveillance of significant archaeological sites

<table>
<thead>
<tr>
<th>Findings:</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact Agent(s):</td>
<td>Wind erosion, animal burrowing, animal dens.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significance of Impact:</td>
<td>No new impacts were noted. Wind continues to influence surface soils throughout the site area, exposing new artifacts and covering others. Animal burrows are showing up in soft, sandy soils and one portion of the rock wall may also be used periodically as a den. Rock walls appear unharmed from this activity and have not been impacted by nearby explosive testing. Previously reported evidence of Type 3 impacts is still apparent (old vehicle tracks, artifact discard piles). No new evidence of vehicle traffic or looting was discovered. In spite of past impacts the site retains archaeological and cultural significance and potential for future research.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Did impacts extend into undisturbed areas?** Yes [x] No

**Work Halted?** Yes [x] No

**Notifications:** None required under Type 1 finding.

**Cultural Materials Observed?** Yes [x] No

*If yes, describe:* In 1984 the site was named “Hellofasite” for the dense, diverse scatter of artifacts and unique rock walls recorded there. In FY 2011, looters relocated many surface artifacts to distinct “discard piles” and removed previously documented diagnostic artifacts (numerous projectile points, pottery, scrapers, knives, etc.). In 2012, INL Power Management distributed a video that shows how heavy equipment disturbance occurred. In 2015, no new evidence of human-caused disturbance was apparent. Winds do continue to influence surface soils on the site, exposing some artifacts and covering others and many animal tracks were also noted in the soft sand.

**Cultural Materials Collected?** Yes [x] No

**General Comments:** Visual inspection of the site indicates no impacts to rock structures and no new impacts to surrounding assemblage of artifacts. Looting, human-caused disturbance, and powerline work have caused significant impacts in the past but were not active in 2015. Site retains potential for future research in spite of past impacts. Federal agents and DOE-ID continue an investigation for vandals, but it is not active.

**Recommendations:** Continue routine monitoring and implement recommendations arising from ongoing federal investigation, as appropriate.

**Attach additional documentation, as warranted (photos, profiles, etc.)** Yes [ ] No [x]

*If yes, describe:* Photos on file. Locational information withheld for resource protection.
A: Historic Archaeological Sites
Monitor Number: 2015 – Historic – 01
Monitor Name: Hollie Gilbert, Payton McGriff
Monitor Date(s): June 16, 2015, August 19, 2015

Project: INL Cultural Resource Management Office yearly monitoring
Site Name/Number: Powell Stage Station / 10-BT-2194
Reason for Monitoring: Routine periodic surveillance of significant archaeological sites

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Impact Agent(s): No new impacts noted.
Significance of Impact: N/A
Did impacts extend into undisturbed areas? Yes No x
If yes, describe: N/A

Work Halted? Yes No x
If yes, describe: N/A
Notifications: E-mail Phone Official correspondence, CCN#:

Cultural Materials Observed? Yes No
If yes, describe: Non-diagnostic glass and metal artifacts.
Cultural Materials Collected? Yes No
If yes, describe:

General Comments: In FY-2014, a badger had been digging in the southwest corner inside the rock house feature and also outside the southeast corner. Since then, a packrat has moved into the badger burrow pulling in rocks and cactus around the burrow entrance. It seems that this activity has actually protected the rock wall from any further badger activity. Rodent activity will be closely monitored for any additional impacts. August 19th update – no rodent concerns at this time

Recommendations: Continue to monitor at a minimum annually.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes No x
If yes, describe: Photos on file. Locational information withheld for resource protection.
**Idaho National Laboratory Cultural Resource Management Office**  
**Field Monitoring Form**

**Monitor Number:** 2015 – Historic 02  
**Monitor Name:** Hollie Gilbert, Payton McGriff  
**Monitor Date(s):** July 14, 2015

**Project:** INL Cultural Resource Management Office yearly monitoring  
**Site Name/Number:** Birch Creek Stage Station / Reno homestead / 10-BT-2362  
**Reason for Monitoring:** Routine periodic surveillance of significant archaeological sites

<table>
<thead>
<tr>
<th>Findings:</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact Agent(s):</td>
<td>No new impacts or unauthorized visitation noted.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significance of Impact:</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did impacts extend into undisturbed areas?</td>
<td>Yes</td>
<td>No</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Work Halted?** Yes | No | x  
| If yes, describe: | N/A |

**Notifications:**  
**Contact Method:** E-mail, Phone, Official correspondence, CCN#:  

**Cultural Materials Observed?** Yes | x | No  
| If yes, describe: | In addition to general broken glass and various metal artifacts, a historic road and bridge abutments were discovered and located just south of the dugout feature. |

**Cultural Materials Collected?** Yes | No | x  
| If yes, describe: | |

**General Comments:** No grazing activity noted for this year in the vicinity of site.  
**Recommendations:** Due to proximity to public lands, continue to monitor annually.

**Attach additional documentation, as warranted (photos, profiles, etc.)** Yes | No | x  
| If yes, describe: | Photos on file. Locational information withheld for resource protection. |
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Historic- 03 |
| Monitor Name: | Hollie Gilbert, Payton McGriff |
| Monitor Date(s): | July 14, 2015 |
| Project: | INL Cultural Resource Management Office yearly monitoring |
| Site Name/Number: | Richards homestead / 10-BT-2358 |
| Reason for Monitoring: | Routine periodic surveillance of significant archaeological sites |

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
</table>

Impact Agent(s): None - no new site disturbance noted.

Significance of Impact:

Did impacts extend into undisturbed areas? Yes [ ] No [x]

If yes, describe: N/A

Work Halted? Yes [ ] No [x]

If yes, describe: N/A

Notifications:

Contact Method: E-mail [ ] Phone [ ] Official correspondence, CCN:

Cultural Materials Observed? Yes [x] No [ ]

If yes, describe: General historic glass and metal pieces strewn across site.

Cultural Materials Collected? Yes [ ] No [x]

If yes, describe: 

General Comments: In FY 2013, tire tracks were noted across site in addition to signs of sheep and cattle grazing impacts. In FY 2014 and 2015, it appeared that no grazing had occurred over the area.

Recommendations: Continue to monitor annually.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x]

If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Historic– 04 |
| Monitor Name:   | Hollie Gilbert, Payton McGriff |
| Monitor Date(s):| July 14, 2015 |

| Project: | INL Cultural Resource Management Office yearly monitoring |
| Site Name/Number: | Kuharski homestead / 10-CL-1054 |
| Reason for Monitoring: | Routine periodic surveillance of significant archaeological sites |

| Findings: | Type 1 x Type 2 Type 3 Type 4 |
| Impact Agent(s): | None – no new site disturbance noted. |
| Significance of Impact: | |
| Did impacts extend into undisturbed areas? | Yes No x |
| If yes, describe: | N/A |

| Work Halted? | Yes No x |
| If yes, describe: | N/A |

| Contact Method: | E-mail Phone Official correspondence, CCN#: |

| Cultural Materials Observed? | Yes No x |
| If yes, describe: | Expected historic glass and metal artifacts. |

| Cultural Materials Collected? | Yes No x |
| If yes, describe: | |

| General Comments: | No grazing has occurred thus far over the site in FY 2015. |
| Recommendations: | Continue to monitor annually due to proximity to public lands. |

| Attach additional documentation, as warranted (photos, profiles, etc.) | Yes No x |
| If yes, describe: | Photos on file. Locational information withheld for resource protection. |
A: Historic Trails
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Historic Trail– 01
Monitor Name: Hollie Gilbert, Marie Holmer
Monitor Date(s): September 22, 2015

Project: INL Cultural Resource Management Office yearly monitoring
Site Name/Number: Goodale’s Cutoff (Oregon Trail Cutoff)
Reason for Monitoring: Routine periodic surveillance of significant historic resources

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
</table>

Impact Agent(s): No new impacts noted. Ranching activities still prevalent in area.
Significance of Impact: N/A
Did impacts extend into undisturbed areas? Yes [x] No [ ]
If yes, describe: N/A

Work Halted? Yes [ ] No [x]
If yes, describe: N/A

Notifications: Contact Method: E-mail [ ] Phone [ ] Official correspondence, CCN#:

Cultural Materials Observed? Yes [x] No [ ]
If yes, describe: Features along the trail include rock cairns, rock piles from road clearing activity, other swales/ruts adjacent to main trail and worn grooved rocks from wagon wheels.

Cultural Materials Collected? Yes [ ] No [x]
If yes, describe: 

General Comments: Historic roads are routinely overused and impacted during ranching activities, especially when troughs are continually filled by water trucks weekly. Cattle use the road for easy access to the troughs which in turn create deeper ruts, leading to further erosion within the bed of the road.

Recommendations: Need to work with the BLM and ranchers to halt adverse impacts to the trail. Continue to monitor annually.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x]
If yes, describe: Photos on file.
A: Modern Resources
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Modern – 01
Monitor Name(s): Christina Olson
Monitor Date: September 03, 2015

Project: INL Cultural Resource Management Office yearly monitoring
Site Name/Number: EBR I Reactor Building and Guardhouse / EBR-601 and EBR-602
Reason for monitoring: Routine surveillance of INL historic properties

Findings:

<table>
<thead>
<tr>
<th>Impact Agent(s)</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moisture, lack of maintenance; existing impacts previously reported, no new impacts.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significance of Impact:
EBR-601 - Does not impact National Historic Landmark status. EBR-602 – Does not impact eligibility to the National Register of Historic Places

Did impacts extend into undisturbed areas? Yes [X] No

If yes, describe: N/A

Work Halted? Yes [X] No

If yes, describe: N/A

Notifications: N/A

Primary Contact(s): __________________________ Date(s) Contacted: __________________________
Contact Method(s): E-mail [X] Phone No Official correspondence, CCN#: __________________________

Cultural Materials observed? Yes [X] No

If yes, describe: The EBR I Reactor Building is a National Historic Landmark and its associated guardhouse is eligible for listing on the National Register of Historic Places.

