Part I – The Schedule

Section C

Performance Work Statement

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SRS Integrated Mission Completion Cleanup Contract Overview and Objectives

Background

The U.S. Department of Energy (DOE) Savannah River Site (SRS also referred to herein as "Site") is located in western South Carolina, covering 310 square miles in Aiken, Allendale and Barnwell counties. SRS was constructed during the early 1950s to produce basic materials used in fabrication of nuclear weapons, primarily tritium and plutonium-239, in support of our nation's defense programs.

The SRS cleanup strategy is to eliminate or minimize nuclear materials, spent nuclear fuel (SNF), and waste through safe stabilization, treatment, and/or disposition; reduce costs of continuing operations and surveillance and maintenance; remediate surface water, groundwater and contaminated soils consistent with regulatory agreements and permits; and, perform deactivation and decommissioning (D&D) of excessed facilities. The Department's completion strategy provides a comprehensive risk-based methodology to the legacy cleanup project, such as dispositioning radioactive liquid waste (LW) through vitrification of high activity waste constituents at the Site's Defense Waste Processing Facility (DWPF), and using existing SRS facilities to receive, store, and disposition aluminum-clad SNF.

Contract Purpose and Objectives

(a) One of the U.S. DOE strategic goals is to meet the challenges of cleaning up the nation's Manhattan Project and Cold War legacy. To accomplish this goal, the Office of Environmental Management (EM) must reduce environmental liabilities through accelerated cleanup of high-risk areas resulting in risk reduction. This goal must be accomplished in a manner that is protective of human health and the environment.

(b) The purpose of the SRS Integrated Mission Completion Contract (IMCC) is to achieve significant risk and financial liability reduction that provides the best overall optimal solution to Site accelerated completion and closure. Ultimately, the tasks, including the End States associated with the tasks, to be performed during the Contract ordering period will be defined in future Task Orders. The term "End State" is defined as the specified situation, including accomplishment of completion criteria, for an environmental cleanup activity at the end of the Task Order period of performance (POP).

(c) The Contractor is responsible for the performance of the entire scope under the Contract including defining the specific methods, innovations, regulatory approach, and graded approaches for accomplishing all work to be performed and managing, integrating, and executing work described in this PWS.

(d) The DOE's goal is to efficiently optimize the scope, cost, and schedule associated with performance of all work while ensuring quality, protecting the safety of the workers, environment, and the public, to reduce EM's environmental liabilities.

(e) The Contractor shall comply with Section 3116 of the Ronald W. Reagan National Defense Authorization Act (NDAA) for Fiscal Year 2005*;* the *Federal Facility Agreement for the Savannah River Site* (FFA); permits and requirements issued by the South Carolina

Department of Health and Environmental Control (SCDHEC); and any other applicable regulatory requirements and federal regulations.

(f) The FFA is an enforceable agreement among DOE, SCDHEC, and U.S. Environment Protection Agency (EPA). It directs the comprehensive remediation of the SRS. The Contractor is not a signatory to the FFA but will support DOE in its role as the lead agency for Site remediation under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and will support decision making by the three parties to the FFA. The Contractor's work products and processes will meet the requirements of the FFA when performing scope pursuant to the FFA. The Contractor is encouraged to propose cost-effective methods, strategies, and processes for consideration by DOE.

(g) The Contractor shall prepare and submit all regulatory and supporting documentation to DOE prior to submittal to the regulatory agencies. In addition, DOE will:

(1) Operate as the owner in coordination with the regulators to reach agreement on Contractor-prepared regulatory and supporting documentation;

(2) Review, approve, and/or certify, as required, all regulatory and supporting documentation; and

(3) Prepare any additional National Environmental Policy Act (NEPA) analyses and/or documentation that may be required.

(h) The Contractor shall ensure that its technical approach and execution of the work comply with all current applicable laws, regulations, and DOE directives as identified in Section J, Attachment J-2, *Requirements Sources and Implementing Documents*. The list of laws and regulations is not comprehensive. Omission of any applicable law or regulation from Attachment J-2 does not affect the obligation of the Contractor to comply with such law or regulation.

(i) The Government shall conduct audits and surveillances of all aspects of the terms of this Contract to ensure compliance with the terms of this PWS. The results of all audits and surveillances will be resolved with the Contractor. DOE reserves the right to stop work in accordance with the Section H Clause DOE-H-2021, *Work Stoppage and Shutdown Authorization (Oct 2014)(Revised).*

(j) DOE plans to provide a steady, predictable funding stream to enable End State completion; however, funding is subject to the ordinary limitations associated with the congressional appropriation process.

