INEEL/EXT-04-02532

INEEL Cultural Resource Management Program Annual Report - 2004

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January 2005

Idaho National Engineering and Environmental Laboratory
Bechtel BWXT Idaho, LLC

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Idaho Falls, Idaho 83415

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ABSTRACT

As a federal agency, the U.S. Department of Energy has been directed by Congress, the U.S. president, and the American public to provide leadership in the preservation of prehistoric, historic, and other cultural resources on the lands it administers. This mandate to preserve cultural resources in a spirit of stewardship for the future is outlined in various federal preservation laws, regulations, and guidelines such as the National Historic Preservation Act, the Archaeological Resources Protection Act, and the National Environmental Policy Act.

The Idaho National Engineering and Environmental Laboratory Site is located in southeastern Idaho, and is home to vast numbers and a wide variety of important cultural resources representing at least 13,000-year span of human occupation in the region. These resources are nonrenewable, bear valuable physical and intangible legacies, and yield important information about the past, present, and perhaps the future. There are special challenges associated with balancing the preservation of these resources with the management and ongoing operation of an active scientific laboratory, while also cleaning up the waste left by past programs and processes. The Department of Energy Idaho Operations Office has administrative responsibility for most of the Site, excluding lands and resources managed by the Naval Reactors Facility and (in 2004) Argonne National Laboratory-West. The Department of Energy is committed to a cultural resource program that accepts these challenges in a manner reflecting both the spirit and intent of the legislative requirements.

This annual report is an overview of Cultural Resource Management Program activities conducted during Fiscal Year 2004 and is intended to be both informative to external stakeholders and to serve as a planning tool for future cultural resource management work to be conducted on the Site.

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FIGURES

TABLES

NOTE: *Cover photograph shows East Butte as seen from Middle Butte.*

ACRONYMS

ACHP	Advisory Council on Historic Preservation
AEC	U.S. Atomic Energy Commission
AFPA	American Folklife Preservation Act
AIRFA	The American Indian Religious Freedom Act
ANPG	Arco Naval Proving Ground
ARA	Auxiliary Reactor Area
ARPA	Archaeological Resource Protection Act
BLM	Bureau of Land Management
CFA	Central Facilities Area
CITRC	Critical Infrastructure Test Range Office
CRM	Cultural Resource Management
CRMP	Cultural Resource Management Plan
CRMO	Cultural Resource Management Office
CRWG	Cultural Resources Working Group
DOE	U.S. Department of Energy
DOE Idaho	U.S. Department of Energy Idaho Operations Office
FTE	full-time employee
FY	fiscal year
GLO	General Land Office
HAER	Historic American Engineering Record
HeTO	Shoshone-Bannock Heritage Tribal Office
ICP	Idaho Completion Project
IMNH	Idaho Museum of Natural History
INEEL	Idaho National Engineering and Environmental Laboratory
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
ISU	Idaho State University

MDA	Mass Detonation Area
MOA	memorandum of agreement
NEPA	National Environmental Policy Act
NPHA	National Historic Preservation Act
NRF	Naval Reactors Facility
NRTS	National Reactor Testing Station
PBF	Power Burst Facility
PL	Public Law
RWMC	Radioactive Waste Management Complex
SHPO	State Historic Preservation Office
STF	Security Training Facility
TAN	Test Area North
TRA	Test Reactor Area
USC	United States Code
USGS	U.S. Geological Survey
WRRTF	Water Reactor Research Test Facility
WWII	World War II

INEEL Cultural Resource Management Program Annual Report - 2004

1. INTRODUCTION

The Idaho National Engineering and Environmental Laboratory (INEEL) Site is an 890 square mile expanse of land, (see Figure 1-1) most of which has been withdrawn from public use since the early 1940s, and is presently managed by the U.S. Department of Energy Idaho Operations Office (DOE Idaho). It is located on the northern margins of the Eastern Snake River Plain, tucked against the foothills of the Beaverhead, Lemhi, and Lost River Ranges. Most atmospheric moisture tends to precipitate in the mountains adjacent to the INEEL Site resulting in an average annual precipitation of only 22 cm (8.7 in.) on the Site while the adjacent mountains and valleys enjoy an average of around 10-15 in./yr (Orr and Orr 1996). Despite the relative paucity of atmospheric moisture, the Site itself is relatively well watered; or at least was during prehistoric times, as a result of its proximity to the mountains and valleys and the streams that drain from this region. For the most part the Site landscape reflects the broader geologic context of the Snake River Plain through the dominance of lava fields variably blanketed with aeolian loess deposits.

The Big Lost River

Although volcanic flows and associated features such as Big Southern, Middle, East, Antelope, and Circular Buttes tend to dominate a deceptively flat landscape, much of the Site is located in the Big Lost River Trough, also known as the Pioneer Basin. The Big Lost River Trough is defined as a closed topographic depression, hydrologically fed by drainage systems that extend between Big Southern, Middle, and East Buttes to the south, and Mud Lake, the Little Lost River, Big Lost River, and Birch Creek Sinks to the north (Butler 1968). The central feature of the trough is the Big Lost River itself, which enters the Site from the west, flowing southeasterly for about 6 miles before abruptly turning to the northeast and finally to the north, winding through a broad alluvial plain interspersed with basalt outcrops for 25 miles before a combination of stream flow rates, gradient, and soil porosity cause the river to disappear or “sink” into the Snake River Plain Aquifer. The Big and Little Lost Rivers, Birch Creek, their “sink” areas and numerous scattered playas comprise the major Site surface hydrological features. Throughout history these features, combined with the subsurface aquifer have been defining factors in human land-use choices.

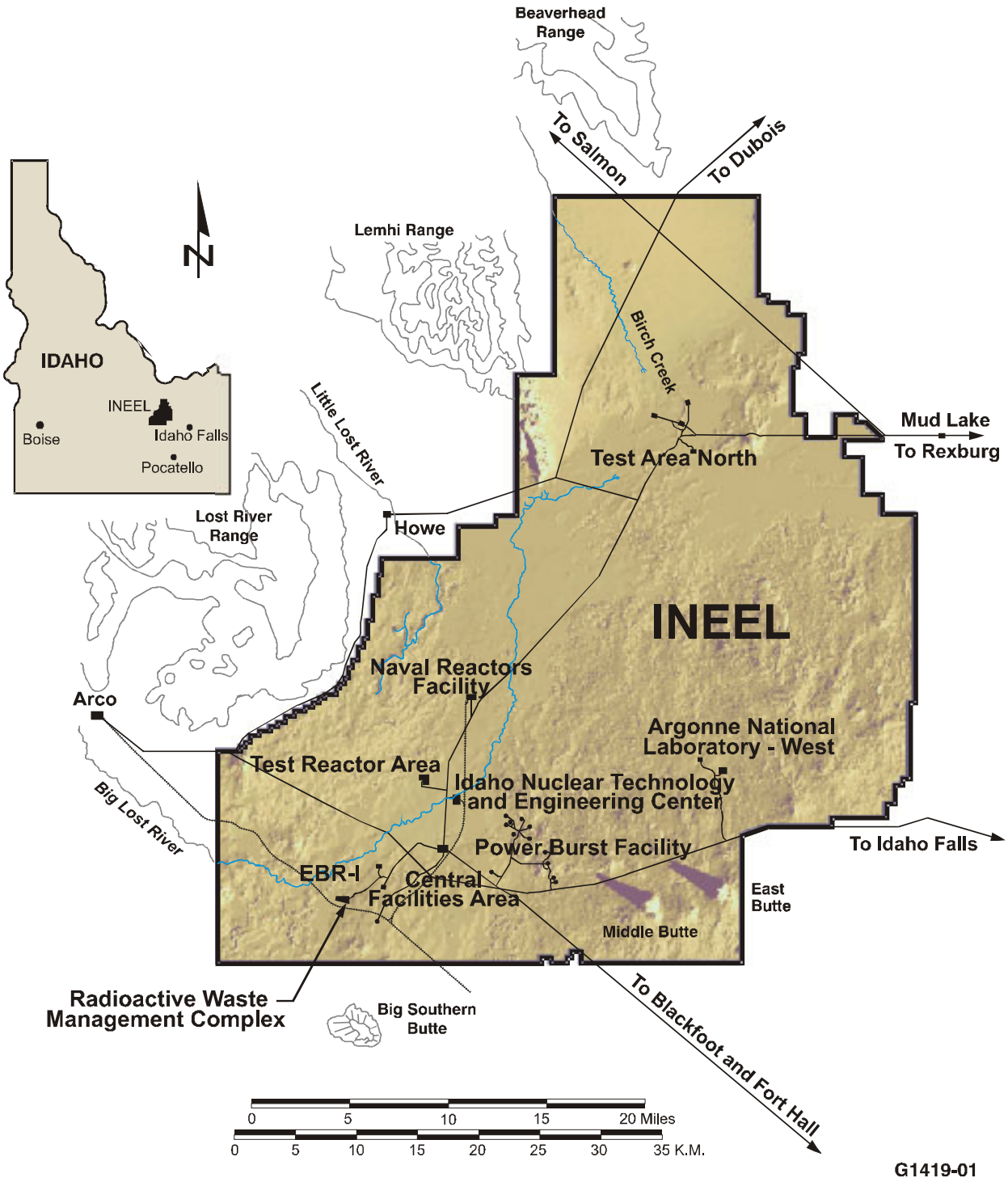


Figure 1-1. Shaded Relief Map of the Idaho National Engineering and Environmental Laboratory Site.

2. OVERVIEW

The INEEL Site landscape provides the stage on which at least 13,000 years of human history has transpired in an intimate relationship with the natural environment. The abundant and varied tangible evidence of this history comprises one aspect of Site cultural resources that DOE Idaho and its contractors are charged with protecting.

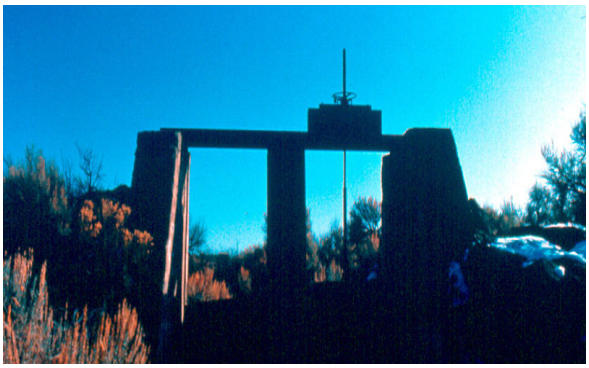
An approximately 10,000 Year-old "Haskett" Spear Point

Evidence of early Native American land use is ubiquitous, though not randomly distributed on the landscape. To date, roughly 8.6 % of the Site has been systematically inventoried, yielding nearly 2,200 recorded archaeological sites. Predictive models developed to facilitate long-term project planning and ongoing protection of this fragile legacy (Ringe 1995; Plager et al. 2004) have provided estimates of as many as 75,000 additional locations within the INEEL Site boundaries.

Since the early 1800s, Euro-American presence has been felt on what is now the INEEL Site. Initially, land use was light and transient, perhaps much like that of the early Native American occupants. Like those earlier people, the first Euro-American occupants were intent on resource extraction. However, unlike the earlier inhabitants whose focus was on food to sustain life, they were intent on the extraction of beaver pelts for monetary purposes. In 1852 Goodale's Cutoff was established as a northern extension of the Oregon Trail; an alternate route to reach the rich resources of the Oregon Territory. Still, this was transient activity, and the human imprint on the landscape remained modest.

Goodale's Cutoff Crossing Re-enactment

Between 1860 and 1880, Goodale's Cutoff came to be used to trail cattle and eventually sheep, from western ranges in Oregon, Washington, and Idaho to eastern markets. During this same time period the mining industry in the mountains of Central Idaho boomed and a number of wagon and stage roads between growing towns and cities along the Snake River and the mining camps of the interior were established. Many of these roads crossed the Site and, in fact, are still in use today. By the early 1880s, a number of ranching operations were underway at the north end of the Site near Howe and around the Big Lost, Little Lost, and Birch Creek Sinks. Cattle were routinely herded across the Site from these areas to summer range near Big Southern Butte (DOE-ID 2004; Gerard 1982).



Big Lost River Diversion Canal Headgates

Clay Marble from an Early
20th Century Homestead Site

While Euro-American settlement began near the Site as early as 1855, it wasn't until passage of the Carey Land Act in 1894, and particularly the Desert Reclamation Act in 1902, that homesteading efforts on the Site began in earnest. Most of these homesteads were located along the Big Lost River. Between 1905 and 1920 a number of water-control projects including the Mackay Dam and numerous irrigation canal systems were established on the Big Lost River. On the Site, the town of Pioneer was established adjacent to the Oregon Shortline railroad and the Big Lost River near what is now the Radioactive Waste Management Complex (RWMC) in the southwest corner of the Site. Extensive irrigation canal and ditch systems extend and radiate from the Big Lost River near the RWMC all the way to the northern reaches of the Site. Although nearby irrigation projects, such as the Mud Lake Irrigation District, were successful, for a variety of reasons, including soil porosity and upstream water use, irrigation efforts on most of the INEEL area failed and by the mid-1920s it was essentially abandoned. In addition to roads and canal systems, artifacts from the 1800s and early 1900s that are found on the desert today include stagecoach stations and remnants of homesteading activity such as domestic items and children's toys that allow more personal insight into the daily lives of the early pioneers. Approximately 100 historic archaeological sites have been recorded from this period and hundreds more remain to be recorded.

WWII ANPG Range and Fire Control Tower

With the outbreak of World War II (WWII), Pocatello, Idaho was selected as an ideal location to construct an ordnance plant with a mission to reline and test Pacific Fleet naval armament. Shortly after construction of the ordnance plant was completed, the Arco Naval Proving Ground (ANPG) was established on core lands that would eventually become the INEEL Site about 12 miles east of Arco, 50 miles northwest of Pocatello, and a similar distance west of Idaho Falls, as an ideal remote location to test the relined guns. Beginning late in 1942, testing began and during the course of the war, all manner of ship weaponry, from anti-aircraft guns firing 3-in. rounds to the main battleship 16-in. guns were test-fired at the ANPG. The latter fired 2,800-pound test rounds from the Scoville facility (now the Central Facilities Area) as far as 20 miles to the north. After the end of WWII, the ANPG continued its testing mission as an ideal location to test various kinds of conventional explosive ordnance. The tests were designed to explore storage and transport methods to minimize the potential for sympathetic explosions. Artifacts remaining from the WWII period include buildings, structures, unexploded ordnance along with discarded domestic items left behind by ordnance workers and their families.

Birdcage found at a WWII Era Dump

In 1949, the newly established U.S. Atomic Energy Commission (AEC) selected the ANPG as the location to build and test nuclear reactors. Land transfers between the Department of Defense and the AEC were concluded and the National Reactor Testing Station (NRTS) was established. Later that year, and again in the early 1950s, additional land withdrawals were made to bring the facility close to its current 890 square miles. The purpose of the NRTS was to provide an isolated location where prototype nuclear reactors could be

designed, built, and tested. The Site was renamed the Idaho National Engineering Laboratory in 1974, and again renamed the Idaho National Engineering and Environmental Laboratory in 1997. In 2005 it will become the Idaho National Laboratory.

EBR-I, First Nuclear Reactor to Produce Usable Quantities of Electricity

Since its establishment, 52 "first-of-a kind" reactors and associated support structures have been constructed at this remote facility. The Laboratory-built environment presently consists of nine active facility areas (see Figure 1-1) separated by variable expanses of undeveloped high desert but connected by paved and unimproved roads. In recent years, the primary mission has been to monitor and clean up residual discharges, buildings, and structures from WWII activities and the original reactor testing mission as mandated by several laws and legal agreements. Present and future Laboratory missions include the development of the next generation of nuclear reactor technology, the development and testing of national security technologies, and maintaining and expanding its role as a multi-program national laboratory. A 1997 inventory of DOE Idaho buildings identified over 200 that are historic, including EBR-I, a National Historic Landmark. Most are scheduled for demolition as part of the environmental cleanup effort (DOE-ID 2004). Other nuclear era artifacts include the prototype nuclear-powered jet engines, structures, and perhaps most significantly, a massive archive that includes technical reports, engineering drawings and photographs documenting the significant Laboratory history.