Cultural Materials Collected? Yes [X] No

If yes, describe: N/A

General Comments:
EBR-601: Visual inspection of the concrete foundation and bricks and mortar indicates some spalling and deterioration from moisture on EBR-601 – severe spalling of bricks on west elevation under drain pipe.
EBR-602: Shows roof shingle and clapboard deterioration from lack of routine maintenance. Unable to do adequate surveillance on the interior due to inability to access it; looking through the windows, the interior also is deteriorating due to rodent infestation and moisture intrusion.

Recommendations:
EBR-601: Install adequate external drainage system – extend drain pipe away from building on west elevation.
EBR-602: Perform minimal routine maintenance and repairs on EBR-602.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [X] No

If yes, describe: Photos on file.
<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Number:</td>
<td>2015 – Modern -- 02</td>
</tr>
<tr>
<td>Monitor Name(s):</td>
<td>Christina Olson</td>
</tr>
<tr>
<td>Monitor Date:</td>
<td>September 03, 2015</td>
</tr>
<tr>
<td>Project:</td>
<td>INL Cultural Resource Management Office yearly monitoring</td>
</tr>
<tr>
<td>Site Name/Number:</td>
<td>ANP Objects / HTRE1, HTRE3, and locomotive</td>
</tr>
<tr>
<td>Reason for monitoring:</td>
<td>Routine surveillance of INL historic properties</td>
</tr>
<tr>
<td>Findings:</td>
<td></td>
</tr>
<tr>
<td>Impact Agent(s):</td>
<td>Moisture, lack of maintenance.</td>
</tr>
<tr>
<td>Significance of Impact:</td>
<td>Does not impact National Register eligibility status</td>
</tr>
<tr>
<td>Did impacts extend into undisturbed areas?:</td>
<td><strong>Yes</strong></td>
</tr>
<tr>
<td>Work Halted?:</td>
<td>Yes, No, N/A</td>
</tr>
<tr>
<td>Notifications:</td>
<td>N/A</td>
</tr>
<tr>
<td>Cultural Materials observed?:</td>
<td>Yes, No, N/A  HTRE1, HTRE3, and the locomotive are potentially eligible for listing on the National Register of Historic Places.</td>
</tr>
<tr>
<td>General Comments:</td>
<td>Exposure to the elements has caused rust and deterioration on both ANP engines and the locomotive. The engines are both covered in rust and bird excrement; in addition, several of the cables and hoses have rotted through. The locomotive is also suffering from exposure, with peeling paint and rust.</td>
</tr>
<tr>
<td>Recommendations:</td>
<td>Continue to monitor - minor maintenance is recommended (i.e. pest and weed control).</td>
</tr>
<tr>
<td>Attach additional documentation, as warranted (photos, profiles, etc.):</td>
<td>Yes, No, N/A  Photos on file.</td>
</tr>
</tbody>
</table>
**Idaho National Laboratory Cultural Resource Management Office**  
**Field Monitoring Form**

| Monitor Number: | 2015 – Modern – 03 |
| Monitor Name(s): | Christina Olson |
| Monitor Date: | August 13, 2015 |

**Project:** INL Cultural Resource Management Office yearly monitoring  
**Site Name/Number:** Arco NPG Marine Barracks / CF-606  
**Reason for monitoring:** Routine surveillance of INL historic properties

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
</table>

**Impact Agent(s):** Moisture, lack of maintenance.  
**Significance of Impact:** Does not impact National Register eligibility status  
**Did impacts extend into undisturbed areas?** Yes [x] No [ ]  
If yes, describe: N/A

**Work Halted?** Yes [ ] No [ ]  
If yes, describe: N/A  
**Notifications:** N/A  
**Contact Method:** E-mail [ ] Phone [ ] Official correspondence, CCN#: [ ]

**Cultural Materials observed?** Yes [x] No [ ]  
If yes, describe: CF-606 is eligible for listing on the National Register of Historic Places.  
**Cultural Materials collected?** Yes [ ] No [x]  
If yes, describe: N/A

**General Comments:** CF-606 is scheduled for demolition in FY2016 as per 2014 MOA between DOE-ID, SHPO, and ACHP. Minor spalling of bricks and mortar present on the exterior of the building. Monitoring of the interior condition of the non-original and original sections was not possible due to the presence of contaminants.  
**Recommendations:** None - 2014 MOA contains measures for mitigation of adverse impacts of demolition (HALS, completed September 30, 2015).

**Attach additional documentation, as warranted (photos, profiles, etc.)** Yes [ ] No [x]  
If yes, describe: Photos on file.
**Idaho National Laboratory Cultural Resource Management Office**

**Field Monitoring Form**

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Number:</td>
<td>2015 – Modern – 04</td>
</tr>
<tr>
<td>Monitor Name(s):</td>
<td>Christina Olson</td>
</tr>
<tr>
<td>Monitor Date:</td>
<td>August 13, 2015</td>
</tr>
<tr>
<td>Project:</td>
<td>INL Cultural Resource Management Office yearly monitoring</td>
</tr>
<tr>
<td>Site Name/Number:</td>
<td>Arco NPG Pump Houses / CF-642 and CF-651</td>
</tr>
<tr>
<td>Reason for monitoring:</td>
<td>Routine surveillance of INL historic properties</td>
</tr>
<tr>
<td>Findings:</td>
<td></td>
</tr>
<tr>
<td>Type 1</td>
<td>X</td>
</tr>
<tr>
<td>Type 2</td>
<td></td>
</tr>
<tr>
<td>Type 3</td>
<td></td>
</tr>
<tr>
<td>Type 4</td>
<td></td>
</tr>
<tr>
<td>Impact Agent(s):</td>
<td>No impacts have occurred</td>
</tr>
<tr>
<td>Significance of Impact:</td>
<td>N/A</td>
</tr>
<tr>
<td>Did impacts extend into undisturbed areas?</td>
<td>Yes X No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>N/A</td>
</tr>
<tr>
<td>Work Halted?</td>
<td>Yes No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>N/A</td>
</tr>
<tr>
<td>Notifications:</td>
<td>N/A</td>
</tr>
<tr>
<td>Contact Method:</td>
<td>E-mail Phone Official correspondence, CCN#:</td>
</tr>
<tr>
<td>Cultural Materials observed?</td>
<td>Yes X No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>CF-642 and CF-651 are eligible for listing on the National Register of Historic Places.</td>
</tr>
<tr>
<td>Cultural Materials collected?</td>
<td>Yes No X</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>N/A</td>
</tr>
<tr>
<td>General Comments:</td>
<td>Both pump houses are still in use and being maintained at a minimal level. Both pump houses were fully documented as part of the Arco NPG HALS completed September 30, 2015 as mitigation for the proposed demolition of CF-606, CF-607, CF-632, and portions of CFA-633 as mandated in the 2014 MOA between DOE-ID, SHPO, and ACHP.</td>
</tr>
<tr>
<td>Recommendations:</td>
<td>None.</td>
</tr>
<tr>
<td>Attach additional documentation, as warranted (photos, profiles, etc.)</td>
<td>Yes No X</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>Photos on file.</td>
</tr>
</tbody>
</table>
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Modern – 05
Monitor Name(s): Christina Olson
Monitor Date: August 13, 2015

Project: INL Cultural Resource Management Office yearly monitoring
Site Name/Number: Arco NPG Commanding Officer Quarters and Garage / CF-607 and CF-632
Reason for monitoring: Routine surveillance of INL historic properties

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Impact Agent(s):
Moisture, lack of maintenance.

Significance of Impact:
Does not impact National Register eligibility status

Did impacts extend into undisturbed areas? Yes [x] No

If yes, describe: N/A

Work Halted? Yes [ ] No [x]

If yes, describe: N/A

Notifications: N/A

Contact Method: [ ] E-mail [ ] Phone [ ] Official correspondence, CCN#:

Cultural Materials observed? Yes [x] No [ ]

If yes, describe: CF-607 and CF-632 are eligible for listing on the National Register of Historic Places.

Cultural Materials collected? Yes [ ] No [x]

If yes, describe: N/A

General Comments:
CF-607 is scheduled for demolition in FY2016 and CF-632 was demolished in FY2015, as per 2014 MOA between DOE-ID, SHPO, and ACHP. Minor spalling of bricks and mortar present on the exterior of the buildings. Monitoring of the interior condition was not possible due to the presence of contaminants.

Recommendations:
None - 2014 MOA contains measures for mitigation of adverse impacts of demolition (HALS, completed September 30, 2015).

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x]

If yes, describe: Photos on file.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

<table>
<thead>
<tr>
<th>Monitor Number:</th>
<th>2015 – Modern – 06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Name(s):</td>
<td>Christina Olson</td>
</tr>
<tr>
<td>Monitor Date:</td>
<td>August 13, 2015</td>
</tr>
</tbody>
</table>

**Project:** INL Cultural Resource Management Office yearly monitoring

**Site Name/Number:** Arco NPG Caretaker’s Quarters / CF-613

**Reason for monitoring:** Routine surveillance of INL historic properties

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Impact Agent(s):** Moisture, lack of maintenance.

**Significance of Impact:** Does not impact National Register eligibility status

**Did impacts extend into undisturbed areas?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

If yes, describe: N/A

**Work Halted?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If yes, describe: N/A

**Notifications:** N/A

**Contact Method:** E-mail

**Cultural Materials observed?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

If yes, describe: CF-613 is eligible for listing on the National Register of Historic Places.

**Cultural Materials collected?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

If yes, describe: N/A

**General Comments:** CF-613 is scheduled for demolition in FY2016 as per 2014 MOA between DOE-ID, SHPO, and ACHP. Minor spalling of bricks and mortar present on the exterior of the buildings. Monitoring of the interior condition was not possible due to the presence of contaminants.

**Recommendations:** None - 2014 MOA contains measures for mitigation of adverse impacts of demolition (HALS, completed September 30, 2015).