(k) Accelerated cleanup (i.e., accomplishing cleanup faster and more efficiently than planned) is a cooperative undertaking that requires the Contractor and the Government to seek innovative approaches to achieve the desired End States. This approach will require DOE and the Contractor to cooperate in creating an organizational culture to facilitate change and a mutual understanding of the technical approach and strategy that will lead to successful achievement of End States to be completed under this Contract. Streamlining the process, challenging requirements, and identifying efficiencies and performance improvements are critical to

accomplishing accelerated cleanup. The Contractor, in partnership with DOE and throughout the Contract ordering period, shall seek to identify requirements and processes that impede progress and recommend efficiencies and performance improvements that reduce the actual cost and/or improve the schedule for the work.

(l) The Contractor, in partnership with DOE, will use its best efforts to further the acceleration of cleanup activities and reduce DOE's long-term liability (see Section H Clause entitled, *Partnering*).

(m) The Contractor shall manage, integrate, and execute the work described in this PWS, as authorized through Task Orders. The Contractor shall provide all personnel, facilities, equipment, materials, services, and supplies required to complete the Contract work scope, except for the items described in Section J, Attachment J-8, *Government Furnished Services and Information* (GFS/I).

(n) The Contractor shall integrate and manage all capital and non-capital asset acquisition projects, activities, and subprojects as described in this PWS. The Contractor shall maximize efficient and cost-effective methods for completing the work scope. The Contractor will be the single point of accountability for the SRS IMC Contract activities, safety and quality assurance programs, regulatory and SRS interface, and project management in the performance of this Contract, including any subcontracts.

(o) The Contractor shall support transfer and/or accept operational responsibility for the IMCC facilities to support execution of the work. Some of the facilities included in this IMC Contract scope may currently be the responsibility of DOE program offices other than EM and/or other contractors. Likewise, certain facilities currently included in the contract scope may be transferred to other DOE Program Offices. The Contractor shall develop interface documents with DOE management and other Site contractors, as needed, to support transition, stipulate respective roles and responsibilities, and define services to be provided by other DOE contractors.

(p) During the conduct of authorized work scope, the Contractor shall ~~also~~ comply with all CERCLA decision documents in effect for the SRS.

Supplemental Information

The various elements of this PWS have descriptive statements of DOE's supplemental information associated with the performance of each element. Such statements are intended to provide the Contractor with insight regarding DOE's historical operational performance/planning perspective on the objectives that need to be accomplished in order to progress toward completion of the SRS cleanup. The Contractor is not bound by such historical operational performance (e.g., waste processing rates, ratios, and limits) and is expected to seek to improve upon such historical operational performance while, at the same time, ensuring compliance with all applicable requirements. The Government makes no representations that the historical operational performance is what the Contractor will, in fact, experience in the execution of this contract.

C.1 Contract Transition

The desired outcome is a smooth transition of full responsibility for execution of the Contract that maintains continuity of operations and avoids or minimizes disruptions to ongoing operations and/or accomplishment of the DOE mission.

As authorized by Task Order(s), the Contractor shall perform the activities necessary to transition work from the current SRS Liquid Waste contract, transition any subcontract work from the incumbent Liquid Waste Contractor as deemed necessary, and complete workforce transition in accordance with the requirements of Section H (H.2 – H.6) of this Contract. Nuclear Materials mission activities (specifically, Section C. 3 Nuclear Materials Stablization and Disposition and Non-Operation Nuclear Facilities (Surveillance, Maintenance, and Deactiviation) may be transitioned via post-award task orders and are not part of this initial contract transition.

The Contractor shall submit a Transition Plan for DOE approval within 15 days after notice to proceed that provides a description of all necessary transition activities, to include:

a. Describe the approach to transition the work indentified in the Contract, including the transition team, their roles and responsibilities, and describe a Work Breakdown Structure (WBS) for each element of contract transfer responsibilities, including: scope of work, labor relations, human and material resources, services, and other work identified in the Contract.

b. Describe responsibility for due diligence, to include its rationale, and a schedule of planned activities (transition schedule) and milestones necessary for the conduct of a safe, orderly contract transition; minimizing impacts on continuity of operations; identifying key issues and associated resolutions that may arise during transition; and planned interactions with DOE, other contractors, the workforce, regulators and stakeholder.

c. The planned strategy for developing required documents (including licenses and agreements); A brief description of all involved organizations; planned execution of Interface Agreements with other DOE-SRS contractors and necessary Memoranda of Understanding (MOUs) with external organiations.

d. Establish any Tranistion Interface Agreements necessary between it and other DOE-SRS contractors/subcontractors to define necessary interface points, scope boundaries, and/or provisions of services, as required.

e. Identify agreements, letter approvals, determinations of cost allowability, or understandings the Contractor plans to reply upon and apply to work performed under this contract, or in the accounting of costs incurred. DOE agreements with predecessor contractors, contract guidance, direction, or interpretation on other contracts shall not apply unless they have been identified and approved in advance by the CO.

f. Document in a Transfer Agreement with the prior contractor all key elements of the transfer. This may include key elements such as purchase order and subcontract assignments, sofeware license agreements, proper transfers/exclusions, key

documents/databases/records, permits, outstanding liabilities, litigation, administrative claims, or other.

