

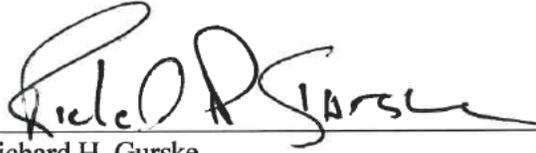
SALT WASTE PROCESSING FACILITY

**ENVIRONMENTAL MANAGEMENT SYSTEMS
PROGRAM DESCRIPTION**

Contract No. DE-AC09-02SR22210

**Function: Environmental Management System Program
Description**
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SIGNATURE PAGE



Richard H. Gurske,
SWPF Environmental Program Manager/EMS
Representative

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Date



Carl Everatt
SWPF ESH Manager

3/14/19

Date



Frank Sheppard, Jr.,
SWPF Project Manager

3/14/19

Date

SUMMARY OF CHANGES

Revision No.	Date	Description of Change
0	05/02/06	Initial Issuance.
1	05/16/07	Periodic Update.
2	03/14/2019	Revise per DMR-5111, periodic update to address CR-2018-673. Minor Revision

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LIST OF ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
ASQ	American Society for Quality
DOE	U.S. Department of Energy
DWPF	Defense Waste Processing Facility
EMP	Environmental Management Plan`
EMS	Environmental Management System
EPA	U.S. Environmental Protection Agency
ESH	Environmental, Safety, and Health
ICD	Interface Control Document
ISMS	Integrated Safety Management System
ISO	International Organization for Standardization
M&O	Management and Operating (Contractor)
PP	Project Procedure
RRS	Records Retention Schedule
SCDHEC	South Carolina Department of Health and Environmental Control
SPF	Saltstone Production Facility
S/RID	Standards/Requirements Identification Document
SRB	Safety Review Board
SRS	Savannah River Site
SWPF	Salt Waste Processing Facility

1.0 INTRODUCTION

The Salt Waste Processing Facility (SWPF) is located at the Savannah River Site (SRS) in J-Area, near the southeast corner of S-Area. SWPF will receive salt waste that has been removed from various source tanks in the F- and H-Area Tank Farms, blended in designated blend tanks, and staged in the SWPF feed tank. SWPF will process the waste and send the final product to either the Saltstone Production Facility (SPF) or the Defense Waste Processing Facility (DWPF) for final treatment/disposal.

The SWPF mission is to remove radioactive cesium, strontium, and actinides from salt waste solutions stored in the F- and H-Area Tank Farms. Radioactive salt and sludge wastes must be removed and treated for final disposal to satisfy regulatory compliance agreements. Waste concentrated by the SWPF will be transferred to the DWPF for immobilization in glass. Decontaminated salt solution will be sent to the SPF for disposal in an industrial solid waste landfill.

2.0 PURPOSE AND SCOPE

U.S. Department of Energy (DOE) O 450.1, Change 2, *Environmental Protection Program*¹, requires that each contractor ensure that its Integrated Safety Management System (ISMS) fully integrates environmental systems including planning, organizing, executing, reviewing, and improving programs for public health, environmental protection, pollution prevention, and all other obligations identified under DOE. Section 4.2.1 of P-EIP-J-00001, *SWPF Integrated Safety Management System Description*², defines the interface and integration of Environmental Management System (EMS) principles into the ISMS.

In order to achieve this, the SWPF Project has developed and implemented policies and procedures, and trained its workers to: 1) identify activities that have potential environmental impacts, and 2) manage, control, and mitigate the impacts of these activities. The SWPF Project has also developed measurable environmental goals and objectives that are reviewed annually and updated, when appropriate, to assess performance and implement corrective actions where needed.

This document describes the SWPF EMS and shall be used in conjunction with: SWPF Project Procedures (PPs) (see *SWPF Project Procedures Manual*³); DOE O 450.1, Change 2¹, and American National Standards Institute/International Organization for Standardization/American Society for Quality (ANSI/ISO/ASQ) 14001:2004, *Environmental Management Systems – Requirements with guidance for use*⁴. This EMS Description establishes general EMS responsibilities and requirements that describe the framework and process for planning, implementing, and assessing the SWPF Project EMS.

The SWPF Project will continue to develop and fully integrate EMS requirements set forth in DOE O 450.1, Change 2¹, into the existing ISMS throughout the Design, Construction, and Operations phases of the SWPF Project. The SWPF Project will meet DOE O 450.1, Change 2¹, requirements by focusing on the following program areas:

- Promoting the long-term stewardship of our natural and cultural resources;
 - Reducing or eliminating the generation of waste and release of pollutants to the environment;
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- Eliminating the purchase of equipment with FREON Type 11 and 12 and HALON Class I ozone-depleting substances from existing equipment;
- Practicing source reduction through re-use, segregation, and recycling;
- Procuring recycled-content materials and environmentally preferable products and services;
- Implementing a centralized procurement and distribution program for purchasing, tracking, distributing, and managing materials with toxic or hazardous content;
- Incorporating, where appropriate, environmentally and economically beneficial landscape practices into all new landscaping programs, policies, and practices for facilities;
- Monitoring progress toward meeting the pollution prevention requirements identified in Q-PLN-J-0099, *SWPF Project Pollution Prevention Plan*⁵;
- Routinely conducting assessments;
- Conducting environmental monitoring, as appropriate, using validated analytical technologies to support the environmental program; and
- Assisting DOE in meeting *Emergency Planning and Community Right-to-Know Act of 1986*⁶ reporting and planning requirements under Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*⁷.

