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U.S. Department of Energy
Idaho Operations Office

Idaho Cleanup Project Long-Term Stewardship Implementation Plan

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Idaho Cleanup Project

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Prepared for the
U.S. Department of Energy
DOE Idaho Operations Office

ABSTRACT

The U.S. Department of Energy has established long-term stewardship programs to protect human health and the environment at sites where residual contamination remains after site cleanup.

At the Idaho National Laboratory Site, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) long-term stewardship activities—performed under the aegis of regulatory agreements, the *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory*, and state and federal requirements—are administered primarily under the direction of the Idaho Cleanup Project. It represents a subset of all ongoing environmental activity at the Idaho National Laboratory Site.

This plan discusses the CERCLA long-term stewardship goals presented in the *INL-Site Idaho Completion Project Long-Term Stewardship Strategic Plan,* and identifies their implementing actions. This plan will be updated as needed over time, based on input from the U.S. Department of Energy, its cognizant subcontractors, and other local and regional stakeholders.

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ACRONYMS

AR/IR	Administrative Record and Information Repository
BEA	Battelle Energy Alliance, LLC
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DEQ	(Idaho) Department of Environmental Quality
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
EDMS	Electronic Data Management System
EDW	Environmental Data Warehouse
EPA	U.S. Environmental Protection Agency
ESD	explanation of significant differences
FFA/CO	Federal Facility Agreement and Consent Order
GDE	guide
GIS	Geographic Information System
HWMA	Hazardous Waste Management Act
IC	institutional control
ICP	Idaho Cleanup Project
ICS	Institutional Control Sites (Database)
INEEL	Idaho National Engineering and Environmental Laboratory
INL	Idaho National Laboratory
ISRC	INL Site Records Center
LTS	long-term stewardship
MCP	management control procedure
NA	not applicable
O&M	operations and maintenance

OU	operable unit
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
TSCA	Toxic Substances Control Act
USC	United States Code
WAG	waste area group

DEFINITIONS

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act). Federal law that establishes a program to identify, evaluate, and remediate sites where hazardous substances might have been released (leaked, spilled, or dumped) to the environment.

Cultural resources. Include, but are not limited to, the following: (1) prehistoric, historic, and ethnohistoric archaeological materials (artifacts) and sites on the ground surface or buried beneath it; (2) standing structures and associated components more than 50 years old or of importance because they represent a major historical theme or era; (3) cultural and natural places, select natural resources, and sacred objects important to Native Americans and other ethnic groups; and (4) American folk life traditions and arts.

Federal Facility Agreement and Consent Order (FFA/CO). Agreement among the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and the State of Idaho that establishes a process and schedule to evaluate potentially contaminated sites at the Idaho National Laboratory (INL) Site, determine if remediation is warranted, and select remedy alternatives.

Groundwater. Water that soaks into the ground and percolates downward through rock or soil until an impermeable layer stops it. Natural sources are rainfall, snowmelt, and water that seep into the ground beneath streams, rivers, and lakes. Other sources can include irrigated fields, canals, wastewater drain fields, injection wells, leaking pipes, and industrial cooling ponds.

Hazardous waste. Waste regulated under the Resource Conservation and Recovery Act (RCRA) Subtitle C. A solid waste or combination of solid waste that, because of quantity, concentration, or physical or chemical characteristics, may (1) cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Institutional controls (ICs). Generally include all nonengineered restrictions on activities or on access or exposure to land, groundwater, surface water, waste and waste disposal areas, and other areas or media. Some common examples of tools to implement institutional controls include restrictions on use or access, zoning, governmental permitting, public advisories, and installation master plans. Institutional control commitments are necessary at sites where contamination levels prevent unrestricted and unlimited use.

RCRA (Resource Conservation and Recovery Act). Federal waste management law that contains regulations to govern the management (transportation, treatment, storage, and disposal) of solid waste and the generation, accumulation, recycling, and handling of hazardous waste. The RCRA waste includes material listed on one of the EPA's hazardous waste lists or material that meets one or more of the EPA's four characteristics: ignitability, corrosivity, reactivity, or toxicity.

Remediation. Process of cleaning up to an acceptable level of risk at a site where a hazardous or radioactive substance has been released.

Residual contamination. Amount of a hazardous or radioactive pollutant remaining in the environment after a natural or technological remediation process.

Idaho Cleanup Project Long-Term Stewardship Implementation Plan

1. INTRODUCTION

During past operations at the Idaho National Laboratory (INL) Site, hazardous and radioactive contaminants were released into the air, soil, and water. Although remediation efforts have been, and continue to be, dedicated to reducing risks to public health and the environment posed by these contaminants, some of the sites cannot be cleaned enough to permit unrestricted human access or unlimited use of the sites. Consequently, sites with residual contamination will require long-term management to protect the public and ecological receptors from unacceptable contact with the residual contamination.

The term long-term stewardship (LTS) refers to all activities necessary to ensure protection of human health and the environment following completion of remediation, disposal, or stabilization of a site or a portion of a site. Long-term stewardship includes engineered and institutional controls designed to contain or prevent exposures to a residual contamination or waste. LTS also includes actions, such as site surveillance, record-keeping, inspections, groundwater monitoring, ongoing pump and treat activities, cap repair, maintenance of entombed buildings or facilities, maintenance of other barriers and containment structures, access control, and posting of signs. A site is considered to be conducting long-term stewardship activities once required remediation (or cleanup), disposal, or stabilization activities are completed; or in the case of long-term remedial actions (e.g., groundwater, surface waters, sediments, and entombed facilities), the remedy is shown to be functioning properly and operating as designed. Long-term stewardship activities are designed to ensure that the implemented remedies remain effective for an extended, or possibly indefinite, period of time; and until such time that the residual hazard is reduced so that the site may be released for unrestricted access and unlimited use.

