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**Wastren Advantage, Inc. - Environmental  
Surveillance, Education, and Research Program**

**Worker Safety and Health Plan**

**Rev. 6**

**January 1, 2017**



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## Approval Signatures

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## Executive Summary

The **Wastren Advantage Inc. - Environmental Surveillance, Education, and Research (WAI - ESER) Program** conducts, manages and coordinates ecological and environmental research, offsite environmental surveillance, and environmental education for the Idaho National Laboratory (INL) Site. WAI-ESER services include:

- INL Site offsite surveillance, including sample collection and analysis of air, water, soil, milk, wheat, lettuce, potatoes, tissue samples (domestic and wildlife), and other media from U.S. Department of Energy (DOE) sites and their environs for radionuclides.
- Wildlife habitat and vegetation surveys, studies and research on and near INL Site.
- Site-wide research concerning endangered species, pollutants in the environment and revegetation.
- Environmental education concerning ecological and radiological topics related to the INL Site.
- Conservation management planning.

WAI-ESER conducts sampling activities both in and on surrounding areas of the INL Site. The Occupational Safety and Health Administration (OSHA) has jurisdiction over the activities surrounding the INL Site. While within the INL Site boundaries, the DOE 10 CFR 851 has jurisdiction of the above-mentioned activities.

All WAI-ESER sampling activities are covered by this Worker Safety and Health Plan (WSHP). Soil samples are the only samples processed at a WAI-ESER laboratory on the INL Site. Site-wide research, National Environmental Policy Act, conservation management, and wildlife habitat and vegetation surveys are conducted on the INL Site.

Work is conducted for the DOE by the Wastren Advantage, Inc. WAI- ESER Program Office and through the use of agreements with cooperating universities. The WAI-ESER Program is staffed by twelve full time employees, one part time employee and two subcontractor employees. The WAI-ESER Program currently has subcontracts with Idaho State University Environmental Assessment Laboratory in Pocatello, Idaho and ALS Laboratory in Ft. Collins, Colorado to provide laboratory analyses of samples collected by the Surveillance Program and the Wildlife Program to provide assistance with bat monitoring on the INL Site. All INL Site work is performed under the guidance of INL policies and procedures and is followed by WAI-ESER staff as well as subcontractors conducting work there. These procedures include emergency, site access and training, security, radiological control, etc. The training required to gain access to the site (Site Access, Environmental Safety and Health Awareness, GERT, etc.) are conducted on-line and are documented through the site training system (TRAIN). All other training associated with INL Site field activities is not included in the access training and is conducted or facilitated by the WAI-ESER Program.

Site managers required to approve submittal of this document are Steve Moore, President/CEO, Wastren Advantage, Inc.; Jim Gardner, Vice President WAI, Glenn Henderson, Chief Operating Officer, WAI; Matthew Miller, ESH&Q Manager, WAI; Douglas Halford, WAI- ESER Program Manager, WAI-ESER.

**REVISION HISTORY**

<b>Revision No.</b>	<b>Effective Date</b>	<b>Sections Affected</b>	<b>Description</b>
0	01-01-2011	All	New Manual
1	01-01-2012	All	Updated Manual
2	01-01-2013	All	Updated Manual
3	01-01-2014	All	Updated Manual
4	01-01-2015	All	Updated Manual
5	01-01-2016	All	Updated Manual
6	01-01-2017	All	Updated WSHP Plan

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## Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
AMWTP	Advanced Mixed Waste Treatment Project
ASME	American Society of Mechanical Engineers
BEA	Battelle Energy Alliance
DOE	U.S. Department of Energy
DOE-NE	U.S. Department of Energy, Office of Nuclear Energy
DOE-ID	U.S. Department of Energy, Idaho
EPA	U.S. Environmental Protection Agency
ESER	Environmental Surveillance, Education, and Research
ESH	Environmental, Safety, and Health
HIPAA	Health Insurance Portability and Accountability Act
H&S	Health and Safety
ICP	Idaho Cleanup Project
INL	Idaho National Laboratory
ISMS	Integrated Safety Management System
ITG	Idaho Treatment Group, LLC
M&O	Management and operating
NRF	Naval Reactors Facility
OSHA	Occupational Safety and Health Administration
PPE	Personal protective equipment
QA	Quality Assurance
QAP	Quality Assurance Program
QAPjP	Quality Assurance Project Plan
QIP	Quality Implementation Plan
QMP	Quality Management Plan
SN3	Stoller Newport News Nuclear
SOW	Statement of Work
THA	Task Hazard Analysis
VPP	Voluntary Protection Program
WAI	Wastren Advantage, Inc.
WSHP	Worker Safety and Health Plan

## 1.0 Background

The Wastren Advantage Inc. - Environmental Surveillance, Education, and Research (WAI - ESER) Program conducts, manages and coordinates ecological and environmental research, offsite environmental surveillance, and environmental education for the Idaho National Laboratory (INL) Site. WAI-ESER services include:

- INL Site offsite surveillance, including sample collection and analysis of air, water, soil, milk, wheat, lettuce, potatoes, tissue samples (domestic and wildlife), and other media from U.S. Department of Energy (DOE) Idaho sites and their environs for radionuclides.
- Wildlife habitat and vegetation surveys, studies and research on and near INL Site.
- Site-wide research concerning endangered species, pollutants in the environment and revegetation.
- Environmental education concerning ecological and radiological topics related to the INL Site.
- Conservation management planning.

The work is conducted for the DOE by Wastren Advantage, Inc. WAI- ESER Program Office and through the use of agreements with cooperating universities.

The Worker Safety and Health Rule, 10 Code of Federal Regulations (CFR) 851, requires that the contractor's written Worker Safety and Health Plan (WSHP) describe how the contractor will integrate all requirements of the Rule with other related program-specific worker protection activities. Prior to establishing 10 CFR 851, DOE, in response to Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 95-2, committed to implementing an Integrated Safety Management System (ISMS) across the DOE complex by issuing an Implementation Plan in April 1996 and, subsequently, DOE Policy P450.4 in October 1996. That Policy, along with the "Integration of Environment, Health and Safety into Work Planning and Execution" clause set forth in the DOE procurement regulations, requires DOE contractors to establish ISMS.

A straight-forward approach to meeting the policies and requirements for Integrated Safety Management and for implementation of the DOE Worker Safety and Health Rule is to develop the WSHP. This is also consistent with the guidance promulgated by the DOE Office of Environment, Health, Safety and Security (EHSS).

Therefore, for the WAI- ESER Program, an ISMS program description containing all the features that are needed to comply with the requirements of the Rule is an ideal structure within which to embed the WSHP.

The contract period is April 1, 2016, through March 31, 2021. Safety documents and programs developed by the participating companies will continue to be used to facilitate the WAI-ESER Health and Safety (H&S) Program and ensure it is of the highest quality and function.

The WAI-ESER organization is committed to providing a safe and healthy workplace for employees. These conditions shall be ensured through a comprehensive WSHP that is integrated with other site worker protection activities and the ISMS. This organization regards employee protection as a priority and is committed to developing, implementing, and improving safety and health practices that will afford optimal protection to employees and enable the organization to continually improve the quality of its worker protection performance. The safety and health of employees shall take precedence whenever conflicts with production or other objectives arise.

## 2.0 Purpose

This document describes ISMS that ensures that safety is integrated into work performed on the INL Site and incorporates a complete WSHP that is compliant with the Rule. Section 851.11(c) (2) of the Rule requires this Written Safety and Health Plan to be updated and submitted annually, to DOE for approval. This is accomplished within the ISMS approval procedure. For purposes of this document, the term “safety” includes all aspects of safety and health management. This document and the ISMS described herein serve to implement DOE Policy P 450.4A and the revised DOE DEAR Clause 970.5223-1, *Integration of Environment, Safety, and Health Into Work Planning and Execution*, as well as to implement 10 CFR 851 *Worker Safety and Health Plan*.

This ISMS is a dynamic system incorporating the concept of continuous improvement that will support worker safety as the work, by this Contractor, changes to meet new or revised missions of the DOE. The basic structure of ISMS (i.e., the Core Functions and Guiding Principles) is the overarching system WAI-ESER uses to manage the conduct of work under the WAI-ESER contract.