2.1 Applicability

The requirements established in this document apply to all SWPF Project personnel. The scope of the SWPF EMS consists of management-defined activities, products, and services applicable to the EMS over which SWPF has control and/or influence. These activities, products, and services are defined in the various SWPF environmental management procedures governing environmental activities conducted under the purview of SWPF design, construction, and operation.

3.0 DEFINITIONS

1. **Conformance:** The condition or fact of an organization being in agreement with the requirements of a quality or environmental standard.
 2. **Continual Improvement:** Process of enhancing the EMS to achieve improvements in overall environmental performance in line with the organization's environmental policy.
 3. **Environment:** Surroundings in which an organization operates including air, water, land, natural resources, flora, fauna, humans, and their interrelation.
 4. **Environmental Aspect:** Element of an organization's activities, products, or services that can interact with the environment.
 5. **Environmental Impact:** Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products, or services.
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6. Environmental Management Plan (EMP): A specific action taken by the organization to accomplish an environmental target and, ultimately, an environmental objective.
7. Environmental Management System (EMS): The part of the overall management system that includes organization structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining the environmental policy.
8. Environmental Objective: Overall environmental goal arising from the environmental policy that an organization sets itself to achieve and which is quantifiable, where practicable.
9. Environmental Planning: The activities that establish objectives and requirements for the application of EMS elements.
10. Environmental Policy: Statement by the organization of its intentions and principles in relation to its overall environmental performance, that provides a framework for action and for the setting of its environmental objectives and targets.
11. Environmental Target: Detailed performance requirement, quantified where practicable and applicable to the organization or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.
12. Organization Impact: Company, corporation, firm, enterprise, authority, or institution, or part or combination thereof, whether incorporate or not, public or private, that has its own functions and administration.
13. Prevention of Pollution: Use of processes, practices, materials, or products that avoid, reduce, or control pollution, that may include recycling, treatment, process changes, control mechanisms, efficient use of resources, and material substitution.
14. Significant Aspect: An element of the organization's aspects that has been determined to have a potentially drastic effect or interaction with the environment.
15. Standard/Requirement Identification Document (S/RID): A document that lists the environmental, safety, health (ESH), and quality requirements to be implemented by a site, facility, or activity to achieve an adequate level of protection for workers, public health and safety, and the environment. The ESH and quality set of requirements is identified in 20 Functional Areas.

4.0 REQUIREMENTS/RESPONSIBILITIES

EMS responsibilities are defined in this document. Responsibilities are further defined in V-IM-J-00001, *SWPF Organization, Roles, and Responsibilities Manual*⁸, PP-TR-1802, *Employee Indoctrination and Training*³, PP-AS-1200, *SWPF S/RID Maintenance and Compliance*³, and other applicable PPs. A person assuming responsibility for an environmental function may delegate performance of that function to others. The individual originally assigned shall retain responsibility and accountability for proper performance of the delegated activity.

4.1 Project Manager

The Project Manager is responsible for the following functions in the EMS:

- Providing resources to adequately support the EMS;
- Supporting continual improvement and the prevention of pollution initiatives, consistent with PS-02, *SWPF Environmental Management System Policy*⁹, and Q-PLN-J-0099⁵; and
- Fostering the overall commitment to success of the EMS.

4.2 ESH Manager

The ESH Manager is responsible for the following functions in the EMS:

- Overall responsibility for overseeing implementation of the EMS;
- Ensuring that appropriate resources are assigned to accomplish EMS objectives, targets, and EMPs;
- Serving as lead support to DOE in responding to relevant environmental-related communications from external interested parties, such as the State of South Carolina, U.S. Environmental Protection Agency (EPA) Region IV, and public interest groups;
- Supporting pollution prevention initiatives; and
- Ensuring that S-RCP-J-00001, *SWPF Standards/Requirements Identification Document*¹⁰, contains the necessary and sufficient set of requirements to ensure that the SWPF is designed, constructed, commissioned, and operated in a manner that protects human health and the environment.