**Attach additional documentation, as warranted (photos, profiles, etc.)**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

If yes, describe: Photos on file.
Idaho National Laboratory Cultural Resource Management Office  
Field Monitoring Form

| Monitor Number: | 2015 – Modern – 07 |
| Monitor Name(s): | Christina Olson |
| Monitor Date: | August 13, 2015 |

**Project:** INL Cultural Resource Management Office yearly monitoring  
**Site Name/Number:** Arco NPG Standard High Explosive Magazines / CF-638 and CF-639  
**Reason for monitoring:** Routine surveillance of INL historic properties

**Findings:**  
- Type 1 [ ]  
- Type 2 [ ]  
- Type 3 [x]  
- Type 4 [ ]

**Impact Agent(s):** No impacts have occurred.  
**Significance of Impact:** N/A  
**Did impacts extend into undisturbed areas?** Yes [x] No [ ]  
**If yes, describe:** N/A

**Work Halted?** Yes [ ] No [ ]  
**If yes, describe:** N/A  
**Notifications:** N/A  
**Contact Method:** E-mail [ ] Phone [ ] Official correspondence, CCN#: [ ]

**Cultural Materials observed?** Yes [x] No [ ]  
**If yes, describe:** CF-638 and CF-639 are potentially eligible for listing on the National Register of Historic Places.

**Cultural Materials collected?** Yes [ ] No [x]  
**If yes, describe:** N/A

**General Comments:** Both magazines are still in use and being maintained at a minimal level. Both magazines were fully documented as part of the Arco NPG HALS completed September 30, 2015 as mitigation for the proposed demolition of CF-606, CFA-607, CF-632, and portions of CF-633 as mandated in the 2014 MOA between DOE-ID, SHPO, and ACHP.

**Recommendations:** None

**Attach additional documentation, as warranted (photos, profiles, etc.)** Yes [ ] No [x]  
**If yes, describe:** Photos on file.
A: Projects
Monitor Number: 2015 – Project – 01  
Monitor Name: Brenda Pace, Hollie Gilbert, Carla Heathman  
Monitor Date(s): April 22, 2015

Site Name/Number: 10-BT-1135  
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings:  
Impact Agent(s):  
Type 1  x  
Type 2  
Type 3  x  
Type 4  
As noted on the original site form from 1985, an unimproved road leading to old borrow area runs through the center of the site. Currently, artifacts are Present in the road and are also located on the edge of the old borrow area. No new impacts were observed.

Significance of Impact: Site has been previously impacted by vehicles associated with a nearby borrow area, probably during construction of the nearby facility in the 1950s. Despite these impacts, portions of the site remain undisturbed and diagnostic artifacts are still present. Buried cultural deposits are possible and the site retains its potential for nomination to the National Register of Historic Places.

Did impacts extend into undisturbed areas?  
Yes  x  No

Work Halted?  
Yes  x  No

Notifications:  
Contact Method: E-mail  
Phone  
Official correspondence, CCN#:

Cultural Materials Observed?  
Yes  x  No

Cultural Materials Collected?  
Yes  x  No

General Comments: No substantial changes from original recording. Artifacts are present in the road associated with the old borrow pit. However, significant deposits and diagnostic artifacts are present outside the road and buried cultural deposits may be present. Proposed new powerline for the current project has been moved to the north to avoid impacts to the site.

Recommendations: No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. If project plans change and impacts are likely, the site should be tested to determine if any significant cultural deposits are present. In addition, all soil disturbance associated with the current project must be monitored by INL cultural resource personnel.

Attach additional documentation, as warranted (photos, profiles, etc.)  
Yes  x  No

If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office  
Field Monitoring Form

Monitor Number: 2015 – Project – 02
Monitor Name: Brenda Pace, Hollie Gilbert, Carla Heathman
Monitor Date(s): April 23, 2015

Site Name/Number: 10-BT-1142
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings:
Impact Agent(s): Site was undisturbed in 1985 and remains in good condition in 2015. No new impacts were observed.
Significance of Impact: Site remains undisturbed in 2015.
Did impacts extend into undisturbed areas? Yes [x] No
If yes, describe: N/A

Work Halted? Yes [ ] No [x]
If yes, describe: N/A
Notifications:
Contact Method: E-mail [x] Phone [ ] Official correspondence, CCN#:

Cultural Materials Observed? Yes [x] No [ ]
If yes, describe: During the original recording in 1985, this site was described as a small lithic scatter consisting of approximately 100 artifacts. Diagnostics included one small corner-notched point and a steep end scraper. In 2015, a dispersed scatter of more than 50 flakes was documented along with schistose quartzite scrapers and one piece of fire-cracked river rock. The latter artifact suggests that a buried fire hearth may be present in subsurface cultural deposits. The site remains potentially eligible for nomination to the National Register of Historic Places for the information that it could yield.

Cultural Materials Collected? Yes [ ] No [x]
If yes, describe: 

General Comments: No substantial changes from original recording. The site remains undisturbed and new evidence suggests that a buried fire hearth may be present. Proposed activities associated with the current project are not likely to cause any impacts to the site since they are located to the south.

Recommendations: No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. If project plans change and impacts are likely, the site should be tested to determine if any significant cultural deposits are present. In addition, all soil disturbance associated with the current project must be monitored by INL cultural resource personnel.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x]
If yes, describe: Photos on file. Locational information withheld for resource protection.
Monitor Number: 2015 – Project – 03
Monitor Name: Brenda Pace, Hollie Gilbert, Carla Heathman
Monitor Date(s): April 23, 2015

Site Name/Number: 10-BT-1161
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings:

<table>
<thead>
<tr>
<th>Impact Agent(s)</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In 1985, the southern edge of the site contained impacts associated with the dumping of gravel fill. These impacts were observed again in 2015 and may be associated with construction of Wilson Blvd. Wildfire in 2010 passed over the site, removing larger brush and vegetation. Grasses have returned and some light aeolian erosion is currently affecting loose surface soils. No significant new impacts were observed in 2015.

Significance of Impact: Impacts along the southern edge of the site probably associated with road construction are not significant. A substantial portion of the site remains undisturbed. Impacts from wildfire are also not significant.

Did impacts extend into undisturbed areas? Yes [x] No

Work Halted? Yes [ ] No [x]

Contact Method: E-mail [ ] Phone [ ] Official correspondence, CCN#:

Cultural Materials Observed? Yes [x] No [ ]

Artifact assemblage at this site is similar to that reported in 1985 during initial recording. Approximately 80 artifacts were noted then, along with a Rosegate corner-notched point, a stemmed point, a scraper, three bifacial fragments, and several retouched flakes. In 2015, 80 flakes were found and diagnostic artifacts included another Rosegate corner-notched point, and an Elko corner-notched point broken into two conjoining pieces. The site remains potentially eligible for nomination to the National Register of Historic Places for the information that it could yield.

Cultural Materials Collected? Yes [x] No [ ]

General Comments: No substantial changes from original recording. The site remains undisturbed and may contain additional information. Proposed activities associated with the current project are not likely to cause significant impacts with careful placement of new poles and access roads.

Recommendations: This site should be closely monitored during project activities. New poles must be placed so that sensitive artifacts and deposits are spanned. The new access road must be established adjacent to Wilson Blvd. in the zone disturbed during original construction. In addition, all soil disturbance associated with the project must be monitored by INL cultural resource personnel.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x] Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Project – 04
Monitor Name: Brenda Pace, Hollie Gilbert, Carla Heathman
Monitor Date(s): April 23, 2015

Site Name/Number: 10-BT-1143
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings: Type 1 [x] Type 2 [ ] Type 3 [ ] Type 4 [ ]

Impact Agent(s): In 1985, the PBF perimeter fence was found to pass through the edge of this prehistoric rock structure. In 2015, the fence has not changed.

Significance of Impact: Site remains in good condition despite the fenceline that passes through one edge. The rock ring retains integrity of location, setting, materials, and workmanship even though the fence has disturbed one edge. National Register eligibility has not been compromised by this older disturbance.

Did impacts extend into undisturbed areas? Yes [x] No [ ]
If yes, describe: N/A

Work Halted? Yes [ ] No [x]
If yes, describe: N/A

Notifications: Contact Method: E-mail [ ] Phone [ ] Official correspondence, CCN#:

Cultural Materials Observed? Yes [x] No [ ]
If yes, describe: During the original recording in 1985, this site consisted of a circular arrangement of basalt boulders, some stacked, on a rocky knoll and it was interpreted as a small hunting blind. In 2015, the site retained these original characteristics with no changes or additional impacts. Nearly all of the rocks exhibited heavy lichen, with only a few showing the white carbonate coating typical of recently disturbed rock. The topographic position of the rock ring provides a good view into a low area located to the west where game may have congregated. The site remains potentially eligible for nomination to the National Register of Historic Places due to its rarity and for the information that it could yield. Shoshone-Bannock tribal representatives also expressed specific concerns for its protection.

Cultural Materials Collected? Yes [ ] No [x]
If yes, describe:

General Comments: No substantial changes from original recording. The site has not been subject to any new impacts. It is potentially eligible for nomination to the National Register and may be of tribal cultural significance. Proposed activities associated with the current project are located to the south of the rocky knoll and are not likely to cause any impacts to the site.

Recommendations: No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. In addition, all soil disturbance associated with the current project must be monitored by INL cultural resource personnel.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x]
If yes, describe: Photos on file. Locational information withheld for resource protection.
### Field Monitoring Form

**Idaho National Laboratory Cultural Resource Management Office**

**Monitor Number:** 2015 – Project – 05  
**Monitor Name:** Brenda Pace, Hollie Gilbert, Carla Heathman  
**Monitor Date(s):** April 30, 2015  

**Project:** BEA-15-25: INL Power Grid Test Bed Enhancements  
**Site Name/Number:** 10-BT-1209  
**Reason for Monitoring:** Re-identify site area to facilitate avoidance during proposed project and update site records.

### Findings:

**Impact Agent(s):**  
- Type 1: Impacts associated with the existing powerline and road were documented in 1985 during original recording. In 2015, these previous impacts were confirmed, with the impacts cutting through the center of the artifact scatter.  
- Type 2: An artifact discard pile was also found near power pole # 56-9, indicating that unauthorized artifact removal has occurred since 1985. A range fire in 2010 and subsequent wind erosion have removed vegetation and increased aeolian re-deposition of surface soils throughout the area.