Prototype Nuclear-powered Jet Engine

Tangible evidence of the past such as lithic artifacts, prehistoric campsites, historic trails, homesteads, buildings and structures, and archival documents such as those described above comprise one form of cultural resource. The second form is less easily defined but generally consists of cultural and natural places, landscapes, viewsheds, select natural resources, and sacred areas or objects that have importance for Native Americans and others such as the Oregon and California Trail Association. Ongoing consultation with these groups is facilitating the identification and protection of these less tangible cultural resources.


Pronghorn Grazing on Site Sagebrush Steppe

3. REGULATORY FRAMEWORK

A comprehensive annotated list of regulatory and procedural drivers for the management of Site cultural resources is contained in Appendix A of the INEEL Cultural Resource Management Plan (DOE-ID 2004). These requirements are broadly encapsulated in three federal laws; the National Environmental Policy Act of 1969 (NEPA 1969), the Archaeological Resource Protection Act of 1979 (ARPA 1979), and the National Historic Preservation Act of 1966 (NHPA 1966), as amended, and their implementing regulations. NEPA implements the federal environmental protection policy by requiring information gathering, planning, and assessment in advance of projects or actions that occur on federal land, or are federally licensed or funded, and extends protective provisions to important historic, cultural, and natural aspects of our national heritage. The ARPA establishes permit requirements for archaeological work conducted on federal lands, and criminal and civil penalties for the unauthorized excavation, removal, damage, alteration, or defacement of any archaeological resource located on public or Indian lands. This act also prohibits the sale, purchase, exchange, transportation, receipt, or offering of any archaeological resource obtained in violation of any provision of the act. Finally, ARPA fosters increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data.

The NHPA establishes the National Register of Historic Places and defines historic properties as those that meet National Register of Historic Places criteria and are, therefore, eligible for listing on the National Register. Properties that are eligible for listing are afforded the same protection under the law as those that are listed. NHPA Sections 106 and 110 are particularly important for the identification, management, and protection of the Site's cultural resources. The protective provisions of the NHPA apply only to those resources that are determined to be eligible or potentially eligible for nomination to the National Register of Historic Places. Many Native American sacred sites, traditional cultural areas, and sites or features of local interest are not eligible for listing on the National Register, but nonetheless are cultural resources and are no less important to local tribal members and stakeholders. Other laws such as NEPA, American Indian Religious Freedom Act (AIRFA 1978), and the American Folklife Preservation Act (AFPA 1976) do recognize their importance and DOE Idaho is committed to their protection at the Site. The DOE Cultural Resource Management Policy (DOE P 141) illustrates this commitment.

Executive Order 13287 (2003) states that federal agencies have a responsibility to provide a leadership role in preserving America's heritage. Federal agencies must manage the cultural resources under their jurisdiction as assets to their departments and missions while contributing to the vitality and economic well-being of the nation's communities and fostering a broader appreciation for the development of the United States and its underlying values. This executive order directs federal agencies to maximize efforts to integrate the policies, procedures, and practices of the National Historic Preservation Act. It directs them to promote the preservation of irreplaceable cultural resources by advancing the protection and continued use of their historic properties and pursuing partnerships with state and local governments, Indian tribes, and the private sector. Finally, DOE's commitment to cultural resource management and preservation is outlined in several agency and INEEL-specific policies and agreements. For details see Appendix A of the INEEL Cultural Resource Management Plan (DOE-ID 2004).

The Cultural Resource Management (CRM) office staff has prepared a Cultural Resource Management Plan (DOE-ID 2004) for DOE Idaho as the most efficient means to maintain compliance with regulatory drivers and implement CRM policies and procedures. This plan customizes and streamlines cultural resource compliance activities to balance historic preservation with the need to clean up the environment and allow present and future projects to proceed, while maintaining strong focus on the intent of the regulatory drivers, which is to preserve the significant heritage contained within the Site

boundaries; in other words, to create a balance between the past, the present, and the future. Compliance processes contained in the management plan have been formalized, legitimized, and implemented through a programmatic agreement between DOE Idaho, the State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP).

This annual report constitutes an inaugural publication that responds to two fundamental needs. First, a condition of the programmatic agreement is that the CRM Program will regularly report to stakeholders on its activities such that they can be assured that required policies and procedures set forth in the INEEL Cultural Resource Management Plan are adhered to, specific milestones are met, and more generally that DOE Idaho and its contractors maintain a tradition of responsible stewardship. The second need that this report is intended to address refers to a desire for enhanced stakeholder involvement in the planning process. The DOE Idaho and the CRM Program staff embrace the idea that multiple and diverse viewpoints will create a synergistic environment that can only improve the effectiveness of the Site cultural resource stewardship. The intent is that this annual review of past activities be used in tandem with an annual stakeholders meeting that will provide a forum for discussion of past, present, and future goals and priorities for the Cultural Resource Management Program.

4. PROGRAM STAFF

4.1 Tribal and DOE Program Coordinators

At the INEEL, DOE Idaho's Environmental Technical Support Division takes responsibility for oversight of the cultural resource management program through a designated cultural resources coordinator, Bob Starck. Bob Pence of the DOE Public Affairs office has lead responsibility for coordinating communications and interactions with the Shoshone-Bannock Tribes, and Willie Preacher is the Shoshone-Bannock Tribal DOE Program manager.

Willie Preacher, Shoshone Bannock Tribes; Bob Starck and Bob Pence, DOE-ID

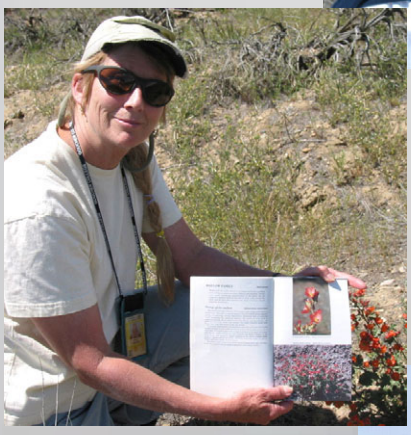
4.2 Cultural Resource Management Office Personnel

DOE Idaho entrusts execution of its cultural resource policies along with regulatory compliance oversight to the INEEL Cultural Resource Management Office (CRMO), whose staff is comprised of prime contractor personnel and includes qualified professionals in the fields of archaeology, history, architectural history, historic preservation, and sociology. The described technical capabilities reflect education and training but not necessarily current job function. Shifting funding levels and sources require adaptability and versatility, and much of the work presently performed by CRMO staff is actually unrelated to cultural resource management (e.g., borrow source management and geological mapping.)

Cultural Resource Management Office Personnel

Hollie Gilbert: Historic Archaeology, ICP

Clayton Marler:
Archaeology, INEEL



Dino Lowrey:
Sociology, INEEL

Julie Braun: Architectural History,
Team Lead, INEEL

Brenda Ringe Pace: Archaeology, INEEL

Terri Ireland: Archaeology, INEEL

5. CULTURAL RESOURCE MANAGEMENT OFFICE ACTIVITIES

5.1 Funding

In general, there are two types of funding that support CRM work on the Site. "Direct" funding is provided by specific projects or programs to support compliance with Section 106 of the NHPA, while "Indirect" or overhead funding is provided to accomplish the crosscutting management activities not associated with specific projects and to address the regulatory drivers other than Section 106. In 2004, the DOE let two separate contracts that will fundamentally divide the Site into two distinct entities. The Idaho Completion Project (ICP) was created to focus solely on cleanup operations, while overall facility operations and management coalesced into an organization whose purpose is aligned with current and future research and development missions. (Under the new contractor, as of February 1, 2005, this organization will be called the Idaho National Laboratory [INL].) In 2004, the cleanup operations funded approximately 1.5 full-time employees (FTEs) to support cultural resource milestones associated with accelerated cleanup while the INEEL provided indirect funding for approximately 2.5 FTEs and direct funding for 0.5 FTEs. The remaining funding (1.5 FTE) was for non-CRM related work such as geotechnical graphics and borrow source management. See Figure 5-1 for a profile of funding sources.

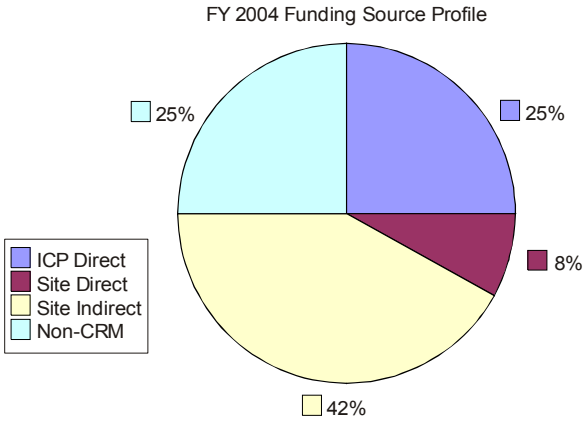


Figure 5-1. Profile of funding sources.

The balance of this report describes accomplishments resulting from ICP direct, Site direct, and Site indirect CRM funding only.

5.2 Approach

Cultural resource management on the Site is a dynamic process with some short-term goals and activities being accomplished each year in support of the overarching management goals of identification, evaluation, and resource protection and preservation as described in the INEEL CRM Plan. As specific tasks are accomplished or goals achieved, they might be dropped from the list while others might become "ongoing activities." New goals and tasks are added in response to changing conditions at the Site and within the regulatory framework that drives compliance activities, and in consideration of comments and advice from stakeholders.

The following lists reflect identified opportunities for programmatic improvement, ongoing management responsibilities, and the need for a comprehensive, effective management program. The intent is to provide a program that is not only responsive to the letter of cultural resources law but one that

addresses the full suite of cultural resources present on the Site in a manner consistent with the spirit of long-term stewardship, stakeholder involvement, and DOE policy.

5.3 Ongoing or Recurring Tasks

Ongoing or recurring tasks that will continue to be addressed each year include:

- Implement and update the Cultural Resources Management Plan, as needed
- Complete the annual questionnaire on CRM activities for the Secretary of Interior
- Complete a year-end report for all CRM Office activities (beginning in FY 2005)
- Conduct an annual stakeholders meeting (beginning in FY 2005)
- Continue public outreach and stakeholder involvement
- Seek preservation grant opportunities
- Continue to collect baseline data for cultural chronologies and land-use patterns on the Site
- Continue NHPA Section 110 survey programs to directly support research designs and contexts and to target under-represented regions and property types for survey and inventory
- Continue maintenance and enhancement of electronic data management systems and CRM project archives and files
- Develop site protection plans for historically or culturally important resources or areas
- Form preservation partnerships with local, regional, and national stakeholders
- Coordinate activities with the SHPO, ACHP, Shoshone-Bannock Tribes, and other interested parties
- Ensure the adequacy of contractor policies and procedures regarding compliance with requirements for coordinating work with the Shoshone-Bannock Tribes
- Update historic contexts and research designs
- Conduct appropriate National Register eligibility evaluations and reevaluations
- Oversee and/or conduct all NHPA Section 106 compliance work.

Each year performance measures in the form of specific milestones related to these general activities are selected to guide work activities and gauge programmatic effectiveness. In 2004, the CRMO successfully completed all assigned milestones.

5.4 FY 2004 Specific Milestones

Specific milestones for FY 2004 included the following:

- Update and finalize *The Idaho National Engineering and Environmental Laboratory, A Historical Context and Assessment, Narrative and Inventory* (INEEL 2003)
- Finalize and implement the INEEL Cultural Resource Management Plan and associated programmatic agreement
- Draft INEEL Archival Plan
- Develop a stakeholder involvement plan
- Initiate inventory of Power Burst Facility (PBF) and Test Area North (TAN) non-building property types
- Complete PBF Special Power Excursion Reactor Tests and TAN Historic American Building Survey and Historic American Engineering Record reports
- Submit INEEL signature facilities list to DOE Idaho
- Develop a provenience tag for post-1942 artifacts
- Identify interim storage for post-1942 artifacts
- Develop a formal cultural resources permitting program
- Develop a functional cultural resource data management system
- Conduct monitoring at selected sites
- Prepare a site protection plan for the CFA facility
- Prepare a final report for monitoring conducted during FY-04
- Organize and participate in a Historic Preservation Month public tour of INEEL Site cultural resources
- Develop a cultural resource protection training program for all INEEL employees
- Work with the Museum of Idaho to update its INEEL exhibit and the exhibits at EBR-I using grants and donations
- Develop an outline for a 10-year CRM Program Implementation Plan that includes cost forecasts
- Conduct NHPA Section 110 archaeological surveys along the Big Lost River channel that extends between Highway 33 and TAN.

The following sections discuss FY 2004 accomplishments as related to both ongoing activities and specific milestones.

5.5 FY 2004 Activities

5.5.1 Cultural Resource Management Plan and Programmatic Agreement

Completion of the *Idaho National Engineering and Environmental Laboratory Cultural Resource Management Plan* (DOE-ID 2004) was one of the more significant accomplishments of FY 2004. While it is understood that this is a dynamic document that will undergo some change each year, SHPO and ACHP review and acceptance provided the basis for development of a Programmatic Agreement with DOE Idaho that allows a measure of autonomy with regard to Site cultural resource management. The CRMP was developed over several years with the assistance and input of the Shoshone-Bannock Tribes, SHPO, ACHP, National Park Service, and others. The CRMP was finalized in August 2004 and is intended to guide the long-term management of Site cultural resources. It guides all INEEL Site preservation and compliance activities, and the Programmatic Agreement between the SHPO, ACHP, and DOE Idaho provides the basis for the CRMP's implementation.

5.5.2 Data Management Systems

The INEEL CRM Office maintains extensive archives documenting previous cultural resource investigations on the INEEL. Hard-copy and electronic formats are utilized. A newly developed Data Management Tool (DMT) is improving management and long-term stewardship of this information. The fully integrated system links an archaeological database, a historical database, and a research database to spatial data through a customized user interface using a geographical information system (GIS) and Active Server Pages (ASP). Components of the DMT are tailored specifically to the INEEL and include automated data entry forms for historic and prehistoric archaeological sites, historic architectural resources, specialized queries and reports that address both yearly and project-specific documentation requirements, and unique field recording forms. A predictive modeling component increases the DMT's value for land use planning and long-term stewardship. The DMT enhances the efficiency of archive searches, improving customer service, oversight, and management of the large INEEL cultural resource inventory.

The three DMT databases were developed in Microsoft Access 97[a] and in FY 2004 were upgraded to Access 2000. Windows operating systems that run the DMT were also upgraded in FY 2004 to Windows Professional 2003 and the server was upgraded to Windows Server 2000. The archaeological predictive modeling component was also upgraded with new information collected through an educational alliance with Idaho State University (Plager et al. 2004). Initial steps were also taken in FY 2004 to meet company quality and copyright requirements for unique software applications like the DMT.

Funding for data entry is limited at this time. As a result, the total number of records entered in each respective database varies. The archaeological database currently contains 1527 records, nine of which were entered in FY 2004. The historical database contains 552 records, 70 of which were modified in FY 2004 to reflect changes as a result of accelerated cleanup activities across the Site. The Research database contains 1,855 records. To facilitate data entry in the historical database, a new data entry terminal was set up in FY 2004. Efforts were also begun to add the capability of generating unique reports to meet SHPO reporting requirements.

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a. References herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the U.S. Government, any agency thereof, or any company affiliated with the Idaho National Engineering and Environmental Laboratory.

5.5.3 INEEL Archive Management

Work to establish an INEEL Archive Management Program continued by hosting a meeting with a professional archivist from Los Alamos National Laboratory and soliciting ideas for the preparation of an archive management plan. Meetings with ICP and INEEL records management and photo lab management were held regarding the need to identify hard copies of documents, document types, and photo negatives for retention and preservation. In addition, input was provided to the INEEL Long-Term Stewardship Program regarding the need to preserve INEEL archives as part of their overall scope. A tour of the INEEL records facility was conducted to identify current practices that might be modified to accommodate the retention and preservation of and access to archival materials. In anticipation of establishing a formal archive, the CRM office has continued to collect items and documents on an ad hoc basis.