The LTS Program at the INL Site was initiated in 2001 to implement long-term requirements identified in CERCLA documents. Since that time, the program has been modified to include long-term components of RCRA closures and other modifications as appropriate. Currently, the primary driver for the Idaho Cleanup Project (ICP) Long-Term Stewardship Program at the INL Site is the Idaho Cleanup Project contract. The ICP contract calls for nearly Site-wide implementation of institutional and engineered controls, reporting, and five-year reviews. It also requires management of the administrative record, and completion of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Federal Facility Agreement and Consent Order (FFA/CO), and legacy management (the current incarnation of long-term stewardship) actions. Although the term long-term stewardship has been used indirectly to discuss any and all environmental work, its meaning within the context of this implementation document is primarily limited to the ICP CERCLA site designation. The vision and mission of the ICP LTS Program are:

- Vision – to ensure the safe, informed, and judicious use of the INL Site by multiple generations following remediation.
- Mission – to ensure the safe, informed, and judicious use of the INL Site by multiple generations following remediation through decisions that: (1) protect human health and the environment from residual contamination, (2) conserve ecological and cultural resources, and (3) respond to regulatory, political, and technological changes.

2. PURPOSE

This document was prepared as a companion to the Long-Term Stewardship Strategic Plan (DOE-ID 2007a). The strategic plan identifies the ICP LTS goals and strategic objectives, and this implementation plan describes the activities that support, implement, and execute those long-term stewardship goals and objectives. These two documents together constitute the guiding documents for the LTS Program. Successful implementation requires that the program remain flexible enough to reflect existing and changing cleanup decisions, legal requirements, funding projections, lessons learned, and other pertinent information.

3. RESPONSIBILITY FOR ICP LONG-TERM STEWARDSHIP AT THE IDAHO NATIONAL LABORATORY SITE

Given the inter-generational aspects of LTS, and the potential for change over time, appropriate mechanisms are necessary to ensure effective performance of LTS roles and responsibilities into the future. To that end, the U.S. Department of Energy (DOE) should maintain a collaborative working relationship with other federal and state agencies. The following sections discuss the LTS responsibilities for DOE, contractors, and regulatory agencies, as they apply to LTS under the ICP contract.

3.1 DOE Responsibilities

At the national level, DOE is responsible for the establishment of a national LTS program that identifies policy and provides guidance for individual site programs. The national program works with other offices within DOE to develop LTS-related policy and guidance, conducts technical analyses, represents DOE at national stakeholders and tribal organization meetings, and provides support for stewardship activities conducted at DOE sites.

At the INL Site, DOE Idaho Operations Office (DOE-ID) is the primary agency responsible for implementation, oversight, integration, maintenance, and compliance with established LTS requirements; and for communication with state, local, tribal, and federal government agencies. DOE-ID adheres to those requirements by utilizing internal procedures, Federal Register notices, informational announcements, and contracts consistent with all applicable laws, regulations, agreements, and consent orders.

Ultimately DOE-ID is responsible for the following:

- Enforcing relevant DOE orders, directives, and policies
- Ensuring that National Environmental Policy Act (42 USC 4321 et seq.) requirements are followed
- Performing LTS activities in accordance with approved plans
- Providing necessary training to personnel to allow appropriate and safe performance of LTS actions
- Communication with the U.S. Environmental Protection Agency (EPA) and the Idaho Department of Environmental Quality (DEQ)
- Negotiating corrective actions for failed LTS actions with EPA and DEQ, and implementation of negotiated corrective actions
- Enforcing contract requirements.

3.2 Contractor Responsibilities

Although responsibility for LTS ultimately resides with DOE-ID, the physical implementation and execution of LTS actions are performed under contracts issued by DOE-ID. Contractors are required to comply with applicable environmental laws, DOE orders, and administrative orders by way of contract requirements with DOE-ID. Contractor responsibilities include, but are not limited to, assessing, monitoring, maintaining the sites, reporting on LTS actions, maintaining information management systems, communicating deficiencies or failed LTS actions to DOE-ID, interfacing with DOE-ID to develop corrective actions to failed LTS actions, and implementing corrective actions.

3.3 Regulatory Agencies' Responsibilities

EPA and DEQ are the primary regulatory agencies that oversee INL Site cleanup activities in accordance with CERCLA § 120 (42 USC 9601 et seq.) and the FFA/CO (DOE-ID 1991). Although site cleanup is not a direct LTS responsibility, decisions made during the cleanup phase are preparatory to eventual LTS actions. DOE-ID is required by the FFA/CO to obtain agency approval and concurrence on the selected remedial actions in accordance with the requirements of CERCLA § 120 and the "National Oil and Hazardous Substances Pollution Contingency Plan" (40 CFR 300). In addition, the regulatory agencies review and comment on the LTS-related reports and the CERCLA-required five-year reviews, and can propose additional work or modifications to primary and secondary documents in accordance with Paragraphs 8.21 to 8.24, 15.1 to 15.4, and 22.1 of the FFA/CO (DOE-ID 1991). Therefore, the regulatory agencies have responsibility for monitoring LTS actions to verify that they are performed adequately.

4. REGULATORY AGREEMENTS, REQUIREMENTS, AND GUIDANCE APPLICABLE TO LONG-TERM STEWARDSHIP

The ICP LTS activities are governed by regulatory agreements, the *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory* (DOE-ID 1991), federal and state laws, and DOE orders.