The Contractor is responsible for performing due diligence to ensure that all transition activities are identified and completed during the transition period (see Section L, Attachment L-9, *Task Order 1: Transition*.

The list below includes the major elements necessary for transition of the Contract, but is not a comprehensive list of all transition requirements. The following items shall be addressed in the Transition Plan:

(a) **Public Release Statement:** Within 72 hours following a Notice to Proceed (NTP), the Contractor shall release on its own website a brief Executive Summary of its offer including the following elements:

(1) Name of Contractor including the identification of teaming partners and subcontractors and a description of the experience that each party brings to the project.

(2) Organizational Structure and Identification of Key Personnel.

(3) Summary/description of Contractor's management approach to execute the work.

(4) Brief overview of Contractor's work on similar projects.

(5) Commitments to the Community.

(6) Commitments to Small Business Subcontracting (if applicable).

(b) **Implementation of Human Resources Management Requirements:** The Contractor's Transition Plan required above shall include a description of the Contractor's implementation of human resource management consistent with *Workforce Transition and Contractor Human Resources Management* requirements as described in Section H, Clauses H.2~~3~~ through H.~~7~~6.

(c) **Inter-Contractor Ordering and Financial Agreements:** The Contractor shall develop the inter-contractor ordering and financial agreements necessary to support transition and Contract performance and will be responsible for the costs incurred under these agreements.

(d) **Status Reports – Transition Activities:** The Contractor shall provide weekly status reports of transition activities to DOE. The Contractor shall establish routine status meetings with DOE and affected contractors to review transition activities and issues (see Section L, Attachment L-9, Task Order 1, *Liquid Waste Transition*, and Section J, Attachment J-7, *Contract Deliverables*).

(e) **Government-Owned Property:** All real and personal property currently accountable to the incumbent Liquid Waste Contractor for contract performance will be provided to the

Contractor. During the contract transition period, an inventory record of such property in the DOE Facilities Information Management System (FIMS) and the incumbent Liquid Waste Contractor's personal property databases will be provided to the Contractor. Specifically, the following property acceptance requirements will be implemented:

(1) The Contractor shall perform a joint comprehensive physical inventory with the incumbent Liquid Waste Contractor of all accountable high-risk and sensitive property, as defined in the Code of Federal Regulations (CFR) Title 41 Chapter 109, during the transition period, and shall accept full accountability for the high-risk and sensitive property at the end of transition.

(2) The Contractor shall accept, at the end of transition, transfer of accountability for the remaining government-owned real and personal property not covered under paragraph (1), based on existing inventory records on an "as-is, where-is" basis, or perform a wall-to-wall inventory within the transition period of the Contract. Any discrepancies with the existing inventory records shall be reported to the Contracting Officer (CO). At the end of transition, the Contractor shall assume responsibility and liability for subsequent losses and damages. If the physical inventory is not accomplished within the allotted time frame, the previous contractor's records will become the inventory baseline.

(f) **DOE Safeguards and Security (S&S) Survey:** During the Contract transition period and prior to assuming control and responsibility for S&S responsibilities, the Contractor shall be subject to a DOE S&S initial survey conducted in accordance with DOE Order 470.4, *Safeguards and Security Program*. The results of the survey shall be documented and shall form the basis for DOE authorization to assume S&S responsibilities, in particular responsibilities for special nuclear material, classified information, and other applicable protection level assets. Following a satisfactory survey, the Contractor shall assume responsibility for all applicable S&S resources, materials, facilities, documents, and equipment.

(g) **Identification of Material Differences:** During the transition period, the Contractor shall identify any material differences between the systems, facilities, waste sites, property, and services (to include review of policies, procedures, technical documents and other documents in the form of information) described in this PWS and actual conditions. The Contractor shall prepare and submit a Statement of Material Differences (see Section L, Attachment L-9, Task Order 1, T*ransition*). After receipt and evaluation of the Contractor material differences submission, DOE will negotiate the final list of Material Difference and Preexisting Conditions with the Contractor and determine whether a change to the Contract is necessary. The CO will provide direction to the Contractor to address any changes and will establish timeframes for completion of applicable actions.