5.5.4 INEEL Historic Contexts

> "A historic context is an organizational format that groups information about related historic properties, based on a theme, geographic limits and chronological period. A single historic context describes one or more aspects of the historic development of an area, considering history, architecture, archeology, engineering and culture; and identifies the significant patterns that individual historic properties represent. A set of historic contexts is a comprehensive summary of all aspects of the history of the area." (Secretary of Interior's Standards and Guidelines, 48 FR 190).

Well-developed contexts provide the framework within which properties are evaluated for eligibility for listing on the National Register of Historic Places. Six broad context "domains" are presently identified for the INEEL Site:

1. Prehistoric/Protohistoric
2. Euro-American Contact and Settlement
3. Naval Ordnance Testing
4. Nuclear Reactor Testing
5. Post-Reactor Testing Research and Development
6. Waste Remediation.

It is understood that formal written contexts for each of these domains are dynamic documents that will change with the addition of new data and with shifting perceptions within national and international contexts. At present, formal contexts are at various stages of development; however, in FY 2004 a significant milestone was met with finalization of *The Idaho National Environmental and Engineering Laboratory, A Historical Context and Assessment, Narrative and Inventory* (INEEL 2003). This publication specifically focused on updating the 1998 draft report and fully developing Domains 4-6, including detailed inventories of relevant associated INEEL architectural properties. Although not yet published, *A Paleoindian Context for the Idaho National Engineering and Environmental Laboratory* was completed in FY 2004, updating portions of a research design developed by a subcontractor in 1986. Additional work is needed to update and expand other aspects of the Prehistoric/Protohistoric domain, as well as for the Euro-American Contact and Settlement period and Naval Ordnance Testing.

5.5.5 Curation

The DOE Idaho is responsible for the management of artifacts and documents located on or removed from the INEEL Site. DOE is required to ensure that collections of these artifacts remain the property of the United States and are preserved in a qualified repository. A contract (Order for Supplies or Services) between DOE Idaho and the Idaho Museum of Natural History (IMNH) to address the backlog of artifacts in temporary storage at the Museum is presently in place. Beginning in FY 2004, this contract remains in effect through February 28, 2008, and appropriates $7,000 per year for each of the five years to cover the cost of services for processing and accessioning artifacts that are currently held at the Museum. DOE Idaho collections have been reconciled and data entry is underway. In addition to items presently stored at the IMNH, a number of artifacts are presently in interim storage at the INEEL. These must be inventoried, processed, and transferred, along with associated documentation, to the IMNH for accessioning. FY 2004 activities related to items in interim storage at the INEEL included preparation of a draft interim storage plan and a proposal for additional funding to complete these tasks. In addition, a process to identify nuclear-era artifacts was implemented, some items were moved to interim storage and efforts are underway to identify long-term storage facilities to house and possibly display and interpret these unique items.

5.5.6 Regulatory and Requirements Reviews

Work at the INEEL Site is guided by literally hundreds of external and internal requirements and procedures with cultural resource management requirements being well integrated into the overall environmental compliance system. New requirements and procedures and changes to existing requirements and procedures are continuously tracked and undergo company-wide impact reviews by subject matter experts. In FY 2004, over 50 of these reviews were conducted by the CRMO subject matter experts for potential impacts to cultural resources or for impacts to CRM compliance processes at the Site and comments were subsequently incorporated into several document revisions.

5.5.7 Cultural Resource Protection

A variety of activities falling under the broad topic of cultural resource protection were completed in FY 2004, meeting several specific and recurring CRMO goals. Most of these activities are ongoing efforts and include the following:

- Began to assemble histories for unimproved roads designated as “Priority 3” for maintenance (spot grade and gravel) to provide information necessary to assess the impacts of this maintenance approach. Historic information was gathered for the following roads: T-1 (Goodale’s Cutoff), T-2, T-3, T-4, T-5, T-6, T-9, T-10, T-11, T-16, T-20. A report on this research is expected to be completed in FY 2005.

- Assembled list of significant architectural and nonarchitectural cultural resources in and around the Central Facilities Area (CFA) as a first step in developing a Site Protection Plan for this facility.

- Conducted numerous “Cultural Resource Protection” training sessions for Site employees (e.g., ecological field teams, emergency responders, Site management, university researchers, heavy equipment operators at ARA and PBF, etc.).

- Developed a permitting program to address ARPA requirements. (Presently undergoing legal review)

- In 2004, a cultural resources training module was incorporated into "Blue-Card Training," known formally as INEEL ESHQ/ISM/VPP and Site Access Training. All current employees received the training during the annual refresher, and all new hires now receive it as a part of their orientation.

6. STAKEHOLDER AND PUBLIC OUTREACH

Public Tour Examining a WWII Historic Site on the INEEL

As a federal agency, DOE is required by a number of statutes, most importantly the National Historic Preservation Act, to manage INEEL Site cultural resources in a spirit of stewardship for the citizens of the United States and to provide those citizens an opportunity to become involved in the cultural resource management process. Systematic planning for public participation in Site cultural resource management will help ensure that such participation takes place routinely and productively, and that public interests regarding resource preservation and interpretation will be considered as the Laboratory executes its primary missions. Finally, the list of potential stakeholders is as varied as the resources themselves, including such diverse groups as local historical societies, museum associations, Oregon Trail enthusiasts, INEEL retirees, historical and scientific researchers, Native American tribes, and the general public. Because of the special relationship between DOE Idaho and the Shoshone-Bannock Tribes, tribal outreach and participation are discussed in Section 7.

6.1 Communication Strategies

The Cultural Resource Management staff members recognize that successful communication is more than simply the release of technically correct information. In order to facilitate meaningful stakeholder and public discourse the following strategies are implemented:

- Evaluate and assess the communication environment, political environment, and the decision making process and the role of stakeholders that process

- Seek every available opportunity and use multiple communication vehicles to share information about cultural resources and activities that may affect them.

During FY 2004, these strategies were implemented through tours, presentations, and participation in local and regional historic preservation activities. This work was completed with both direct and indirect funding and on a voluntary basis that reflects the CRM staff's commitment to the protection of cultural resources and to public education.

6.2 Completed Activities for FY 2004

The following list of activities conducted in FY 2004 correspond to specific tasks or milestones as well as to the overall tribal involvement philosophy.

6.2.1 Stakeholder Involvement Plan

During FY 2004, the CRM office developed an INEEL Cultural Resources Stakeholder Involvement Plan (Draft) in order to:

- Ensure timely communication with stakeholders and the general public in order to promote increased interaction, understanding, and cooperation on issues of mutual concern
- Ensure compliance with all applicable federal and state laws, regulations, DOE agreements and directives that require reciprocal, open, and sincere exchanges of information prior to an agency's undertaking.

6.2.2 Tours

The CRM office conducted eleven formal tours:

- DOE Chief Historians' tour of Signature Properties
- State Historic Preservation Office and Advisory Council to discuss the CRM Plan and programmatic agreement
- Two public tours associated with Idaho Archaeology and Historic Preservation Month to increase awareness of cultural resource protection on the INEEL Site
- Idaho Historic Sites Review Board tour
- Museum of Idaho Youth Science Camp tour

Museum of Idaho Tour Group

- ICP Technical Integration Tour to discuss the End State Plan
- University of Utah astrophysics staff tour to discuss collaborations
- University of Oklahoma geophysics students and professors tour of INEEL archaeological sites
- BBWI Emergency Management – tour of INEEL archaeological sites for ARPA education
- DOE Idaho and DOE-HQ – cave and archaeological site tour.

6.2.3 Presentations and Press Releases

The CRM office staff visited schools, community organizations, universities, other institutions, and professional conferences to educate people about INEEL CRM activities and share knowledge about INEEL Site cultural resources. Such presentations included:

Presentation on Snake River Plain Geology

- "Relics of Flight: from Wright to Wrong," Goucher College
- "The Idaho National Laboratory: Preserving Elements of the Recent Past" at University of Oregon Preservation Field School, Harriman State Park
- "Somewhere Between the Mountain and the Ant: A Comparison Between Northwest Native American and Euro-American Salmon Economies," ISU, Land Issues Seminar
- "Nature Versus Nurture: Exploring the Territory Between Culture and Genes," ISU, Philosophy of Social Science Seminar
- "The Natural History of Bats on the INEEL," various locations
- Treasure Valley Business Leaders, cultural resources of the INEEL
- Idaho Economic Development Council, cultural resources of the INEEL
- Society for American Archaeology: "Analyzing Land Use Changes Over Time Using GIS and Projectile Point Typology" (poster presentation)
- "Testing a GIS Predictive Model of Archaeological Sites and Its Potential Research Applications for the Upper Snake River Basin in Eastern Idaho," 19th Annual Northwest GIS Users Conference, September 2004, Sun Valley, ID (Award winning poster)
- "Archaeological Applications in Geophysics," 30th Annual Idaho Archaeological Society Conference, October 2003, Boise, ID
- "Archaeological Geophysics," INEEL Subsurface Science Seminar and lobby display, November 2003, Idaho Falls, ID
- "Historic Preservation in Idaho Falls," Idaho Falls Exchange Club, January 2004, Idaho Falls, ID
- "INEEL Initiatives in Archaeological Geophysics," Idaho State University Department of Geology Colloquium, January 2004, Pocatello, ID
- "Careers in Archaeology and Anthropology," Claire E. Gail Jr. High Career Days, March 2004, Idaho Falls, ID
- "Eyes of the Beholder: GIS as a Tool to Understand and Manage Diverse Landscapes on the Northeastern Snake River Plain," 69th Annual Society for American Archaeology Conference, March 2004, Montreal, Canada

- "Testing a GIS Predictive Model of Archaeological Sites for the Upper Snake River Basin in Eastern Idaho," 69th Annual Society for American Archaeology Conference, March 2004, Montreal, Canada
- "Archaeological Sensitivity Training," Long Term Ecological Sampling Field Team, June 2004, INEEL Site
- " Talkin' Trash:" A World War II dump on the INEEL—Idaho Archaeological Society
- Presentation on Late Pleistocene/Early Holocene human land use on the Eastern Snake River Plain—Idaho State University
- Presentation on The National Historic Preservation Act and National Environmental Policy Act and how they relate to each other—Idaho State University
- Presentations on Cultural Landscapes—Idaho State University
- 100th anniversary of flight and Nuclear Aircraft—KIDK TV interview
- Numerous internal training sessions on CRM compliance responsibilities for project managers, DOE managers and relevant technical personnel
- "INEEL develops computer tool to help save archaeological treasures," DOE News Release, local radio interview, DOE Pulse article, internal INEEL employee article (iLights), August/September 2004
- "INEEL hosts tour of its archaeological, historical sites," DOE News Release, April 2004.

6.2.4 Professional Activities

INEEL CRM Office staff members conduct a variety of professional activities and serve in numerous capacities in local, regional, and national cultural resource organizations. For example, individual memberships are maintained in the Society for American Archaeology, the Idaho State Historical Society, Idaho Professional Archaeological Council, Idaho Archaeological Society, and the Bonneville County Historical Society. The majority of these efforts are unfunded, completed by CRMO Staff at their own discretion. Below is an abbreviated list of additional professional activities completed in FY 2004.

- Provided technical consultation on Pleistocene and Holocene exhibits at the Museum of Idaho
- Provided technical support to preservation projects at the Wasden Site, near Camas Creek, and near the Blackfoot Reservoir
- Served in a grant reviewer and in an advisory capacity on new exhibits at EBR-I and nuclear history-related exhibits at the Museum of Idaho
- Helped host an archaeology workshop for nonprofessionals, Mesa Falls, Island Park
- Bureau of Land Management Resource Advisory Council
- Adjunct Faculty, Idaho State University
- Registered Professional Archaeologist

- Chair, Idaho Falls Historic Preservation Commission
- Member, Idaho Historic Sites Review Board
- Officer, Bonneville County Historical Society-Museum of Idaho Board of Directors.

6.2.5 Preservation Partnerships

In FY 2004, the INEEL CRM Office furthered two significant and multifaceted cooperative efforts focused on preservation. One important effort involved many integrated partnerships supporting a "Save America's Treasures" grant for the EBR-I National Landmark and related Murdock Trust Foundation grant for EBR-I and Museum of Idaho exhibits in Idaho Falls. These partnerships will help to keep INEEL history vital and visible throughout the region and will continue into FY 2005. In a second partnership, Educational Outreach funds provided support for Idaho State University students and faculty to collaborate with INEEL archaeologists to finalize a three-year effort to produce a Geographical Information System-based archaeological predictive model, and train and educate students in basic cultural resource management practices. Another notable cooperative venture between the INEEL CRM Office, the Idaho Bureau of Land Management, and the University of Oregon focused on archaeological and geophysical investigations of a lava tube cave in southern Idaho.

The following groups were involved in the various efforts conducted in FY 2004:

- Atomic Heritage Foundation
- Museum of Idaho
- Arco Science Center Group
- Murdock Trust Foundation
- Idaho State University
- Shoshone District Bureau of Land Management
- University of Oregon.

Public Tour at WWII Naval Ordnance Testing Facilities

7. NATIVE AMERICAN PARTICIPATION

As a federal agency, DOE Idaho recognizes its trust responsibility to the Shoshone-Bannock Tribes and in the spirit of that responsibility DOE Idaho has entered into an Agreement in Principle (AIP) with the Tribes. The AIP defines working relationships between the Shoshone-Bannock Tribes and DOE Idaho and fosters a mutual understanding and commitment to facilitate confidence that activities being conducted at the INEEL Site protect the health, safety, environment, and cultural resources of the Tribes. To aid with implementing cultural resource aspects of the AIP, cultural resources protection on the INEEL Site is coordinated through the Cultural Resources Working Group (CRWG) with representatives from the Shoshone-Bannock Heritage Tribal Office (HeTO), DOE Idaho, and the INEEL contractor CRM Office. Regular meetings of this group help to ensure that issues and opportunities are addressed in an environment of mutual respect and learning. Tribal input is sought for new and ongoing Site projects and a standing invitation is extended to comment on, visit, observe, and/or assist in cultural resource management field activity. The holistic view of cultural resources and cooperative spirit encouraged in this group are designed to enhance understanding and appreciation of all types of cultural resources, both within the INEEL community and the Tribes. In an effort to gain a broader understanding of the importance of the INEEL Site landscape and resources to the Shoshone-Bannock Tribes, the INEEL CRM Office has partnered with the Shoshoni Language Project at Idaho State University to begin to assemble a list of Shoshoni and Paiute place-names on and around the Site. Indian and non-Indian students under the direction of Shoshone elder and fluent speaker, Drusilla Gould, have assisted in this work, visiting the INEEL Site on many occasions for direct observation. In FY 2004, a listing of over 300 translations of Shoshoni terms and concepts was created (Plager et al. 2004). This work represents an ongoing commitment by the CRM Office to a holistic concept of cultural resources. For more detail on the special relationship between the INEEL and the Tribes, and detailed working procedures, see Appendix B of the *Idaho National Engineering and Environmental Laboratory Cultural Resource Management Plan* (DOE-ID 2004).

During FY 2004 the CRMO staff was represented at all scheduled CRWG meetings and HeTO staff were otherwise informed of INEEL Site activities pertinent to cultural resources through preparation and transmittal of quarterly activity reports. HeTO staff members were also regularly invited to participate in survey and monitoring fieldwork.

Aviators' Cave

Heritage Tribal Office Staff

Lee Juan Tyler

Carolyn Smith

Patty Johnson

LaRae Bucksin

8. PROJECT REVIEWS

8.1 NHPA Section 106 Project Reviews (Historic Architectural)

The INEEL Site contains various property types that are elements of, or have features that contribute to, the overall landscape and understanding of the INEEL's recent World War II and pioneering nuclear history (1942-1970). The need to clean up the residual waste left by these past activities and processes has resulted in the removal of many buildings and structures and has been the main focus of the project reviews in FY 2004. Due to the nature of the cleanup work and that the INEEL remains an active scientific and technical facility, such activities have impacted, or may impact, historic Site architectural properties.