## 3.0 Scope

The ISMS described herein applies to work performed by this Contractor under Contract DE-NE0008477 with the U.S. Department of Energy, Office of Nuclear Energy (DOE-NE), and to all work subcontracted by this Contractor, to perform work at a DOE covered workplace. If the subcontracted work is judged by DOE and this Contractor to be sufficiently complex and/or hazardous, the subcontractor may be required by contract to have and document its own safety management system that is compatible with this ISMS description.

As a part of the WAI-ESER Program, the DOE-NE enters into agreements with universities or non-profit organizations to become affiliates to the program. Visiting scientists and technicians, as well as student and other volunteers are considered subcontractors to WAI under the WAI-ESER Program, and are therefore subject to the provisions of this program. WAI-ESER provides visitor orientation and training through on-line access to INL Site training to ensure that these individuals are familiar with site procedures and recognized hazards. This training is tracked and documented through the use of the INL TRAIN system. This is described in Administrative Procedure ADP-1 Badging and Orientation for New Employees, Visitors, and University Affiliates.

## 4.0 Integrated Safety Management System Description

The DOE Integrated *Safety Management Policy*, DOE P 450.4A, subdivides the concept of the ISMS into six primary components: Objective, Guiding Principles, Core Functions, Mechanisms, Responsibilities, and Implementation.

### 4.1 Objective

Integrate safety into management and work practices at all levels so that missions are accomplished while protecting the public, the worker, and the environment while promoting a positive safety culture.

### 4.2 Guiding Principles (GP#1 thru 7)

**4.2.1. GP. 1 Line Management Responsibility for Safety:** Line management is responsible for the protection of the public, the workers, and the environment.

**a. Program Manager.** The WAI- ESER Program Manager shall have ultimate responsibility for job site H&S. This includes communicating ISMS, VPP, and other site requirements to all personnel, ensuring that field personnel and subcontractors enforce all provisions of this plan, and consulting with the SN3 H&S Manager (safety services subcontracted to WAI-ESER) and/or representative regarding changes to this WSHP.

**b. Task Managers.** Task managers supervise specific activities and shall be responsible for field implementation of applicable sections of the WSHP. Responsibilities include and are not limited to the following:

- Identifying hazards associated with work;
- Implementing controls to mitigate and/or eliminate identified hazards;
- Stopping work, if necessary, to ensure that personnel are following all project environmental, H&S requirements;
- Conducting periodic site management safety audits with the H&S Manager and/or representative to verify compliance with this WSHP;
- Determining evacuation routes and emergency contacts for respective work locations;
- Ensuring that all site personnel and visitors receive the proper training and have obtained medical clearance prior to conducting work on the INL Site;
- Ensuring that pre-job safety meetings are conducted as necessary;
- Conducting post-incident critiques, as necessary; an

- Implementing changes as directed by the SN3 H&S Manager and/or representative and the WAI-ESER Program Manager.
- c. **SN3 H&S Manager and/or representative.** The SN3 H&S Manager and/or representative will serve as the on-site representative for all H&S matters including safety and industrial hygiene. This individual will work closely with the WAI-ESER Program Manager and Task Managers to ensure all aspects of safety and health processes are implemented and followed. Responsibilities include:
- WSHP administration and implementation;
  - Developing and implementing additional specific safety and health requirements that the contractor determines to be necessary to protect the safety and health of workers;
  - Conducting periodic assessments to verify WSHP compliance;
  - Developing and conducting training, as necessary;
  - Conducting safety meetings;
  - Conducting post-incident critiques;
  - Providing feedback to personnel; and
  - Tracking training rosters for WAI-ESER personnel.
- d. **Subcontractors.** Subcontractors shall be responsible for complying with applicable WSHP requirements. WAI-ESER will ensure on-site subcontractors and their personnel understand and comply with all site requirements. Subcontractors will not be allowed to perform work until the appropriate level of H&S orientation/training is completed.

Documents: WAI-ESER Worker Safety and Health Plan  
WAI-ESER Health and Safety Procedures  
Quality Assurance Project Plan for the INL Site Offsite Environmental Surveillance Program

Discussion: The WAI-ESER is a line management organization. All personnel working in the field report to their task manager who then reports to the Program Manager. Direct communication of all employees with Program Manager is encouraged. Each employee is aware of their safety responsibilities. Every worker has stop work authority.

**4.2.2. GP.2 Clear Roles and Responsibilities:** Clear and unambiguous lines of authority and responsibility for ensuring safety are established and maintained. The WAI-ESER

Program Manager will work with the SN3 H&S Manager and/or representative. The H&S Manager and/or representative will oversee programmatic implementation of ISMS and the WSHP, including periodic assessments of the ESER Program. The SN3 H&S Manager and/or representative will communicate with the ESER Program Manager and will be responsible for ensuring all activities of the WAI-ESER Program adhere to the WAI-ESER Worker Safety and Health Plan, including performing H&S assessments of WAI-ESER Program activities.

The SN3 H&S Manager and/or representative's responsibilities include, and are not limited to include the following:

- Preparation/review, revision, and personnel adherence to the WAI-ESER Worker Safety and Health Plan, and project specific H&S processes.
- Industrial Hygiene activities for confined space entry.
- Maintaining a schedule for H&S assessments.
- Performing periodic internal assessments of H&S processes for all WAI-ESER Program activities.
- Issuing internal H&S assessment reports of reviewed WAI-ESER Program activities, including recommendations for improvement.

#### Medical Management Program Implementation

Documents: ADP-1 "Badging and Orientation for New Employees, Visitors and University Affiliates, Rev. 2"  
ADP-2 "Training and Qualification of WAI-ESER Program Personnel, Rev. 0"  
ADP-3 "Property Management, Rev. 2"  
WAI-ESER Worker Safety and Health Plan  
WAI-ESER Health and Safety Procedures  
Quality Assurance Project Plan for the INL Site Offsite Environmental Surveillance Program

Discussion: The WAI-ESER organization has established clear lines of authority through the above procedures which are reiterated during the various training activities.

**4.2.3. GP3. Competence Commensurate with Responsibilities:** Personnel possess the experience, knowledge, skills, and abilities that are necessary to execute their responsibilities.

The WAI-ESER Program has a highly trained and skilled workforce. This training and skill set is relied upon on a daily basis to assure safe and effective operations. The

personnel are encouraged to clarify any safety concerns, before beginning the assigned tasks. The WAI-ESER Program expectation is that each person should know the scope of the work to be executed. Under the Voluntary Protection Program (VPP) and the ISMS program, personnel have the right to stop work if they believe there is an unsafe or potentially unsafe environment. All safety and health concerns will be reported to the SN3 H&S Manager and/or representative. These concerns will be reviewed and appropriate measures taken to correct any deficiencies. Lessons learned will be provided to all WAI-ESER personnel through the SN3 H&S Manager and/or representative.

WAI-ESER has established training requirements including First Aid/CPR, Field Worker, National Safety Council Defensive Driving, and proper incident reporting to be taken by all WAI-ESER employees as well as university affiliates, subcontractors and interns. This training is documented and the training records are retained in the WAI-ESER Idaho Falls Office.

Requirements for site access include Environmental Safety and Health Awareness, Security Awareness, Counterintelligence, and GERT. These requirements are tracked in the INL TRAIN system. WAI-ESER uses the TRAIN database to verify training is completed and to ensure that annual training refreshers are taken prior to access requirements expiration.

The SN3 H&S Manager and/or representative have skills and experience to provide general safety guidance per Occupational Safety and Health Administration (OSHA) regulations, as well as any monitoring of conditions for the personnel working in the field. The SN3 H&S Manager and/or representative has been qualified through outside vendor training as well as site training. The SN3 H&S Manager and/or representative also have qualifications in HAZWOPER and OSHA regulations 29 CFR 1910 and 29 CFR 1926. Guidance and support are provided through senior level safety and health personnel as well as from the WAI-ESER office.

Documents: ADP-2 “Training and Qualification of ESER Program Personnel, Rev.2”

Discussion: Employees are initially evaluated as to their ability to conduct task assignments with continual evaluations done thereafter. Factors used in the evaluation may include but are not limited to:

- Complexity of the activity to be performed.
- Being “Fit for Duty,” under 10 CFR 851. Meaning if in the post-job offer physical, abnormalities are found which would not meet the basic requirements of the normal job functions review for alternate job assignment and/or the withdrawal of job offer may be considered.
- Consequences rendered in the event of poor or unsafe performance.
- Level of education achieved by the employee.