(h) **Legal Management Transition:** The Contractor shall provide a Litigation Management Plan in accordance with the Section H clause, *Legal Management,* and compliant with 10 CFR Part 719, *Contractor Legal Management Requirements*.

(i) **Communication of Contractor's Approach:** The Contractor shall communicate its approach and commitments for accomplishing the scope of the Contract to workers, federal staff, stakeholders, and other interested entities during the transition period.

(j) **Adoption of Programs, Procedures and Service Level Agreements:** To ensure continuity of operations, the Contractor shall adopt, as applicable, the incumbent Liquid Waste Contractor's programs, procedures and Memorandum of Agreement(s), Functional Service Agreement(s), and Service Level Agreements at NTP (e.g. Documented Safety Analysis (DSA), Technical Safety Requirement (TSR)s, operating procedures, etc.), provided the Contractor has formally reviewed the programs, procedures, Memorandum of Agreement(s), Functional Service Agreement(s), and ~~and~~ Service Level Agreements to ensure compliance with Contract requirements, current regulatory requirements, DOE Orders and directives, and the Contractors' organizational roles and responsibilities. The Contractor shall revise those programs, procedures, Memorandum of Agreement(s), Functional Service Agreement(s), and and Service Level Agreements it deems necessary provided the programs and procedures and~~-~~, Memorandum of Agreement(s), Functional Service Agreement(s), and Service Level Agreements remain in compliance with DOE requirements, and shall maintain its plans, programs, procedures and~~-~~, Memorandum of Agreement(s), Functional Service Agreement(s), and Service Level Agreements, etc. in accordance with this PWS. In addition, the Contractor shall adopt the existing DOE-SR approved SRS Criticality Safety Program Description document and associated SCD-3 Nuclear Crticiality Safety Manual, plans and procedures.

(k) **Graded Approach:** The Contractor shall submit a *Graded Approach for Implementation of Contract Requirements Plan* for DOE approval to streamline processes, apply a graded approach, and identify efficiencies and performance improvements (e.g., DOE directives, regulations, and others) that are critical to accomplishing the Site mission. The plan shall include a review and recommendations of changes to the current Site standards and implementing procedures for the elimination of requirements and/or streamlining of processes. The Contractor may propose for DOE's approval, exceptions for self-performance of processes associated with business systems, procurement and asset management, human resources, and quality and operations excellence.

The Contractor shall interface with the other Site contractors on proposed changes, as necessary. The Contractor shall initially adopt existing-Memorandum of Agreement(s), Functional Service Agreement(s), and Service Level Agreements and/or other interface agreements with the future SRS Operations Contractor (also noted currently as the SRS Operations Contractor), Site Lab Contractor, and other Site Contractors while performing make or buy evaluations for services offered by the SRS Operations Contractor, Site Lab Contractor, and other Site Contractors, Section J, Attachment J-3, *Savannah River Site Services and Interface Matrix* needed by the Liquid Waste program.

The Contractor shall provide during Task Order 2 their detailed plan to address the SRS Operations Contractor, Site Lab Contractor, and other Site Contractors services needed.

The Implementation Plan for the proposed procurement of those services shall be provided during Task Order 3 with actual implementation no later than the end of Task Order 3. In the Implementation Plan, the Contractor shall provide the basis for the proposed costs and fee for each cost category (direct labor, indirect rates, direct materials, etc.) for each service as follows: (1) what source data is existing and how that data is verifiable, and (2) key assumptions for efficiencies/innovations and what the Contractor's estimates are for those efficiencies/innovations. The Contractor's Implementation Plan shall be in sufficient detail at a summary level to demonstrate probable reasonableness and realism.

(l) **Task Order Proposals:** During transition, the Contractor shall expediently provide the CO with Task Order proposals that are compliant with the Section H Clause entitled, *Task Ordering Procedure*. The CO will provide direction as applicable regarding these potential Task Orders and will establish time frames for submission of additional Task Order proposals.

(m) **Training for the Workforce**: The Contractor shall ~~D~~develop training for the workforce on the contract to include but not limited to changes from the prior PWS, Task Orders, Contractor's proposed management approach for execution of work, J Attachments regarding applicable Directives, Regulations, Policies and Standards; Site Services and Interface Requirements Matrix, and Contract Deliverables. Provide DOE a schedule for completion of training that results in 100 percent of the workforce trained within 6 months of NTP.

(n) **Declaration of Readiness:** Submit a *Declaration of Readiness to Execute the Contract* to the CO, prior to the end of transition, indicating readiness to assume responsibility for execution of the Contract. Also, identify any post-transition activities that may be required to complete transition (e.g., notifications to outside agencies of transfer of co-operator responsibilities, completion of procedure updates).