4.3 Functional Area Managers

Functional Area Managers have the following EMS responsibilities:

- Implementing the SWPF EMS within their respective organizations by following requirements from DOE O 450.1, Change 2¹, and this document, and with guidance from the EMS Management Representative;
 - Making recommendations and evaluating EMS program elements, as required;
 - Ensuring that staff members attend general EMS Awareness Training and participate in the EMS program;
 - Ensuring that employees involved in the design, operation, and management of an environmental aspect determined to be significant by the organization, through the use of DP-EV-4001, *Identification of Environmental Aspects and Actions*³, are properly trained to understand the significance of a departure from procedures that could result in a non-compliance and/or significant harm to the environment;
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- Ensuring that employees are trained to the appropriate procedures such that an employee does not knowingly deviate from specified procedures and, in instances encountered by the employee that are not covered by these procedures, work is halted such that the said procedure can be updated and approved prior to the work activity commencing;
- Immediately reporting potential regulatory non-compliances in accordance with PP-CONOPS-07.2, *Occurrence Reporting*³, non-conformances pursuant to PP-AS-1203, *Corrective Action Program*, for process/activity non-conformances, and PP-QA-4703, *Nonconforming Items*³, for item non-conformances; and
- Working in accordance with ISMS principles and core functions and understanding the rights and obligations to stop any work that is dangerous to co-workers and the public or damaging to the environment (e.g., improper disposal of hazardous materials, lack of proper erosion control at work site, etc.).

4.4 Environmental Program Manager

The Environmental Program Manager serves as the “EMS Management Representative” and is responsible for the following EMS functions:

- Monitoring EMS implementation by the SWPF Project;
 - Ensuring that specific records (e.g., the amounts of generated hazardous wastes, radioactive wastes, stormwater sampling events, etc.) concerning EMS metrics are identified and maintained;
 - Ensuring that other records relative to regulatory compliance mandated by DOE, EPA, or the State of South Carolina are maintained;
 - Developing, implementing, and maintaining Q-PLN-J-0099⁵;
 - Coordinating the implementation of waste minimization and pollution prevention procedures and activities;
 - Reviewing this document, PS-02⁹, and EMS procedures and revising as needed;
 - Coordinating and reviewing this document, PS-02⁹, and EMS procedures with other Functional Area Managers, as required;
 - Coordinating and developing EMS training and orientation for SWPF staff concerning the pollution prevention plan, EMS Description, environmental policy, and EMS procedures;
 - Assisting in conduct of training;
 - Identifying records demonstrating conformance with legal and environmental compliance requirements to be maintained, stored, and disposed in accordance with PP-DC-3002, *Records Management*³;
 - Maintaining a Records Retention Matrix that details which documents and records are considered key and those that shall be maintained for specified periods of time;
 - Identifying EMS documents that shall be controlled;
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- Communicating any and all changes within the EMS to affected Functional Area Managers and employees;
- Maintaining and updating Q-EIP-J-00002, *SWPF Environmental Aspects and Actions*¹¹; and
- Selecting Project personnel to serve on the EMS Implementation Team, based on subject matter expertise.

4.5 EMS Implementation Team

The EMS Implementation Team will assist the EMS Management Representative in determining SWPF environmental aspects and impacts. Specifically the responsibilities are as follows:

- Providing guidance, implementation, and review of environmental programs throughout the organization;
- Addressing new ideas and concepts of pollution prevention and recycling;
- Addressing and providing resolution of environmental concerns;
- Evaluating environmental programmatic responsibility;
- Reviewing and evaluating aspects and impacts leading to the framework for the organization's environmental goals and objectives;
- Identifying and evaluating the environmental aspects, impacts, objectives, and targets for the organization; and
- Providing feedback and communication to the general employee population and to individually affected or impacted parties of the results of the environmental aspects and impact list, along with the status of the objectives and targets of the organization.

4.6 Document Control Manager

The Document Manager is responsible for the following EMS functions:

- Maintaining records relative to regulatory compliance as required by DOE, EPA, or the State of South Carolina.

4.7 Employees

Employees are responsible for the following functions in the EMS:

- Attending EMS general awareness and program-specific training, as required;
 - Attending training related to any new equipment, modifications to existing equipment, or procedures that could potentially affect their procedures and work instructions;
 - Complying with applicable sections of this plan and related procedures that apply to specific laboratory, shop, or work areas;
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- Making recommendations or comments concerning the pollution prevention plan, EMS program, environmental policy, and EMS procedures;
- Generating records specified by EMS procedures or work instructions;
- Working in accordance with PPs that establish methods and responsibilities for implementing the ISMS guiding principles and core functions;
- Understanding the right and obligation to stop any work they feel may be dangerous to workers and the public, or that may damage the environment (e.g., improper disposal of hazardous materials, lack of proper erosion control at work site, etc.);
- If directly or indirectly involved with a significant aspect, awareness of Environmental Aspects and Impacts that have been determined as significant in accordance with DP-EV-4001³;
- Awareness of impacts to the environment and consequences of non-compliance with procedures, plans, or instructions; and
- Aiding in identification of new environmental aspects and impacts as requested by the EMS Management Representative and EMS Implementation Team Representatives.

5.0 SWPF ENVIRONMENTAL MANAGEMENT SYSTEM PROGRAM DESCRIPTION

This SWPF EMS Program Description provides a detailed road map of the overall execution of the specific 17 elements of the EMS program. Referenced procedures and work instructions will also provide detail as to the execution of EMS functions. The 17 elements described within this Description satisfy both DOE O 450.1, Change 2¹, and ANSI/ISO/ASQ 14001:2004⁴ EMS requirements.