- Experience of the employee, either at the specific activity or with similar activities.
- Changes to activities or to employees' abilities to conduct that activity.

**4.2.4. GP4. Balanced Priorities:** Resources are effectively allocated to address safety, programmatic, and operational considerations. Protecting the public, the workers, and the environment is a priority whenever activities are planned and performed.

Documents: WAI-ESER Worker Safety and Health Plan

Discussion: All work will be performed in accordance with the applicable elements of the INL ISMS and VPP. The WAI-ESER SAF-007 Accident Prevention procedure identifies mandatory practices for personnel to prevent accidents while conducting work. The WAI-ESER H&S Policy incorporates all aspects of the ISMS and provides guidance on general responsibilities and training. One of the primary elements of the Policy is the concept of "**Stop Work Authority.**" All personnel have the right to stop work in the event of unsafe conditions. No field operation or administrative activity is to take precedence over the prevention of an injury or illness. Safety takes priority over expediency or shortcuts.

**4.2.5 GP5. Identification of Safety Standards and Requirements:** Before work is performed, WAI-ESER personnel and the SN3 H&S Manager and/or representative will evaluate associated hazards and an agreed-upon set of safety standards and requirements are established which, if properly implemented, provide adequate assurance that the public, the workers, and the environment are protected from adverse consequences.

Per 10 CFR 851.23, the following safety and health standards (and subsequent successor versions of consensus standards) will be implemented as applicable for the WAI-ESER Program:

29 CFR, Part 1910, "Occupational Safety and Health Standards," excluding 29 CFR 1910.1096, "Ionizing Radiation."

29 CFR, Part 1926, "Safety and Health Regulations for Construction."

American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices," (2005) (incorporated by reference, see 851.27) (applicable areas only, i.e., heat and cold stress)

NFPA 70E, "Standard for Electrical Safety in the Workplace," (2004) (applicable areas only, i.e., portable electrical equipment)

Documents: WAI-ESER Health and Safety Procedures, SAF-001 Task Hazard Analysis  
WAI-ESER Worker Safety and Health Plan

Discussion: All project tasks are evaluated prior to commencing site activities to evaluate all potential hazards. A task hazard analysis (THA) is written for each major activity and all high consequence activities for every project.

**4.2.6 GP6. Hazard Controls Tailored to Work Being Performed:** Administrative and engineering controls to prevent and mitigate hazards are tailored to the work being performed and the associated hazards.

WAI-ESER management relies on the SN3 H&S Manager and/or representative to analyze the hazards at the beginning of all activities as part of the THA with cooperation from the WAI-ESER personnel. The SN3 H&S Manager and/or representative have education, training, experience, and professional certifications to provide support in safety and health for all activities for WAI-ESER Program. If activities require specialized needs, resources are available from the corporate office or other WAI projects to facilitate any additional needs.

WAI-ESER relies on skill of the craft, training, and experience of all personnel to perform final analysis of the hazards prior to beginning any work in the field.

Due to the nature of the WAI-ESER contracted activities, personnel are not required to wear personal protective equipment (PPE) that would require monitoring for environmental stresses. However, they do work outside which presents a need for sunscreen, hats, long pants, sleeved shirts, and sturdy shoes. There also needs to be some determinations made based on humidity and temperature for work that is conducted in that environment. These determinations will be made by the SN3 H&S manager and/or representative assigned to the WAI-ESER Program using the applicable requirements from the LWP-14606, Heat and Cold Stress that the INL contractor uses.

Documents: WAI-ESER Health and Safety Procedures, SAF-001 Task Hazard Analysis  
HSP-6; LWP-14606, Heat and Cold Stress, Appendix F  
WAI-ESER Worker Safety and Health Plan

Discussion: All project tasks are evaluated prior to commencing site activities to evaluate all potential hazards. A THA is written for each major activity and all high consequence activities for every project. The THA will determine the level of protection or controls needed to be implemented to protect workers. These can include engineering controls, administrative controls and/or PPE.

**4.2.7 GP7. Operations Authorization:** The conditions and requirements to be satisfied for operations to be initiated and conducted are clearly established and agreed-upon.

Documents: WAI-ESER WSHP

Discussion: The conditions and requirements for operations to be initiated are established for each task through the following processes:

- Identifying hazards associated with work;
- Implementing controls to eliminate and/or mitigate identified hazards;
- Stopping work, if necessary, to ensure that personnel are following all project environmental, H&S requirements;
- Conducting periodic site management safety audits with the SN3 H&S Manager and/or representative to verify compliance with this WSHP;
- Determining evacuation routes and emergency contacts for respective work locations;
- Ensuring that all site personnel and visitors receive the proper training and have obtained medical clearance prior to entering the site;
- Ensuring that pre-job safety meetings are conducted as necessary;
- Conducting post-incident critiques, as necessary; and implementing changes as directed by the SN3 H&S Manager and/or representative and the ESER Program Manager.

#### **4.3 Core Functions (CF#1 thru 5 integrated as follows):**

##### **4.3.1 CF.1 Define Scope of Work**

Documents: Contract DE-NE0008477

Discussion: The purpose of this contract is to perform independent environmental surveillance, natural resources management support and research, and public education for the INL in the WAI-ESER Program. The INL is under the purview of the DOE-NE and is comprised of the following:

- INL, managed and operated by Battelle Energy Alliance
  - dedicated to nuclear research and development and national security missions;
- Idaho Cleanup Project (ICP), operated by Fluor Idaho, LLC – and supports the DOE cleanup mission at the Idaho Site under the Idaho Cleanup Project Core contract (ICP Core). Fluor Idaho will focus on addressing the key elements of the ICP Core – dispositioning

transuranic waste (TRU), spent nuclear fuel (SNF), and high-level radioactive waste (HLW). dedicated to remediating contaminated areas, dispositioning waste and spent nuclear fuel, and decontaminating and decommissioning facilities under the purview of the U.S. Department of Energy Office of Environmental Management Idaho Operations Office;

- Naval Reactors Facility (NRF), operated by Bechtel Marine Propulsion Corporation - under the purview of the National Nuclear Security Administration and focused on supporting the U.S. Navy's nuclear powered fleet; and
- Advanced Mixed Waste Treatment Project (AMWTP), operated by Fluor Idaho, LLC, focused on processing approximately 65,000 cubic meters of stored mixed transuranic waste for shipment to the Waste Isolation Pilot Plant in Carlsbad, New Mexico.

The tasks associated with the WAI-ESER Statement of Work (SOW) support implementation of sound stewardship practices that are protective of the air, water, land, and other natural resources impacted by INL Site operations and compliance with applicable environmental, public health, and resource protection laws, and regulations.

#### 4.3.2 CF.2 Analyze Hazards

Documents: WAI-ESER Worker Safety and Health Plan

Discussion: The WAI-ESER WSHP is the primary Environmental, Safety, and Health (ESH) document for the WAI-ESER Program. The WSHP implements the applicable elements of the INL and WAI-ESER ISMS as well as 10 CFR 851 and is anchored by THA. Implementation of this plan provides the worker with clear direction, responsibilities, and requirements for performing work safely.

The main objective of this Plan is to provide workers with clear information necessary to perform work safely. Sub-objectives include:

- Identification of ESH hazards associated with the WAI-ESER;
- Establishment of appropriate controls to mitigate or eliminate hazards;
- Communicate the project lines of authority relative to ESH; and
- Identify applicable ESH training requirements.

### 4.3.3 CF.3 Develop/Implement Controls

Documents: WAI-ESER WSHP  
WAI-ESER Health and Safety Procedures

Discussion: Administrative and engineering controls will be implemented when applicable to mitigate hazards. Protective clothing and PPE which shields or isolates employees from chemical, physical and biological hazards will be used when hazards cannot be engineered or administratively mitigated.

### 4.3.4 CF.4 Perform Work

Documents: WAI-ESER WSHP  
WAI-ESER Health and Safety Procedures

Discussion: The ESH Program applies to all work under the jurisdiction of WAI-ESER. The Program also applies to WAI-ESER employees working in areas under the jurisdiction of other organizations.