C.2 Liquid Waste Stabilization/Disposition

C.2.1 Liquid Waste Operations

The mission of LW Operations is to receive, store, treat, and dispose of radioactive liquid waste. The LW Operations are highly integrated involving safely storing liquid radioactive waste in underground storage tanks; removing, treating, and dispositioning the low activity waste fraction as a saltstone waste form in concrete SDUs; vitrifying the higher activity waste at DWPF; storing the vitrified waste in stainless steel canisters until permanent disposition; and completing operational closure of all underground storage tanks and ancillary equipment.

The goal of the U.S. Department of Energy is to complete the LW cleanup mission at SRS in 15 years. The Contractor shall plan the work scope in this contract period of performance conducive to the achievement of this goal. Facilities shall be operated and maintained in a condition to ensure operability as designed beyond the end of the contract period of performance.

The Contractor shall maintain a comprehensive Master Infrastructure List of critical facility and infrastructure needs. Infrastructure for the purpose of this work scope includes all facility support

structures; operational equipment; fire protection; electrical systems; plumbing; heating, ventilation and air conditioning equipment; superstructures; interior and exterior enclosures; roofing; foundations; basement construction; conveying systems; stairs; and furnishings. The areas of consideration include the Tank Farms and associated systems, structures and components, S-Area, Z-Area, ETF, and SWPF in J-Area, once the SWPF is transitioned to the Contractor. It also includes the office trailers and other supporting facilities in areas B, E, G and T-Areas (see Section J, Attachment J-8, *Government Furnished Services and Information* (GFS/I)). The Contractor shall provide to DOE quarterly maintenance updates including a list of maintenance activities for these areas that were completed during the preceding quarter, a prioritized list of maintenance activities that are scheduled to be performed, and newly identified maintenance activities. The maintenance activities shall be prioritized, and risks associated with non-performance of the maintenance activities shall be identified and described with respect to safety and continued operations.

C.2.1.1 Tank Farms

Tank Farms operation includes multiple facilities and processes, including waste tank system transfers, evaporator operations, space management, salt and sludge waste retrieval, feed batch preparation for waste treatment facilities, and preparation of waste for transfer to other LW facilities, waste disposition, and, ultimately, operational closure of underground waste storage tanks and ancillary equipment.

C.2.1.1.1 Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit (ARP/MCU)

Operation of ARP/MCU (interim salt processing and disposition of radioactive salt waste) was suspended and isolated to allow SWPF radioactive tie-ins to the liquid waste system. The Contractor shall maintain the ARP/MCU processes and facilities in a lay-up status until DOE makes the decision to proceed with final layup and complete execution of the de-inventory plan. Ventilation system filters will continue to be maintained to ensure any residual contamination is not be released from the facilities.

Alternately, the Contractor may, with DOE approval, re-purpose the ARP/MCU systems as part of the system optimization activities for accomplishment of the PWS consistent with applicable requirements.

C.2.1.1.2 Tank Farm Operations

The Contractor shall operate the Tank Farms to receive, concentrate, and store liquid radioactive wastes in support of ongoing Site activities and ensure the continued operability and structural integrity of the liquid radioactive waste tanks and ancillary structures. The Contractor shall be responsible for effective Tank Space Management, Salt Feed Preparation, Sludge Feed Preparation, Bulk Waste Removal/Retrieval, and Management of the ETF. The Contractor shall maintain a comprehensive tank inspection program that is compliant with the requirements specified in the SRS Federal Facility Agreement (FFA). Mercury monitoring/sampling and chemical analysis throughout the LW systems will continue to be performed. Mercury shall be managed consistent with the Safety Basis.

The Contractor shall ensure the Tank Farms have the capacity to receive up to 300,000 gallons of waste from H-Canyon processing operations annually through FY 2030.

Supplemental Information

The radioactive liquid waste contained in the underground storage tanks is in the form of saltcake, salt supernate, or insoluble sludge solids. The functions of the underground storage tanks are:

- Receipt and storage of radioactive liquid waste and by-products generated by operation of the chemical separations processing and research facilities.
- Prevention of potentially harmful exposure from radiation to Site worker and members of the public.
- Prevention of potentially harmful quantities of radionuclides and chemicals from escaping to the environment.
- Maintaining safe storage of the liquid radioactive waste.
- Preparing batches of liquid radioactive waste for treatment into a more stable form (solidification) for final disposition.