Demolition of the Water Research Reactor Test Facility

As discussed in the INEEL Cultural Resources Management Plan (CRMP), cultural resource reviews are completed as part of the environmental review process to assess impacts to both architectural and nonarchitectural resources. FY 2004 reviews for projects impacting nonarchitectural resources are summarized in Section 8.2. For historic architectural properties (i.e., buildings, structures, equipment, and records) a cultural resource review is initiated whenever one of the following thresholds is met:

- Demolition, major structural or landscape modification, or permanent closure of extant buildings and structures and/or removal of original equipment, features, or records
- Any activities that may affect the Experimental Breeder Reactor-I facility area, a National Historic Landmark.

The goal of the cultural resource review is to determine if the proposed project will affect properties that are eligible for the National Register of Historic Places, if they are Category 1, 2, 3, or "Signature" properties based on their relative historic importance; and, if so, to complete the mitigation and/or consultation measures outlined in the INEEL CRMP. The process used to make this determination includes archive and record searches and survey.

Nearly all of the INEEL Site architectural properties project reviews conducted in FY 2004 resulted from acceleration of decontamination, deactivation, and demolition (DD&D) ofactivities related to Site buildings and structures. Such acceleration meant that project reviews were conducted prior to the removal of 88 Site buildings and structures in FY 2004. Although consultation was conducted for some of these properties in years prior to 2004, the CRM Office staff provided the history and results of this consultation to DOE Idaho and contractor project managers, and advised them on whether or not compliance had been achieved in the cases where Memoranda of Agreement (MOA) were developed.

Of the 88 buildings and structures that were reviewed and underwent DD&D in FY 2004, 28 were exempted from the cultural resource review process, 33 were not historic, and 27 were historic. Five MOA, between the DOE Idaho and the Idaho State Historic Preservation Office (SHPO) were produced in FY 2004 and guided the mitigation of most of these properties. Mitigation activities conducted in FY 2004, included the completion of two draft Historic American Engineering Record (HAER) reports, one for Test Area North properties and the other for those at the Power Burst Facility area. Documentation was gathered or completed for buildings and structures at the Test Reactor Area and

the Idaho Nuclear Technology and Engineering Center as required by the FY 2004 and earlier, MOAs for inclusion in HAER reports that are scheduled for completion between FY 2005 and FY 2007.

The Programmatic Agreement signed in July 2004 required that the measures outlined in the CRMP be implemented. Activities proposed after July followed the requirements outlined in the CRMP. Table 8-1 includes the properties that underwent DD&D, those that are awaiting DD&D, and status of other project reviews.

Table 8-1. Buildings and structures reviewed in FY 2004.

	Building/Structure Number and Name	FY04 Projects/Comments	Compliance Status
	BUILDINGS		
CFA 622	Multicraft Shop #2	Move TAN-604 lab equipment to CFA-622	CRMO review-approved 12/3/03 (not historic)
CFA 633	Instrument Laboratory	Proposed DD&D CFA-633 Complex	Consultation started August-ongoing
CFA 635	Hazardous Mix Waste Storage / Igloo / Bunker	Proposed DD&D CFA-633 Complex	Consultation started August-ongoing
CFA 690	Radiological and Environmental Science Lab	Upgrade utilities (HVAC; water)	Activities exempted from further CRM review
CPP 601	Process Building	Proposed DD&D 1998; awaiting demolition	MOA;final HAER planned FY06
CPP 603	Fuel Receiving and Storage Building	Proposed partial DD&D 1998;awaiting demltn	MOA; final HAER planned FY06
CPP 608	Storage Building (Butler Building)	Demolished	MOA conditions met
CPP 617	Storage Building (Butler Building)	Demolished	MOA conditions met
CPP 620	Chemical Engineering Laboratory High Bay	Awaiting Demolition	MOA conditions met
CPP 620A	CPP 620 Annex	Awaiting Demolition	Not NRHP eligible
CPP 627	Remote Analytical Facility Building	Proposed DD&D 1998	MOA; final HAER planned FY06
CPP 629	MK FPR Office Building	Demolished	Not NRHP eligible
CPP 637	Process Improvement Facility, Offices and Lab	Partially Demolished	MOA conditions met
CPP-640	Headend Process Plant	Proposed DD&D 1998;awaiting demolition	MOA; final HAER planned FY06
CPP 648	Basin Sludge Tank Control House	Proposed DD&D 1998; awaiting demolition	MOA; final HAER planned FY06
CPP 664	Office Building (Quality Inspection)	Demolished	Not NRHP eligible
CPP 665	Office Building (FPR Construction)	Demolished	Not NRHP eligible
CPP 672	Contaminated Tool Storage Building	Demolished	Not NRHP eligible
CPP 682	FPR Contractor Fabrication Shop	Demolished	Not NRHP eligible
CPP 685	Safeguard Data Acquisition	Awaiting Demolition	Not NRHP eligible
CPP 693	Warehouse	Demolished	Not NRHP eligible
CPP 695	Quality X-ray Facility	Demolished	Not NRHP eligible
CPP 1603	Landlord Storage Facility	Demolished	Not NRHP eligible
CPP 1611	Pond-327 Pump House	Demolished	Not NRHP eligible
CPP 1612	Pond-326 Pump House	Demolished	Not NRHP eligible
CPP 1616	Glass Shop Storage Building	Demolished	Not NRHP eligible

Table 8-1. (Continued).

	Building/Structure Number and Name	FY04 Projects/Comments	Compliance Status
CPP 1630	Fire Protection Building	Demolished	Not NRHP eligible
CPP TB-1	MK Carpenter Shop	Awaiting Demolition	Not NRHP eligible
CPP TB-3	FPR East Guard Gate	Awaiting Demolition	Not NRHP eligible
CPP TB-4	Craft Building	Demolished	Not NRHP eligible
CPP TB-6	Quality Office Building	Demolished	Not NRHP eligible
CPP T-1	Contractors Office Space	Demolished	MOA conditions met
CPP T-2	Temporary Storage Building	Demolished	Not NRHP eligible
CPP T-3	Temporary Storage Building	Demolished	Not NRHP eligible
CPP T-5	Contractors Office Space	Demolished	MOA conditions met
EBR 601	Reactor Building and Annex	Update Interpretive Displays	Consultation completed.
PER 601	Office Buildings (Control Building)	Demolished	MOA conditions met
PER 604	Terminal Building	Awaiting demolition	MOA conditions met
PER 606	Instrument Cell	Demolished	MOA conditions met
PER 616	Storage Building	Demolished	MOA conditions met
PER 617	Fuel Storage Building	Demolished	MOA conditions met
PER 620	PBF Reactor Building	Awaiting demolition	HAER report in progress
PER 621	Emergency Generator Building	Demolished	Exempt
PER 624	Auxiliary Building	Demolished	Not NRHP eligible
PER 625	Maintenance & Storage Building	Awaiting demolition	MOA conditions met
PER 626	Storage Building and (Pump House)	Demolished	Not NRHP eligible
PER 627	Gas Cylinder Storage Facility	Demolished	MOA conditions met
PER 629	PBF Stack Gas Monitor Building	Demolished	Not NRHP eligible
PER 634	PBF Firewater Pumphouse	Demolished	Not NRHP eligible
PER 635	WERF Storage Building	Demolished	Not NRHP eligible
TAN 602	Administration Building	Demolished	MOA conditions met
TAN 603	Service Building	Demolished	MOA conditions met
TAN 604	Maintenance Shop	Demolished	MOA conditions met

Table 8-1. (Continued).

Building/Structure Number and Name		FY04 Projects/Comments	Compliance Status
TAN 606	Carpenter Shop	Demolished	MOA conditions met
TAN 608	Water Filtration Building	Awaiting demolition	Exempt
TAN 609	Equipment Maintenance Shop	Demolished	MOA conditions met
TAN 616	Liquid Waste Treatment Plant	Demolished	MOA conditions met
TAN 618	Data Collection Building	Awaiting demolition	Not NRHP eligible
TAN 624	Containment Building Entryway	Awaiting demolition	MOA conditions met
TAN 628	Warehouse	Demolished	MOA conditions met
TAN 631	Tank Building	Demolished	MOA conditions met
TAN 633	Hot Cell Annex	Awaiting demolition	MOA conditions met
TAN 635	Continuous Air Monitor Building	Demolished	Exempt
TAN 636	Carpenter Shop	Awaiting demolition	MOA conditions met
TAN 637	Compressor Building	Demolished	MOA conditions met
TAN 640	Assembly and Test Building	Awaiting demolition	MOA conditions met
TAN 641	Control and Equipment Building	Awaiting demolition	MOA conditions met
TAN 642	Area Gatehouse	Demolished	MOA conditions met
TAN 643	Chlorination Building	Demolished	Exempt
TAN 644	Well Pump House	Demolished	Exempt
TAN 645	Control and Administration Building	Awaiting demolition	MOA conditions met
TAN 646	Assembly and Test Building	Awaiting demolition	MOA conditions met
TAN 647	Containment Storage Building	Demolished	MOA conditions met
TAN 648	Storage Building	Demolished	MOA conditions met
TAN 649	Water Filtration Building	Awaiting demolition	Exempt
TAN 651	Heat Stress Relief Structure	Demolished	MOA conditions met
TAN 652	Fire Protection Pump House	Demolished	Exempt
TAN 653	Multicraft Shop	Demolished	Not NRHP eligible
TAN 654	Storage Building	Demolished	Not NRHP eligible
TAN 657	Heat Stress Control Building	Demolished	MOA conditions met
TAN 659	Control Shelter	Awaiting demolition	Exempt
TAN 662	Gas Cylinder and Oil Storage	Demolished	Not NRHP eligible
TAN 663	Continuous Air Monitor Building	Demolished	Exempt

Table 8-1. (Continued).

	Building/Structure Number and Name	FY04 Projects/Comments	Compliance Status
TAN 666	10,000 Gallon Tank	Awaiting demolition	Not NRHP eligible
TAN 667	Small Machine Shop	Demolished	Not NRHP eligible
TAN 670	Chlorine Treatment Building	Demolished	Exempt
TAN 694	Tank Storage Building	Awaiting demolition	Not NRHP eligible
TAN 695	Hazardous Material Storage Facility	Demolished	Not NRHP eligible
TAN 1601	Equipment Storage	Demolished	Not NRHP eligible
TAN 1610	Hazardous Material Storage Building	Demolished	Not NRHP eligible
TAN TB-1	Old Bully Barn	Demolished	Not NRHP eligible
TRA 603	Materials Test Reator Building	Final Disposition not determined	NEPA Environmental Assessment in progress
TRA 611	Plug Storage Building	Demolished	MOA conditions met
TRA 612	Retention Sump Pumphouse	Awaiting demolition	Exempt
TRA 624	Sewage Treatment Building	Demolished	Not NRHP eligible
TRA 637	Bunk House Trailer	Demolished	Not NRHP eligible
TRA 642	Engineering Test Reactor Building	Proposed for DD&D	NEPA Environmental Assessment in progress
TRA 643	ETR Services Building	Awaiting demolition	MOA conditions met
TRA 647	ETR Office Building	Awaiting demolition	MOA conditions met
TRA 651	Maintenance and Storage Building	Awaiting demolition	MOA conditions met
TRA 655	Storage Building	Awaiting demolition	MOA conditions met
TRA 656	Maintenance Storage Building	Awaiting demolition	MOA conditions met
TRA 663	Superior Diesel Building	Awaiting demolition	MOA conditions met
TRA 664	Hot Storage Building	Demolished	MOA conditions met
TRA 690	Storage Building	Awaiting demolition	Not NRHP eligible
	STRUCTURES		
CPP-710	Solvent Storage Building	Demolished	Not NRHP Eligible
PER-719	Electrical Substation	Awaiting demolition	Exempt
TAN 719	Shielded Roadway to TAN 630 (CTF area)	Partially Demolished	MOA conditions met

Table 8-1. (Continued).

	Building/Structure Number and Name	FY04 Projects/Comments	Compliance Status
TAN 725	Exhaust Stack (CTF area)	Awaiting demolition	MOA conditions met
TAN-729	Electrical Substation	Awaiting demolition	Exempt
TAN-730	Electrical Substation	Awaiting demolition	Exempt
TAN-768	Electrical Substation	Demolished	Exempt
TAN-798	Electrical Substation	Awaiting demolition	Exempt
TAN-801	ANP Locomotive	Proposed move to EBR I	Consultation initiated to determine final disposition
TRA 732	Sewage Treatment Plant	Demolished	Exempt
TRA 752	ETR Transformer Yard	Awaiting demolition	Exempt
TRA 779	Decon Pad	Awaiting demolition	Not NRHP eligible

8.2 NHPA Section 106 Project Reviews (Nonarchitectural)

The INEEL Site is an active facility where thousands of work orders for projects ranging from lawn mowing to new facility construction are processed each year. Detailed procedures are in place to evaluate the environmental consequences of all activities, large or small. Cultural resource reviews are an integral part of the environmental review process and are completed to assess impacts to both architectural and nonarchitectural resources. FY 2004 reviews for projects impacting architectural resources are summarized in Section 8.1.

For nonarchitectural cultural resources (archaeological sites, traditional cultural properties, roads and trails, etc.), a cultural resource review is prompted whenever one of the following basic thresholds is met:

- Ground disturbance outside the boundaries of fenced INEEL facilities or more than 50 ft from existing buildings or landscaped areas in unfenced areas
- Any ground disturbance within or around the Power Burst Facility, now designated as the Critical Infrastructure Test Range Complex (CITRC)
- Any activities proposed for known or suspected zones of Native American sensitivity and/or high archaeological resource density.

The goal of the cultural resource review is to determine if the proposed project will affect significant, National Register-eligible cultural resources. Techniques used to make this determination include archive and record searches, field surveys, tribal communication, and small-scale test excavation.

In FY 2004, 39 projects were screened for potential impacts to nonarchitectural cultural resources (See Table 8-2). Nearly all of these reviews (62%) demonstrated that the proposed projects were located within areas that had already been intensively surveyed for cultural resources through archive and record searches, alone. In all of these cases, the projects could be completed with no impacts to known resources of National Register significance either because the original surveys resulted in no resources recorded or because identified resources were clearly outside the area of potential effects for the work. Recommendations for "clearance" were issued for all of these projects with standard stipulations requiring work to stop in the event of any unanticipated discovery of cultural material.

Field surveys were necessary for slightly more than 28% of FY 2004 projects proposed for areas that had never been surveyed for cultural resources or in areas that were originally surveyed more than ten years ago. Close to 58 acres were intensively examined during these FY 2004 surveys (57.75) and six archaeological resources were documented. The Shoshone-Bannock Tribes visited all of these project locations either during the surveys or on special tours. No special tribal concerns were voiced for any of the projects. Project plans were modified in all cases to avoid all of the archaeological resources identified. Cultural resource clearance recommendations issued for these projects also included a reminder of the requirements to stop work if any cultural materials were unexpectedly encountered.

A small number of the cultural resource reviews completed in FY 2004 (10%) resulted in recommendations for future work. In these cases, projects were not scheduled for immediate completion and were located in areas that had never been surveyed for cultural resources or in areas where cultural resources are known to exist. Documentation of FY 2004 nonarchitectural cultural reviews consisted of individual project summaries completed and filed for each project. Site recording forms were also completed and electronic archives were updated.

Table 8-2. Nonarchitectural projects reviewed in FY 2004.