5.1 Environmental Policy

PS-02⁹ is required to be developed by the EMS Management Representative and approved by the Project Manager.

PS-02⁹ commits to:

- An SWPF design that protects employees, the public, and the environment;
 - Constructing, commissioning, and operating the SWPF in a manner that is protective of employees, the public, and the environment;
 - Continual improvement of Project activities, processes, and products while maintaining and improving the quality of the environment;
 - Prevention and/or reduction of pollution and reduction of waste;
 - Compliance with all applicable Federal and State environmental regulations and DOE Directives;
 - An annual review with revisions and updates, when appropriate, of the Project's significant environmental aspects, impacts, objectives, and targets; and
 - The communication of PS-02⁹ and key principles to employees, including subcontractors.
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The SWPF Project Manager is also a co-signatory of the *SRS Environmental Management System Policy*¹², which closely mirrors PS-02⁹. Implementation of these policies is a fundamental management objective and the responsibility of every employee and subcontractor supporting the SWPF Project.

5.2 Environmental Planning

Environmental planning is a critical step in determining the environmental aspects and impacts and those aspects that are designated as significant by the organization at the SWPF. This section provides details as to how environmental aspects will be identified and appropriately managed by the SWPF EMS.

5.2.1 Environmental Aspects and Impacts

The EMS Management Representative shall conduct a complete review of the environmental aspects and impacts for the SWPF, with assistance from the EMS Implementation Team. Significant aspects are those that have been determined by the EMS Management Representative and EMS Implementation Team, using DP-EV-4001³, to have a potential negative impact on the environment, if not properly managed. Significant aspects shall be assigned appropriate targets, objectives, and EMPs to properly manage those activities, reduce potential environmental risks, and foster continual improvement within the EMS. Functional Area Managers shall be aware of and understand the various permits, guidelines, plans, administrative orders, and regulations that are applicable to the programs for which they are responsible. Facility permits, plans, and administrative orders shall be maintained in the central file area for the SWPF Project. Direct supervisors shall ensure that employees involved with various environmental issues are appropriately trained, as required by the job duties being performed.

A complete listing of the SWPF aspects and impacts shall be reviewed annually by the EMS Management Representative and updated, when appropriate, for any changes or updates to the environmental aspect listing. When a new requirement is identified (e.g., new initiative, consent order, notice of violation, etc.), the responsible Functional Area Manager shall elevate the issue to the EMS Management Representative to determine the course of action. When a new process (with environmental implications) or a modification to an existing process (with environmental implications) is proposed at SWPF, the responsible organization shall notify the EMS Management Representative for review with respect to environmental regulations, programs that may be affected, and in accordance with DP-EV-4001³.

5.2.2 Legal and Other Requirements

The State of South Carolina Department of Health and Environmental Control (SCDHEC) has been delegated authority over most of the applicable environmental regulations. EPA Region IV retains the regulatory authority for regulations covering radioactive air emissions, management of the *Toxic Substances Control Act of 1976*¹³, and remediation conducted under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act¹⁴. The ESH Manager is the central SWPF point-of-contact involving environmental issues. Points-of-contact involving specific operational elements involving legal and other requirements are the responsible SWPF Functional Area Managers. Each SWPF Functional Area Manager shall be aware of and understand the various permits, guidelines, plans, administrative orders, and regulations applicable to their areas of responsibility. Guidelines and regulations are available at the SCDHEC website (<http://www.scdhec.net>) and the Government Printing Office website (<https://www.gpo.gov/>). Facility permits, plans, and administrative orders shall be maintained by SWPF Document Control. Supervisors shall ensure that employees involved with various environmental issues are appropriately trained, as required by the subject matter area (e.g., radioactive waste management, hazardous/mixed waste management, environmental sampling, and release reporting).

The EMS Management Representative will review S-RCP-J-00001¹⁰ to ensure that all applicable environmental requirements are identified and documented. Newly identified environmental protection and waste management requirements shall be submitted, as appropriate, to the EMS Representative and EMS Implementation Team for review, in accordance with Section 5.2.1.

When a new process having environmental implications or a modification to an existing process having environmental implications is proposed for SWPF, the responsible organization shall notify the EMS Management Representative for review with respect to environmental regulations and programs that may be affected.

The EMS Management Representative shall communicate all approved legal and other requirements changes to the responsible SWPF Functional Area Managers. Each SWPF Functional Area Manager shall communicate relevant legal and other regulatory changes, as necessary, to SWPF personnel via e-mail, updates to directives, and training.

5.2.3 Objectives, Targets, and Environmental Management Programs

The EMS Management Representative shall establish and document objectives and targets to address all high-priority environmental aspects identified by the aspects and impacts analysis, per Section 5.2.1 of this Description. Targets shall be technically feasible, economically reasonable, and achievable. The established targets shall be specific measurable indicators of performance. If it is determined that objectives and targets cannot be developed, due to being technically infeasible or economically unreasonable, the rationale behind the decision shall be documented and managed as a record (see Section 5.4.4). Objectives and targets developed as part of the EMS shall become records and shall be managed as discussed in Section 5.4.4. Objectives and targets shall be reviewed annually and updated, when appropriate, by the EMS Representative and EMS Implementation Team. Aspects, impacts, targets, and objectives shall be documented and appended to this document.