The F-Area Tank Farm (FTF) is a 22-acre site containing eight Type I, two Type III, eight Type IIIA, and four Type IV storage tanks. Six tanks in FTF have been operationally closed. In addition, FTF also includes supporting ancillary structures such as two evaporator systems, transfer pipelines, diversion boxes, a concentrate transfer system, a catch tank, and three pump pits. The H-Area Tank Farm (HTF) is a 45-acre site containing four Type I, four Type II, four Type III, thirteen Type IIIA, and four Type IV tanks. Two tanks in H-Tank Farm have been operationally closed. In addition, HTF includes supporting ancillary structures such as three evaporators, eight diversion boxes, ten pump pits, pump tanks, transfer valve boxes, and transfer piping. Also located in HTF is the ARP/MCU processing system. The twenty-four Type I, II, and IV tanks do not meet the secondary containment standards in the SRS Federal Facility Agreement. Eight of these tanks have been operationally closed. Out of these sixteen tanks that remain in service, eight tanks have leaked waste through the primary tank wall into their respective secondary containment (i.e. annulus space) and six of these tanks have completed bulk waste removal efforts (tanks 4F, 7F, 8F, 10H, 11H and 15H). Execution of waste retrieval in Type I and II tanks that have leak sites may reactivate these leak sites or expose new leak sites.

C.2.1.1.2.1 Tank Space Management

The Contractor shall maintain usable working tank storage capacity (space) to support waste retrieval and prepare waste for permanent immobilization and disposition of HLW in a vitrified waste form and low-level waste in a grouted waste form (e.g., preparation of sludge and salt feed for DWPF and SWPF and receipt of waste from DWPF, ETF, and H-Canyon). The Contractor shall implement effective supplemental space management initiatives as necessary, including the operation of evaporator systems.

Supplemental Information

Since 1951, the Tank Farms have received over 160 Mgal of liquid waste, of which most has been evaporated and/or treated, leaving approximately 35.3 Mgal in the storage tanks. Available storage space is used for waste receipts, waste retrieval, and processing operations. A contingency amount of 1.3 Mgal is not included as working space and is reserved for the unlikely event of a full tank failure. Waste receipts and transfers are normal Tank Farm activities as the Tank Farms receive new or "fresh" waste from the H-Canyon stabilization program, a low activity waste stream from DWPF processing (typically referred to as "DWPF recycle"), wash water from sludge washing, and very small amount of concentrate from ETF.

The Tank Farms also make routine transfers to and from waste tanks and evaporators. The two evaporator systems, the 2H and 3H systems, support space management with volume reduction of 2 – 3 million gallons per year of liquids produced by sludge batch washing and DWPF recycle receipts. Although both systems are currently operating satisfactorily, both systems have experienced significant operational issues. A leak from the 3H evaporator pot into the secondary containment cell was successfully repaired in 2018. There are no plans to replace the 3H Evaporator pot but a spare pot will be available at the beginning of this contract performance period in case it is needed.

The space in Type III/IIIA tanks is used to: (1) retrieve waste from and clean older style (Type I, II, and IV) tanks; (2) prepare, qualify, and treat sludge waste for disposal; (3) prepare, qualify, and treat salt waste; and (4) support nuclear materials stabilization and disposal through H-Canyon. Additionally, several old-style tanks support immobilization and disposition of HLW. Old style tanks (Types I, II, and IV) are shown in Figures 2.4-1, 2.4-2, and 2.4-4 in WSRC-SA-2002-00007-VOL-1-DSA-ES, Ch. 1, 2 Rev 17, provided in the Document Library. The Tank Farm space management strategy in the Liquid Waste System Plan (http://www.srs.gov/general/pubs/srr-lw-systemplan.pdf) is based on projections of DWPF canister production rates, salt waste processing rates, influent stream volumes, Tank Farm evaporator performance, and space gain initiative implementation. Reuse of old-style tanks for storage of liquid may require DOE and/or regulator approval. The below Table identifies the operational and operationally closed tanks.

	Operational Tanks					
	Old Style Tanks			Compliant Tanks		
	Type I	Type II	Type IV	Type III	Type IIIA	Total
F Tank Farm	6	0	0	2	8	16
H Tank Farm	3	3	4	4	13	27
Total	9	3	4	6	21	43

	Operationally Closed Tanks					
	Old Style Tanks			Compliant Tanks		
	Type I	Type II	Type IV	Type III	Type IIIA	Total

F Tank Farm	2	0	4	0	0	6
H Tank Farm	1	1	0	0	0	2
Total	3	1	4	0	0	8

C.2.1.1.2.2 Salt Feed Preparation

The Contractor shall be responsible for operation and maintenance of equipment necessary to dissolve, batch, and adjust salt waste from various tanks to serve as feed for TCCR and SWPF. Salt batches shall meet the waste acceptance criteria (WAC) of the facility it will be transferred to.