Regulatory agreements applicable to ICP LTS activities normally require input from interested stakeholders, DOE, EPA, and the State of Idaho. They are typically prescriptive in nature, calling out specific surveillance, monitoring, and management activities. Regulatory agreements may consist of any of the following:

- End-state planning documents
- CERCLA Records of Decision (RODs), Explanation of Significant Differences (ESD), or ROD amendments
- Hazardous Waste Management Act/Resource Conservation and Recovery Act (HWMA/RCRA) corrective actions, closure processes, or development of postclosure permits
- Groundwater, cultural, and ecological monitoring plans; institutional controls and operations and maintenance plans; and other miscellaneous implementing procedures.

In addition to regulatory agreements, the following federal statutes and DOE directives are applicable to the LTS work:

- CERCLA (42 USC 9601 et seq.)
- RCRA (42 USC 6901 et seq.)

- Toxic Substances Control Act (TSCA) (15 USC 2601 et seq.)
- Federal Facility Agreement and Consent Order (FFA/CO) (DOE-ID 1991)
- Close-out procedures for the National Priorities List
- DOE Memorandum, "Long-Term Stewardship Transition to Site Landlord" (Glauthier 2000)
- DOE Memorandum, "Long-term Stewardship Responsibility" (Huntoon 2001)
- DOE Memorandum, "DOE American Indian and Alaska Natives Tribal Government Policy" (Bodeman 2006)
- DOE Policy 141.1, "Department of Energy Management of Cultural Resources"
- DOE Policy 141.2, "Public Participation and Community Relations"
- DOE Policy 441.1, "DOE Radiological Health and Safety Policy"
- DOE Policy 454.1, "Use of Institutional Controls"
- DOE P 580.1, "Management Policy for Planning, Programming, Budgeting, Operation, Maintenance, and Disposal of Real Property"
- DOE O 200.1, "Information Management Program"
- DOE O 231.1A, "Environment, Safety, and Health Reporting"
- DOE O 430.1B, "Real Property Asset Management."

5. ICP LONG-TERM STEWARDSHIP GOALS

The administrative goals and strategic objectives provided within the Long-Term Stewardship Strategic Plan (DOE-ID 2007a), which form the primary basis for this document are identified in the following sections.

5.1 Goal 1 – Implement Primary Long-Term Stewardship Requirements

Primary LTS requirements are those that directly contribute to protecting human health or the environment from residual contamination that remains following remedial actions. They include the requirements identified during remediation planning such as those documented within RODs, ESDs, remedial action reports, and work plans, or as otherwise negotiated with the agencies, or directed in contracts or other governing documents. Primary LTS requirements at the INL Site include: (1) long-term storage and management of information necessary to document decisions, and legally defend actions taken at the INL; (2) establish and implement measures that control access to, and activities at, contaminated sites; (3) monitor contaminants to remain cognizant of site conditions; and (4) perform necessary operations and maintenance of engineered site remedies to keep them operational, functional, and protective of human health and the environment.

5.1.1 Strategic Objective 1.1 – Identify and Incorporate Primary Requirements

The primary ICP Long-Term Stewardship Program requirements for the INL Site are derived from decision documents such as RODs, ESDs, or ROD Amendments. Based on the decisions made in those documents, the primary LTS requirements at the INL include: (1) archiving, maintaining, and managing records and data necessary to make appropriate land-use decisions, operational decisions, and to legally

defend actions at the INL; (2) monitoring the environment to verify that residual hazards are managed or mitigated; (3) establishing and enforcing controls to prevent exposure to residual hazards; and (4) performing appropriate measures or operations that will keep selected remedies protective and functioning as intended. More detailed descriptions of these requirements, and the implementing actions for each, are presented in the following sections.

5.1.1.1 Records/Data Archiving, Maintenance, and Management. A key component that contributes to appropriate long-term decisions about a site, and which thereby helps to ensure the protection of human health and the environment, is the preservation of accurate and complete information that is readily accessible to future stewards of the site. Information to be managed includes archived records, data storage, and site tracking. Archived records include electronic and hard-copy media, both presenting unique challenges.

- The *Electronic Document Management System* (EDMS) is the primary records management system for the INL Site. The EDMS provides electronic access to records, documents, drawings, correspondence, environmental records, and a variety of other information. It is the complete electronic storage location for project files at the INL. The EDMS comprises applications for developing, processing, managing, and distributing controlled documents and records. EDMS is managed and maintained under the authority of Battelle Energy Alliance (BEA).

- The *INL Site Records Center* (ISRC) is a temperature and humidity-controlled repository established for the storage of paper records. It is designed to mitigate many problems related to the degradation of paper records. Based on current receipt rates, it has a storage capacity adequate for approximately 25 years of records. The storage facility is expected to be used as the INL continues stewardship activities into the future. Most physical records will ultimately be stored in this facility, or its successor. Physical records are managed in accordance with National Archives and Records Administration requirements outlined in 36 CFR 1220-1236. Records are managed at the ISRC in accordance with the requirements in MCP-557 and GDE-273.

- The *Administrative Record/Information Repository* (AR/IR) is the public records system for ICP CERCLA documents at the INL Site. The FFA/CO mandates that "The data be maintained at a U.S. DOE-designated storage location(s) and summarized in the administrative record file..." The documents archived in the AR/IR provide public access to information concerning the Idaho National Laboratory's environmental cleanup program. The collection includes legal regulations and agreements, guidance and technical documents, public involvement information, press releases, fact sheets, newsletters, and other documents. The AR/IR system contains the ICP public records of CERCLA cleanup actions at the INL Site. The AR/IR is managed and maintained by the ICP Document and Records Service Center.