Project-specific ESH training is conducted prior to commencing field activities, when performing non-routine tasks, and when new hazards are identified.

### 4.3.5 CF.5 Feedback/Improvement

Documents: WAI-ESER WSHP  
WAI-ESER Health and Safety Procedures

Discussion: WAI-ESER strives to establish and maintain a strong safety culture by encouraging all employees to submit suggestions on how to improve current procedures and programs and to identify potential hazards. Every employee has stop work authority. Employees have an active and meaningful role in contributing to the structure and operation of the safety and health plan. This involvement results in ownership of the safety and health plan by all employees.

The objective, principles, and functions are established and provided by the DOE and are universally applicable to all activities and operations at this Site. This ISMS is tailored to the work and organizational structure unique to this contractor and program.

## 4.4 Mechanisms

Mechanisms are the means by which agreements are reached with the DOE Site Office and the safety management functions are implemented and performed. Environmental, safety and health requirements in the form of laws, regulations, DOE Directives, consensus standards and others flow down from their source into this Contractor's contract. The contract DE-NE0008477 contains those requirements that DOE and WAI-ESER agree are applicable to the work and conditions at this Site. The contract directs

that all work be conducted according to the applicable requirements. The applicable requirements flow down to policies and procedures established and maintained by the project office. These policies and procedures include controls tailored to the work/activity and the type and level of hazards present. A listing of this Contractor's policies, procedures and manuals describing the ISM mechanisms is located in Section 7 of this WSHP.

#### **4.4.1 Responsibilities**

The WAI-ESER Program is organized to satisfy the first Guiding Principle that Line Management is responsible for safety. Unambiguous lines of responsibility within the WAI-ESER Program are paramount to effective safety management at this Site. The second component of ISMS, Guiding Principles, is satisfied by the assignment, within each procedure, of functional responsibilities and approval authorities for each proceduralized activity. The WAI-ESER Program implements the third Guiding Principle by staffing the organization with personnel having competence commensurate with their responsibilities. Reporting to the WAI-ESER Program Manager are personnel having appropriate line management authority for their areas of responsibility. Line Management has primary responsibility for safely operating equipment and conducting activities.

#### **4.4.2 Implementation**

The strategy for implementing the ISMS is to have frequent direct communication with all program personnel. Since the WAI-ESER Program organization is few in numbers, frequent direct communication with all program staff is achieved. All program activities are well defined, and each activity performed in the field is defined by a procedure. Regular safety meetings are conducted. Feedback and improvement is achieved through direct communication with the Program Manager. The WAI-ESER Program conducts the INL Offsite Environmental Surveillance Program as well as radioecology and natural resource research. Therefore, the Program has developed procedures which describe the program to ensure that personnel who perform activities under the WAI-ESER Program are properly trained and qualified to perform those activities. The procedures apply to routine preparation and activities for the WAI-ESER Program. The procedures also provide chain of command and methods for addressing employee suggestions and concerns. Part of the WAI-ESER incident analysis process is to address and implement lessons learned. Training requirements for H&S processes are contained in the WAI-ESER H&S Procedures and ADP-1 and ADP-2 of the WAI-ESER Program.

If activities of the WAI-ESER Program warrant inclusion of requirements from any area that has been identified as not applicable or as not fully applicable, WAI-ESER Program management will notify DOE-ID of those activities. No work will begin on those activities until a thorough review has been conducted, training has been provided, and changes have been approved by DOE-ID, for this WSHP.

## 5.0 Integrated Safety Management System Mechanisms

This Section describes how Environmental, Safety and Health programs are incorporated into the work. This Section also links the DOE's safety objective, principles, and functions with this Contractor's implementing strategy and responsibilities discussed earlier.

For work performed by subcontractors and cooperating universities, relevant requirements are flowed down through the contracting vehicle. For subcontractors, new employees and visitors, site orientation is conducted to ensure all personnel are aware of recognized hazards.

The specific mechanisms for implementation of the core functions and guiding principles are addressed in Section 4 above, through reference to the program-specific documents and discussion.

Because of the potentially far-reaching effects associated with the materials located at this Site, many of the mechanisms employed by WAI-ESER's safety program are also directed toward protection of workers, the public and the environment.

## 6.0 WSHP Description Change Control Process

This WSHP description is reviewed annually, updated as appropriate, and submitted to the DOE-ID for approval if major changes are warranted. This document may also be updated prior to the annual update if there are changes to the scope of work or nature of hazards that compels a more timely change to the document.

## 7.0 Bibliography: Documents Containing this Contractor's ISMS Mechanisms

***ADP-1: Badging and Orientation for New Employees, Visitors, and University Affiliates, Rev. 2.*** This procedure describes the orientation process, including documents issued, briefings conducted, and other valuable information disseminated. University affiliates conduct research projects for the WAI-ESER Program. This procedure describes the security and training requirements for these university affiliates, and the processes and procedures used for badging. This procedure also describes the requirements for briefing and badging visiting scientists and technicians who participate in WAI-ESER Program activities for 30 days or less.

***ADP-2: Training and Qualification of ESER Program Personnel, Rev. 0.*** This procedure describes the system to ensure that personnel who perform activities under the WAI-ESER Program are properly trained and qualified to perform those activities. This procedure applies to routine preparation and activities for the WAI-ESER Program. Training requirements for H&S processes are contained in the WAI-ESER Health and Safety Procedures.

***WSHP: ESER Worker Safety and Health Plan.*** WAI-ESER WSHP is the primary ESH document. The WSHP implements the WAI-ESER and applicable elements of the INL ISMS and is anchored by THA. Implementation of this plan provides the worker with clear direction, responsibilities, and requirements for performing work safely.

The main objective of this Plan is to provide workers with clear information necessary to perform work safely. Sub-objectives include:

- Identification of ESH hazards associated with the WAI-ESER;
- Establishment of appropriate controls to mitigate or eliminate hazards;
- Communicate the project lines of authority relative to ESH; and
- Identify applicable ESH training requirements.

**HSP-1: Hantavirus.** Hantavirus is transmitted to humans through inhalation of aerosolized particles of rodent feces, urine, or saliva, biting, or through mucous membranes. Various activities conducted by WAI-ESER Program personnel and certain university affiliates, such as small mammal trapping and cleaning of field buildings and office areas located on the INL Site, offer the potential exposure to the Hantavirus. This procedure provides the control methods utilized during selected activities to minimize personnel exposure. If a large scale cleanup effort is identified, the use of BEA or CWI qualified respirator users will be utilized to aid in the cleanup.

**HSP-6: Notification Requirements for Field Worker Safety and Compliance.** This procedure covers all the salient portions of LWP-14101 (site-wide procedure implemented by the management and operating [M&O]) that apply to any WAI-ESER Program employee, university affiliate, subcontractor, and visiting scientist. The M&O's primary concerns are personnel accountability and communications. WAI-ESER Program procedure HSP-6 applies to all permanent and temporary ESER Program staff, university affiliates, subcontractors, and research and monitoring technicians conducting fieldwork on the INL Site beyond the boundaries of major facility complexes, including at the Experimental Field Station. Work performed within a facility boundary also requires communications to be maintained, but may also have additional facility requirements. This procedure does not apply to field work performed outside the boundaries of the INL Site nor to work such as milk sampling runs that only require travel on public roads through the INL Site. Work that is conducted in the field will be monitored for heat and cold stress as indicated in Appendix F, LWP-14606, of this procedure and the Industrial Hygiene section of this WSHP.

**HSP-11: Field Worker Safety.** This procedure identifies training requirements, the most commonly-faced hazards, identification controls, job hazard analysis requirements, notification requirements, emergency actions and Stop-Work Authority, for all WAI-ESER Field Workers.

**QAP-1: Preparation, Review, and Approval of Procedures.** WAI-ESER Program activities in the areas of environmental surveillance, H&S, and quality are specified by the use of clear, written procedures. Procedures may also be prepared for education and research projects, as necessary. To ensure that procedures are kept current they will be distributed as controlled documents. This procedure details the preparation, review, and approval process for procedures prepared for the WAI-ESER Program. This procedure also outlines a standard format to follow when preparing procedures. Topics covered in this procedure apply to all procedures prepared for activities conducted under the WAI-ESER Program at the INL Site. Subcontracted

laboratories and university affiliates performing work for the WAI-ESER Program are required to have written procedures for those activities. Such procedures may also be prepared according to this procedure.