Tank Farm feed preparation infrastructure modifications required to support SWPF increasing processing rates include:

- Waste retrieval infrastructure in several tanks to support salt batch feed preparation
- Mixing capabilities
- Enhanced transfer capabilities
- Transfer routes provided to blend/feed tank(s)

Supplemental Information

Salt feed preparation includes development of salt batches from various waste tanks for feed to salt treatment processes including SWPF and TCCR. Salt Feed Preparation for each batch currently requires four months for compiling, sampling, analysis, qualifying and transfer into the batch feed tank. SWPF is planned to process the majority of this salt solution waste. Salt preparation capability is dependent on the number of blend tanks available to prepare salt batches. Currently, a single tank is capable of preparing 3 to 4 Mgal/yr. Three blend tanks are needed to enable the Tank Farms to feed SWPF at 9 Mgal/yr. Two blend tanks are expected to be available upon SWPF startup and the third blend tank will be available for SWPF's second year of operation.

Factors that impact salt feed preparation include:

- Blend Tank availability
- Timely preparation of tanks for waste retrieval
- Effective and efficient saltcake dissolution
- Waste transfer logistics

Salt treatment technology demonstration of the at-tank cesium removal is in progress. Refer to Section C.2.2.5.2 for additional information.

C.2.1.1.2.3 Sludge Feed Preparation

The Contractor shall be responsible for operation of equipment and conducting treatment processes used to prepare sludge waste feed to sustain DWPF vitrification operations. The Contractor shall effectively couple tank waste retrieval operations with sludge waste feed preparation operations to

provide sludge waste: 1) within compositional ranges that support sludge waste blending and preparation into batches that meet DWPF prescribed feed specifications; and 2) with sufficient volume to ensure the continuous availability of sludge waste feed to DWPF. The Contractor shall also model sludge waste feed preparation activities and execute activities necessary to ensure that DWPF vitrification operations can be sustained beyond the Contract period of performance.

Supplemental Information

The basic steps for sludge processing are: 1) sludge removal from tanks; 2) optional Low-Temperature Aluminum Dissolution; 3) blending and washing of sludge followed by sample, analysis, and qualification; and 4) sludge feeding to the DWPF. Currently a single tank (Tank 51H) is the sole DWPF feed preparation tank (see Figure 1).

Sludge preparation is paced by bulk waste retrieval and by tank storage space to prepare sludge batches. Sludge batch planning uses the estimated mass and composition of sludge and known processing capabilities to optimize processing sequences. The planned sludge batches are identified in the approved Liquid Waste System Plan.

Differences in sludge batch sequencing, total number canisters produced, and batch end dates is an effort to balance the end of salt processing more closely with the end of sludge processing. The projected canister pour rate is balanced to be appropriate for salt processing support.

Waste generated from processing of spent nuclear fuel and targets in H-Canyon has resulted in high amounts of aluminum solids as gibbsite or boehmite. Much of this aluminum can be removed from the sludge by dissolution of the aluminum and subsequent removal by decanting of the liquid phase. This reduces the number of canisters needed to disposition the sludge, due to the lowered sludge solids mass and improved waste loading in the glass. Dissolution is achieved by adding caustic, elevating temperature, mixing, and sufficient reaction time.

Sodium (Na) and other soluble salts (e.g., sulfates, nitrates, nitrites) in DWPF feed are reduced through sludge washing. Sludge washing is performed by adding water to the sludge batch, mixing with slurry pumps, securing the pumps to allow gravity settling of washed solids, and decanting the sodium-rich supernate to an evaporator system for concentration. This cycle is repeated until the desired molarity (typically 1.25 M Na) is reached. Some types of sludge settle slowly, extending wash cycles. Sludge settling and washing typically constitutes ~75% of batch preparation time. The total number of washes performed, and volume of wash water used are minimized to conserve tank space. Sludge batch size and wash volumes are also limited by the hydrogen generation rate associated with radiolysis of water. Tank contents are mixed on a periodic frequency to release hydrogen retained within the sludge layer, resulting in a limited window within operating constraints for gravity settling.

C.2.1.1.2.4 Bulk Waste Retrieval/Removal

Note: In this document, the terms “bulk waste retrieval” and “bulk waste removal” may be used interchangeably and signify the same set of activities.

The Contractor shall retrieve and remove sufficient waste from older style and compliant tanks to ensure adequate support of salt and sludge batch preparations. Preference should be given to

retrieval and removal from older style tanks that are within or beneath the water table (Type I and II tanks in H-Area Tank Farm) and all tanks in F-Area Tank Farm to enable F-Area Tank Farm closure in 10 years.