- The *Environmental Data Warehouse* (EDW) is the official warehouse for long-term management and storage of environmental data collected by sampling and monitoring projects at the INL. Data contained within the EDW are used in support of compliance-reporting, decision-making, trending, and modeling. In accordance with the requirements of the FFA/CO, the database contains validated and quality-assured technical decision-level data that may be used in selection of response actions. The EDW is managed and maintained by the ICP LTS Program.

- The *Long-term Stewardship Tracking System* tracks the status of CERCLA sites at the INL from creation of the site to completion of remedial actions, and implementation of LTS requirements. Information contained within this database includes a summary of completed actions/decisions, current actions or requirements, the projected final outcome for sites that still have remedial

activities remaining, and the final determination at completed sites. The LTS tracking system is managed and maintained by the ICP LTS Program.

- The *Institutional Control Sites (ICS) Database* is a subset of the LTS tracking system. This database tracks the status of those CERCLA sites that cannot be released for unrestricted access or unlimited use. It provides a description of each site, identifies the controls that are in place at each site, identifies the timeframe for the controls, and identifies the contaminants of concern at each site. The ICS Database is managed and maintained by the ICP LTS Program. Institutional controls at the INL Site are implemented in accordance with the *INL Site-Wide Institutional Controls, and Operations and Maintenance Plan for CERCLA Response Actions* (DOE-ID 2008).

5.1.1.2 Monitoring the Environment. DOE O 450.1 requires that DOE implement sound stewardship practices that are protective of the air, water, land, and other natural and cultural resources that have been impacted by DOE operations. Long-term environmental monitoring is the mechanism used to verify that the contaminant concentrations are within acceptable limits, and contamination is not migrating beyond acceptable boundaries. Environmental monitoring at the INL Site is performed in accordance with the requirements identified in DOE O 450.1. Monitoring activities with LTS requirements include groundwater monitoring and ecological monitoring.

Groundwater monitoring at the INL Site is designed to determine the nature and extent of contamination in the groundwater from past INL operations and the resulting potential risks to human health and the environment. Groundwater monitoring results are used to help ensure that environmental impacts associated with releases of hazardous substances at the INL Site are thoroughly investigated, and that appropriate actions are taken to protect the public and the environment. The majority of the groundwater monitoring requirements were derived from cleanup activities performed under the individual Waste Area Groups (WAGs) at the INL Site, and implemented in accordance with the groundwater monitoring plans identified in Appendix A, Table A-1. Additional groundwater monitoring is performed to determine the appropriateness for consumption of the water from the production (drinking water) wells. The implementing documents for drinking water monitoring are presented in Table A-1.

Ecological monitoring at the INL Site is conducted to verify that the objectives of INL remedial actions are maintained, and to verify that the long-term Site-wide ecological impact of residual contamination at the INL is within acceptable limits. Ecological resource management at the INL is implemented under the *Record of Decision—Experimental Breeder Reactor I/Boiling Water Reactor Experiment Area and Miscellaneous Sites, Operable Units (OUs) 6-05 and 10-04* (DOE-ID 2002), and in accordance with the requirements identified in the *Long-Term Ecological Monitoring Plan for the Idaho National Laboratory* (INEEL 2007).

Although environmental monitoring at the INL Site is not completely consolidated within a single organization, the individual programs combined, do provide complete coverage of the requirements identified in DOE O 450.1. Monitoring results are analyzed and reported annually to DEQ and EPA by the individual programs.

5.1.1.3 Establishing and Enforcing Site Controls. Institutional controls (ICs) are established in accordance with EPA Region 10 policy (EPA 1999) to prevent inadvertent or intentional exposure to residual hazards. They generally include all non-engineered restrictions on activities, access, or exposure to land, groundwater, surface water, waste, and waste disposal areas, and other areas or media. Some common examples of tools to implement ICs include restrictions on use or access, zoning, governmental permitting, public advisories, or installation master plans. Institutional controls at the INL are implemented in accordance with the *INL Site-Wide Institutional Controls, and Operations and*

Maintenance Plan for CERCLA Response Actions (DOE-ID 2008). Tracking of institutionally controlled sites is performed through the use of the ICS Database.

5.1.1.4 Operation and Maintenance. Operation and maintenance (O&M) of remediated sites is essential to ensure the functionality and protectiveness of remedies. The "National Oil and Hazardous Substances Pollution Contingency Plan" (40 CFR 300) defined O&M as the measures initiated after the remedy has achieved the remedial action objectives and remediation goals in the ROD, and is determined to be operational and functional. O&M measures are designed to maintain the remedy at a site to ensure that the remedy remains protective of human health and the environment. O&M activities at the INL include sampling/monitoring, inspections, and maintenance/repair. Operations and maintenance activities at the INL with LTS applicability are implemented in accordance with EPA guidance for the Superfund program, and as directed in the *INL Site-Wide Institutional Controls, and Operations and Maintenance Plan for CERCLA Response Actions* (DOE-ID 2008).

5.2 Goal 2 – Manage Residual Risk

Residual risk at a site results from contamination that remains following cleanup. Management of residual risk is performed by implementation of measures that ensure that contamination left in place is identified, documented, and that the documentation is available for future site users, and that the contamination behaves as intended at the time remedial actions were completed.

The primary LTS requirements identified in Section 5.1 either directly or indirectly contribute to the management of residual risk at the INL, and therefore contribute to the accomplishment of this goal. In addition, the following strategic objectives specifically contribute to the accomplishment of this goal.