***QAP-2: Document Control.*** This procedure applies to the development, review, and approval of documents used for activities covered under the WAI-ESER Program, as well as covering revision, distribution, and use of controlled documents. This procedure is applicable to all WAI-ESER Program employees who perform work under the *Quality Assurance Project Plan for INL Site Offsite Environmental Surveillance Program*.

***WAI-ESER Health and Safety Program.*** WAI-ESER ES&H Policies are implemented and administered by the WAI-ESER Environmental Safety & Health (ES&H) Program Procedures. WAI-ESER ES&H Programs are based on OSHA, U.S. Environmental Protection Agency, Nuclear Regulatory Commission and DOE regulatory requirements and are written to ensure supervisors and employees are provided with a safe and healthy work environment promoting a positive safety culture.

The WAI-ESER ES&H Program applies to all work areas under the jurisdiction of WAI-ESER whether or not employees of other organizations are also working in these areas. Likewise, the program applies to WAI-ESER employees working in areas under the jurisdiction of other organizations. Plant, facility or project sites may have ES&H requirements in addition to those in the WAI-ESER ES&H Program Procedures. All additional requirements will be followed.

***Quality Assurance Requirements for the ESER Program.*** An effective quality assurance (QA) program is essential to achieving the objectives of projects conducted under the ESER Program. The principal drivers for development of a QA program at DOE facilities are 10 CFR 830, Subpart A (the rule) and DOE Order 414.1D (the Order). The Quality Assurance (QA) Requirements, for the Rule and Order are met by the implementation of the following four documents used by the WAI ESER Program: (1) The WAI-ESER Quality Assurance Project Program (QAPjP) governs quality assurance for all WAI activities including the ESER Program. WAI-ESER has adopted the American Society of Mechanical Engineers (ASME)-NQA-1-2008, Quality Assurance Requirements for Nuclear Facility Applications as the standard from which the ESER QAPjP is developed for the ESER Program and flows down to all projects and uses a graded approach. This QAPjP describes the quality processes implemented for the WAI- ESER Surveillance and other ESER activities.

(2) The WAI-ESER Quality Assurance Project Plan (QAPjP) for the Offsite Environmental Surveillance Program of the INL has been prepared in accordance with DOE Orders 231.1A (*Environment, Safety, and Health Reporting*), 414.1C (*Quality Assurance*), and 450.1 (*Environmental Protection Program*); and other applicable requirements (i.e., EPA QA/R-5, ASME NQA-1-2008, etc.). This QAPjP is written to cover specifically the offsite environmental surveillance activities for the INL Site as performed by the WAI-ESER Program, but can also cover other WAI-ESER programs.

(3) The WAI-ESER Quality Management Plan (QMP) for the WAI-ESER Program has been prepared in accordance with Title 10 of the CFR Part 830, Subpart A, DOE Orders 200.1,

414.1C, 5400.1, and EPA QA/R-2, and guidance specified in DOE G 200.1-1, G 414.1-2, DOE/EH-0173T, ANSI/ASME NQA-1, and ISO 9001 and 9004. This plan applies to all work conducted under the scope of the WAI-ESER S&H Plan as well as all work performed under the scope of the INL Offsite Environmental Surveillance Program. It also applies to research-oriented and educational activities, at the discretion of the WAI-ESER Program Manager. Both the Rule and the Order require a QMP that covers 10 key criteria. These 10 criteria are further divided into 3 broad categories: Management (Criteria 1 through 4), Performance (Criteria 5 through 8), and Assessment (Criteria 9 and 10).

(4) The WAI-ESER Quality Assurance Implementation Plan (QIP) for the WAI-ESER Program. This QIP provides requirements, responsibilities, and authority for implementing the NQA-1-2008 QAPjP under a graded and tailored approach to all work activities for the WAI-ESER Program under contract DE-NE0008477 with the U. S. Department of Energy, Office of Nuclear Energy (DOE-NE). This QIP shall: (1) identify the program-specific inputs and assumptions used in grading and tailoring the Quality Assurance (QA) Program; and (2) identify the program QA implementing procedures and processes.

### ***Occupational Medicine Program Plan for the WAI-ESER.***

The Occupational Medicine Program along with Injury/Illness Management for the WAI-ESER Program is handled through the following means:

- Physical Examination requirements(s) as defined under 10 CFR 851 are handled through a contract with an appropriate Occupational Medicine Provider that meets the requirements under 10 CFR 851 and other applicable job description essential functions and tasks as identified both for and during the employment process.
- Reporting any injuries or illnesses to the SN3 S&H representative and to the WAI management team. Medical care is provided through the designated and appropriate Occupational Medical provider as defined according to policy and/or regulation under Worker's Compensation systems by State. Case management for Injury/Illness assistance is available through SN3's Corporate Occupational Medicine Program.

A contract with an Occupational Medicine Provider has been established for conducting physical examination requirements, drug testing and/or assistance with offsite injuries/illnesses as appropriate. Other requirements under 10 CFR 851 such as the availability of an Employee Assistance Program (EAP) are addressed through individual designations by the appropriate employer.

WAI-ESER employees can utilize the Central Facilities medical facility for any injuries/illnesses occurring within the site boundaries. Additionally, a "follow up" with the designated Occupational Medicine Provider may be necessary, as applicable under company and/or Worker's Compensation Insurance designations.

The National Occupational Medicine Provider will be responsible for clinic locations and certifications, providing medical direction and supervision through a staff medical director,

electronic maintenance of medical records to meet 10 CFR 851 needs, and making other resources available for use or request such in Wellness Programs, Ergonomic Assessments and EAP as necessary and applicable Ergonomic or Wellness needs.

## **Appendix A**

### **Crosswalk between Sections of the Rule, Example Program, and Implementation Guide**

**Appendix A: Crosswalk between Sections of the Rule, Example Program, and Implementation Guide**

Rule Section		Crosswalk		
Section Number	Section Subject	ISMS Description Reference (this document)	WAI- ESER Program Document	Document Section
<b>(Subpart C)</b>	<b>Specific Requirements</b>			
<i>(851.20)</i>	<i>Management responsibilities and worker rights and responsibilities.</i>			
(851.20(a))	Management responsibilities	4(b)1; 4(b)2; 4(b)3	WAI-ESER Safety and Health Plan;	Section 6 Section 4.2.1 Entire Document
(851.20(a)(1))	Policy, goals, and objectives.	4(a)(b)(c)(d)	WAI-ESER Safety and Health Plan;	Section 7 Section 4.1 Entire Document
(851.20(a)(2))	Qualified staff.	4(b)3	WAI-ESER Quality Assurance Project Plan WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Section 5 Section 4.2.3 Entire Document
(851.20(a)(3))	Accountability	4(b)4; 4(b)5; 4(b)6; 4(b)7	WAI-ESER Quality Assurance Project Plan WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Section 1 Entire Document Entire Document
(851.20(a)(4))	Employee involvement.	4(b)4; 4(b)5; 4(b)6; 4(b)7	WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Section 4.3.5 Entire Document

Rule Section		Crosswalk		
Section Number	Section Subject	ISMS Description Reference (this document)	WAI- ESER Program Document	Document Section
(851.20(a)(5))	Access to information		WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Entire Document Entire Document
(851.20(a)(6))	Report events and hazards.	3; 4(b)1(b); 4(b)5, 6, 7; 4(c)2, 4, 5; 4(d)	WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Entire Document SAF-008
(851.20(a)(7))	Prompt response to reports.	4(b)7	WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Entire Document Entire Document
(851.20(a)(8))	Regular communications.		WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Entire Document Entire Document
(851.20(a)(9))	Stop work authority.	4(b)1(d); 4(b)4; 4(b)5	WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Section 4.2.4 Entire Document
(851.20(a)(10))	Inform workers of rights.	4(c)2; 4(c)3; 4(c)4; 4(c)5	WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Entire Document Entire Document
(851.20(b))	Worker rights and responsibilities.			
(851.20(b)(1))	Participate on official time.		WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Entire Document Entire Document
(851.20(b)(2))	Access to information.		WAI-ESER Quality Assurance Project Plan WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Entire Document Entire Document Entire Document