**Significance of Impact:**  
- Powerline construction, maintenance, and ongoing use have created a zone of disturbance through the site area. Site has also been subject to looting of surface artifacts. Despite these impacts, portions of the site remain largely undisturbed and diagnostic artifacts are still present. The site retains its potential for nomination to the National Register of Historic Places.

<table>
<thead>
<tr>
<th>Did impacts extend into undisturbed areas?</th>
<th>Yes</th>
<th>No</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Halted?</th>
<th>Yes</th>
<th>No</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notifications:**  
E-mail  
Phone  
Official correspondence, CCN:

**Cultural Materials Observed?**  
- Yes | X | No  
   |    |    |   |
   |     |    |   |
| If yes, describe:  
In 1985, the site was described as a scatter of 200 flakes and a Rosegate corner-notched point. In FY 2015, these basic characteristics were confirmed, but many flakes were covered by a thin, recent deposit of aeolian sand. The visible artifact inventory in 2015 included 65 flakes, a biface fragment, and schistose quartzite scrapers. Nearly 20 of the larger flakes originally found on the site had been moved to a looter’s discard pile on the edge of the site near a power pole. Flakes were present in the erosional surface of the road, indicating possible depth of cultural deposits.

**Cultural Materials Collected?**  
- Yes | X | No
   |    |    |   |
   |     |    |   |
| If yes, describe:  
The site has been subject to moderate impacts from powerline maintenance, range fire, erosion and unauthorized artifact removal since its original recording. Undisturbed subsurface cultural deposits may be preserved in areas that are away from the powerline and for the information that these deposits may contain, the site remains potentially eligible for nomination to the National Register.

**General Comments:**  
The site has been subject to moderate impacts from powerline maintenance, range fire, erosion and unauthorized artifact removal since its original recording. Undisturbed subsurface cultural deposits may be preserved in areas that are away from the powerline and for the information that these deposits may contain, the site remains potentially eligible for nomination to the National Register.

**Recommendations:**  
- No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. All vehicle traffic through the site area must be restricted to the existing road and gravel could be added to the road surface to prevent additional erosion. In addition, all soil disturbance associated with the current project must be monitored by INL cultural resource personnel.

**Attach additional documentation, as warranted (photos, profiles, etc.)**  
- Yes | No | X
   |    |    |   |
   |     |    |   |
| If yes, describe:  
Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Project – 06 |
| Monitor Name: | Brenda Pace, Hollie Gilbert, Carla Heathman |
| Monitor Date(s): | April 30, 2015 |

| Site Name/Number: | 10-BT-1214 |
| Reason for Monitoring: | Re-identify site area to facilitate avoidance during proposed project and update site records. |

| Findings: | Type 1 | Type 2 | Type 3 | Type 4 |
| Impact Agent(s): | Impacts associated with the powerline were noted during the original recording of this site in 1985. In 2015 these previous impacts were confirmed and consisted of power poles (#56-12), access road, old shallow trenches, and concrete cleanouts. Light erosion of sandy surface soils has also occurred, related to the wildfire that burned through the area in 2010. |
| Significance of Impact: | The swath of disturbance caused by the powerline and associated road is significant, but undisturbed deposits still remain in a large area adjacent to the disturbance. Diagnostic artifacts were identified here in 2015 and the potential for shallow subsurface cultural deposits is high. |

| Did impacts extend into undisturbed areas? | Yes | No | X |
| Work Halted? | Yes | No | X |

| Notifications: | Contact Method: | E-mail | Phone | Official correspondence, CCN#: |
| Cultural Materials Observed? | Yes | No | X |
| If yes, describe: | In 1985, the site consisted of approximately 50 small tertiary flakes and two large notched projectile point fragments. Buried cultural deposits were considered a possibility at this time. In 2015, the artifact inventory was expanded, but the same basic characteristics were confirmed. Approximately 100 flakes were noted and nearly all were small and representative of late stage biface reduction. Chipped stone tools included a Rosegate corner-notched point, a Cottonwood preform, two nondiagnostic point fragments, and a schistose quartzite scraper. Additional artifacts and shallow cultural deposits are still considered a possibility in relatively undisturbed soils adjacent to the powerline and road. |
| Cultural Materials Collected? | Yes | No | X |
| If yes, describe: | The site has been impacted by powerline construction and operation as well as a range fire in 2010. However, undisturbed portions of the site are present and these may contain additional information in shallow subsurface cultural deposits. The site is potentially eligible for nomination to the National Register because these deposits may contain additional information that could be of importance in understanding prehistoric use of the area. |

| General Comments: | Recommendations: | No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. All vehicle traffic through the site area must be restricted to the existing road and gravel could be added to the road surface to prevent additional erosion. In addition, all soil disturbance associated with the current project must be monitored by INL cultural resource personnel. |

| Attach additional documentation, as warranted (photos, profiles, etc.) | Yes | No | X |
| If yes, describe: | Photos on file. Locational information withheld for resource protection. |
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Project – 07
Monitor Name: Brenda Pace, Hollie Gilbert, Carla Heathman
Monitor Date(s): May 5, 2015

Site Name/Number: 10-BT-1172
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings:

Impact Agent(s):
This site was undisturbed when it was initially recorded in 1985. In 2015, light erosion following a 2010 range fire was observed and a monitoring well (#PBF-MON-A-004) was located near the eastern border of the site. Neither of these recent impacts had caused significant damage to the cultural deposits.

Significance of Impact:
The site remains largely undisturbed in 2015. Sandy surface soils have undergone light erosion since a range fire in 2010, but the dunes in which the cultural materials are located remain stable and significant cultural deposits remain.

Did impacts extend into undisturbed areas? Yes [x] No

Work Halted? Yes [x] No

Notifications:
Contact Method: E-mail [x] Phone [ ] Official correspondence, CCN#:

Cultural Materials Observed? Yes [x] No [ ]
If yes, describe:
in 1985, the site was described as a dispersed scatter of 125 flakes, nine tools (four large notched and stemmed projectile points, three biface fragments, two scraping tools, two scoria fragments), and two possible fire hearths among three shallow sand dunes. In 2015, the assemblage was unchanged and a similar assemblage of flakes, tools, and hearth features was documented. Diagnostic artifacts in 2015 included two additional stemmed point fragments, two large notched point fragments, several pressure-flaked biface tips, and one fragment of the scoria observed in 1985. The two hearths were also re-identified. Buried cultural deposits are considered likely.

Cultural Materials Collected? Yes [x] No [ ]
If yes, describe:

General Comments: The site contains undisturbed cultural deposits that may include datable cultural features. As in 1985, it is considered to be potentially eligible for nomination to the National Register based on the information potential of these deposits.

Recommendations: No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. New poles must be placed so that lines will span the site area and all vehicle traffic in the vicinity must be routed to avoid the surface artifacts. In addition, all soil disturbance associated with the current project must be monitored by INL cultural resource personnel.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x]
If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Project – 08
Monitor Name: Brenda Pace, Hollie Gilbert, Carla Heathman
Monitor Date(s): May 5, 2015

Site Name/Number: 10-BT-1039
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings:

Impact Agent(s): In 1984, the condition of this small site was rated as poor due to construction related impacts throughout the area. In 1996, Native American human remains were discovered in excavations for a stormwater basin located to the west of the site. In 2015, the extensive impacts were still evident and included construction of the stormwater basin, a buried power cable and associated road, and general surface disturbance in the zone around the WERF facility. Area also burned during a range fire in 2010.

Significance of Impact: Impacts are extensive and significant, but the potential for discovery of additional buried Native American human remains is high. If these remains were located at the same depth as those discovered in the nearby stormwater basin in 1996, they would be unaffected by the extensive surface disturbance that is present today.

Did impacts extend into undisturbed areas? Yes ☒ No ☐
If yes, describe: N/A

Work Halted? Yes ☐ No ☒
If yes, describe: N/A

Notifications:
Contact Method: E-mail ☒ Phone ☐ Official correspondence, CCN#:

Cultural Materials Observed? Yes ☒ No ☐
If yes, describe: In 1984, only eight flakes and one nondiagnostic projectile point fragment were identified in the area. In 2015, six artifacts were inventoried, including four unmodified flakes and two nondiagnostic pressure-flaked biface fragments. No evidence of cultural features or human remains was observed at the current ground surface.

Cultural Materials Collected? Yes ☐ No ☒
If yes, describe: N/A

General Comments: Due to the potential for discovery of additional human remains, this site and its surrounding area are considered to be very sensitive. Human remains discovered in 1996 are stable beneath three truckloads of clean fill placed in one corner of the stormwater pond. Shoshone-Bannock tribal representatives have requested that work activities be curtailed here, even at developed facilities.

Recommendations: No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. All vehicle traffic through the site area must be restricted to the existing road that runs along the buried cable. Poles must be placed so that sensitive artifacts and deposits are spanned. New signs stating “No Admittance” should be installed around the edges of the stormwater pond. All soil disturbance associated with the current project must be monitored by INL cultural resource and Shoshone-Bannock personnel. Workers in the PBF/CITRC area must attend a cultural resource awareness briefing.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes ☐ No ☒
If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Project – 09
Monitor Name: Brenda Pace, Hollie Gilbert, Carla Heathman
Monitor Date(s): May 5, 2015

Site Name/Number: 10-BT-1044
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings: Type 1 x
Impact Agent(s): Powerline and associated road were identified as impacts to this site during initial recording in 1985. A lack of chipped stone artifacts at this time also suggested that artifacts may have been removed unlawfully. In 2015, the site appeared to have changed little from the original recording. Light impacts associated with the powerline were still present (Pole # 32 on east edge of artifact scatter) and light erosion after a 2010 range fire was evident

Significance of Impact: Very little has changed at this location and the site remains largely undisturbed in 2015. Light surface erosion has occurred since 2010 when a range fire passed through. Undisturbed cultural deposits remain in the area, potentially including datable subsurface cultural features.