Project Number	Project Name	Type of Review	Acres Surveyed	Cultural Resources Recorded
2004-1	Parking Lot Extension at Idaho Nuclear Technology Center (INTEC)	Archive Review – No Historic Properties		
2004-2	Wells Near the Radioactive Waste Management Complex (RWMC)	Archive Review – No Historic Properties		
2004-3	Wireless Test Bed Enhancements	Field Survey – Project modified to avoid sensitive area – No Effect	0.5 acres	1 prehistoric site
2004-4	Ordnance Removal	Archive Review – long term recommendations		
2004-5	U.S. Geologic Survey (USGS) Wells 132 and 133	Field Survey – No Historic Properties	0.5 acres	None
2004-6	Removal of Ground Piping at Test Area North (TAN)	Archive Review – No Historic Properties		
2004-7	Powerpole at Auxiliary Reactor Area IV	Archive Review – No Effect		
2004-8	National Security Projects at Power Burst Facility (PBF)	Field Survey – No Historic Properties	18 acres	None
2004-9	Free Space Optic System	Archive Review – long term recommendations		
2004-10	Test Reactor Area (TRA) PoWater Well System	Archive Review – No Historic Properties		
2004-11	Misc. demolition at TAN, TRA, INTEC, and PBF	Archive Review – No Historic Properties		
2004-12	FY-04 Long-Term Ecological Sampling	Field Survey – Project modified to avoid sensitive area – No Effect	0.5 acres	1 historic site
2004-13	RWMC Pit 4 Stop Work Exemption	Archive Review – long term recommendations		
2004-14	RWMC Security Trailer and New Access Point	Archive Review – No Effect		
2004-15	TAN Trailer Relocation	Archive Review – No Historic Properties		
2004-16	Road Upgrades for demolition at the Water Reactor Research Test Facility (WRRTF)	Field Survey – Sensitive area located outside the Area of Potential Effect – No Effect	7 acres	1 prehistoric isolate

Table 8-2. (Continued).

Project Number	Project Name	Type of Review	Acres Surveyed	Cultural Resources Recorded
2004-17	INTEC Sewage Treatment Plant Upgrade	Archive Review – No Historic Properties		
2004-18	Road Upgrade Between Argonne National Lab-West and PBF	Archive Review – long term recommendations		
2004-19	Coast Guard Tower at Security Training Facility (STF)	Field Survey – No Historic Properties	0.5 acres	None
2004-20	FY-04 Fires	Field Survey – No Historic Properties	0.25 acres	None
2004-21	Expansion of Mining at Ryegrass Flats	Field Survey – Project modified to avoid sensitive area – No Effect	24 acres	1 prehistoric site
2004-22	Road Grading Along Scoville Siding	Field Survey – Isolated Find ineligible for NRHP – No Effect	4 acres	1 prehistoric isolate and 1 historic isolate
2004-23	Alternative Fuel Stations	Archive Review – No Historic Properties		
2004-24	Relocation of TAN Nurse Trailer	Archive Review – No Historic Properties		
2004-25	New Wells at Vadose Zone Research Park	Archive Review – No Historic Properties		
2004-26	Explosive Breach Pad at Range 7	Archive Review – No Historic Properties		
2004-27	Naval Reactors Facility (NRF) Projects	Archive Review – No Effect		
2004-28	Central Facilities Area (CFA) Landfills Monitoring Wells	Field Survey – No Historic Properties	0.5 acres	None
2004-29	INTEC Disposal Facility Parking Expansion	Archive Review – No Historic Properties		
2004-30	PBF Substation Modifications	Archive Review – No Historic Properties		
2004-31	Rattlesnake Drift Fence	Archive Review – No Effect		
2004-32	PBF Septic System Modifications	Archive Review – No Historic Properties		
2004-33	East Butte Radio Towers	Field Survey – No Effect	2 acres	None

Table 8-2. (Continued).

Project Number	Project Name	Type of Review	Acres Surveyed	Cultural Resources Recorded
2004-34	Explosives Testing at Mass Detonation Area (MDA)	Archive Review – No Historic Properties		
2004-35	National Security Testing of the Powerline between PBF and CFA	Archive Review – No Effect		
2004-36	Critical Infrastructure Testing and Research Center at PBF	Archive Review – No Historic Properties		
2004-37	Seismic Station at Existing Well M14S	Archive Review – No Historic Properties		
2004-38	Removal of Manganese Pile from CFA	Archive Review – No Historic Properties		
2004-39	Health Physics Laboratory Modifications at CFA	Archive Review – No Historic Properties		

Although no test excavations were completed on the INEEL Site in FY 2004, consultation on one FY 2003 project was finalized. FY 2003 test excavations and geophysical mapping at a small prehistoric lithic scatter located in the middle of an active portion of the INEEL Firing Range revealed no significant subsurface cultural deposits and led to a determination that the site (10-BT-810) is not eligible for nomination to the National Register (Pace 2004). In FY 2004, the report documenting this work and eligibility recommendation was forwarded to the SHPO and Tribes for review. The SHPO concurred with the report and its findings (Neitzel 2004). Although the Tribes participated in all FY 2003 fieldwork, they declined to comment on the project report.

8.3 NHPA Section 110 Projects

8.3.1 FY 2004 Section 110 Survey

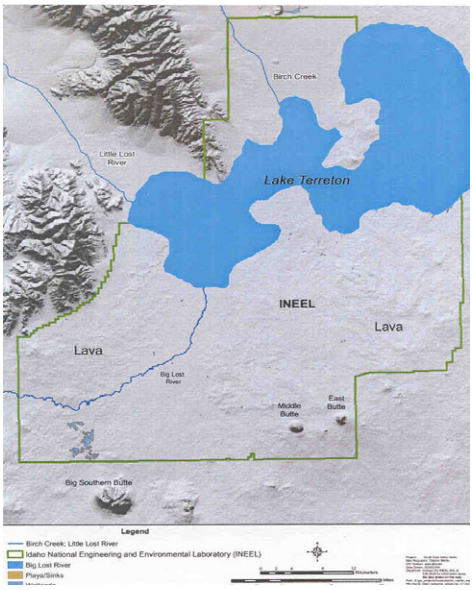
Section 110 of the National Historic Preservation Act (NHPA) directs federal agencies to establish programs to identify, evaluate, and nominate properties under their jurisdiction to the National Register of Historic Places and to maintain and manage such properties in a manner that considers their preservation. To that end, DOE Idaho has committed to a comprehensive cultural resource management approach that addresses all cultural resources on the INEEL Site, regardless of the potential for adverse effects to them.

Every year, newly discovered resources are added to the list of known, cultural resources through two basic processes. The first is the NHPA Section 106 compliance project as described in Sections 8.1 and 8.2. The second process consists of Section 110 resource inventory surveys that address provisions of Section 110 of the NHPA and also of the Archaeological Resources Protection Act that require federal agencies to locate and evaluate all cultural resources on lands they administer. Beyond satisfying compliance requirements, data gathered from these inventories lend themselves to long-term land management planning, resource stewardship, and can help address specific research questions when surveys are conducted under the guidance of appropriate research designs or historic contexts.

The FY 2004 Section 110 archaeological survey targeted the extreme northern reaches of the Big Lost River, a stretch of the river that actually flows north from the Big Lost River Sinks and was once inundated by Pleistocene Lake Terreton. This is an area of the Site that has seen little development since the early 1900s, and consequently has also received little in the way of Section 106 cultural resource survey.

Lake Terreton was a shallow lake that once spread over hundreds of square kilometers, including approximately 233 km^2 of the Site (Butler 1970; Gianniny et al. 2002; Miller 1995). Early researchers believed that the Lake Terreton shoreline was generally at an elevation of 4800 ft (Butler 1968; Nace et al. 1972).

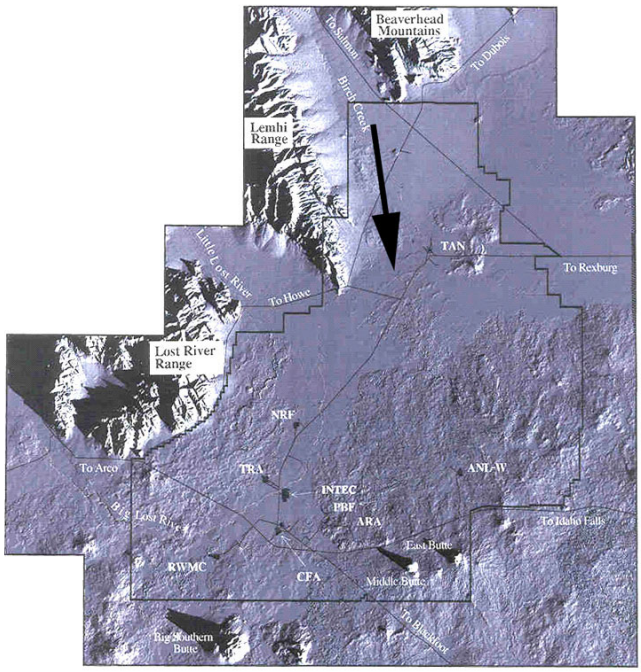
During the Pleistocene, particularly at the end of the last glacial maximum at about 18,000 B.P., high discharge flows from the Big Lost River, Little Lost River, and Birch Creek fed a western sub-basin of Pleistocene Lake Terreton. Farther to the east, Camas and Beaver Creeks sustained an eastern sub-basin that is manifest in present-day Mud Lake, located roughly 20 miles east of the study area.



Approximate Location of Lake Terreton

Although the precise hydrologic history of Lake Terreton is not clearly understood, lake levels during the Quaternary generally appear to have fluctuated in accord with advances and retreats of the nearby montane glaciers (Gianniny et al. 2002). However, palynological studies indicate that significant stands of water may have been present in the Lake Terreton basin as recently as 700 years ago (Bright and Davis 1982).

Recent paleohydrologic and geomorphic studies tend to support this, suggesting a high stand as recently as 1,000 years ago. However, it appears that this event was the only Holocene occurrence. Prior to this, the last high stand probably occurred between about 22,000 and 11,000 years ago (Ostenaa et al. 1999). Regardless of the precise Lake Terreton history, at the end of the Pleistocene and during early Holocene times this northern portion of the Site was likely exceptionally well watered



Approximate FY 2004 Section 110 Survey Location

In terms of human adaptation these conditions yield the possibility of various combinations of riverine and lacustrine adaptations (Marler 2004). Subsequent Holocene warming and drying trends have left a barren, flat expanse of silt and clays, occasionally overlain with sand dunes aligned with the dominant southwesterly winds and variably relieved by sagebrush steppe vegetation (Miller 1995).

The FY 2004 Section 110 survey was designed as an initial phase of a long-term series of cultural resource inventories in the western Lake Terreton sub-basin and along the probable shoreline to explore what, if anything, the kinds of cultural materials present and their relative locations can tell us about human adaptation and Lake Terreton history during the Late Pleistocene and Holocene and to expand the survey sample from under-studied INEEL Site areas.

8.3.2 Findings

Ten sites and six isolated finds were found and recorded during the approximately 150-acre 2004 survey. Of the 10 sites, five contain both historic and prehistoric components, four are prehistoric and one is historic, while all six of the isolates are prehistoric. A total of 31 diagnostic prehistoric artifacts were documented, 90% of which represent dart technology typically associated with middle prehistoric time period (approximately 7,500-1,500 years ago), 10% represent arrow technology from the late prehistoric timeframe (approximately 1,500 to 150 years ago). No unequivocal early prehistoric (15,000 to 7,500 years ago) artifacts were in evidence. Interestingly, the surveyed area is one that would likely have been under water during peak moisture periods of the Late Pleistocene and Early Holocene.

Baking Powder Can from the Blacker Homestead

During the survey an historic site of particular interest was found and recorded that appeared to be the remnants of a homestead. While there was no permanent foundation, the abundant presence of used (bent and twisted) nails indicated that a structure once stood in the general area. A dense scatter of broken glass, hole-in-top cans and other related cultural refuse and artifacts also indicated evidence of a habitation site. Later research revealed that the homestead most likely belonged to Charles M. Blacker.

According to Bureau of Land Management (BLM) General Land Office (GLO) records, Charles M. Blacker (also listed as Blocher) patented his homestead claim on May 16, 1922 under the 1862 Homestead Act (12 Stat. 392). To file on a claim under this act, the homesteader first needed to be the head of a household and at least 21 years of age. After filing on their claim at the nearest General Land Office (in this case it was located at Blackfoot, Idaho) they were then required to "prove up" on their 160-acre parcel of land. This required building a home and farming their land for five years. If the homesteader made it after five years they could then file a patent. Although there is a discrepancy in Blacker's (Blocher's) name, it is likely that the text was entered incorrectly into the BLM GLO records due to possible bad handwriting.

Blacker, born in Indiana in 1895 was 24 years of age during the 1920 census. This would have made him 26 at the time he patented his claim, making him only 21 when he filed on his claim. While the census shows him as the only occupant of his residence, the artifact assemblage tells possibly a different story. A ladies hatpin, hair pin, and possible garter attachment hardware indicates the presence of a woman, while a brown clay marble, found also at the site could indicate the presence of a child.

Possible Garter Attachment
Hardware from the Blacker Homestead

Additional research could tell us many things such as when he relinquished his homestead (indicating how long he occupied the site; aerial photographs taken in 1949 of the area show plow scars approximately 200 meters to the north of his homestead that indicate only 10 acres were under cultivation), if and to whom he was married, and if they had any children. We might even possibly find living descendents who could further enhance our knowledge of what life was like living on the Site in the early 1900s.

An inventory of INEEL post-1942 WWII and nuclear-era structures was also completed in FY 2004. Appendix A provides a list of inventoried structures. Although some have been determined to be exempt from the cultural properties review process, most have yet to be evaluated for their eligibility to the NRHP.

Middle Prehistoric Dart Point
found during the 2004 110 Survey

9. SITE AND PROJECT MONITORING

A detailed description of the INEEL CRM Office monitoring program is located in Appendix L of the INEEL Cultural Resource Management Plan (DOE-ID 2004). Monitoring enables the INEEL CRM Office to document if the integrity of known resources is being compromised by natural processes, by unauthorized activities, or inadvertently by INEEL projects. By identifying impacts to cultural resources in this manner, actions to avert further deterioration can be initiated and federal stewardship responsibilities are fulfilled.

Larae Buckskin of the Shoshone Bannock Heritage Tribal Office Checks Conditions at Middle Butte Cave

Specific cultural resources and INEEL projects are chosen for cultural resource monitoring based on feedback from DOE Idaho and INEEL CRM knowledge of INEEL Site projects and facilities. Each year, DOE Idaho recommends a select number of especially sensitive localities that are then targeted for visitation. The Shoshone-Bannock Tribes are typically involved in these monitoring activities. In recent years, funding cuts have reduced the number of resources monitored and in FY 2004 only three such places were visited. Monitoring of Site projects is also limited by funding and must be responsive to the overall sensitivity of the Site and the level of project activity in any given year. For example, in the sandy aeolian soils of the Power Burst Facility complex, where Native American human remains have been found on two occasions, cultural resource monitoring of projects that involve excavation is routine and required by company procedure (MCP-3480). Accelerated cleanup and DD&D at PBF in FY 2004 resulted in a number of CRM Office monitoring visits. This level of cultural resource oversight ensures that any additional human remains that might be encountered are handled appropriately. Cultural resource monitoring of other Site projects is typically done at the discretion of the CRM Office and again, is responsive to overall levels and areas of activity across the entire area.

In FY 2004, 15 monitoring trips were documented throughout the year (INEEL 2005). This included visits to the three especially sensitive specific cultural resource locations and involvement with six different Site projects. The three sensitive resources identified by DOE Idaho for monitoring in FY 2004 were:

- Middle Butte Cave
- Aviators' Cave
- 10-BT-2046, a site near the Waste Experimental Reduction Facility within the PBF complex where human remains are present.

No new impacts were observed at any of these localities. Shoshone-Bannock representatives participated in all of these visits. DOE Idaho participated in the cave visits.

The six projects subjected to cultural resource scrutiny during FY 2004 were:

- Miscellaneous decontamination, dismantlement, and demolition activities at PBF (5 visits)
- National security testing activities near PBF (1 visit)

- Soil removal and remediation at the Auxiliary Reactor Area (ARA) (3 visits)
- Radioactive Waste Management Complex Northside Security Gate (1 visit)
- Monroe Gravel Pit (1 visit)
- Unmanned aerial vehicle runway (1 visit).