Rule Section			Crosswalk	
Section Number	Section Subject	ISMS Description Reference (this document)	WAI- ESER Program Document	Document Section
(851.20(b)(3))	Notification of monitoring results.		WAI-ESER Health and Safety Procedures	Entire Document
(851.20(b)(4))	Observe monitoring.		WAI-ESER Health and Safety Procedures	Entire Document
(851.20(b)(5))	Accompany inspections.		WAI-ESER Health and Safety Procedures	Entire Document
(851.20(b)(6))	Results of inspections and investigations.		WAI-ESER Health and Safety Procedures	Entire Document
(851.20(b)(7))	Express concerns.		WAI-ESER Health and Safety Procedures	Entire Document
(851.20(b)(8))	Decline to perform in imminent risk.		WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Section 4.2.4 Entire Document
(851.20(b)(9))	Stop work.	4(b)1(d); 4(b)4; 4(b)5	WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures	Section 4.2.4 Entire Document
<b>(851.21)</b>	<b><i>Hazard Identification and Assessment</i></b>			
(851.21(a)(1))	Assess workers exposures.		WAI-ESER Health and Safety Procedures WAI-ESER Safety and Health Plan;	Entire Document Section 4.2.6
(851.21(a)(2))	Document hazard assessment		WAI-ESER Health and Safety Procedures	Entire Document
(851.21(a)(3))	Record results.		WAI-ESER Health and Safety Procedures	Entire Document
(851.21(a)(4))	Analyze designs for potential hazards.		WAI-ESER Quality Assurance Project Plan WAI-ESER Health and Safety Procedures	Section 2 Entire Document
(851.21(a)(5))	Evaluate operations, procedures, and facilities.	4(c)5; 4(d)7; 4(f)	WAI-ESER Quality Assurance Project Plan WAI-ESER Health and Safety Procedures	Section 3 Entire Document

Rule Section		Crosswalk		
Section Number	Section Subject	ISMS Description Reference (this document)	WAI- ESER Program Document	Document Section
(851.21(a)(6))	Job activity-level hazard analysis.	4(b)1(a); 4(b)1(b); 4(c)2; 7	WAI-ESER Health and Safety Procedures WAI-ESER Safety and Health Plan	HS-001 Section 4.2.6
(851.21(a)(7))	Review safety and health experience.		WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures; WAI-ESER Procedure	Section 4.2.3 SAF-001 ADP-1 Badging and Orientation for New Employees, Visitors, and University Affiliates; ADP-2 Training and Qualification of ESER Program Personnel
(851.21(a)(8))	Consider other hazards		WAI-ESER Safety and Health Plan; WAI-ESER Health and Safety Procedures; WAI-ESER Procedure	Section 4.2.6 SAF-001; HLTH-001; ENV-001 ADP-1 Badging and Orientation for New Employees, Visitors, and University Affiliates; ADP-2 Training and Qualification of ESER Program Personnel
(851.21(b))	Closure facilities hazard identification	Not applicable	Not applicable	

Rule Section		Crosswalk		
Section Number	Section Subject	ISMS Description Reference (this document)	WAI- ESER Program Document	Document Section
(851.21(c))	Hazard identification schedule	3; 4(b)1(b); 4(b)5, 6, 7; 4(c)2, 4, 5; 4(d)	WAI-ESER Health and Safety Procedures	SAF-001; HLTH-001
<b>(851.22)</b>	<b><i>Hazard prevention and abatement</i></b>			
(851.22(a))	Hazard prevention and abatement process.	3; 4(b)1(b); 4(b)5, 6, 7; 4(c)2, 4, 5; 4(d)	WAI-ESER Health and Safety Procedures	Entire Document
(851.22(a)(1))	During design or procedure development.	3; 4(b)1(b); 4(b)5, 6, 7; 4(c)2, 4, 5; 4(d)	WAI-ESER Health and Safety Procedures	Entire Document
(851.22(a)(2))	Existing hazards.	3; 4(b)1(b); 4(b)5, 6, 7; 4(c)2, 4, 5; 4(d)	WAI-ESER Health and Safety Procedures, Hazard Communication Program HS-002	Entire Document
(851.22(b))	Hierarchy of controls.		WAI-ESER Health and Safety Procedures	Entire Document
(851.22(b)(1))	Substitution.		WAI-ESER Health and Safety Procedures WAI-ESER Quality Assurance Project Plan	Entire Document Section 14
(851.22(b)(2))	Engineering.	4(c)3; 4(c)6	WAI-ESER Health and Safety Procedures	Entire Document
(851.22(b)(3))	Work practices and administrative.	4(a)	WAI-ESER Health and Safety Procedures	Entire Document
(851.22(b)(4))	Personal protective equipment.	4(c)3	WAI-ESER Health and Safety Procedures	SAF-002
(851.22(c))	Purchasing equipment, products, and services.		WAI-ESER Quality Assurance Project Plan WAI-ESER Procurement Procedures	SM-130

Rule Section		Crosswalk		
Section Number	Section Subject	ISMS Description Reference (this document)	WAI- ESER Program Document	Document Section
<i>(851.23(a)) Applicable sections: (2), (3), (7), (9), (10), (13), (14)</i>	<i>Safety and health standards</i>	4(c)5; 4(d)	WAI-ESER Health and Safety Procedures	Entire Document
<i>(851.23(b))</i>	<i>Additional safety and health standards</i>	4(c)	WAI-ESER Procedures	Health and Safety Procedures HSP-1; HSP-3; HSP-4; HSP-6; HSP-7
<i>(851.24)</i>	<i>Functional areas.</i>		WAI-ESER Health and Safety Procedures	Entire Document
<i>(851.25)</i>	<i>Training and information.</i>	Section 4	WAI-ESER Health and Safety Procedures WAI-ESER Safety and Health Plan WAI-ESER Procedure	Entire Document Section 7 ADP-1 Badging and Orientation for New Employees, Visitors, and University Affiliates; ADP-2 Training and Qualification of ESER Program Personnel
<i>(851.26)</i>	<i>Recordkeeping and reporting</i>		WAI-ESER Health and Safety Procedures; WAI-ESER Procedures	Entire Document QAP-2 Document Control;

Rule Section		Crosswalk		
Section Number	Section Subject	ISMS Description Reference (this document)	WAI- ESER Program Document	Document Section
(851.27)	<i>Reference sources</i>	Section 7	WAI-ESER Quality Procedures; WAI-ESER Safety and Health Plan;  WAI- ESER H&S Procedures WAI-ESER Quality Management Plan WAI-ESER Quality Assurance Implementation Plan	Entire document Entire document Entire document ADP-1 Badging and Orientation for New Employees, Visitors, and University Affiliates; ADP-2 Training and Qualification of ESER Program Personnel;
<b>Appendix B</b>				
1.	Construction Safety	Not applicable	Not applicable	
2.	Fire Protection	Appendix B Section B2	Tenant Use Agreement Between BEA and the WAI-ESER Program, IAG-222	Entire document
3.	Explosives Safety	Not applicable	Not applicable	
4.	Pressure Safety	Not applicable	Not applicable	
5.	Firearms Safety	Not applicable	Not applicable	
6.	Industrial Hygiene	Appendix B Section B6	WAI-ESER Safety and Health Plan, Notification Requirements for Field Worker Safety and Compliance	HSP-6, Heat and Cold Stress, Section 7, Appendix F
7.	Biological Safety	Not applicable.	Not applicable	
8.	Occupational Medicine	Appendix B Section B8	WAI-ESER Health and Safety Procedures	HLTH-008
9.	Motor Vehicle Safety	Appendix B Section B9	WAI-ESER Health and Safety Procedures	SAF-009

Rule Section		Crosswalk		
Section Number	Section Subject	ISMS Description Reference (this document)	WAI- ESER Program Document	Document Section
10.	Electrical Safety	Appendix B Section B10	Tenant Use Agreement Between BEA and the WAI-ESER Program, IAG-222	Entire document
11.	Nanotechnology Safety-Reserved	Reserved	Reserved	
12.	Workplace Violence Prevention-Reserved	Reserved	Reserved	

## **Appendix B**

### **General Approach to Worker Safety and Health Functional Areas (Appendix A to Part 851)**

The mandatory requirements for Functional Areas, established by Appendix A to Part 851 –Worker Safety and Health Functional Areas

**The following Functional Areas pertain to the current scope of work for WAI-ESER:**

## **Fire Protection**

The ESER Program maintains a laboratory and office location in the CFA-612 building. A tenant use agreement (IAG-222) with Battelle Energy Alliance (BEA) outlines the responsibilities of each party. The landlord (BEA) is responsible for maintaining basic utilities (electrical and water). Per the agreement, the landlord is responsible for providing emergency preparedness points-of-contact for drills. It also allows for landlord responsibility for scheduling and conducting inspection of fire extinguishers, safety showers, fire doors, etc. WAI-ESER is not responsible for the maintenance of the building including the fire protection systems. BEA as the landlord will provide for fire protection and security for the building. In the event of an emergency, the INL Fire Department will respond and the BEA Occupational Medical Program will provide any emergency medical needs.