Did impacts extend into undisturbed areas? Yes [ ] No [ ] x
If yes, describe: N/A

Work Halted? Yes [ ] No [ ] x
If yes, describe: N/A

Notifications:
Contact Method: E-mail [ ] Phone [ ] Official correspondence, CCN#:

Cultural Materials Observed? Yes [ ] x No [ ]
If yes, describe: The assemblage exposed on the surface at this site is very similar to that which was documented in 1985. Approximately 100 flakes were noted at both times. Two utilized flakes were also noted both years. In 2015, ongoing light erosion had exposed a few more chipped stone tools including a large notched projectile point fragment and a schistose quartzite scraper. The concentration of burned large mammal bone on the north end of the artifact scatter and fire-cracked rock noted in 1985 are still present, without any new impacts. Both of these features may represent fire hearths or cooking features, which may contain datable subsurface deposits.

Cultural Materials Collected? Yes [ ] No [ ] x
If yes, describe:

General Comments: Significant, datable subsurface deposits may be present at this site and the information that could be obtained through excavation and study of these materials could provide important information to help to understand prehistoric occupation of the area. The site is potentially eligible for nomination to the National Register because of this information.

Recommendations: No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. New poles must be placed so that lines will span the site area and all vehicle traffic in the vicinity must be routed to avoid the surface artifacts. In addition, all soil disturbance associated with the current project must be monitored by INL cultural resource personnel.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [ ] x
If yes, describe: Photos on file. Locational information withheld for resource protection.
## Idaho National Laboratory Cultural Resource Management Office
### Field Monitoring Form

**Monitor Number:** 2015 – Project – 10  
**Monitor Name:** Brenda Pace, Hollie Gilbert, Carla Heathman  
**Monitor Date(s):** May 5, 2015

**Project:** BEA-15-25: INL Power Grid Test Bed Enhancements  
**Site Name/Number:** 10-BT-1123  
**Reason for Monitoring:** Re-identify site area to facilitate avoidance during proposed project and update site records.

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

**Impact Agent(s):**

In 1985 when this site was initially recorded, the PBF/CITRC fence and perimeter road were noted as impacts. In 2015, additional heavy impacts were documented, all related to fire-fighting during the range fire of 2010. Impacts included large firebreaks, heavy equipment use, and light wind erosion of surface soils.

**Significance of Impact:**

A portion of the site (~20%) has been destroyed by heavy ground disturbance in the firebreak. Artifacts are exposed in the soil ricks that run alongside the firebreak and only heavily calcified subsoils are exposed within the dozer lines. Light erosion has exposed additional artifacts. Undisturbed areas do still exist within the large dispersed scatter of artifacts and the stone circle/hearth located on top of the knoll was not affected.

**Did impacts extend into undisturbed areas?**

- Yes [ ]
- No [X]

**Work Halted?**

- Yes [ ]
- No [X]

**Notifications:**

**Contact Method:**

- E-mail [X]
- Phone [ ]
- Official correspondence, CCN#:

**Cultural Materials Observed?**

- Yes [X]
- No [ ]

In 1985, approximately 150 widely dispersed artifacts were recorded at this location, including 100 flakes, two small side-notched arrow points (Avonlea, Desert series), three large notched point fragments, two end scrapers, five biface fragments, and four utilized flakes. A lava knoll inside the site boundary also revealed a stone circle/hearth and many of the diagnostic artifacts were associated with this feature. In 2015, disturbance of ~20% of the site was documented due to 2010 fire-fighting. Flakes were found in the disturbed soils at the edge of a firebreak and light erosion had exposed additional artifacts in some areas and covered them in others. In general, the site was shown to cover a larger area than originally estimated. However, only 40 flakes, a large notched point, and a schistose quartzite scraper were found. Although fire impacts also occurred on top of the knoll, the stone circle/hearth is undisturbed. Although the site has sustained significant damage, undisturbed cultural deposits may still be present and these would justify a nomination to the National Register.

**Cultural Materials Collected?**

- Yes [X]
- No [ ]

**General Comments:**  
Although the site has been damaged, it remains potentially eligible for nomination to the National Register.

**Recommendations:**  
No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. New poles must be placed so that lines will span the site area and all vehicle traffic must be routed to avoid the surface artifacts. Lastly, all soil disturbance during the current project must be monitored by INL cultural resource personnel.

**Attach additional documentation, as warranted (photos, profiles, etc.)**

- Yes [ ]
- No [X]

If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Project – 11
Monitor Name: Brenda Pace, Hollie Gilbert, Carla Heathman
Monitor Date(s): May 5, 2015

Site Name/Number: 10-BT-1216
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings: |
| Type 1 | Type 2 | Type 3 | Type 4 |

Impact Agent(s): In 1985, a dearth of chipped stone tools on the surface of this large site led researchers to believe that unauthorized artifact collection had occurred. No other impacts were noted at that time. In 2015, a small artifact discard pile located on a basalt outcrop along the site boundary provided additional evidence of looting. Light erosion following a 2010 range fire was also noted.

Significance of Impact: Evidence of unauthorized artifact removal has been noted at other sites in the vicinity. The site is likely to contain additional subsurface cultural deposits that may yield information important for understanding prehistoric use. The loss of diagnostic artifacts will limit the interpretive value of the site somewhat, but will not eliminate the value of the information that could be obtained through careful study. Light erosion of loose surface soils is a widespread impact, but this is limited in scope and does not compromise research potential.

Did impacts extend into undisturbed areas? Yes [x] No
If yes, describe: N/A

Work Halted? Yes [x] No
If yes, describe: N/A

Notifications: Contact Method: E-mail [ ] Phone [x] Official correspondence, CCN#:

Cultural Materials Observed? Yes [x] No
If yes, describe: In 1985, hundreds of flakes were observed in three major concentrations at this site. Diagnostic tools were limited to three large-notched point fragments at this time. In 2015, light surface soils had shifted due to a 2010 range fire, obscuring some of the flakes. Only 150 flakes were observed in a dispersed scatter at this time and no diagnostic artifacts were found. Six of the largest flakes found on the site had been left by a looter in a small pile on a distinctive lava outcrop near the edge of the site.

Cultural Materials Collected? Yes [x] No
If yes, describe: N/A

General Comments: Evidence indicates that this large site has been repeatedly visited by looters who have removed all of the diagnostic artifacts that may have been present. Otherwise the site appears to be undisturbed and significant cultural deposits may be present. The site is potentially eligible for nomination to the National Register because of this.

Recommendations: No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. All vehicle traffic through the site area must be restricted to existing roads or to paths that go around rather than through the artifact scatter. Employee education should help to prevent additional looting. In addition, all soil disturbance associated with the current project will be monitored by INL cultural resource personnel.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [x] No
If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Project – 12
Monitor Name: Brenda Pace, Hollie Gilbert, Carla Heathman
Monitor Date(s): August 17, 2015

Site Name/Number: 10-BT-1167
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings: Type 1 x Type 2 Type 3 Type 4
Impact Agent(s): In 1985, portions of this site had been heavily disturbed by roads, fencelines, an earthen berm, and a variety of other surface and subsurface construction activity. These impacts were still apparent in 2015 with little change.
Significance of Impact: The site has changed little since its original recording in 1985. Impacts are still significant throughout much of the site area, but portions of the site are intact and the potential for subsurface cultural deposits is high here. With these remnant deposits undisturbed in 2015, the site retains some potential for nomination to the National Register in spite of the previous damage.

If yes, describe: N/A
Did impacts extend into undisturbed areas? Yes No x

Work Halted? Yes No x
If yes, describe: N/A
Notifications:
Contact Method: E-mail Phone Official correspondence, CCN#: 
Cultural Materials Observed? Yes No x
If yes, describe: In 1985, the site was described as a thin lithic scatter of approximately 50 artifacts including obsidian flakes, an end scraper, and a nondiagnostic biface fragment. Subsurface artifacts were considered likely due to the presence of flakes in the backdirt of a construction-related hole. In 2015, approximately 60 flakes were inventoried along with a finely made Rosegate corner-notched point fragment. Fire-cracked basalt fragments that may represent a partially buried fire hearth were also noted. Finally, new scatters of artifacts were observed to the south of the site and classified as new sites.

Cultural Materials Collected? Yes No x
If yes, describe: 

General Comments: Although much of this site has been destroyed or seriously disturbed by activities associated with the construction of PBF/CITRC, a small remnant undisturbed subsurface cultural deposits remains. This portion of the site may also contain datable cultural features. Until testing has been completed to determine the extent and nature of subsurface cultural materials, the site is evaluated as potentially eligible for nomination to the National Register.

Recommendations: No additional impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. In addition, all soil disturbance associated with the current project must be monitored by INL cultural resource personnel.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes No x
If yes, describe: Photos on file. Locational information withheld for resource protection.

A-55
**Idaho National Laboratory Cultural Resource Management Office**  
**Field Monitoring Form**

<table>
<thead>
<tr>
<th>Monitor Number:</th>
<th>2015 – Project – 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Name:</td>
<td>Brenda Pace, Hollie Gilbert, Carla Heathman</td>
</tr>
<tr>
<td>Monitor Date(s):</td>
<td>August 17, 2015</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Name/Number:</td>
<td>10-BT-1207</td>
</tr>
<tr>
<td>Reason for Monitoring:</td>
<td>Re-identify site area to facilitate avoidance during proposed project and update site records.</td>
</tr>
</tbody>
</table>

**Findings:**

<table>
<thead>
<tr>
<th>Impact Agent(s):</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>There was no sign of impacts to this small site during its original recording in 1985. The site appeared to have changed very little in 2015. Some light surface erosion was observed due to the removal of vegetation during a 2010 range fire. Near the southern boundary of the site, vehicles have crossed the surface repeatedly to access power pole # 52-4 and a pile of basalt rubble probably associated with powerline maintenance has been deposited.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significance of Impact:**

Light surface erosion has not caused significant impacts to the site area. Vehicle travel and activities associated with power pole #52-4 has avoided the majority of artifacts present. Undisturbed cultural deposits remain in the deep sandy soils.