Each affected SWPF organization shall assist the EMS Management Representative in establishing an EMP, as necessary, that provides guidance for achieving the documented EMS objectives and targets within that organization. An EMP is a detailed outline of the actions that need to be taken to achieve the environmental objectives and targets. Each EMP shall:

1. Designate responsibility for achieving the objectives and targets;
2. Identify required resources (technical and financial, if applicable) to carry out the EMPs; and
3. Establish time frames in which objectives and targets shall be achieved.

EMPs developed as part of this process shall become records and shall be managed as discussed in Section 5.4.4 of this EMS Description.

5.3 EMS Implementation

Achievement of established targets and objectives, documentation, roles and responsibilities, communication, training and awareness, operational controls, and emergency preparedness are addressed in the following subsection of this document.

5.3.1 Resources, Roles, Responsibilities, and Authority

Section 4.0 of this EMS Description provides a general description of the overall structure, roles, and responsibilities for EMS implementation, operation, and maintenance.

5.3.2 Competence, Training, and Awareness

SWPF personnel shall receive general EMS Awareness Training. Personnel engaged in activities associated with SWPF EMS environmental aspects or compliance activities shall receive appropriate training, as defined in PL-TR-1801, *SWPF Personnel Selection, Training, and Qualification Plan*¹⁵. SWPF PP-TR-1802³, also provides training requirements for the SWPF Project.

All employees shall be aware of the importance of conformance with the approved PS-02⁹ and procedures and with the requirements of the EMS. All onsite employees shall be aware of the following areas, as appropriate, based on activities in which they are engaged:

1. The importance of following specified work instructions and procedures such that they are aware that deviation from approved procedures could result in an environmental non-compliance, non-conformance with specified EMS requirements, and/or potential damage to worker safety and the environment; and
2. Adverse and beneficial environmental impacts associated with the high-priority environmental aspects of their work and the benefits of improved environmental performance.

Environmental compliance training, including training required under various laws and regulations (e.g., hazardous waste management, storm water control, petroleum storage tank operations, etc.), will be administered to those individuals performing job-specific functions involved with the environmental activity in question.

Supervisors shall ensure that employees whose jobs may impact the environment are trained and competent to perform their tasks. All onsite supervisors shall ensure that employees complete General EMS Awareness Training, as well as job-specific EMS training to specified work instructions, procedures, and applicable laws and regulations for those environmental aspects deemed significant by the organization, as detailed in Section 5.2.1 of this document. Training records shall be managed as discussed in Section 5.4.4 of this document.

5.3.3 Communication

Internal Project Communication

The SWPF internal communication system shall be used to communicate environmental awareness, performance, issues, and concerns. Standard methods of communication include:

- SWPF PPs,
- Training (EMS training),
- Management meetings,
- The ISMS Steering Committee,
- EMS Implementation Team,
- SWPF Intranet website,
- Staff/Safety meetings,
- New employee briefings,
- SWPF bulletin boards,
- Facility-wide e-mail bulletins, and
- Parsons' Monthly Bulletin Publications.

External Communication

Communications with SCDHEC are conducted in accordance with V-ESR-J-00019, *SWPF Permitting and Monitoring Requirements Interface Control Document [ICD-19]*¹⁶, and as described in Chapter 11 of S-EIP-J-00001, *SWPF Environmental Plan*¹⁷. All formal communication with SCDHEC will be numbered and controlled by the Document Control Manager, in accordance with PP-DC-3001, *Document Control*³.

5.3.4 Documentation

In accordance with this document, the SWPF Project has established and maintains a documented EMS for environmental practices and information specific to the facility. The EMS Management Representative shall ensure that SWPF documents do not conflict with DOE Directives or State and Federal regulations.

This document establishes mandatory requirements and references for environmental responsibilities and a mechanism to assist in maintaining employee awareness of SWPF environmental policy and objectives.

The EMS Management Representative (or designee) shall be responsible for maintenance of this document.

The controlled version of this document is available online on the SWPF Project Collaboration Portal.

5.3.5 Control of Documents

The SWPF Project Document Control procedures shall be followed to ensure that all documents required to support and implement EMS functions or tasks are suitable, available, current, and controlled.

SWPF Project Document Control procedures include:

- PP-DC-3001³,
- PP-DC-3002³,
- PP-DC-3005, *Action Item Processing*³,
- PP-DC-3008, *Request for Information Processing*³,
- PP-DC-3009, *Supplier Data*³, and
- PP-PR-6022, Supplier Submittal Management.

This document will be controlled and revised in accordance with these PPs.

5.3.6 Operational Control

When necessary, written operating procedures shall be established and maintained for the SWPF Project processes and activities associated with high-priority environmental aspects. The purpose of these procedures is to provide institutional controls (e.g., administrative and engineering) to effectively and efficiently manage high-priority environmental aspects. Written operational procedures may also be developed and implemented for those environmental aspects that are of interest to the organization, but are not considered significant in accordance with Section 5.2.1 of this document.