5.2.1 Strategic Objective 2.1 – Process New Site Identifications in a Timely Manner

Although remedial investigations, baseline risk assessments, and RODs prepared for each WAG at the INL have identified and evaluated the known CERCLA sites, ongoing activities continue to discover releases to the environment that require evaluation and assignment to a WAG so that the risks associated with the site may be mitigated and appropriately managed. The new site identification process in the ICP provides a mechanism to consistently identify and manage newly discovered sites, to include new sites within the FFA/CO, and to ensure that risks associated with the sites are appropriately managed. The new site identification process was negotiated with, and approved by, the agencies and is formalized in a management control procedure, "Inclusion of New Sites under the Federal Facility Agreement and Consent Order" (MCP-3448).

5.2.2 Strategic Objective 2.2 – Conduct Surveillance and Maintenance Activities as Required

Surveillance, maintenance, and monitoring activities discussed in Section 5.1 constitute the majority of the activities required by LTS. They are conducted to evaluate the site conditions, ensure that remedies function properly, and that risks to human health and the environment are controlled. The surveillance and monitoring activities function as a gauge to measure the need for site maintenance activities. Maintenance activities are performed in accordance with requirements prescribed in the controlling documents (e.g., a CERCLA ROD industrial landfill post-closure plan) and implemented through the work control documents and guidance plans.

5.2.3 Strategic Objective 2.3 – Report the Status of Long-Term Stewardship as Required

Reports typically generated as a result of LTS activities include groundwater monitoring reports, IC and O&M reports, ecological monitoring reports, and five-year reviews. Five-year reviews are mandated under CERCLA and provide a summary of site background, contamination, and remediation. They review remedy requirements and all applicable or relevant and appropriate requirements to determine the protectiveness of the selected remedies. The information obtained and reported in annual reports, and other relevant documents such as remedial action reports or site closure reports, is summarized in the five-year review. Thus, the five-year review provides a routine comprehensive update of long-term stewardship activities at the INL Site.

5.3 Goal 3 – Implement Secondary Long-Term Stewardship Requirements

Secondary LTS requirements are those in which the LTS program primarily provides support to other programs that perform an activity or activities that contribute long-term value to a site, or help achieve LTS goals. Implementation of secondary LTS requirements is discussed in the five strategic objectives identified in the following sections.

5.3.1 Strategic Objective 3.1 – Comply with Federal and Environmental Statutes, Regulations, and Executive Orders as well as DOE Orders and Policy Directives

The ICP LTS program is committed to complying with all applicable national and local LTS requirements. Although the national LTS program has been relatively static since approximately 2003, the requirements identified at that time in statutes, regulations, and orders have been incorporated into the ICP LTS program. As new guidance becomes available, the program is designed to be flexible enough to adapt to, and incorporate changes appropriately.

5.3.2 Strategic Objective 3.2 – Support Sitewide Fire Fighting and Disaster Mitigation Efforts

Although disaster mitigation is not generally considered an LTS function, there is a measure of LTS understanding and interaction that is necessary to maximize the safety and effectiveness of the mitigation efforts. For example, it is vital for emergency response teams responding to wildland fires and other similar disasters, to know the locations where residual contamination remains at levels that cause LTS controls to be implemented due to the potential health risks, and to understand the hazards at those sites. Therefore, updated maps and site information are routinely provided to emergency response personnel as site status changes, or as additional sites are identified. The Geographic Information System (GIS) Laboratory maintains base data for the contaminated CERCLA sites, and provides updated information to the emergency response organizations. The GIS Laboratory also maintains site maps for the LTS Tracking System and ICS Database.

5.3.3 Strategic Objective 3.3 – Support Cultural Resources Management Efforts

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.

Because approximately 13,000 years of human history, is documented in the artifacts and traces at historical sites across the INL, these sites pose a unique challenge to balancing preservation of the sites against the management and ongoing operations of an active scientific laboratory. Although the cultural resources program is administered and implemented by BEA, the ICP LTS program complies with the *Idaho National Laboratory Cultural Resource Management Plan* (DOE-ID 2007b) to preserve and maintain the cultural/historical sites within the INL Site boundaries.

5.3.4 Strategic Objective 3.4 – Support Ecological Resources Management

Ecological monitoring is conducted at the INL Site as discussed in section 5.1.1.2. Although ecological monitoring at the INL Site is conducted under OU 10-04, the ICP Long-Term Stewardship Program provides support as needed to the Long-Term Ecological Monitoring Program at the INL Site.

5.3.5 Strategic Objective 3.5 – Support Stakeholder Communication

The ICP external communications program is responsible for off-site communications with the public and the stakeholders. The LTS program supports communication efforts as needed or requested. This support includes participation in Citizens Advisory Board meetings, working with regulatory agencies, tribes, and other stakeholders to ensure that LTS concerns are adequately communicated and addressed. Stakeholder communications are conducted in accordance with the guidance in the *Community Relations Plan: A guide to CERCLA public involvement in the cleanup program at the INEEL* (DOE-ID 2004).

5.4 Goal 4 – Information Management

As discussed in Section 5.1.1, management of information is a significant component of long-term stewardship at the INL. Information must be documented, accurately archived, and easily retrievable to provide the most benefit to future users of a site. The foundation for information management at the INL is established in the FFA/CO, which requires that:

- U.S. DOE preserve records relating to sampling, analysis, investigations, and monitoring conducted in accordance with the FFA/CO

- U.S. DOE establish and maintain databases for compilation of site-wide validated and quality-assured technical decision-level data that will be considered or relied upon in selection of response actions.

MCP-557, "Managing Records," directs the care and handling of all records at the INL in accordance with National Archives and Records Administration requirements.