Company environmental procedures require project managers to contact the CRM Office in advance of ground disturbance within the fenced boundary of PBF. This is due to the occurrence of human remains in original as well as secondary contexts at two separate locations within the facility. Accelerated cleanup across the Site has resulted in an increase in the number of projects at PBF. On five occasions in FY 2004, ground disturbance was monitored for human remains. No sensitive materials were observed at any time.

A series of seventeen holes 3 × 3 × 3 ft in size were excavated in the vicinity of PBF to support a new National Security testing project in FY 2004. Due to proximity to the sensitive sandy soils of PBF, these excavations were monitored for human remains and artifacts. No sensitive materials were observed at any time.

Contaminated soils surround some of the structures within the now largely demolished ARA facility. In FY 2004, these surface soils were removed down to approximately 12 inches below the surface across a large area. Archaeological sites were identified around the perimeter of this soil removal area. Monitoring for subsurface cultural materials was conducted on three occasions when project activities approached these resource locations. At no time did any of the project activities directly impact the identified resources and no sensitive materials were observed in any of the excavations.

Archaeological sites are numerous in the area immediately north of the fenced perimeter at the RWMC. Installation of a new security gate in this area in FY 2004 prompted a visit by the CRM Office staff to watch for artifacts in the limited area of excavation needed to support the project. No sensitive materials were observed at any time.

Monroe Gravel Pit, located between the Test Reactor Area and Idaho Nuclear Technology and Engineering Center is one of the most active gravel pits on the Site. In FY 2004, the western border of this gravel pit was monitored for exposure of any archaeological materials. No sensitive materials were observed in this area. An attempt was also made to re-identify the locations of archaeological sites originally recorded in the undisturbed area west of the active pit since range fires in this vicinity have created excellent surface visibility. Despite intensive pedestrian survey efforts, the three small sites originally located in this area (10 - 20 artifacts each) could not be found. Additional surveys are scheduled in this area for FY 2005 in anticipation of gravel pit expansion.

In FY 2004 a new facility was developed to support a growing unmanned aerial vehicle program. The modest runway built for this facility was placed in an area where intensive archaeological surveys and tribal communication revealed no cultural resources in the construction zone. Monitoring of construction activities showed that project personnel were aware of the limits of the area cleared for cultural resource concerns and all activities were within the bounds of the original recommendations. No sensitive cultural materials were observed at any time.

10. ARCHAEOLOGICAL GEOPHYSICS

Investigations into the application of geophysical tools to archaeological research problems are a new business effort for the INEEL CRM Office. Most of the activities conducted in FY 2004 were designed to make contacts with potential customers and collaborators. Overall, this included technical reporting, presentations, informational displays, and some field work.

Technical reporting on the results of geophysical mapping at a small Middle Prehistoric (3,500 – 1,300 BP) hunting camp located in the middle of the INEEL Firing Range was completed in FY 2004 (Pace 2004), concluding SHPO and tribal consultation on the National Register eligibility of Site 10-BT-810. Section 8.2 provides details on the consultation. The geophysical mapping of this small site proved encouraging for future efforts in this research area, although the occurrence of metal bullet casings and other materials associated with long-term use as a live-fire range did complicate the resulting data. We are encouraged by the apparent association between ground-penetrating radar anomalies and artifact concentrations. This probably reflects differences in soil compaction and moisture content, which could be associated with intensive human activity. The radar surveys also revealed a buried stream channel in the vicinity of the site, which was not readily apparent at the current ground surface and may help to explain the presence of the site in such a seemingly featureless area.

One field project was completed in FY 2004, a modest joint effort between the INEEL, the Shoshone District of the Bureau of Land Management, and the University of Oregon. It involved electromagnetic and ground penetrating radar surveys in and around a lava tube cave (Kelvin's Cave) in advance of archaeological excavations. Imagery obtained through these surveys was valuable as a general guide for the excavations because it showed the location of a buried chamber in the cave where undisturbed cultural deposits were likely to occur as well as areas of deeper roof fall where researchers believed they would find evidence of a Pleistocene aged association between human populations and now-extinct megafauna. Plans are in place to incorporate geophysical surveys into an archaeological salvage project near the Blackfoot Reservoir in the summer of 2005. A number of research presentations and papers on this work are also planned for FY 2005.

Future plans for this new business effort call for additional reporting and presentations on the work at Kelvin's Cave, possible participation in another archaeological excavation at a rockshelter in southern Idaho or at open sites along the Snake River, and preparation of proposals for additional baseline funding to develop a library of geophysical signatures applicable to archaeological settings in cold desert regions throughout the West using a variety of real-life and simulated settings.

11. PRESENT AND FUTURE ACTIVITIES

11.1 FY 2005 (Activities Currently Underway)

- Complete an inventory of PBF/TAN non-building property types.
- Complete the TRA HABS/HAER report.
- Implement the stakeholder involvement plan.
- Compile the annual report of CRM activities.
- Conduct the annual meeting with SHPO, ACHP, tribes, and stakeholders.
- Integrate references to the CRMP and PA into appropriate Management Control Procedures and other procedural documents at the INEEL.
- Implement a comprehensive monitoring program to identify, track, and prevent impacts to known cultural resources throughout the INEEL. Obtain GPS locations and photographs.
- Continue development of specialized techniques and partnerships for conducting geophysical investigations of archaeological resources.
- Establish a plan for revisiting, re-recording, and re-evaluating cultural resources originally identified more than 10 years ago.
- Develop an EBR-I preservation plan.
- Develop a NAGPRA Plan of Action for the INEEL and a detailed procedure for unanticipated discoveries of human remains.
- Develop an Oral History Plan.

11.2 Short-term Goals (1-5 Years)

- Establish a comprehensive, sitewide monitoring program to identify, track, and reduce impacts to known cultural resources throughout the INEEL and for purposes of updating significance evaluations on selected properties.
- Expand the INEEL interpretive program.
- Establish roadside interpretive signage.
- Develop and implement a formal oral history program.
- Establish an ongoing research program for the INEEL through collaborative relationships with universities.
- Determine if the INEEL is a cultural landscape based on National Park Service criteria.
- Increase percentage of intensively surveyed INEEL lands from 8% to 15%.
- Complete the inventory of INEEL built environment.

11.3 Long-term Goals

- Inventory remaining nonbuilding INEEL property types.
- Research and write Historic American Engineering Record reports for remaining major INEEL programs.
- Write multiproperty National Register nomination package for INEEL historic properties.
- Identify suitable repository for post-1942 artifacts.
- Prepare report on archaeological and Native American resources within facility fences or within 50 ft of existing buildings in unfenced areas.
- Establish creative ways to recognize INEEL employees who demonstrate good stewardship of INEEL cultural resources.
- Develop internal assessment/audit system to identify any deficiencies in the INEEL CRM Program.
- In collaboration with the Shoshone-Bannock Tribes, prepare a research design for the investigation of Native American cultural resources that may be located on the INEEL.
- Create a web page for the INEEL CRM Office.
- Complete an inventory of architectural properties at Argonne National Laboratory-West.

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Appendix A

Building and Structures Inventoried in FY 2004

A-1. Buildings and structures inventoried in FY 2004.

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
	STRUCTURES			
CF 701	CFA Landfill	—	Needs Assessed	Operating
CF 702	Weather Station Farm (behind CF 690)	—	Needs Assessed	Operating
CF 703	Microwave Tower (behind CF 606)	1965	Exempted	Shutdown
CF 704	Concussion Wall (Navy Firing Center at CF 633)	1942	Eligible	Operating
CF 707	Electrical Substation for CF 689, 690	—	Exempted	Operating
CF 708	Fuel Oil Storage Tank, CFA Technical Center	—	Exempted	Operating
CF 709	Helicopter Landing Pad	—	Needs Assessed	Operating
CF 710	CFA Loading Dock (on SPUR Track #9)	—	Needs Assessed	Operating
CF 711	CFA Loading Dock (on SPUR Track #10)	—	Needs Assessed	Operating
CF 717	Sewage Lift Station (behind CF 689)	—	Exempted	Operating
CF 718	Railroad Trestle	—	Needs Assessed	Inactive
CF 719	CF Well No. 1 (Navy Well)	ca. 1949	Needs Assessed	Operating
CF 720	CF Well No. 2 (Navy Well)	ca. 1949	Needs Assessed	Operating
CF 722	Security Munitions Bunker	—	Needs Assessed	Operating
CF 723	Fuel Oil Tank	—	Exempted	Inactive
CF 728	Fuel Oil Tank at CF 666	—	Exempted	Operating
CF 731	Jet Fuel Tank behind CR 608 replaced by CF 1704	—	Exempted	Operating
CF 733	Fuel Oil Tank	—	Exempted	Inactive
CF 736	Fuel oil Tank at CF 603	—	Exempted	Operating
CF 738	Fuel Oil Tank CF 650	1951	Exempted	Operating
CF 739	Fuel Oil Tank CF 650	1951	Exempted	Operating
CF 742	Fuel Tank at CF 640	—	Exempted	Inactive
CF 748	Diesel Oil Tank at CF 641	—	Exempted	Operating
CF 749	Waste Oil Tank	—	Exempted	Operating
CF 753	Tank, 50,000 gal. Steel raw water storage	—	Exempted	Operating
CF 755	#5 Fuel Oil Tank	—	Exempted	Inactive
CF 756	25,000 gal. concrete raw water storage UST	1950	Exempted	Shutdown
CF 758	Truck Weighing Scale	1950	Needs Assessed	Shutdown
CF 761	INEL Scoville Electrical Substation	1951	Exempted	Operating
CF 765	Loading Dock at CF 674	—	Needs Assessed	Operating
CF 768	Heavy Equipment Loading Dock and Ramp	—	Needs Assessed	Operating
CF 773	Underground Storage Tank next to CF 665	—	Exempted	Operating
CF 776	Fence at CF 609	—	Needs Assessed	Operating
CF 777	Fence at CF 660	—	Needs Assessed	Operating
CF 778	Fence at CF 701	—	Needs Assessed	Operating
CF 779	Fence at CF 601 and 674	—	Needs Assessed	Operating
CF 780	Fence at CF 716	—	Needs Assessed	Operating

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
CF 781	Propane Tank at CF 650	—	Exempted	Operating
CF 782	Fire Water Tank 500,000 gallon	—	Exempted	Operating
CF 783	Bus Refueling Island	—	Needs Assessed	Operating
CF 784	Car Refueling Island	—	Needs Assessed	Operating
CF 785	Liquid Propan Tank (18,000)	—	Exempted	Operating
CF 786	Waste Water Treatment Lagoon	—	Needs Assessed	Operating
CF 787	Waste Water Storage Lagoon	—	Needs Assessed	Operating
CF 788	Waste Water Polishing Lagoon	—	Needs Assessed	Operating
CF 789	Waste Water Disposal Pivot System	—	Needs Assessed	Operating
CF 790	CF 606 Flag Pole	ca. 1945	Eligible	Operating
CF 791	Antifreeze Tank north of CF 696 underground	—	Exempted	Operating
CF 792	Oil Tank north of CF 696 underground	—	Exempted	Operating
CF 793	Oil Tank north of CF 696 underground	—	Exempted	Operating
CF 794	Oil Tank north of CF 696 underground	—	Exempted	Operating
CF 795	Waste Oil Tank north of CF 696 underground	—	Exempted	Operating
CF 796	Diesel Tank east of CF 696 underground	—	Exempted	Operating
CF 797	Diesel Tank east of CF 696 underground	—	Exempted	Operating
CF 798	Propane Tank east of CF 696 above ground	—	Exempted	Operating
CF 799	Gasoline Tank north of CF 696	—	Exempted	Operating
CF 1701	Fuel Tank north of CF 668	—	Exempted	Operating
CF 1702	Heating Oil Tank	—	Exempted	Operating
CF 1704	Fuel Tank	—	Exempted	Operating
CF 1705	Heating Oil Tank	—	Exempted	Operating
CF 1706	Fuel Tank	—	Exempted	Operating
CF 1708	Heating Oil Tank	—	Exempted	Operating
CF 1710	Vehicle Fuel Station	2001	Exempted	Operating
CF 1711	Temporary Accumulation Area	—	Needs Assessed	Operating
CF 1713	Propane Tank near CF 666	—	Exempted	Operating
CF 1714	Truck Scale north of CF 629	—	Needs Assessed	Operating
CF 1715	CFA Sanitary Treatment System	—	Exempted	Operating
CF 1716	LNG Tank	—	Exempted	Operating
CF 1717	Liquid Propane Tank (12,000)	—	Exempted	Operating
CF 1718	Sewage Lift Station (behind CF 696)	—	Needs Assessed	Operating
CF 1719	Evacuation Siren Tower	—	Needs Assessed	Operating
CF 1720	Evacuation Siren Tower	—	Needs Assessed	Operating
CPP 701	Fuel Oil Unloading Shelter for Power House	1951	Needs Assessed	Operating
CPP 701A	Fuel Oil Storage Tank	1951	Exempted	Operating
CPP 701B	Fuel Oil Storage Tank	1960	Exempted	Operating
CPP 702	Fuel Oil Unloading Shelter	1980	Exempted	Shutdown
CPP 702A	Fuel Oil Storage Tank	1980	Exempted	Shutdown
CPP 702B	Fuel Oil Storage Tank	1980	Exempted	Shutdown

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
CPP 706	Transformer Area at Guardhouse	1978	Exempted	Operating
CPP 708	Exhaust Stack	1953	Needs Assessed	Operating
CPP 710	Solvent Storage Building	1953	Needs Assessed	Shutdown
CPP 712	Instrument House	—	Needs Assessed	Operating
CPP 713	Tank Enclosure	1953	Exempted	Operating
CPP 717A	STR Waste Storage Tank	1953	Needs Assessed	Operating
CPP 717B	STR Waste Storage Tank	1953	Needs Assessed	Operating
CPP 717C	STR Waste Storage Tank	1953	Needs Assessed	Operating
CPP 717D	STR Waste Storage Tank	1953	Needs Assessed	Operating
CPP 719A	Nitric Acid Storage	1954	Exempted	Operating
CPP 719B	Nitric Acid Storage	1954	Exempted	Operating
CPP 720A	Aluminum Nitrate Storage	1954	Exempted	Operating
CPP 720B	Aluminum Nitrate Storage	1954	Exempted	Operating
CPP 720C	Aluminum Nitrate Storage	1954	Exempted	Operating
CPP 721	Condenser Pit for WM-182	1953	Needs Assessed	Operating
CPP 722	Condenser Pit for WM-183	1953	Needs Assessed	Operating
CPP 723	Relief Valve Pit for WM-181	1953	Needs Assessed	Operating
CPP 724	Lift Station for Waste Water Treatment Plant	1953	Needs Assessed	Operating
CPP 725	Water Storage Tank	1951	Exempted	Operating
CPP 726	Raw Water Storage Tank	1960	Exempted	Operating
CPP 727	FAST HF Acid Storage	1983	Exempted	Shutdown
CPP 728	UREP Lift Station for NWCF Plant	1953	Needs Assessed	Operating
CPP 729	Vault for Bin Set I	1960	Needs Assessed	Operating
CPP 730	Liquid Nitrogen Storage Tank	1964	Exempted	Operating
CPP 731	Transformer Area at Process Improvement Facility	1959	Exempted	Operating
CPP 732	Cooling Stack Bin Set I	1960	Needs Assessed	Operating
CPP 733	Lift Station for Eastside Sanitary Waste Line	1953	Needs Assessed	Operating
CPP 735	Transformer area at Waste Calciner	—	Exempted	Operating
CPP 736	Salt Storage Pit	1984	Exempted	Operating
CPP 737	Condenser Pit	1953	Needs Assessed	Operating
CPP 738	Cooling Water Pit	1953	Needs Assessed	Operating
CPP 739	Condenser Pit	1953	Needs Assessed	Operating
CPP 740	Settling Basin and Dry Well	1953	Exempted	Operating
CPP 741	WCF Solids Storage Vault	1962	Needs Assessed	Operating
CPP 742	Vault for Bin Set II	1966	Needs Assessed	Operating
CPP 743	Condenser Pit	1953	Needs Assessed	Operating
CPP 744	Vault for Bin Set II Equipment	1965	Needs Assessed	Operating
CPP 746	Vault for Bin Set III	1971	Needs Assessed	Operating
CPP 747	Vault for Bin Set III Equipment	1971	Needs Assessed	Operating
CPP 748	Lift Station for Surface Drainage	1972	Exempted	Operating
CPP 749	Peach Bottom Fuel Storage Facility	1972	Needs Assessed	Operating