S-EIP-J-00001¹⁷ provides a detailed comprehensive review of the Project's environmental compliance requirements. The plan's scope includes compliance requirements covering air emissions, waste water effluents, waste management, release reporting, and community right-to-know reporting. S-EIP-J-00001¹⁷ describes the general Project responsibilities, methods, and schedule for meeting environmental compliance requirements.

A number of SWPF ICDs describe Site Management and Operating (M&O) Contractor responsibilities for operational controls of SWPF Project environmental aspects. These documents are intended to

provide substantive requirements for interface between SWPF activities and the Site M&O and are identified as follows:

- V-ESR-J-00003, *SWPF Radioactive Solid Waste, Mixed Waste, and Hazardous Waste Interface Control Document (ICD-03)*¹⁸,
- V-ESR-J-00004, *SWPF Stormwater Interface Control Document (ICD-04)*¹⁹,
- V-ESR-J-00005, *SWPF Radioactive Liquid Effluents Interface Control Document (ICD-05)*²⁰,
- V-ESR-J-00006, *SWPF Liquid Sanitary Wastes Interface Control Document (ICD-06)*²¹,
- V-ESR-J-00010, *SWPF Waste Transfer Interface Control Document (ICD-10)*²²,
- V-ESR-J-00011, *SWPF Waste Treatability Samples Interface Control Document (ICD-11)*²³,
- V-ESR-J-00012, *SWPF Emergency Response Interface Control Document (ICD-12)*²⁴,
- V-ESR-J-00019¹⁶, and
- V-ESR-J-00021, *SWPF Non-Radioactive Solid Waste Interface Control Document (ICD-21)*²⁵.
- V-ESR-J-00027, *SWPF Radiological Controls Interface Control Document (ICD-27)*²⁶

5.3.7 Emergency Preparedness and Response

The following documents were established to address emergency preparedness and response, and are considered part of the SWPF EMS:

- PP-CONOPS-03.2, *Conduct of Drills*³,
- Q-PLN-J-0081, *SWPF Office Health and Safety*²⁷,
- S-CIP-J-00005, *SWPF Construction Health and Safety Plan*²⁸, and
- V-ESR-J-00012²⁴.

These documents address emergency, natural hazard, and disaster planning, response, mitigation, and recovery specific to SWPF design, construction, and operational activities. The Project will develop an Annex to SRS' emergency plan to address Commissioning/Operations, in accordance with DOE O 151.1C, *Comprehensive Emergency Management System*²⁹ or its successor Directive or Directives included in S-RCP-J-00001¹⁰ by DOE and V-ESR-J-00012²⁴.

SWPF employees shall be provided with appropriate training, based on activities in which they are engaged, on emergency preparedness and response requirements associated with the environmental aspects and impacts of their jobs.

5.4 Checking

Checking or assessment is the process of monitoring key elements of organization processes. Key elements include ensuring compliance with all applicable laws and regulations to which the organization subscribes, as well as conformance to SWPF EMS plans, procedures, and work

instructions. The checking or assessment functions include monitoring and measurement, evaluation of compliance, nonconformity, corrective action and preventive action, control of records, and internal audits.

5.4.1 Monitoring and Measurement

The SWPF shall apply suitable methods for monitoring and, where applicable, measurement of EMS performance, conformance with operational controls, and the achievement of objectives and targets. These methods shall demonstrate the ability of the processes to achieve planned results.

The following Parsons' PPs have been identified for surveillance, monitoring, and measurement requirements within the SWPF EMS:

- PP-PC-2008, *Progress Measurement Methodology*³,
- PP-QA-4701, *Surveillance Program*³,
- DP-QA-4706, *QA Assessment of Item and Service Procurements*³, and
- DP-QC-4801, *Quality Control Inspector Certification*³.

Monitoring and measuring shall be addressed through the following methods.

1. EMPs shall be developed to identify actions to achieve the environmental objectives and targets. These EMPs (or other documents) shall also identify points of monitoring and measuring for assessing and tracking progress toward these objectives and targets.
2. Operational controls or operating procedures shall address equipment calibration requirements and equipment logs, as appropriate.
3. Pollution Prevention metrics regarding key elements (e.g., radioactive waste, hazardous waste, mixed waste, recycled materials, etc.) of the EMS will be tracked and progress will be updated when appropriate. These metrics will be generated in conjunction with the pollution prevention initiatives outlined in the Q-PLN-J-0099⁵.
4. The EMS Management Representative shall report the metric results to the ESH Manager and the ISMS Steering Committee.
5. SWPF shall implement corrective actions addressing non-conformances identified as a result of evaluating and reporting of metrics to DOE.

5.4.2 Evaluation of Compliance

Evaluating compliance with environmental laws and regulations shall be measured through routine Regulatory Compliance Audits. The EMS Management Representative (or designee) shall conduct internal environmental compliance audits per Critical Decisions. The scope and breadth of the audit should include all applicable laws and regulations to which the organization subscribes regarding specific SWPF activities or projects. This audit may be conducted in accordance with the S-RCP-J-00001¹⁰ review at the discretion of the EMS Management Representative.