**Did impacts extend into undisturbed areas?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Work Halted?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notifications:**

**Contact Method:**

<table>
<thead>
<tr>
<th>E-mail</th>
<th>Phone</th>
<th>Official correspondence, CCN#:</th>
</tr>
</thead>
</table>

**Cultural Materials Observed?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*In 1985, the sandy soils at this site revealed approximately 25 flakes. No diagnostic artifacts were identified, but buried cultural deposits were considered a possibility. In 2015, a similar assemblage of debitage was documented along with a Cottonwood triangular arrow point and a concentration of large, green-fractured, burned mammal bone.*

**Cultural Materials Collected?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General Comments:**

The essential characteristics of this small site remain the same in 2015 as they were originally documented in 1985. Buried cultural deposits remain a possibility in the deep sandy soils found in the area and if these are present, the site will be clearly eligible for nomination to the National Register.

**Recommendations:**

No impacts are anticipated at the site, but it should be periodically monitored during construction, along with other sensitive sites in the PBF/CITRC area. All vehicle traffic through the site area must be restricted to the existing road and gravel could be added to the road surface to prevent additional erosion. In addition, all soil disturbance associated with the current project must be monitored by INL cultural resource personnel.

**Attach additional documentation, as warranted (photos, profiles, etc.)**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Photos on file. Locational information withheld for resource protection.*
## Field Monitoring Form

### Monitor Number:
2015 – Project – 14

### Monitor Name:
Brenda Pace, Hollie Gilbert, Julie Williams

### Monitor Date(s):
November 3, 2014

### Project:
BEA-15-02: INL Fiber Optic Cable Installation

### Site Name/Number:
10-BT-1732

### Reason for Monitoring:
Re-identify site area to facilitate avoidance during proposed project.

### Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>❌</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Impact Agent(s):
No impacts observed from natural forces or INL activities.

#### Significance of Impact:
Site remains undisturbed.

#### Did impacts extend into undisturbed areas?
Yes ❌ No ✗

If yes, describe:
N/A

#### Work Halted?
Yes ❌ No ✗

If yes, describe:
N/A

### Notifications:

#### Contact Method:
E-mail ☑ Phone ☐ Official correspondence, CCN#:

### Cultural Materials Observed?
Yes ✗ No ❌

If yes, describe:
In 1990, this site was originally described as a small lithic scatter consisting of nine obsidian flakes, one retouched obsidian flake, and one biface fragment of white silicate material. In FY 2015, the original pebble pile that served as a site datum was re-identified. Six artifacts were observed: a retouched obsidian flake also noted in 1990, two obsidian biface fragments, and three unmodified flakes. As in 1990, no evidence of cultural features was apparent.

### Cultural Materials Collected?
Yes ❌ No ✗

If yes, describe:

### General Comments:
No substantial changes from original recording. Site is located approximately 30 meters from the powerline in an area that will not be impacted by installation of new fiber optics on the existing poles.

### Recommendations:
No additional monitoring recommended.

### Attach additional documentation, as warranted (photos, profiles, etc.)
Yes ❌ No ✗

If yes, describe:
Photos on file. Locational information withheld for resource protection.
# Idaho National Laboratory Cultural Resource Management Office
## Field Monitoring Form

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Number:</td>
<td>2015 – Project – 15</td>
</tr>
<tr>
<td>Monitor Name:</td>
<td>Brenda Pace, Hollie Gilbert</td>
</tr>
<tr>
<td>Monitor Date(s):</td>
<td>November 4, 2014</td>
</tr>
<tr>
<td>Project:</td>
<td>BEA-15-02: INL Fiber Optic Cable Installation</td>
</tr>
<tr>
<td>Site Name/Number:</td>
<td>10-BT-1188</td>
</tr>
<tr>
<td>Reason for Monitoring:</td>
<td>Re-identify site area to facilitate avoidance during proposed project and update site records.</td>
</tr>
<tr>
<td>Findings:</td>
<td>Type 1</td>
</tr>
<tr>
<td>Impact Agent(s):</td>
<td>Powerline and associated road and historic ditch cut through the middle of site. An artifact discard pile located near power pole #27 indicates that unauthorized artifact removal has occurred in the past.</td>
</tr>
<tr>
<td>Significance of Impact:</td>
<td>Powerline construction, maintenance, and ongoing use have created a zone of significant disturbance through the site area. Ditch has also disturbed a narrow linear zone. Site has also been subject to looting of surface artifacts at some time since its original recording in 1985. Despite these impacts, large portions of the site remain undisturbed and diagnostic artifacts are still present. The site retains its potential for nomination to the National Register of Historic Places despite the impacts.</td>
</tr>
<tr>
<td>Did impacts extend into undisturbed areas?</td>
<td>Yes</td>
</tr>
<tr>
<td>Work Halted?</td>
<td>Yes</td>
</tr>
<tr>
<td>Contact Method:</td>
<td>E-mail</td>
</tr>
<tr>
<td>Notifications:</td>
<td>Official correspondence, CCN#:</td>
</tr>
<tr>
<td>Cultural Materials Observed?</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>In 1985, this site was originally described as a scatter of more than 100 flakes with several retouched flake tools and one nondiagnostic biface fragment. In FY 2015, these basic characteristics were confirmed. Once again, more than 100 flakes were observed along both sides of the road and also within the tracks. Many of the observed flakes were tiny and concentrated in anthills. In addition, three large notched dart points and one nondiagnostic biface fragment were found. A shallow ditch that runs through the site also yielded a 1954-55 Oregon license plate, probably reflecting the original construction of this feature.</td>
</tr>
<tr>
<td>Cultural Materials Collected?</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td></td>
</tr>
<tr>
<td>General Comments:</td>
<td>No substantial changes from original recording. Artifacts are present in the road associated with the powerline and these will be impacted by vehicles passing through the area during installation of new fiber optics on the existing poles. However, significant deposits and diagnostic artifacts are present outside the roadway and these will not be impacted by the proposed project.</td>
</tr>
<tr>
<td>Recommendations:</td>
<td>Recommend that all vehicles and project activities be restricted to existing road. Continue periodic monitoring of archaeological sites located in INL powerline corridors to determine if unauthorized artifact collection is a continuing problem. If substantiated, initiate targeted employee education of associated personnel.</td>
</tr>
<tr>
<td>Attach additional documentation, as warranted (photos, profiles, etc.)</td>
<td>Yes</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td>Photos on file. Locational information withheld for resource protection.</td>
</tr>
</tbody>
</table>
Monitor Number: 2015 – Project – 16
Monitor Name: Brenda Pace, Hollie Gilbert
Monitor Date(s): November 4, 2014

Project: BEA-15-02: INL Fiber Optic Cable Installation
Site Name/Number: 10-BT-1189
Reason for Monitoring: Re-identify site area to facilitate avoidance during proposed project and update site records.

Findings:

Impact Agent(s): Powerline and associated road and historic ditch cut through the middle of site. Area was burned by range fire in 2010. No significant new impacts seen.

Significance of Impact: Powerline construction, maintenance, and ongoing use have created a zone of significant disturbance through the site area. Ditch has also disturbed a narrow linear zone. Despite these older impacts, no significant new impacts have occurred. Large portions of the site remain undisturbed and diagnostic artifacts are still present. The site retains its potential for nomination to the National Register of Historic Places despite the past impacts.

Did impacts extend into undisturbed areas? Yes ☑ No ☐
If yes, describe: N/A

Work Halted? Yes ☐ No ☑
If yes, describe: N/A

Notifications: Contact Method: E-mail ☐ Phone ☐ Official correspondence, CCN#: ☐

Cultural Materials Observed? Yes ☑ No ☐
If yes, describe: Artifact assemblage is essentially unchanged from the original recording in 1985. Hundreds of flakes and seven diagnostic projectile points from the Middle and Late Prehistoric periods were documented in 1985. In FY 2015, the dense scatter of debitage was still notable and further distinguished by a wide range of material types and flakes sizes. Newly observed diagnostics included a Besant Side-notched point, Rosegate Corner-notched point, five pressure-flaked biface fragments that are probably fragmentary projectile points as well, and a schistose quartzite scraper. All of the artifacts were found in a unique setting of sandy soils at the edge of the Ryegrass Flats basin.

Cultural Materials Collected? Yes ☑ No ☐
If yes, describe: ☐

General Comments: No substantial changes from original recording. Artifacts are present in the road associated with the powerline and these will be impacted by vehicles passing through the area during installation of new fiber optics on the existing poles. However, significant deposits and diagnostic artifacts are present outside the roadway and these will not be impacted by the proposed project.

Recommendations: Recommend that all vehicles and project activities be restricted to existing road. Continue periodic monitoring of archaeological sites located in INL powerline corridors to determine if unauthorized artifact collection is a continuing problem. If substantiated, initiate targeted employee education of associated personnel.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes ☐ No ☑
If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Project – 17 |
| Monitor Name:   | Hollie Gilbert, Marie Holmer, Brenda Pace, Jackie Hafla |
| Monitor Date(s):| August 27, 2015 and September 29, 2015 |

**Project:** BEA-15-16: Routine INL Powerline Maintenance

**Site Name/Number:** Poles # 243 and 118, INL main power loop

**Reason for Monitoring:** Spot check on INL routine maintenance activities to assess potential impacts to cultural resources.

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Impact Agent(s):**

No cultural resources impacted, but heavy equipment is being operated indiscriminately in offroad settings

**Significance of Impact:**

Ground surface around poles proposed for maintenance/replacement was extensive, even before the work was completed. No cultural resources were involved at either of the locations examined, but the indiscriminate use of heavy equipment in offroad settings has the potential to cause significant disturbance to surface artifacts and cultural features.

**Did impacts extend into undisturbed areas?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

**If yes, describe:**

Maintenance crews are not observing requirements to minimize offroad vehicle use.

**Work Halted?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

**If yes, describe:**

No cultural resources disturbed. Notification made to Jim Graham, the environmental lead for this work, with request to remind maintenance crews of restrictions on use of vehicles and equipment offroad prior to cultural resource surveys.