The WAI-ESER specifies fire prevention, protection, and response through the WAI- ESER Safety and Health Procedure, HSP-6, Notification Requirements for Field Worker Safety and Compliance as well as SAF-005, Fire Protection Program. This establishes the general requirements and procedures for fire prevention and fire protection, including measures designed to protect employees, visitors, subcontractors, and facilities from the effects of fire and explosion. This procedure provides the processes to notify the site security, shift supervisors, and WAI-ESER Program management of individuals in the field. It describes the necessary communication processes as well as vehicle safety and fire prevention from brush or debris.

The WAI-ESER Program will adhere to NFPA codes and regulations when applicable to the activities that are being conducted by WAI-ESER personnel outside the tenant use agreement with BEA.

## **Industrial Hygiene**

Industrial hygiene is the science and art devoted to the anticipation, recognition, evaluation, prevention, and control of those environmental factors or stresses arising in or from the workplace and may cause sickness, impaired health and well-being, or significant discomfort among workers and the public.

An effective worker protection program encompasses the concept of prudent avoidance of worker exposure to any occupational hazard. Prudent avoidance involves minimizing the number of individuals at risk of exposure, minimizing the individual worker's potential for exposure, and controlling all exposures to chemical and physical agents so that exposures are within established

occupational exposure limits and as low as practical. WAI-ESER Program activities involve personnel that are outside in the environment. This exposes the personnel to potential heat and cold stress. The ESER's Industrial Hygiene program addresses this exposure to heat and cold stress. The program is implemented in the WAI-ESER Safety and Health Procedure, HSP-6, Notification Requirements for Field Worker Safety and Compliance and integrates recognized industrial hygiene practices within the overall worker protection program. The program also ensures the collection, validation, and maintenance of applicable industrial hygiene information with regards to heat and cold stress exposure.

WAI-ESER personnel will follow the process implemented through INL Procedure LWP-14606, regarding heat and cold stress. Through HSP-6, the WAI-ESER Program will document and ensure that personnel working in the field are not overexposed to heat or cold. The SN3 H&S manager and/or representative will monitor and, with input from job supervisor, determine if heat stress conditions exist based on criteria for that particular day. Among these criteria are the temperature, PPE, humidity, sources of heat, type of work, and air movement. WAI-ESER personnel are exposed to heat when working in the field from the sun. The personnel are not in PPE as described in the procedure. However, the temperature, humidity, and air movement are factors to be used to determine if personnel have a potential to be overexposed. The WAI-ESER Program will use a qualified safety and health representative (per INL procedure STD-1103) that will utilize the wet bulb globe thermometer and worksheet as provided in LWP-14606. The responsibilities will be with this individual to monitor and document the heat and cold stay times. The SN3 H&S representative will be trained to INL "Heat Stress Stay Time Training" (00TRN1083), per the procedure to be qualified to determine if stay times need to be established.

Additional support and assistance will be obtained from the WAI Corporate offices or other WAI projects, or if there is a question or if clarification is needed. These stay times should be minimal as the WAI-ESER personnel are not typically involved with tasks that would exceed TLVs for heat or cold stress per ACGIH limits.

WAI-ESER personnel will be trained for heat and cold stress, per ADP-2, Training and Qualification of WAI-ESER Personnel, before beginning work. Tailgate training will be conducted on an as needed basis or when a condition arises that requires personnel to be briefed prior to performing field activities. Initial training will emphasize the requirements for stay times, limits, and requirements for breaks. Training will also include self-monitoring, signs of stress, and ways of prevention such as drinking fluids, finding shady areas, etc. Training will be documented and retained in the WAI-ESER Idaho Falls office.

There are several drop-in caves on the INL site. These caves are considered confined spaces. Prior to entry into the drop-in caves, the caves are evaluated for hazards, including atmospheric hazards. These caves were initially evaluated by SN3 safety personnel. The scientists, who will be working in this environment, are trained to do evaluation before entry. The SN3 safety personnel are available if additional support or training is needed.

Other potential field hazards include Hantavirus, snakes, big game, sheep and waterfowl sampling. Hantavirus is addressed in HSP-1, Hantavirus. WAI-ESER personnel only work in small scale clean-ups and thus do not require respiratory protection as specified in TPR-14607,

Preventing Disease from Rodents, Birds and Bats, BEA Manual: 14A – Vol. II – Safety, Fire Protection, and Industrial Hygiene. WAI-ESER staff does not work in areas heavily infested with rodent urine, droppings, saliva, or nesting materials that have the potential to carry harmful microbial agents. If necessary, these areas would be addressed by BEA staff that are certified to wear respirators. Snakes, big game and waterfowl sample collection have potential associated hazards that are addressed in the following WAI-ESER Procedures:

- ESP-3.5 Large Game Sampling
- ESP-3.7 Bird Collection for Scientific Purposes
- OP-1 Collection, Transportation, and Processing of Snakes

## Occupational Medicine

The WAI-ESER does not directly provide occupational medicine services to its employees at any work location. Due to the relatively small number of employees and the low hazards of the work environments, it would not be practical or economical to staff a facility that can provide comprehensive occupational medicine services. Instead, the ESER subcontracts with a qualified Occupational Medical Provider and provides services with local physicians through this contract.

The local Occupational Medical Provider performs occupational medical services in accordance with 10 CFR 851. The current local provider for the ESER Program is:

Mt. View Redicare  
2730 Channing Way  
Idaho Falls, Idaho 83404  
208- 542-7100

The contracted Occupational Medical Provider is responsible for their clinic location certifications, providing medical direction and supervision through assigned staff medical director, electronic maintenance of medical records to meet 10 CFR 851 needs, and making resources available for use in Wellness Programs, Ergonomic Assessments, and the EAP as applicable.

Occupational Medicine services are provided by professionals who have been licensed, registered, or certified in the state of employment. These professionals administer services under the supervision and direction of a graduate of a school of medicine or osteopathy who is licensed for the practice of medicine of which meets the requirement as defined under 10 CFR 851. Services are provided for all WAI-ESER employees and subcontractor employees who work on a DOE site for more than 30 days in a 12-month period (which for the purposes of WAI-ESER is equivalent to 240 hours in a 12-month period). WAI-ESER activities do not require special medical surveillances that would be required under OSHA regulations but should the need arise the appropriate surveillance will be instituted and maintained through the Occupational Medicine Provider. Records would be maintained through the local Occupational Medicine Program Office and Health and Safety office. Should additional oversight be needed, it is available through SN3's Corporate Occupational Medicine Program.

### **Pre-Employment, Employment, and Post-Employment Evaluations**

The SN3 H&S representative will work with the WAI-ESER project manager to determine which new WAI-ESER employees are required to complete a Fit for Duty physical evaluation as a condition of employment. The content of the Fit for Duty physical evaluation for workers at each DOE site is determined by the Occupational Medicine Services Provider. These evaluations are used to establish a baseline of the physical condition of each employee, essential functions and review expected working conditions/job duties as needed or required. Subcontractor employees who work on a DOE site for more than 240 hours or 30 days in a 12-month period, or who are enrolled in an exposure monitoring program, also receive baseline Fit for Duty evaluations as required by 10 CFR 851.