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
CPP 750	Service Waste Diversion Pump Station	1973	Exempted	Operating
CPP 751	Service Waste Monitoring Station	1973	Needs Assessed	Operating
CPP 752	Service Waste Diversion Pump Station	1974	Exempted	Operating
CPP 753	Service Waste Monitoring Station	1974	Exempted	Operating
CPP 753A	Service Waste Monitoring Station	1974	Exempted	Operating
CPP 754	Service Waste Diversion Pump Station	1975	Exempted	Operating
CPP 755	Coal Storage Pad	1980	Needs Assessed	Shutdown
CPP 756	Prefilter Vault	1976	Exempted	Operating
CPP 757	FAST Sulfuric and Hydrochloric Acid Tanks	1989	Exempted	Operating
CPP 758	Leaching Cesspool	—	Exempted	Operating
CPP 759	Leaching Cesspool	1977	Exempted	Shutdown
CPP 760	Vault for Bin Set IV	1977	Needs Assessed	Operating
CPP 761	Vault for Bin Set IV Equipment	1977	Needs Assessed	Operating
CPP 762	Westside Condensate Pump Pit	1978	Exempted	Operating
CPP 763	Waste Diversion Tank Vault	1969	Needs Assessed	Operating
CPP 764	SFE Hold Tank Vault	1980	Exempted	Operating
CPP 765	Vault for Bin Set V	1981	Needs Assessed	Operating
CPP 766	Seepage Pit for CPP 662	1979	Exempted	Operating
CPP 767	FAST Stack	1985	Needs Assessed	Operating
CPP 768	Sewage Lift Station for CPP 657	1976	Exempted	Operating
CPP 769	UREP Flow Control Station	1982	Exempted	Operating
CPP 770	UREP Flow Control Station	1982	Exempted	Operating
CPP 771	UREP Flow Control Station	1982	Exempted	Operating
CPP 772	UREP Flow Control Station	1982	Exempted	Operating
CPP 773	UREP Flow Control Station	1982	Exempted	Operating
CPP 774	UREP Flow Control Station	1982	Exempted	Operating
CPP 775	Fuel Oil Pump Shed, Coal-Fired	1983	Exempted	Shutdown
CPP 776	Car Thawing Station, Coal-Fired	1983	Needs Assessed	Shutdown
CPP 778	Electrical Substation, Coal-Fired	1983	Exempted	Operating
CPP 780	Vault for Waste Tank	1960	Needs Assessed	Operating
CPP 781	Vault for Waste Tank	1960	Needs Assessed	Shutdown
CPP 782	Vault for Waste Tank	1960	Needs Assessed	Operating
CPP 783	Vault for Waste Tank	1960	Needs Assessed	Shutdown
CPP 784	Vault for Waste Tank	1960	Needs Assessed	Shutdown
CPP 785	Vault for Waste Tank	1960	Needs Assessed	Shutdown
CPP 786	Vault for Waste Tank	1960	Needs Assessed	Shutdown
CPP 787	Boiler Stack, Coal-Fired	1983	Needs Assessed	Shutdown
CPP 788	Boiler Baghouse, Coal-Fired	1983	Needs Assessed	Shutdown
CPP 789	Boiler Baghouse, Coal-Fired	1983	Needs Assessed	Shutdown
CPP 791	Vault for Bin Set V	1984	Needs Assessed	Operating
CPP 792	Ash Silo, Coal-Fired	1983	Needs Assessed	Shutdown
CPP 793	Limestone Silo, Coal-Fired	1983	Needs Assessed	Shutdown

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
CPP 794	Coal Handling Dust Collector	1983	Needs Assessed	Shutdown
CPP 795	Vault for Bin Set VII	1985	Needs Assessed	Operating
CPP 796	Structure Replacement for CPP 734	1988	Needs Assessed	Operating
CPP 797	Structure Replacement for CPP 709	1988	Needs Assessed	Operating
CPP 798	HF Acid Storage	1988	Needs Assessed	Operating
CPP 799	Lift Station	1991	Exempted	Operating
CPP 1711	Deep Well	1984	Exempted	Operating
CPP 1713	Lift Station	1986	Exempted	Operating
CPP 1714	CPP 1714 to CPP 1748 are Camera Towers	—	Needs Assessed	Varies
CPP 1749	Emergency Pumping Stations for Waste Systems	1988	Exempted	Operating
CPP 1750	Substation	1988	Exempted	Operating
CPP 1751	Camera Tower	—	Needs Assessed	Operating
CPP 1752	Camera Tower	—	Needs Assessed	Shutdown
CPP 1754	Cesspool	1983	Exempted	Operating
CPP 1755	Cesspool	1983	Exempted	Shutdown
CPP 1756	Cesspool	1992	Exempted	Operating
CPP 1757	Cesspool	1992	Exempted	Operating
CPP 1758	Load Center # 4	—	Needs Assessed	Operating
CPP 1759	Diesel Storage Tank Basin	—	Exempted	Operating
CPP 1760	Kerosene Storage Tank Basin	—	Exempted	Operating
CPP 1762	Load Center # 5	—	Needs Assessed	Operating
CPP 1764	Load Center # 14	—	Needs Assessed	Operating
CPP 1767	Control Valve Vault	1992	Needs Assessed	Operating
CPP 1769	PoWater Storage Shed	1992	Needs Assessed	Operating
CPP 1770	Substation	1994	Exempted	Operating
CPP 1771	Substation	1994	Exempted	Operating
CPP 1772	Lift Station	—	Exempted	Operating
CPP 1773	Load Center # 13	2000	Needs Assessed	Operating
CPP 1774	TMI-2 Spent Fuel Storage Installation	1998	Needs Assessed	Operating
CPP 1775	NWCF Calciner Ventilation Stack	1981	Needs Assessed	Operating
CPP 1776	Tunnel, starts at CPP 606 and runs under complex	—	Needs Assessed	Operating
CPP 1777	USGS Water Quality Monitoring Station	—	Exempted	Operating
CPP 1778	Sewer Lagoon I,II,III,IV,V	—	Needs Assessed	Operating
CPP 1779	Percolation Ponds, I and II west of INTEC	2001	Needs Assessed	Operating
CPP 1780	Ash Burial Pit Coal Fire Area SE of CPP 687	1981	Needs Assessed	Shutdown
CPP 1782	Substation # 15	1998	Needs Assessed	Operating
CPP 1784	Tank Enclosure	—	Needs Assessed	Operating
CPP 1786	Load Center # 1	2001	Needs Assessed	Operating
EBR I 709	Septic Tank for EBR -I	ca. 1950	Exempted	Operating
EBR I 710	Deep Well Transformer Yard	ca. 1950	Exempted	Operating

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
EBR I 711	EBR I Deep Well and Pit	ca. 1950	Exempted	Operating
EBR I 712	Meteorological Tower	ca. 1950	Needs Assessed	Operating
EBR I 713	Seepage Pit	ca. 1950	Exempted	Operating
EBR I 714	Septic Tank for EBR -I	ca. 1950	Exempted	Operating
EBR I 716	Seepage Pit	ca. 1950	Exempted	Operating
PBF 703	Electrical Substation (Control Area)	1981	Exempted	Operating
PBF 705	Fuel Tank	1987	Exempted	Operating
PBF 706	PBF Evaporation Tank	1994	Exempted	Shutdown
PBF 707	Electrical Substation	1957	Exempted	Operating
PBF 708	WERF Electrical Substation (was SPERT III)	1956	Exempted	Operating
PBF 709	Fuel Oil Tank	1958	Exempted	Shutdown
PBF 710	WEDF Electrical Substation (was SPERT II)	1960	Exempted	Operating
PBF 711	Fuel Oil Tank	1988	Exempted	Operating
PBF 713	MWSF Electrical Substation	1962	Exempted	Operating
PBF 717	50,000 gallon water tank	1962	Exempted	Operating
PBF 718	Meteorological Tower	—	Needs Assessed	Operating
PBF 719	Electrical Substation	1976	Exempted	Operating
PBF 720	Cooling Tower (was SPERT I)	1976	Eligible	Shutdown
PBF 722	Fuel Storage Tank (SPERT I)	1971	Exempted	Operating
PBF 723	Nitrogen Tank	—	Exempted	Operating
PBF 724	Septic Tank (Control Area)	1968	Exempted	Removed
PBF 725	WEDF Septic Tank (SPERT II)	—	Exempted	Operating
PBF 726	WERF Septic Tank (SPERT III)	1968	Exempted	Shutdown
PBF 727	MWSF Septic Tank (SPERT IV)	—	Exempted	Shutdown
PBF 728	PBF Septic Tank	1968	Exempted	Operating
PBF 729	Fire Hose Storage (Control Area)	1980	Needs Assessed	Operating
PBF 730	Primary Coolant Water Storage Tank	1976	Exempted	Shutdown
PBF 732	Hot Waste Storage Tank	1978	Needs Assessed	Operating
PBF 733	Waste Disposal Evaporation Pond	—	Needs Assessed	Operating
PBF 742	Fuel Oil Tank	—	Exempted	Operating
PBF 743	Fuel Oil Tank	—	Exempted	Operating
PBF 744	Septic Tank (Control Area)	1980	Exempted	Operating
PBF 745	Seepage Pit	1963	Exempted	Operating
PBF 746	Seepage Pit	1963	Exempted	Operating
PBF 749	Diesel Fuel Tank	—	Exempted	Shutdown
PBF 751	Radioactive Liquid Waste Storage Tank	1979	Needs Assessed	Shutdown
PBF 754	Seepage Pit	1980	Exempted	Operating
PBF 755	WERF Exhaust Stack North	1983	Needs Assessed	Operating
PBF 756	WERF Exhaust Stack South	1983	Needs Assessed	Shutdown
PBF 758	Leaching Pond	1962	Needs Assessed	Operating
PBF 759	Seepage Pit (SPERT I) D&D with monument	—	Needs Assessed	Operating

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
PBF 760	Seepage Pit (SPERT II)	1960	Exempted	Operating
PBF 761	Spray Dryer Absorder Silo	1990	Needs Assessed	Operating
PBF 763	WERF (SPERT II) Septic Tank	1990	Exempted	Operating
PBF 765	PBF-622 Building Stack	1990	Needs Assessed	Shutdown
PBF 766	Fire Hose Storage (PBF)	1980	Needs Assessed	Operating
PBF 768	PoWater and Fire Water Tank	1995	Exempted	Operating
PBF 769	Hose House (PBF)	1980	Needs Assessed	Shutdown
PBF 770	Drain Field	1990	Exempted	Shutdown
PBF 771	Heating Oil Tank	1994	Exempted	Operating
PBF 772	Heating Oil Tank	1994	Exempted	Operating
PBF 775	Fuel Tank	—	Exempted	Shutdown
PBF 776	Fuel Tank	—	Exempted	Operating
PBF 778	Heating Oil Tank	—	Exempted	Operating
PBF 779	Heating Oil Tank	1994	Exempted	Operating
PBF 780	Drainage Basin # 2	1994	Needs Assessed	Operating
PBF 781	Drainage Basin # 3	—	Needs Assessed	
STF 725	Downtherm Relief Pit	ca. 1961	Needs Assessed	
STF 726	Downtherm Surge Tank	ca. 1961	Needs Assessed	Operating
TAN 701	Water Storage Tank	1953	Exempted	Shutdown
TAN 702	Boiler Fuel Tank (TSF area)	1956	Exempted	Operating
TAN 704	Boiler Fuel Tank (TSF area)	—	Exempted	Inactive
TAN 705	Turn	ca. 1955	Eligible	Inactive
TAN 706	Radioactive Sample Tower (IET area)	—	Needs Assessed	Operating
TAN 707	Weather Tower (IET area)	—	Needs Assessed	Shutdown
TAN 709	Transformer Station (TSF area)	1960	Exempted	Operating
TAN 710	Septic Tank (IET)	1956	Exempted	Operating
TAN 711	Sewage Treatment Plant (TSF area)	1954	Needs Assessed	Operating
TAN 714	Weather Tower (IET area)	—	Needs Assessed	Shutdown
TAN 715	Unit Substation (IET area)	1994	Exempted	Shutdown
TAN 716	Exhaust Duct and Stack (CTF area)	—	Needs Assessed	Shutdown
TAN 717	Helicopter Pad (TSF area)	—	Needs Assessed	Shutdown
TAN 718	Exhaust Filter and Pad (IET area)	1956	Needs Assessed	Operating
TAN 719	Shielded Roadway to TAN 630 (CTF area)	1956	Needs Assessed	Operating
TAN 720	RPSSA Concrete Storage Casks (TSF area)	1961	Needs Assessed	Operating
TAN 721	RPSSA Heat Removal Storage Cask (TSF area)	1961	Needs Assessed	Shutdown
TAN 723	Brine Pit for Demineralizer Water System (TSF)	1959	Exempted	Shutdown
TAN 724	Boiler Fuel Tank (TSF area)	1956	Exempted	Shutdown
TAN 725	Exhaust Stack (CTF area)	1956	Needs Assessed	Operating
TAN 726	Hot Liquid Waste Storage Tanks/Vault (CTF area)	1975	Needs Assessed	Shutdown
TAN 727	Covered Stairs, East of TAN 607 (TSF area)	1994	Needs Assessed	Shutdown
TAN 728	Water Tank (WRRTF area)	—	Exempted	Shutdown

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
TAN 729	Electrical Substation (WRRTF area)	—	Exempted	Shutdown
TAN 731	Water Storage Tank (WRRTF area)	—	Exempted	Shutdown
TAN 732	Propane Storage Tank (TSF area)	—	Exempted	Operating
TAN 734	TAN 607 Stack (TSF area)	—	Needs Assessed	Shutdown
TAN 735	Contaminated Waste Tank (WRRTF area)	—	Exempted	Shutdown
TAN 737	Septic Tank (CTF area)	1956	Exempted	Operating
TAN 738	Fuel Oil Tank (WRRTF area)	—	Exempted	Shutdown
TAN 739	Meteorological Tower (CTF area)	—	Needs Assessed	Inactive
TAN 740	Liquid Waste Disposal Pond	—	Needs Assessed	Shutdown
TAN 741	Cylinder Storage Facility	—	Needs Assessed	Shutdown
TAN 742	Liquid Waste Holding Tanks (TSF area	1970	Needs Assessed	Shutdown
TAN 743	TAN Cylinder Storage (TSFarea)	1960	Needs Assessed	Shutdown
TAN 744	Inlet Gas Supply Platform (CTF area)	1960	Needs Assessed	Shutdown
TAN 745	Secondary Coolant System Heating (CTF area)	1965	Needs Assessed	Shutdown
TAN 746	Condenser Shelter Structure (CTF area)	1958	Needs Assessed	Operating
TAN 747	Steam Tanks (WRRTF area)	1960	Needs Assessed	Operating
TAN 748	Water Tank (CTF area)	—	Exempted	Shutdown
TAN 750	Liquid Waste Disposal Pond	1960	Needs Assessed	Inactive
TAN 752	Storage Vaults	—	Needs Assessed	Shutdown
TAN 754	Propane Tank (WRRTF area)	—	Exempted	Shutdown
TAN 755	Boiler Fuel Tank (WRRTF area)	—	Exempted	Shutdown
TAN 756	Slop Tank (CTF area)	1990	Exempted	Shutdown
TAN 757	Propane Tank (WRRTF area)	—	Exempted	Shutdown
TAN 760	Fire Hose House (WRRTF area)	1958	Needs Assessed	Shutdown
TAN 761	Fire Hose House (WRRTF area)	1958	Needs Assessed	Shutdown
TAN 762A	Sewage Lagoon (WRRTF area)	—	Needs Assessed	Shutdown
TAN 763	Evaporation Pond (WRRTF area)	—	Needs Assessed	Shutdown
TAN 764	Contaminated Waste Tank (CTF area)	1991	Exempted	Shutdown
TAN 765	Slop Tank (CTF area)	1970	Exempted	Shutdown
TAN 766	Diesel Fuel Oil Tank (CTF area)	1960	Exempted	Shutdown
TAN 767A	Boiler Fuel Tank (CTF area)	1959	Exempted	Shutdown
TAN 768	Electrical Substation (CTF area)	—	Exempted	Operating
TAN 769	Electrical Substation (CTF area)	1994	Exempted	Shutdown
TAN 771	Sulfuric Acid Tank (CTF area)	1959	Exempted	Operating
TAN 772	Liquid Nitrogen Tank (CTF area)	1959	Exempted	Shutdown
TAN 774	Concrete Slab (CTF area)	1959	Needs Assessed	Shutdown
TAN 776	Transformer Station (TSF area)	1969	Exempted	Operating
TAN 778	Water Blowdown Tank (TSF area)	—	Needs Assessed	Shutdown
TAN 779	Diesel Fuel Tank TAN 603 (TSF area)	1990	Exempted	Operating
TAN 780	Tank, TAN 603 (TSF area)	1970	Exempted	Operating
TAN 781	Drainage Pond (TSF area)	—	Needs Assessed	Operating
TAN 783	Gasoline Tank (TSF area)	—	Exempted	Operating