Regulatory Compliance Audits are designed to measure environmental compliance with Federal, State, and local regulations. Compliance Audits shall be conducted through the following means:

- Federal and State regulatory agency inspections,
- Regular inspections conducted via SWPF Environmental staff,
- Compliance inspections conducted by the EMS Management Representative (or designee),
- Periodic inspections conducted by SWPF personnel, and
- Environmental Audits and Operational Readiness Reviews conducted by DOE or the Site M&O for environmental compliance with SRS-level permits or plans held by the Site M&O (e.g., Part 70 Operating Permit).

The EMS Management Representative shall present key Compliance Audit findings to the Senior Review Board (SRB) during the Management Review, as specified in Section 5.5 of this EMS Description.

5.4.3 Nonconformity, Corrective Action, and Preventive Action

Identified non-conformances and non-compliances will be managed by the SWPF Project as described in this section. Corrective and preventive actions are addressed in the following PPs:

- PP-QA-4701³,
- PP-AS-1203³,
- PP-QA-4703³,
- PP-AS-1208, *Cause Analysis*³, and
- PP-QA-4703³

Appropriate corrective and preventive actions shall be taken in response to audits or as a result of management reviews, daily operations, and employee suggestions. As appropriate, SWPF procedures or programs shall be modified or revised, based on the results of a non-conformance or non-compliance root cause analysis. Any changes to the documented procedures as a result of corrective or preventive actions shall be recorded and implemented as required by appropriate Document Control procedures specified in Section 5.3.5. Non-conformance and non-compliance findings shall be tracked in the SWPF Project Issue and Corrective Action Tracking and Trending database, through issue closure.

5.4.4 Control of Records

SWPF EMS Records shall be maintained according to Parsons' PP-DC-3002³ and shall be identifiable, stored, protected, and retrievable. EMS records retention and disposal shall be established as follows.

1. Environmental aspects and impacts, objectives and targets, and EMPs shall be maintained by Document Control, retained for the duration of the Parsons' Contract (DE-AC09-02SR22210: *Design, Construction, and Commissioning of a Salt Waste Processing Facility (SWPF)*³⁰), and
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then transferred to the successor SWPF operations contractor or, if Parsons remains the SWPF operator after the first year of operations, disposed in accordance with the SWPF Records Retention Schedule (RRS) requirements.

2. Written environmental communications with internal parties: Maintained by Document Control, retained, and disposed in accordance with the SWPF RRS requirements.
3. Written environmental communications with external parties: Maintained by Document Control, retained, and disposed in accordance with the SWPF RRS requirements.
4. EMS audit reports: Maintained by Document Control, retained for seven years (after close-out of audit findings), and then disposed in accordance with the SWPF RRS.
5. Regulatory Compliance Audit records: Maintained by Document Control, retained for seven years, and disposed in accordance with the SWPF RRS.
6. Management review records are kept as part of the SRB meeting minutes and shall be managed in accordance with Section 5.5 of this EMS Description.
7. Equipment logs and calibration records shall be maintained as records in accordance with this section and applicable Parsons' Procedures.
8. SWPF employee environmental training records (defined in PL-TR-1801¹⁵) shall be maintained by the Parsons Training Manager and tracked in the training database. The actual retention and disposition of these records will depend on the type of training involved and specific regulatory permit requirements.
9. Environmental training records for onsite contractors shall be maintained by the responsible contractor.

5.4.5 Internal EMS Audits

The SWPF Project shall conduct complete internal EMS reviews, using the core elements of the ANSI/ISO/ASQ 14001:2004⁴, as well as DOE O 450.1, Change 2¹, when Critical Decision milestones are initiated. The EMS Management Representative shall be responsible for coordinating the audit. Internal EMS audits shall be conducted in accordance with PL-AS-1001, *SWPF Integrated Assessment Program Plan*³. Internal EMS Audits shall be required to ensure that SWPF is following the procedures and performing the activities established in the EMS. In addition, the Internal EMS Audit assesses whether the organization is following the procedures in the EMS necessary to implement an effective EMS. The objective is to determine whether the EMS program is understood and is being implemented and maintained.

At the conclusion of Internal EMS Audits, findings shall be documented and supported by objective evidence. Findings shall be documented in the Audit Report and made available to the audited organizations and activities. Audit reports shall become records and be managed as discussed in Section 5.4.4.

The EMS Management Representative shall present the key findings from the EMS Quality Audit to the SRB (see Section 5.5).

5.5 Management Review

For Management Review, the EMS Management Representative (or designee) shall present EMS review findings to the SRB. This allows SWPF Senior Management the opportunity to evaluate the ongoing suitability, adequacy, and effectiveness of the EMS. The EMS Management Representative shall ensure that the necessary EMS information is collected and reported to the SRB and that Management Review meeting results are communicated to SWPF personnel, as appropriate. Meeting minutes and official rosters of attendees shall be recorded as official SRB minutes and become official EMS records to be managed in accordance with Section 5.4.4 of this Description.