If an employee's job changes to involve new tasks, exposures, or job functions, the contracted Occupational Medicine Provider will determine if the employee's physical condition needs to be evaluated against the new situation to ensure continued fitness for duty status. When regulations require, or when the Occupational Medicine Provider recommends, employees will also be subject to periodic, hazard-based medical monitoring or qualification-based fitness for duty evaluations.

At the time of separation from employment, employees will be offered an Exit Physical evaluation to establish a record of their physical condition at that time. If an employee chooses not to participate in the evaluation, the declination will be documented.

Workers are informed of the purpose and nature of the evaluations and tests, both in writing and verbally, and the communication is documented in the worker's medical record. Workers are provided with the results of all evaluations and tests. If the Fit for Duty evaluation indicates that a worker should not perform certain tasks, the Occupational Medicine Provider can place the worker under medical restrictions that can be temporary or permanent. Placement of restrictions can be considered a Reasonable Accommodation and should be cross-referenced with the appropriate Human Resource policy and requirements. If the Occupational Medicine Provider states that an employee is not cleared due to additional information required for review it is the employee's responsibility to provide in a timely manner to the Occupational Medicine Provider to review and determine if Fit for Duty status is appropriate.

### **Injury and Illness Evaluations**

Employees and supervisors are required to report any known or suspected work-related illness or injury to the Project Manager immediately. The designated Occupational Medicine Provider will be used to provide a diagnostic examination of an employee's known or suspected work-related injury or illness the examination will evaluate the work-relatedness, the applicability of medical restrictions, and referral to other care, as appropriate.

Should any work-related illness/injury, or any personal illness/injury result in an absence of five (5) or more consecutive working days, the employee will be sent to see the Occupational Medicine provider to be evaluated for return to duty under 10 CFR 851 criteria. The Occupational Medicine Provider will monitor ill and injured workers to aid their rehabilitation

and safe return to work. If a health evaluation indicates that a worker is restricted from certain job tasks either temporary or permanent the Occupational Medicine Provider will notify the worker and WAI-ESER management if and when restrictions are imposed or removed. Placement of restrictions can be considered a Reasonable Accommodation and should be cross-referenced with the appropriate Human Resource policy and requirements

### **Coordination Between the WAI-ESER and Occupational Medical Service Provider**

The WAI-ESER works with the Occupational Medical service provider to supply them with current information about the actual or potential hazards to which workers may be exposed. These hazards may be chemical, biological, radiological, or physical. The SN3 H&S representative may be involved in performing employee job-task and hazard analyses to identify the essential job functions, to identify actual or potential hazards and exposures, and to evaluate the implications of personnel actions that result in a change of job functions, hazards, or exposures. The local and Occupational Medicine Provider has access to the workplace for evaluation of job conditions and issues relating to worker health.

The SN3 H&S representative and the Occupational Medicine Provider are encouraged to periodically participate in worker safety and health meetings and committees. These partnerships are necessary to help establish and maintain a safe workplace.

The Occupational Medical Provider must communicate the results of safety and health evaluations with the WAI-ESER management in a timely manner so that the WAI-ESER might use this information to help mitigate worksite hazards.

The SN3 H&S representative must identify any principal, preventable workplace causes of employee illness or injury that could/can affect worker health and productivity. The SN3 H&S representative must work with the WAI-ESER employees to prevent and manage these causes.

### **Record Keeping**

The WAI-ESER Program Manager and the SN3 Occupational Medical Provider develop and maintain records of all data collected for the purposes related to occupational medicine. Records are kept confidential, are protected from access by unauthorized persons, and are stored to ensure their long-term preservation. Psychological records are kept separately from medical records, in the custody of the designated psychologist. Access to all records is provided only in accordance with applicable laws.

Appropriately released and required records deemed necessary under contract and/or regulation are periodically turned over in accordance with DOE Orders and Regulations. Records generated for or as a result of an injury, fit for duty examination or other employee physical/mental issue will be maintained with the provider and WAI-ESER's Program Manager.

These records are maintained under HIPAA mandates and are part of the employee's Occupational Health Record. They are not releasable to a third party without an employee-signed release. An employee has a right to a copy of their file and can make the request with a signed release to the Medical Provider and/or WAI-ESER Program Manager.

## Motor Vehicle Safety

The WAI-ESER uses passenger vehicles (primarily sport utility vehicles and pickup trucks) in the course of business for the DOE. This motor vehicle safety program outlines the measures the WAI-ESER takes to protect drivers and passengers from the hazards of driving or operating motorized vehicles. No employee shall be permitted to operate a motor vehicle if their visual, auditory, physical, or mental capacities are limited to the point where unsafe acts could result. The implementing documents for the WAI-ESER's motor vehicle safety program are found in the WAI-ESERHSP-009: *Motor Vehicle Safety*.

### Passenger Vehicle Safety

The WAI-ESER manages motor vehicles to be used by employees for work purposes. Where there are no government-owned or company-owned vehicles available or suitable for use, employees may use a personal vehicle. In each case, the vehicles are registered and licensed in the appropriate state. Vehicles managed by WAI-ESER Program receive preventive and corrective maintenance coordinated by the WAI-ESER through a local service provider, and such maintenance is documented via daily, weekly, monthly and six month's checklists. Such records are kept with the SN3 Safety Representative, as well as the WAI-ESER office manager.

Line supervisors are required to ensure that employees have a valid driver's license, have completed a DOE-approved defensive driving course, are aware of the general requirements for the use of government-supplied vehicles, and are aware of any site-specific requirements. Line supervisors are also required to initiate disciplinary actions against employees for negligent or inappropriate use of vehicles, including noncompliance with the requirements.

Employees are required to operate vehicles in accordance with applicable traffic laws and regulations, including wearing a seat belt and shoulder harness, at all times for both driver and passenger(s), while the vehicle is in motion. Cell phone use (including hands free) by the driver is prohibited while the vehicle is in motion. Prior to operating a vehicle (first use of the day), employees are required to inspect the vehicle for the following operating features: tires are properly inflated; headlights, tail lights, turn signals and brake signals are functioning; heater and air-conditioning mechanisms are working properly; and check for obvious signs of mechanical problems such as unusual fluid leaks. At the beginning of the week (or first use of the vehicle for the week) the following items (in addition to the daily items) need to be inspected; fluid levels of oil, coolant, steering, brake and washer; both wipers are operational and in good repair; tread and pressure of spare is in good condition; and, appropriate jack is present. If the vehicle cannot be operated safely and legally, the driver will report the problem(s) to their manager, and Safety Representative and use of the vehicle will be discontinued.

### Loss of Driving Privileges

It is a privilege to drive a vehicle while conducting government business. Abuse of this privilege may result in its removal or disciplinary action. Employees will lose the privilege temporarily or permanently in accordance with, but not limited to, the following infractions committed while using a vehicle in the service of the government:

- Conviction of operating a vehicle while under the influence of alcohol or illegal drugs.
- Vacating the scene of an accident without leaving proper identification.
- Violation of traffic laws.
- Conviction of causing an accident while driving a government owned, company-owned, rental or personal vehicle while performing work under the WAI- ESER contract.
- Inability to meet appropriate physical standards.

If the ability to drive a vehicle is critical to an employee's job functions, the employee may be reassigned to another position (possibly one that involves a pay decrease) or may be terminated.

### **Electrical Safety**

The WAI-ESER Program maintains a laboratory and office location in the CFA-612 building. Under a tenant use agreement (IAG-222) with Battelle Energy Alliance (BEA), ESER is not responsible for the electrical safety systems within the CFA-612 facility or the Experimental Field Station. BEA as the landlord will provide for any electrical work for the building. The ESER Program scope of work identified in Contract DE-NE0008477 is specifically limited to work with portable electrical equipment that is UL listed and/or approved equipment both in the laboratory (CFA-612) and the field (air monitoring stations) as applicable through NFPA 70E. This equipment will be inspected prior to use and will be removed from service should any indications be found where a potential exposure to electrical hazards are identified. All air monitoring low volume air pumps (three on the INL) contain UL listed components, safety switches and fuses as well as all-power off switches. Maintenance of the electrical source (110V AC) is provided by the INL M&O Contractor. The ESER scope of work does not authorize any work activities to be performed on electrical equipment (energized or de-energized) and that would require a lockout/tag out program as defined by NFPA 70E.