5.5 Goal 5 – Prepare for Eventual Long-Term Stewardship Program Transition

The ICP LTS Program is within the work scope identified in the contract of the ICP, which mandates that appropriate steps be taken to ensure a successful transition to another contractor or governmental agency. Therefore, the following strategic objectives have been developed preparatory to potential future program transition.

5.5.1 Strategic Objective 5.1 – Institutionalize Long-Term Stewardship Activities to be Independent of Personnel Changes, INL Site Work Scope, or Cognizant Site Contractors

While environmental managers cannot anticipate the political or economic factors affecting the disposition of long-term stewardship over time, they can attempt to consistently streamline and improve the tools required for long-term stewardship. For instance, the recent development of the LTS Tracking System now allows environmental data to be queried by potential users without requiring the assistance of a database administrator. Other improvements capable of making long-term stewardship less dependent on individuals will be pursued as they arise.

5.5.2 Strategic Objective 5.2 – Track Long-Term Stewardship Costs by Defined Functional Areas

Tracking of long-term stewardship costs provides valuable information to aid future stewards in planning future activities and completely understanding the full reach of LTS at the INL. The long-term stewardship work scope is described in several work packages dedicated to the various activities (e.g., ecological monitoring, institutional controls, groundwater monitoring, and environmental data warehouse) and the expenditures for each work package are tracked and archived in the company accounting system. In this way, the costs for each component of the ICP Long-Term Stewardship Program are clearly identified, and can be made available to future stewards prior to transitioning the program.

Based on the staffing plans developed during the work planning process, personnel resources will be allocated as identified in Figure 1. However, as the program evolves, resource loading may change to accordingly.

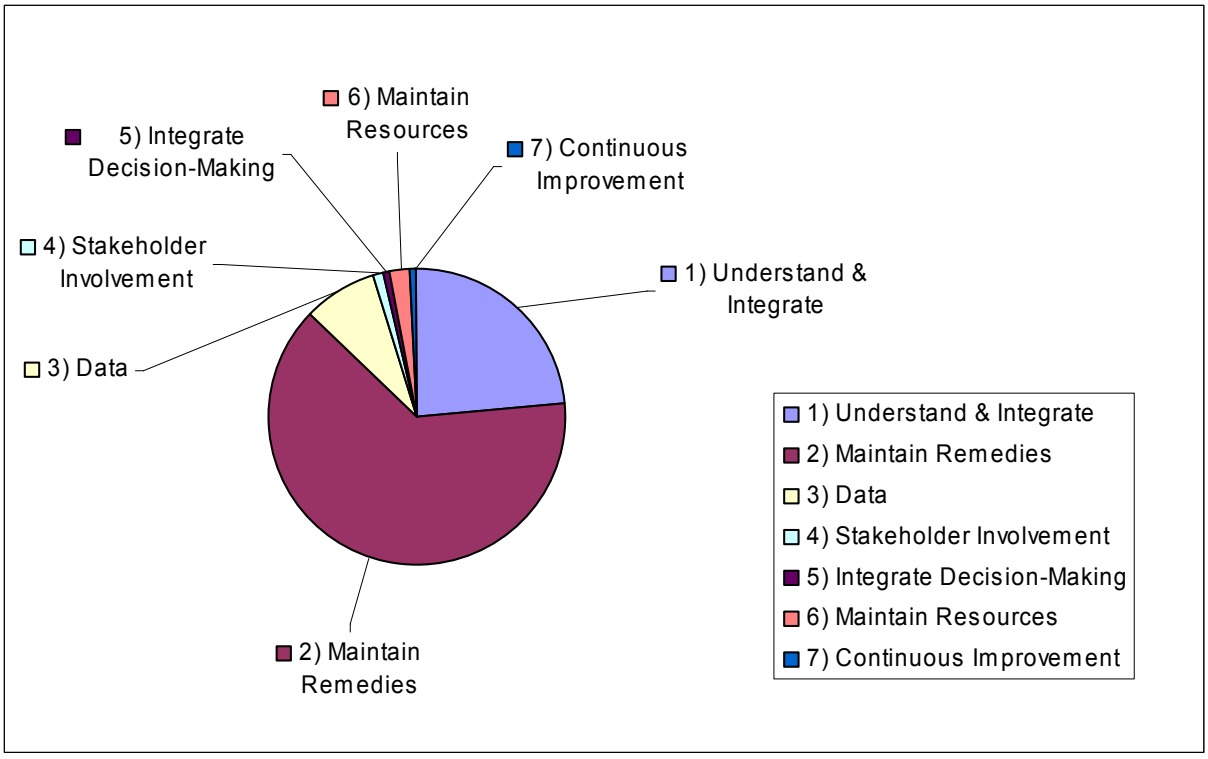

Figure 1. Long-term stewardship resource loading 2008–2012.

5.5.3 Strategic Objective 5.3 – Continue to Move toward Consolidation of Long-Term Stewardship Activities into a Single Sitewide Organization

Many LTS tasks are the result of CERCLA requirements, and were actively performed by the individual projects prior to the creation of the ICP LTS program. The ICP deems that consolidating the administration of LTS activities is more cost-effective than having individual projects manage those activities independently. In fact, the ICP contract states: "The INL must function as a single site for many regulatory purposes." Sitewide coordination and integration of LTS work toward that objective. Since the LTS program was originally established, the INL has made great strides towards complete consolidation of LTS activities. As DOE rebids the various segments of the work at the INL Site, they will consider and implement opportunities for effective consolidation of LTS activities.