**Notifications:**

Jim Graham

**Contact Method:**

<table>
<thead>
<tr>
<th>E-mail</th>
<th>Phone</th>
<th>Official correspondence, CCN#:</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Cultural Materials Observed?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

**If yes, describe:**

No sensitive cultural resources were observed in the disturbed areas.

**General Comments:**

INL powerline maintenance crews continue to assume that they can operate within a “right-of-way” along all existing powerlines. This “right-of-way” is undefined, but appears to extend at least 25 meters from all existing poles, guy lines, and access roads. Offroad vehicle use is indiscriminate throughout, which is causing significant impacts to surface soils, vegetation, and probably to cultural resources.

**Recommendations:**

Continue to work with INL power management and environmental leads to develop work procedures to avoid surface damage in culturally sensitive areas. Work to have cultural resource awareness training required for all personnel.

**Attach additional documentation, as warranted (photos, profiles, etc.)**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

**If yes, describe:**

Photos on file.
Monitor Number: 2015 – Project – 18
Monitor Name: Brenda Pace, Jackie Hafla
Monitor Date(s): September 29, 2015

Project: BEA-14-10: MFC Firewater Upgrade
Site Name/Number: MFC General Area
Reason for Monitoring: Spot check on INL work activities to evaluate compliance with cultural resources restrictions

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Impact Agent(s): No cultural resources impacted by ground disturbance in surveyed corridor
Significance of Impact: Project originally requested cultural resource survey of 15 meter-wide corridor for work. INL CRM staff buffered this area, completing a survey of a 40 meter-wide corridor. No cultural resources were identified in this larger area. Spot check revealed that disturbance had gone well beyond the original estimated footprint of 15 meters and extended out to the surveyed 40 meters.

Did impacts extend into undisturbed areas? Yes [x] No [ ]
If yes, describe: N/A

Work Halted? Yes [ ] No [x]
If yes, describe: No cultural resources disturbed.

Notifications:
Contact Method: E-mail [ ] Phone [ ] Official correspondence, CCN#:

Cultural Materials Observed? Yes [ ] No [x]
If yes, describe: No sensitive cultural resources were observed in the disturbed areas.

Cultural Materials Collected? Yes [ ] No [x]
If yes, describe: No sensitive cultural resources were observed in the disturbed areas.

General Comments: Practice of surveying buffer zones around proposed construction activities can be an important tool in ensuring that no sensitive cultural resources are disturbed by INL project activities.
Recommendations: Continue to conduct spot checks of active INL projects. Continue to survey buffer zones around proposed activities.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x]
If yes, describe: 
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Project – 19 |
| Monitor Name: | Brenda Pace |
| Monitor Date(s): | January 30, 2015 |

Project: BEA-13-14: INL Power Grid Testing and Reconfiguration
Site Name/Number: INL East Loop powerline from CFA to MFC
Reason for Monitoring: Spot check on INL work activities to evaluate compliance with cultural resources restrictions

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Impact Agent(s): No cultural resources impacted, but project activities, including vehicle parking and turnaround and equipment staging have gone beyond original approved footprint for work.

Significance of Impact: Footprint of disturbance associated with ongoing project has grown incrementally since original survey. Vehicles have been parked and equipment has been staged to the north of the powerline in an area that was specifically recommended as off limits for project activities. No cultural resources have been impacted because original surveyed area included a buffer zone around the proposed project.

Did impacts extend into undisturbed areas? Yes [ ] No [x]
If yes, describe: N/A

Work Halted? Yes [ ] No [x]
If yes, describe: No cultural resources disturbed.

Notifications:
Contact Method: E-mail [ ] Phone [ ] Official correspondence, CCN#:

Cultural Materials Observed? Yes [ ] No [x]
If yes, describe: No sensitive cultural resources were observed in the disturbed areas.

Cultural Materials Collected? Yes [ ] No [x]
If yes, describe: No sensitive cultural resources were observed in the disturbed areas.

General Comments: Practice of surveying buffer zones around proposed construction activities can be an important tool in ensuring that no sensitive cultural resources are disturbed by INL project activities.

Recommendations: Continue to conduct spot checks of active INL projects. Continue to survey buffer zones around proposed activities. Expand surveyed buffer zone around main testing areas associated with this project to identify resources that may be jeopardized in the future.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes [ ] No [x]
If yes, describe: ____________________________
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Project – 20 |
| Monitor Name: | Brenda Pace, Jackie Hafla |
| Monitor Date(s): | September 24, 2015 |

| Project: | BEA-15-14: Firing Range Buried Fiber Optic Cable |
| Site Name/Number: | Firing Range General Area |
| Reason for Monitoring: | Spot check on INL work activities to evaluate compliance with cultural resources restrictions |

| Findings: | Type 1 | Type 2 | Type 3 | Type 4 |
| Impact Agent(s): | No cultural resources impacted by ground disturbance in surveyed corridor |
| Significance of Impact: | No impacts to cultural resources. Project has complied with cultural resource recommendations and restrictions. |

| Did impacts extend into undisturbed areas? | Yes | No | x |
| If yes, describe: | N/A |

| Work Halted? | Yes | No | x |
| If yes, describe: | No cultural resources disturbed. |

| Contact Method: | E-mail | Phone |
| Official correspondence, CCN#: | |

| Cultural Materials Observed? | Yes | No | x |
| If yes, describe: | |

| Cultural Materials Collected? | Yes | No | x |
| If yes, describe: | No sensitive cultural resources were observed in the disturbed areas. |

| General Comments: | Project activities have been restricted to previously disturbed road bed, with no disturbance of adjacent undisturbed areas. This is consistent with cultural source recommendations/restrictions. No cultural resource disturbance. |

| Recommendations: | Continue to conduct spot checks of active INL projects. Continue to survey buffer zones around proposed activities. |

| Attach additional documentation, as warranted (photos, profiles, etc.) | Yes | No | x |
| If yes, describe: | |
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

| Monitor Number: | 2015 – Projects – 21 |
| Monitor Name: | Brenda Pace, Hollie Gilbert, Marie Holmer |
| Monitor Date(s): | May 19, 2015 and July 30, 2015 |

| Project: | Remote Handled Low Level Waste Facility Construction |
| Site Name/Number: | BEA-10-10-06 |
| Reason for Monitoring: | Construction monitoring per the requirements of Environmental Assessment DOE/EA-1793 |

| Findings: | Type 1 | Type 2 | Type 3 | Type 4 |
| Impact Agent(s): | No impacts to cultural resources from project construction activities. |
| Significance of Impact: | N/A |
| Did impacts extend into undisturbed areas? | Yes | No | X |

| Work Halted? | Yes | No | X |
| Notifications: | None required for Type 1 finding. |
| Contact Method: | E-mail | Phone | Official correspondence, CCN#: |

| Cultural Materials Observed? | Yes | No | X |
| If yes, describe: | Historic canal construction camp is located within the RHLLW construction area. The site contains a surface scatter of portable artifacts such as tin cans, glass, ceramics, and various metal items. Depressions are also present that may mark the location of cultural features such as privies or dugouts. Two visits to the construction site in 2015 confirmed that none of the artifacts are being impacted by the work. |

| Cultural Materials Collected? | Yes | No | X |
| If yes, describe: | N/A |

| General Comments: | The entire area of the historic canal construction site has been surrounded by temporary plastic fencing to clearly mark the area that must be avoided. On two visits to the construction site in 2015, the location of the fence was confirmed as adequate to project the sensitive area. Project personnel are taking their cultural resource awareness training seriously, contacting INL CRM staff when questions arise. |

| Recommendations: | No further construction monitoring is justified. Site should be revisited when construction is complete and the project moves into the operations stage in order to ensure the historic canal construction site remains outside any areas of ongoing activity or disturbance. |

| Attach additional documentation, as warranted (photos, profiles, etc.) | Yes | No | |
| If yes, describe: | Photos on file. Locational information withheld for resource protection. |
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – Project – 22
Monitor Name(s): Brenda Pace, Hollie Gilbert, Julie Williams, John Irving
Monitor Date: November 17, 2014

Project: BEA-15-03: Maintenance of Road T-5
Site Name/Number: BEA-15-03-01
Reason for monitoring: Damage assessment after unauthorized road grading

Findings:

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
</table>

Impact Agent(s): Road construction, use, and maintenance (grading)

Significance of Impact: Artifacts are exposed on graded surfaces of the road and in the vertical wall of one deep rut. Impacts inside the road bed are notable. Undisturbed cultural deposits are present on each side of the road and >90% of the site has been impacted by road work. The integrity of the site remains intact.

Did impacts extend into undisturbed areas? Yes No x
If yes, describe: Impacts are restricted to the road bed, which was previously disturbed.

Work Halted? Yes No x
If yes, describe: N/A

Notifications: DOE-ID Cultural Resource Coordinator
Primary contact(s): Kathy Medellin
Date contacted: October 30, 2014
Contact Method: E-mail Phone x Official correspondence, CCN#

Cultural Materials observed? Yes x No
If yes, describe: Approximately 70 flakes of obsidian and fragmentary Middle Prehistoric dart points (5,000 – 1,300 BP; Humboldt Lanceolate, Elko Corner-notched) are scattered in a single large concentration approximately 50 by 50 meters in size. Several small flakes of obsidian are exposed on the graded surface of the road and two flakes are eroding from the vertical wall of a deep vehicle rut, suggesting the presence of subsurface cultural deposits.

Cultural Materials collected? Yes No x
If yes, describe: A large portion of the site (>90%) remains undisturbed on either side of Road T-5 and buried cultural deposits are a possibility here. Road grading has caused impacts, but the site is still retains integrity and is potentially eligible for nomination to the National Register for the information it may contain about prehistoric occupation of the region during the Middle Prehistoric period.

Recommendations: Grading should be avoided on this stretch of Road T-5. If future maintenance is needed, gravel fill should be added to the deeply eroded road bed to provide a firmer and more stable driving surface.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes No x
If yes, describe: Photos on file. Locational information withheld for resource protection.