Suggested topics for Management Review meetings consist of, but are not limited to:

- Changes needed to PS-02;
- Status of EMS documentation;
- Summary of EMS audit findings;
- Status and priority of corrective and preventive actions in response to the audit;
- Identification of additional resource and training needs;
- Performance of the EMS;
- Extent to which the EMS objectives and targets have been met;
- Management of change discussions (e.g., changing circumstances such as new activities, processes, and changes to legislation);
- Recommendations for improvement or changes to the policy, objectives, and other elements of the EMS;
- Customer feedback; and
- Follow-up actions from previous Management Reviews.

The Management Review is the initial closure point of the continuous improvement loop and point of departure for the next iteration. Improvements shall be made on a routine basis through use of PS-02, development of objectives and targets, EMS audit results, corrective and preventive actions, and Management Reviews.

6.0 REFERENCES

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- ¹ DOE O 450.1, Change 2, *Environmental Protection Program*. U.S. Department of Energy, Washington, D.C.
 - ² P-EIP-J-00001, *SWPF Integrated Safety Management System Description*. Parsons, Aiken, South Carolina.
 - ³ *Salt Waste Processing Facility Project Procedures Manual*. Parsons, Aiken, South Carolina.
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- ⁴ ANSI/ISO/ASQ 14001:2004, *Environmental Management Systems – Requirements with guidance for use*. International Organization for Standardization.
 - ⁵ Q-PLN-J-0099, *SWPF Project Pollution Prevention Plan*. Parsons, Aiken, South Carolina.
 - ⁶ *Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)*.
 - ⁷ Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*. The President. Signed January 24, 2007.
 - ⁸ V-IM-J-00001, *SWPF Organization, Roles, and Responsibilities Manual*. Parsons, Aiken, South Carolina
 - ⁹ PS-02, *SWPF Environmental Management System Policy*. Parsons, Aiken, South Carolina.
 - ¹⁰ S-RCP-J-00001, *SWPF Standards/Requirements Identification Document*. Parsons, Aiken, South Carolina.
 - ¹¹ Q-EIP-J-00002, *SWPF Environmental Aspects and Actions*. Parsons, Aiken, South Carolina.
 - ¹² Savannah River Site (SRS) Environmental Management System Policy. August 2006.
 - ¹³ *Toxic Substances Control Act of 1976*, Public Law 94-469, 15 United States Code, Section 2622. October 11, 1976.
 - ¹⁴ Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601 et seq. December 11, 1980. Amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.
 - ¹⁵ PL-TR-1801, *SWPF Personnel Selection, Training, and Qualification Plan*. Parsons, Aiken, South Carolina.
 - ¹⁶ V-ESR-J-00019, *SWPF Permitting and Monitoring Requirements Interface Control Document (ICD-19)*. Parsons, Aiken, South Carolina.
 - ¹⁷ S-EIP-J-00001, *SWPF Environmental Plan*. Parsons, Aiken, South Carolina.
 - ¹⁸ V-ESR-J-00003, *SWPF Radioactive Solid Waste, Mixed Waste, and Hazardous Waste Interface Control Document (ICD-03)*. Parsons, Aiken, South Carolina.
 - ¹⁹ V-ESR-J-00004, *SWPF Stormwater Interface Control Document (ICD-04)*. Parsons, Aiken, South Carolina.
 - ²⁰ V-ESR-J-00005, *SWPF Radioactive Liquid Effluents Interface Control Document (ICD-05)*. Parsons, Aiken, South Carolina.
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- ²¹ V-ESR-J-00006, *SWPF Liquid Sanitary Wastes Interface Control Document (ICD-06)*. Parsons, Aiken, South Carolina.
- ²² V-ESR-J-00010, *SWPF Waste Transfer Interface Control Document (ICD-10)*. Parsons, Aiken, South Carolina.
- ²³ V-ESR-J-00011, *SWPF Waste Treatability Samples Interface Control Document (ICD-11)*. Parsons, Aiken, South Carolina.
- ²⁴ V-ESR-J-00012, *SWPF Emergency Response Interface Control Document (ICD-12)*. Parsons, Aiken, South Carolina.
- ²⁵ V-ESR-J-00021, *SWPF Non-Radioactive Solid Waste Interface Control Document (ICD-21)*. Parsons, Aiken, South Carolina.
- ²⁶ V-ESR-J-00027, *SWPF Radiological Controls Interface Control Document (ICD-27)*. Parsons, Aiken, South Carolina.
- ²⁷ Q-PLN-J-0081, *SWPF Office Health and Safety Plan*. Parsons, Aiken, South Carolina.
- ²⁸ S-CIP-J-00005, *SWPF Construction Health and Safety Plan*. Parsons, Aiken, South Carolina.
- ²⁹ DOE O 151.1C, *Comprehensive Emergency Management System*. U.S. Department of Energy, Washington, D.C.
- ³⁰ DE-AC09-02SR22210, *Design, Construction, and Commissioning of a Salt Waste Processing Facility (SWPF)*. U. S. Department of Energy. 2002.
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