5.5.4 Strategic Objective 5.4 – Document Changes in Proprietorship and Confirmation of Compliance with Requirements at each Transition of Site Ownership

The "Hall Amendment" of the National Defense Authorization Act of 1994 (Public Law 103-160) requires concurrence from the EPA on the lease of any National Priorities List site during the period of DOE control, and CERCLA (42 USC 9620(h) (3)) requires that the state be notified of a lease involving contamination. The land within the INL Site boundary is projected to remain under government control until at least 2095. Although transfer of INL property from government control is not anticipated prior to, or after 2095, the lease or transfer of government property is controlled as discussed in the *INL Site-Wide Institutional Controls, and Operations and Maintenance Plan for CERCLA Response Actions* (DOE-ID 2008).

6. SUMMARY

Because many of the requirements applicable to an environmental cleanup program are also applicable to a long-term stewardship program, many of the LTS goals and strategic objectives were actively being achieved prior to the development of the ICP LTS Program. This document discusses how LTS has been implemented, how LTS goals and strategic objectives have been achieved, and how they will continue to be achieved. It identifies measures that help ensure that organizational or program changes do not affect the INL's ability to meet strategic objectives. Fulfillment of these goals and strategic objectives is routinely documented in several Agency-reviewed reports. Examples of typical LTS reports include:

- Groundwater monitoring reports
- Ecological and cultural resource monitoring reports
- Pump and treatment reports
- Operation and maintenance inspection reports
- Institutional controls inspection reports
- New site identification forms
- Five-year review reports.

Although the national LTS program has been relatively static since approximately 2003, the LTS program at the site has continued to perform effectively and has implemented advancements in technology or systems to maximize the efficiency of the program. The ICP LTS Program has and will continue to demonstrate that it is a dynamic, capable program and is committed to the judicious management of the INL Site lands and resources, and to the protection of human health and the environment.

7. REFERENCES

36 CFR 1220–1236, 2007, "National Archives and Records Administration," Chapter XII, Subchapter B, Parts 1220 through 1236, Records Management, *Code of Federal Regulations*, Office of the Federal Register, December 19, 2007.

40 CFR 300, 2008, "National Oil and Hazardous Substances Pollution Contingency Plan," *Code of Federal Regulations*, Office of the Federal Register, April 9, 2008.

15 USC 2601 et seq., 1976, "Toxic Substances Control Act," *United States Code*, October 11, 1976.

42 USC 4321 et seq., 1970, "National Environmental Policy Act of 1969," *United States Code*, January 1, 1970.

42 USC 6901 et seq., 1976, "Resource Conservation and Recovery Act of 1976," *United States Code*, October 21, 1976. (The 1980 Amendment is cited as the "Solid Waste Disposal Act Amendments of 1980.")

42 USC 9601 et seq., 1980, "Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA/Superfund)," *United States Code,* December 11, 1980.

Bodeman, S. W., DOE, Heads of Departmental Elements, DOE, January 20, 2006, "DOE American Indian and Alaska Natives Tribal Government Policy." (Available at: http://www.eere.energy.gov/tribalenergy/pdfs/doe_indian_policy2006.pdf.)

DOE O 200.1, 1996, "Information Management Program," U.S. Department of Energy, September 30, 1996.

DOE O 231.1A, 2004, "Environment, Safety, and Health Reporting," Change 1, U.S. Department of Energy, June 3, 2004.

DOE O 430.1B, 2008, "Real Property Asset Management," Change 1, U.S. Department of Energy, February 8, 2008.

DOE O 450.1, 2007, "Environmental Protection Program," Administrative Change 1, U.S. Department of Energy, January 3, 2007.

DOE P 141.1, 2001, "Department of Energy Management of Cultural Resources," U.S. Department of Energy, May 2, 2001.

DOE P 141.2, 2003, "Public Participation and Community Relations," U.S. Department of Energy, May 2, 2003.

DOE P 441.1, 1996, "DOE Radiological Health and Safety Policy," U.S. Department of Energy, April 26, 1996.

DOE P 454.1, 2003, "Use of Institutional Controls," U.S. Department of Energy, April 9, 2003.

DOE P 580.1, 2002, "Management Policy for Planning, Programming, Budgeting, Operation, Maintenance and Disposal of Real Property," U.S. Department of Energy, May 20, 2002.

DOE-ID, 1991, *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory,* Administrative Docket No. 1088-06-29-120, U.S. Department of Energy Idaho Operations Office; U.S. Environmental Protection Agency, Region 10; Idaho Department of Health and Welfare, December 4, 1991.

DOE-ID, 2002, *Record of Decision—Experimental Breeder Reactor-I/Boiling Water Reactor Experiment Area and Miscellaneous Sites, Operable Units 6-05 and 10-04*, DOE/ID-10980, Rev. 0, U.S. Department of Energy Idaho Operations Office, November 2002.

DOE-ID, 2004, *Community Relations Plan: A guide to CERCLA public involvement in the cleanup program at the INEEL*, DOE/NE-ID-11149, U.S. Department of Energy Idaho Operations Office, February 2004.

DOE-ID, 2007a, *INL-Site Idaho Completion Project Long-Term Stewardship Strategic Plan*, DOE/ID-11008, Rev. 1, U.S. Department of Energy Idaho Operations Office, September 2007.

DOE-ID, 2007b, *Idaho National Laboratory Cultural Resource Management Plan*, DOE/ID-10997, Rev. 2, U.S. Department of Energy Idaho Operations Office, February 2007.

DOE-ID, 2008, *INL Site-Wide Institutional Controls, and Operations and Maintenance Plan for CERCLA Response Actions*, DOE/ID-11042, Rev. 4, U.S. Department of Energy Idaho Operations Office, February 2008.