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
TAN 788	Diesel Fuel Tank (WRRTF area)	1990	Exempted	Operating
TAN 789	Diesel Fuel Tank (WRRTF area)	1990	Exempted	Operating
TAN 790	Abnormal Waste Storage Pad (TSF area)	1986	Needs Assessed	Operating
TAN 791	Spent Fuel Storage Pad (TSF area)	—	Needs Assessed	Operating
TAN 793	Bus Fuel Pump (TSF area)	—	Exempted	Operating
TAN 794	Diesel Generator Fuel Tank (TSF area)	1993	Exempted	Operating
TAN 796	Transformer Station (TSF area)	—	Exempted	Operating
TAN 797	Diesel Oil Storage Tank (TSF area)	1993	Exempted	Operating
TAN 1701	Foam Solution Storage Tank (CTF area)	1994	Exempted	Shutdown
TAN 1702	Diesel Fuel Tank	1990	Exempted	Shutdown
TAN 1705	Lube Oil Tank	1991	Exempted	Shutdown
TAN 1706	Fuel Oil Tank	1990	Exempted	Shutdown
TAN 1707	Acid Pid	—	Exempted	Shutdown
TAN 1708	Pneumatic Tank for Water System	—	Exempted	Shutdown
TAN 1714	Foam Stabilizer Tank	1991	Exempted	Operating
TAN 1715	Gas Storage Tank	1992	Exempted	Operating
TAN 1717	Surface Runoff Well #1	—	Exempted	Operating
TAN 1718	Surface Runoff Well #4	—	Exempted	Operating
TAN 1721	Gas Tank	—	Exempted	Shutdown
TAN 1724	IET Exhaust Stack	ca. 1955	Needs Assessed	Operating
TAN 1725	IET Exhaust Filter Room	ca. 1955	Needs Assessed	Operating
TAN 1726	Disposal Well	—	Exempted	Operating
TAN 1728	Disposal Well	—	Exempted	Inactive
TAN 1729	Cask Dry Storage Pad	—	Needs Assessed	Operating
TAN 1730	Rad-Haz Mixed Waste Water Storage Tank	—	Exempted	Operating
TAN 1731	SMC Substation	—	Exempted	Operating
TAN 1732	Deep Well Chlorination Unit	—	Needs Assessed	Operating
TAN 1733	Deep Well Chlorination Unit	2000	Needs Assessed	Operating
TAN 1739	Heating Oil Tank	—	Exempted	Operating
TAN 1740	Heating Oil Tank	—	Exempted	Operating
TAN 1741	Heating Oil Tank	1986	Exempted	Shutdown
TAN 1742	Heating Oil Tank	1986	Exempted	Shutdown
TAN 1743	Sewage Lift Station	—	Needs Assessed	Operating
TAN 1744	Process Waste Water Lift Station	—	Needs Assessed	Shutdown
TAN 1745	Sewer Lagoons I,II,III, (CTF area)	—	Needs Assessed	Operating
TAN 1746	Explosive Bunkers (6)	—	Needs Assessed	Operating
TAN 1747	Incinerator N.E. or TAN 675 (CTF area)	—	Needs Assessed	Operating
TAN 1748	Ground Water Treatment Facility (TSF area)	—	Needs Assessed	Operating
TAN 1749	Water Tank	2000	Exempted	Operating
TAN 1750	SMC Tank Monument Pad	2000	Needs Assessed	Operating
TAN 1751	SMC Utility Vault	2001	Needs Assessed	Operating
TAN 1752A	Nitrogen Tank	2002	Exempted	Operating

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
TAN 1752B	Nitrogen Tank	2002	Exempted	Operating
TAN 1752C	Nitrogen Tank	2002	Exempted	Operating
TAN 1753	Hydrogen Tank	2002	Exempted	Operating
TAN 1754A	Propane Tank	2002	Exempted	Under construct.
TAN 1754B	Propane Tank	2002	Exempted	Operating
TRA 701	Chemical Leaching Pond	1962	Needs Assessed	Operating
TRA 702	Cold Waste Pond	1982	Needs Assessed	Shutdown
TRA 703	Cold Waste Sump Pit	1952	Needs Assessed	Shutdown
TRA 704	Primary Filter Pit	1957	Needs Assessed	Shutdown
TRA 706	Delay Tanks	1957	Exempted	Shutdown
TRA 707	Fuel Pum Island and Pad	—	Needs Assessed	Operating
TRA 708A	Water Storage Tank	1952	Exempted	Operating
TRA 708B	Water Storage Tank	1952	Exempted	Operating
TRA 708C	Water Storage Tank	1985	Exempted	Operating
TRA 709	Air Intake Shaft (MTR)	1952	Needs Assessed	Operating
TRA 710	MTR Stack	1952	Needs Assessed	Shutdown
TRA 711	ATR Pumphouse Transformer Pad	1963	Needs Assessed	Shutdown
TRA 712	Retention Basin (underground)	1952	Exempted	Shutdown
TRA 713A	Hot Waste Storage Tank (underground)	1989	Exempted	Shutdown
TRA 713B	Hot Waste Storage Tank (underground)	1989	Exempted	Shutdown
TRA 713C	Hot Waste Storage Tank (underground)	1989	Exempted	Shutdown
TRA 713D	Hot Waste Storage Tank (underground)	1989	Exempted	Operating
TRA 714	Valve Box	1952	Needs Assessed	Operating
TRA 715	TRA Evaporation Pond	1988	Needs Assessed	Operating
TRA 716	Warm Waste Transfer Sump	1988	Needs Assessed	Operating
TRA 718	Overhead Raw Water Storage Tank	1961	Exempted	Operating
TRA 719A	Water Storage Tank	1961	Exempted	Operating
TRA 719B	Water Storage Tank	1961	Exempted	Operating
TRA 719C	Water Storage Tank	1961	Exempted	Unkown
TRA 721	Fence at WRPTF	—	Needs Assessed	Operating
TRA 722	TRA Utility Corridor	—	Needs Assessed	Operating
TRA 723	Sewer Manhole	1996	Exempted	Operating
TRA 724	Lift Station	1996	Needs Assessed	Operating
TRA 725	Lift Pump	1996	Needs Assessed	Operating
TRA 726	Lift Pump	1996	Needs Assessed	Shutdown
TRA 727A	Fuel Oil Storage Tank Out of Service	1952	Exempted	Shutdown
TRA 727B	Fuel Oil Storage Tank Out of Service	1952	Exempted	Operating
TRA 727C	Diesel Oil Storage Tank	1952	Exempted	Shutdown
TRA 727D	Diesel Oil Storage Tank	—	Exempted	Shutdown
TRA 730A	Catch Tank	1985	Exempted	Shutdown
TRA 730B	Catch Tank	1985	Exempted	Shutdown

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
TRA 730C	Catch Tank	1985	Exempted	Shutdown
TRA 730D	Catch Tank	1985	Exempted	Shutdown
TRA 731A	Brine Storage Pit	1952	Needs Assessed	Shutdown
TRA 731B	Caustic Storage Tank	1952	Needs Assessed	Shutdown
TRA 731C	Caustic Storage Tank	1952	Needs Assessed	Shutdown
TRA 731D	Acid Storage	1952	Needs Assessed	Shutdown
TRA 731E	Acid Storage	1952	Needs Assessed	Operating
TRA 732	Sewage Treatment Plant	1952	Needs Assessed	Operating
TRA 733	Transfer Structure between Lagoon #1 and #2	1996	Needs Assessed	Operating
TRA 734	Transfer Structure east of lagoon #2	1996	Needs Assessed	Operating
TRA 736	Lagoon #2	1996	Needs Assessed	Operating
TRA 751	ETR Cooling Tower Basin	—	Needs Assessed	Shutdown
TRA 752	ETR Transformer Yard	1955	Needs Assessed	Operating
TRA 753	ETR Waste Gas Stack	1954	Needs Assessed	Shutdown
TRA 754	Demineralized Water Storage Tank	1954	Exempted	Operating
TRA 758	Leaching Pond	—	Exempted	Shutdown
TRA 759	Vehicle Refueling Station	1952	Needs Assessed	Operating
TRA 760	Effluent Water Monitoring Station	—	Exempted	Operating
TRA 762	Firewater Loop Valve Box	1961	Exempted	Shutdown
TRA 763B	Storage Tank	1952	Exempted	Operating
TRA 763C	Storage Tank	1952	Exempted	Operating
TRA 764	Cold Waste Sampling Pit	1962	Needs Assessed	Operating
TRA 770	Air Waste Gas Stack	1964	Needs Assessed	Operating
TRA 771	ATR Cooling Tower	1964	Needs Assessed	Operating
TRA 772	Resin Collection Vault	1996	Needs Assessed	Operating
TRA 773	Valve Box	1996	Needs Assessed	Operating
TRA 774	Transformer Yard	1964	Exempted	Operating
TRA 775	Diesel Oil Storage Tank	1964	Exempted	Operating
TRA 776	ATR Diesel Oil Day Tank	1964	Exempted	Operating
TRA 777A	Propane Tank	1993	Exempted	Operating
TRA 777B	Gasoline Tank	1991	Exempted	Operating
TRA 777C	Diesel Tank	1991	Exempted	Operating
TRA 778	Fuel Pump Island	1991	Needs Assessed	Operating
TRA 779	Decon Pad	1989	Needs Assessed	Operating
TRA 780	Temporary Accumulation Area Concrete Pad	1995	Needs Assessed	
TRA 781	Firewater Storage Tank	2000	Exempted	Operating
TRA 783	MTR Process Water Res.	1951		
TRA 784	Liquid Nitrogen Tank	2000	Exempted	Operating
				Operating
WMF 700	Subsurface Disposal Area	1954	Needs Assessed	Shutdown
WMF 701	Fence, SDA	—	Needs Assessed	Operating
WMF 702	Liquid Chemical Disposal Area	1983	Needs Assessed	Operating

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
WMF 703	Propane Tank	1970	Exempted	Operating
WMF 704	Timber Bridge (over drainage ditch)	1954	Needs Assessed	Operating
WMF 706	Fence, TSA	—	Needs Assessed	Operating
WMF 707	Evaporator Pond	—	Needs Assessed	Operating
WMF 708	Sump Pit	1972	Needs Assessed	Operating
WMF 712	Inner Containment Building	1983	Needs Assessed	Operating
WMF 714	Intermediate Level Transuranic Storage Facility	1977	Needs Assessed	Operating
WMF 715	Air Support Weather Shield	—	Needs Assessed	Operating
WMF 720	Intermediate Level Transuranic Storage Facility	1984	Needs Assessed	Operating
WMF 721	Gravity Drain Structure	—	Needs Assessed	Operating
WMF 726	Adams Boulevard Bridge	—	Needs Assessed	Removed
WMF 727	Fire Water Tank	1994	Exempted	Operating
WMF 729	VVE Gas analysis Trailer	—	Exempted	Operating
WMF 730	Concrete Lined Disposal Vaults	1993	Needs Assessed	Operating
WMF 731	RWMC Sewage Lagoon	—	Needs Assessed	Operating
WMF 732	Propane Tank	1997	Exempted	Operating
WMF 733	Drum Inspection Station inside WMF 612	—	Needs Assessed	Operating
WMF 734	TSA Standby Generator Enclosure	—	Needs Assessed	Operating
WMF 735	Diesel Fuel Tank	—	Exempted	Operating
WMF 736	Cold Test Pit	—	Needs Assessed	Operating
WMF 737	Gasoline Tank	—	Exempted	Operating
WMF 738	Propane Tank	—	Exempted	Operating
WMF 739	Well House	1979	Exempted	Operating
WMF 740	Well House	1979	Exempted	Operating
WMF 741	Well House	1979	Exempted	
AEF 703	Seepage Pit	—	Not Assessed	
AEF 704	Diesel Oil Storage Tank	—	Not Assessed	Operating
B16 704	Fire Department Training Tower at Station #2	1958	Not Assessed	Operating
B16 705	Water Tank, Fire Station #2	—	Not Assessed	Operating
B16 707	Loading Dock on CPP-NRF Railroad	—	Needs Assessed	Operating
B16 708	Evaporation Pond, Fire Station #2	1958	Needs Assessed	Operating
B17 701	Bridge over Big Lost River on Lincoln Boulevard	—	Needs Assessed	Operating
B17 702	Army Re-entry Facility Site Storage Bunker	—	Eligible	Operating
B18 701	Bridge near EBR-II on Buchanan Blvd	—	Needs Assessed	Operating
B21 702	Culverts	—	Needs Assessed	Operating
B21 703	Gun Range Target Pits	—	Needs Assessed	Operating
B21 704	Gun Range Observation Tower	—	Needs Assessed	Operating
B21 705	Personnel Bunkers	—	Needs Assessed	Operating
B21 706	Munitions Bunker	—	Needs Assessed	Operating
B21 707	Munitions Bunker	—	Needs Assessed	Operating
B21 708	Munitions Bunker	—	Needs Assessed	Operating

A-1. (Continued).

	Building/Structure Number and Name	Date Built	National Register Evaluation	Status
B21 710	Long Range Rifle Range #1	—	Needs Assessed	Operating
B21 711	Range 2/Shotgun/Steel Range	—	Needs Assessed	Operating
B21 712	Qualifications Range # 3	—	Needs Assessed	Operating
B21 713	Known Distance Sniper Range	—	Needs Assessed	Operating
B21 714	Tactical Range # 6	—	Needs Assessed	Operating
B21 715	Indoor Pistol and Rifle Range	—	Needs Assessed	Operating
B21 716	Distribution Substation	—	Exempted	Operating
B21 717	Bridge on Lincoln south of Monroe	—	Needs Assessed	Operating
B21 718	INTEC Percolation Pond	2002	Needs Assessed	Operating
B21 719	INTEC Percolation Pond	2002	Needs Assessed	Operating
B21 720	INTEC Perc Ponds Valve Vault	2002	Needs Assessed	Operating
	OBJECTS			
TAN 801	Dolly Trackage within TSF area	—	Needs Assessed	Shutdown
TAN 802	Dolly Trackage from TSF/A&M to IET	—	Needs Assessed	Shutdown
TAN 803	Dolly Trackage from TSF/A&M to LOFT	—	Needs Assessed	Shutdown
TAN 804	Railroad dolly for SNAP/TRAN-2	—	Needs Assessed	Shutdown
TAN 805	Railroad dolly for SNAP/TRAN-2	—	Needs Assessed	Shutdown
TAN 806	MTA railroad dolly for LOFT project	—	Needs Assessed	Shutdown
TAN 807	Sheilded locamotive	—	Eligible	Shutdown
TAN 808	GE/ANP P 102 railroad dolly	—	Needs Assessed	Shutdown
TAN 809	PM2A railroad dolly	—	Needs Assessed	Shutdown