A-65
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

<table>
<thead>
<tr>
<th>Monitor Number:</th>
<th>2015 – Project -- 23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Name(s):</td>
<td>Brenda Pace, Hollie Gilbert, Julie Williams, John Irving</td>
</tr>
<tr>
<td>Monitor Date:</td>
<td>November 17, 2014</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project:</th>
<th>BEA-15-03: Maintenance of Road T-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Name/Number:</td>
<td>Historic Trail T-5 / BEA-15-03-03</td>
</tr>
<tr>
<td>Reason for monitoring:</td>
<td>Damage assessment after unauthorized road grading</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Findings:</th>
<th>Type 1</th>
<th>Type 2</th>
<th>x</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact Agent(s):</td>
<td>Road construction, use, and maintenance (grading)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significance of Impact:</td>
<td>The grading of historic roads can potentially impact historical integrity if original ruts, swales and routes are erased. In the case of T-5, the grading did not affect any of these attributes, therefore, the integrity of the road remains intact.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Did impacts extend into undisturbed areas?</th>
<th>Yes</th>
<th>No</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td>Impacts are restricted to the road bed, which was previously disturbed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Halted?</th>
<th>Yes</th>
<th>No</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notifications:</th>
<th>DOE-ID Cultural Resource Coordinator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary contact(s):</td>
<td>Kathy Medellin</td>
</tr>
<tr>
<td>Date contacted:</td>
<td>October 30, 2014</td>
</tr>
<tr>
<td>Contact Method:</td>
<td>E-mail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural Materials observed?</th>
<th>Yes</th>
<th>x</th>
<th>No</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td>T-5 is associated with several ca. 1909 homesteads, early irrigation canals, and ditches. The expected artifacts which include various cans, glass and other domestic debris can be found scattered along the length of the road.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural Materials collected?</th>
<th>Yes</th>
<th>No</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| General Comments:             | The major portion of T-5 remains in pristine condition. |
| Recommendations:              | Grading should be avoided on Road T-5. If future maintenance is needed, gravel fill should be added to the deeply eroded road bed to provide a firmer and more stable driving surface. |

<table>
<thead>
<tr>
<th>Attach additional documentation, as warranted (photos, profiles, etc.)</th>
<th>Yes</th>
<th>No</th>
<th>x</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, describe:</td>
<td>Photos on file.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Idaho National Laboratory Cultural Resource Management Office  
Field Monitoring Form

Monitor Number: 2015 – Project – 24  
Monitor Name: Hollie Gilbert, Marie Holmer  
Monitor Date(s): September 22, 2015

<table>
<thead>
<tr>
<th>Project:</th>
<th>INL Cultural Resource Management Office yearly monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Name/Number:</td>
<td>BEA-15-30-01 / General impacts from grazing</td>
</tr>
<tr>
<td>Reason for Monitoring:</td>
<td>Routine, periodic assessment of Goodale’s Cutoff and other significant historic properties</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Findings:</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
</table>

**Impact Agent(s):** Livestock grazing and trampling, installation of water troughs  
**Significance of Impact:** Water troughs were placed adjacent to Goodale’s Cutoff and within the boundaries of a prehistoric site. Excessive grazing and trampling has left the area devoid of vegetation thus encouraging erosion.

Did impacts extend into undisturbed areas?  
Yes [x]  
No [ ]

**Work Halted?**  
Yes [x]  
No [ ]

Notifications:  
Contact Method: E-mail [x]  
Phone [ ]  
Official correspondence, CCN#:

<table>
<thead>
<tr>
<th>Cultural Materials Observed?</th>
<th>Yes [x]</th>
<th>No [ ]</th>
</tr>
</thead>
</table>

**If yes, describe:** Within a 20 meter radius around the water troughs 40 plus flakes comprised of obsidian and cryptocrystalline material were noted. Also noted were several pieces of fire cracked rock indicating hearths that have been upturned and strewn across area.

<table>
<thead>
<tr>
<th>Cultural Materials Collected?</th>
<th>Yes [x]</th>
<th>No [ ]</th>
</tr>
</thead>
</table>

**If yes, describe:**

**General Comments:** In the past when monitoring Goodale’s, we have only monitored the main branch which the INL has designated as T-1. However, there are at least three other routes (or forks) accessing the Big Lost River at various locations. So this year it decided that all sections should be monitored. That is how the water troughs were discovered. The troughs do not show up in satellite imagery from 2013.

**Recommendations:** Continue to monitor grazing activities on INL lands in all BLM grazing allotments. Contact BLM archaeologists to determine if site impacted in FY 2015 is previously recorded and if area was surveyed prior to impacts. Involve BLM archaeologists in discussions of how to minimize impacts.

**Attach additional documentation, as warranted (photos, profiles, etc.)**  
Yes [x]  
No [ ]

**If yes, describe:** Photos on file. Locational information withheld for resource protection.
**Idaho National Laboratory Cultural Resource Management Office**

**Field Monitoring Form**

**Monitor Number:** 2015 – PBF/CITRC Monitoring – 01  
**Monitor Name:** Hollie Gilbert, Payton McGriff  
**Monitor Date(s):** July 7, 2015  

**Project:** Ground disturbance at PBF/CITRC – Homeland Security Seismic Holes  
**Site Name/Number:** PBF/CITRC general area / 10-BT-1991, 10-BT-2046  
**Reason for Monitoring:** Routine monitoring of ground disturbance in the PBF/CITRC area where Native American human remains have been discovered per company requirements (LWP-8000 and MCP-3480).

**Findings:**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Impact Agent(s):** None – no sites were affected by project activity.  
**Significance of Impact:** None – no sites were affected by project activity.  
**Did impacts extend into undisturbed areas?** Yes ☒ No ☐  
If yes, describe: N/A  
**Work Halted?** Yes ☐ No ☒  
If yes, describe: N/A  
**Notifications:**  
**Contact Method:** E-mail ☒ Phone ☐ Official correspondence, CCN#: ☐  

**Cultural Materials Observed?** Yes ☐ No ☒  
If yes, describe: ☐  
**Cultural Materials Collected?** Yes ☒ No ☐  
If yes, describe: No sensitive cultural materials or human remains were observed.  

**General Comments:** Project areas were surveyed for cultural resources prior to ground disturbance. Soils were inspected during excavation.

**Recommendations:** Continue monitoring of all ground disturbance in this sensitive area. Continue to implement required reading on cultural resource sensitivity and protection for all workers at PBF/CITRC.

**Attach additional documentation, as warranted (photos, profiles, etc.)** Yes ☐ No ☒  
If yes, describe: Photos on file. Locational information withheld for resource protection.
Idaho National Laboratory Cultural Resource Management Office
Field Monitoring Form

Monitor Number: 2015 – PBF/CITRC Monitoring – 02
Monitor Name: Hollie Gilbert, Payton McGriff
Monitor Date(s): July 9, 2015

Project: Ground disturbance at PBF/CITRC – Homeland Security Temporary Test Antennas
Site Name/Number: PBF/CITRC general area / 10-BT-1991, 10-BT-2046
Reason for Monitoring: Routine monitoring of ground disturbance in the PBF/CITRC area where Native American human remains have been discovered per company requirements (LWP-8000 and MCP-3480).

Findings: Type 1 x Type 2 Type 3 Type 4
Impact Agent(s): None – no sites were affected by project activity.
Significance of Impact: Did impacts extend into undisturbed areas? Yes No x
If yes, describe: N/A

Work Halted? Yes No x
If yes, describe: N/A
Notifications: Contact Method: E-mail Phone Official correspondence, CCN#:

Cultural Materials Observed? Yes No x
If yes, describe: No sensitive cultural materials or human remains were observed.
Cultural Materials Collected? Yes No x
If yes, describe: No sensitive cultural materials or human remains were observed.

General Comments: Project areas were surveyed for cultural resources prior to ground disturbance. Both antenna locations are in previously disturbed areas where the surface area has been scraped and gravel pads added.
Recommendations: Continue monitoring of all ground disturbance in this sensitive area. Continue to implement required reading on cultural resource sensitivity and protection for all workers at PBF/CITRC.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes No x
If yes, describe: Photos on file. Locational information withheld for resource protection.
Archives and Special Collections
Idaho National Laboratory Cultural Resource Management Office  
Field Monitoring Form

Monitor Number: 2015 – Archives – 01  
Monitor Name(s): Christina Olson  
Monitor Date: April 13, 2015

Project: INL Archives and Special Collections  
Site Name/Number: REC IF-627 / SAF 115 B, 116, and 111C  
Reason for monitoring: Routine surveillance of INL historic properties

Findings:  

Impact Agent(s): Lack of adequate storage.  
Significance of Impact: N/A  
Did impacts extend into undisturbed areas? Yes  

If yes, describe: N/A  
Work Halted? Yes  
If yes, describe: N/A  
Notifications: N/A  
Contact Method: E-mail Phone Official correspondence, CCN#:  

Cultural Materials observed? Yes  
If yes, describe: The INL Archives and Special Collections were established through a 2005 MOA between DOE-ID and Idaho SHPO as mitigation for DD&D of TAN-603, TAN-630, TAN-650, and TAN-607. The MOA mandated the following:  
- development of an archival plan  
- hiring of a qualified archival support / certified archivist  
- construction / establishment of a NARA approved archival facility  
- collections must be accessible to researchers  

To date nearly 3600 cubic feet of archival materials have been collected, including, large format and aerial photography, original architectural and engineering drawings*, mid-20th century glass slides of reactor operations and experiments, and original AEC survey data.  

(*For INL Records Management, the scanned copies of these drawings on file in EDMS serve as the originals as per NARA and DOE record schedules.)

Cultural Materials collected? Yes  
If yes, describe: N/A

General Comments: Approximately 3000 cubic feet of archival materials are waiting to be processed but due to a lack of space, these materials are stacked in storage which does not meet NARA standards; in addition, the current facility is not accessible to researchers.

Recommendations: Locate a NARA approved facility that is researcher accessible, which will accept these collections.

Attach additional documentation, as warranted (photos, profiles, etc.) Yes  
If yes, describe: Photos on file