EPA, 1999, "Region 10 Final Policy on the Use of Institutional Controls at Federal Facilities," Office of Environmental Cleanup, Office of Waste and Chemicals Management , and Office of Regional Counsel, U.S. Environmental Protection Agency, Seattle, Washington, May 1999.

GDE-273, 2004, "INEEL Records Storage Facility Operations Guide," Rev. 1, Idaho Cleanup Project, April 28, 2004.

Glauthier, T. J., DOE, All Department Elements, DOE, December 15, 2000, "Long-Term Stewardship Transition to Site Landlord," ES2000-026689. (Available at: http://lts.apps.em.doe.gov/center/reports/pdf/dec15memo.pdf.)

Huntoon, C. L., DOE, Distribution, DOE, January 19, 2001, "Long-Term Stewardship Responsibility." (Available at: http://lts.apps.em.doe.gov/center/reports/pdf/ltsresp.pdf.)

INEEL, 2007, *Long-Term Ecological Monitoring Plan for the Idaho National Laboratory*, INEEL/EXT-02-01191, Rev. 3, Idaho Cleanup Project, October 2007.

MCP-557, 2007, "Records Management," Rev. 13, Idaho Cleanup Project, December 3, 2007.

MCP-3448, 2005, "Inclusion of New Sites under the Federal Facility Agreement and Consent Order," Rev. 7, Idaho Cleanup Project, June 27, 2005.

Public Law 103-160, Section 3154, 1993, "Hall Amendment" to the National Defense Authorization Act of 1994, November 20, 1993.

Appendix A

Activities Subject to ICP LTS Requirements

Appendix A

Activities Subject to ICP LTS Requirements

Long-term stewardship as defined in this document applies only to those long-term activities with applicability to the ICP work scope as identified in the current ICP contract. Table A-1 provides a listing of ICP LTS activities, identifies the responsible manager, and identifies the source references for the documents that implement the identified activities. Applicable LTS requirements or implementing actions are discussed in the source reference documents.

Table A-1. Activities subject to ICP LTS requirements.

LTS Activity Category	LTS Activity Subcategory	Location	Responsible Organization	Performing Organization	Responsible Manager	Implementing Actions	Source Reference
Monitoring	Groundwater Monitoring	Site-wide – by WAG	ICP Groundwater Monitoring Program	ICP Groundwater Monitoring Program	Frank Webber	Sample groundwater and evaluate contaminant concentrations in the water	DOE/ID-10626 DOE/ID-11334 (Draft)[a] DOE/ID-10955 PLN-1373 INEL-95/0585 INEEL/EXT-2000-00029) DOE/NE-ID-11210
	Drinking water Monitoring	Site-wide	ICP Environmental Services Program	ICP Environmental Services Program	Kliss McNeel	Sample and evaluate water from drinking water wells	PLN-730, GDE-124, GDE-129, GDE-130
	Ecological Monitoring	Site-wide	OU 10-04	OU 10-04	Frank Webber	Evaluation of biological populations at the INL	INEEL/EXT-02-01191
Information Management	Administrative Record/Information Repository	NA	DRSC	DRSC	Frank Kocsis	Electronic storage of CERCLA records	MCP-204
	INL Site Records Center	NA	DRSC	DRSC	Frank Kocsis	Archival copies of physical documents	MCP-557, GDE-273
	Environmental Data Warehouse	NA	ICP LTS Program	ICP LTS Program	Frank Webber	Electronic storage of monitoring data	PLN-1385, PLN-1387
	LTS Tracking System	NA	ICP LTS Program	ICP LTS Program	Frank Webber	Electronic tracking of actions and decisions	PLN-1385, PLN-1387
	Institutional Control Sites Database	NA	ICP LTS Program	ICP LTS Program	Frank Webber	Tracking of institutional controls	PLN-1385, PLN-1387

Table A-1. (continued).

LTS Activity Category	LTS Activity Subcategory	Location	Responsible Organization	Performing Organization	Responsible Manager	Implementing Actions	Source Reference
Institutional Controls	Manage/Maintain Institutional Controls	Site-wide	ICP LTS Program	ICP LTS Program	Frank Webber	Implementation, maintenance, and reporting of institutional controls	DOE/ID-11042
Operations and Maintenance	Pump and Treatment of Contaminated Groundwater at TAN	TAN	WAG 1 Environmental Remediation	WAG 1 Environmental Remediation	Frank Webber	Monitoring and treatment of the contaminated groundwater at TAN	DOE/ID-10684
	Organic Contamination in the Vadose Zone	RWMC	WAG 7 Environmental Remediation	WAG 7 Environmental Remediation	Frank Webber	Monitoring and treatment of the contamination in the vadose zone at RWMC	PLN-2291
	Tank Farm Interim Action	INTEC	WAG 3 Environmental Remediation	WAG 3 Environmental Remediation	Frank Webber	Maintenance of the drainage system at the Tank Farm at INTEC	DOE/ID-10771
	Sitewide O&M requirements	Site-wide	ICP LTS Program	ICP LTS Program	Frank Webber	Monitoring and maintenance of engineered remedies	DOE/ID-11042
New Site Evaluation and Identification	Evaluation of Potential New Sites	Site-wide	ICP LTS Program	ICP LTS Program	Frank Webber	Evaluate and identify newly discovered CERCLA sites	MCP-3448
CERCLA 5-Yr Reviews	Conduct 5-Year Reviews	Site-wide	ICP LTS Program	ICP LTS Program	Frank Webber	Conduct CERCLA 5-Year Reviews	DOE/NE-ID-11125

a. The document is currently a draft, and will not be used to implement groundwater monitoring until it is finalized.