The Contractor shall be responsible for design, procurement, installation and operation of equipment for conducting bulk waste retrieval/removal of salt and sludge from the liquid waste storage tanks. The Contractor shall prepare and treat waste to meet the Waste Acceptance Criteria of downstream facilities, including SWPF, Tank 50H, the Saltstone Facility, and DWPF. Completion of bulk waste retrieval/removal activities is defined as DOE concurrence on the Contractor provided detailed presentation of the specified tank's completion of bulk waste removal efforts with conclusive evidence. Future work scope for the specific tank transitions to the Tank Closure process (C.2.2.3) if closure is the next step or to Tank Space Management (C.2.1.1.2.1) if the tank will continue in service.

Supplemental Information

Bulk waste retrieval/removal of salt waste is currently conducted by adding liquid (e.g., dilute supernate, DWPF recycle water) to waste tanks with sufficient mechanical agitation that the saltcake material is dissolved for transfer to the appropriate hub tank, then transferred to a blend tank to be combined with salt solution from other tanks to achieve the appropriate chemistry balance. In the blend tank chemistry or other waste properties may be adjusted in order to meet the SWPF requirements. Currently, dissolution of one 1.3 million gallon tank full of saltcake results in the generation of 4 million gallons of dissolved salt solution, which is equivalent to approximately 3 to 4 full tanks of dissolved salt. Retrieval/removal of sludge waste also includes addition of liquid (e.g., supernate, water) to sludge (non-soluble) waste, agitation by several mixer pumps to suspend sludge solids, and transfer to a hub tank set up to receive and transfer sludge to the feed preparation tank, or directly to the feed preparation tank to then proceed with sludge washing. Similarly, slurrying and washing one gallon of settled sludge increases waste tank inventory by 1.3 gallons of salt waste.

C.2.1.1.2.5 Effluent Treatment Facility (ETF)

The Contractor shall be responsible for operation of the ETF in compliance with environmental regulations associated with the Resource Conservation and Recovery Act (RCRA) and the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act. The ETF operator in charge shall be certified by the South Carolina Environmental Certification Board and hold an "A" Physical/Chemical Wastewater Certificate.

The Contractor shall maintain the facilities in a ready-to-serve status, function as a service provider for other Site contractors, and coordinate with waste generators to develop annual waste volume projections.

Supplemental Information

The ETF is classified as an "A" Level physical/chemical wastewater treatment facility by the SCDHEC. The ETF treats low-level radioactive wastewater from the F and H Area separations and waste management facilities, F/H Laboratory, the Savannah River National Laboratory (SRNL), H Tank Farm evaporator overheads and miscellaneous sources, such as Soil and Groundwater

Closure Projects well purge water. The ETF removes chemical and radioactive contaminants before releasing the water into Upper Three Runs Creek, a SRS stream that flows to the Savannah River. Because the Savannah River water eventually flows into municipal drinking water facilities, radiological effluents are governed by the Federal Clean Water Act. ETF non-radiological effluents are discharged within limits of permits issued by SCDHEC.

The ETF is designed and constructed to allow SRS to meet all environmental regulations associated with the Resource Conservation and Recovery Act and the National Pollutant Discharge Elimination System under the Clean Water Act. The ETF is designed to operate at an average capacity of 165 gpm and with a "sprint" capability of 300 gpm for short durations. The maximum permitted facility capacity is 430,000 gallons per day. The ETF encompasses wastewater collection and treatment operations that were modified for radioactive use. It was designed to remove heavy metals, organic chemicals and corrosive chemicals, as well as cesium and other radiological contaminants from the Site's wastewater.

C.2.1.2 Waste Vitrification

Waste Vitrification operations includes the DWPF and the two existing GWSBs.

C.2.1.2.1 Defense Waste Processing Facility

The Contractor shall operate the DWPF to optimize the processing of the sludge and high activity feed streams from salt processing into a vitrified waste form that meets or exceeds all requirements for interim storage at SRS and all requirements regarding the acceptability of the vitrified waste form for disposal in a licensed Federal Repository. The Contractor shall avoid sludge feed breaks to DWPF. Mercury shall be managed consistent with the Safety Basis. The Contractor shall ensure the availability of a spare melter to affect a timely replacement of an operational melter in the event of its failure. The Contractor shall maintain a concentration limit of 897 g/m^3 of fissile material in the glass and a canister heat load of less than 792 watts per canister. The concentration limit of 897 g/m^3 is currently being reviewed for potential increase to 2500 g/m^3. The Contractor shall also provide for safe storage of failed melters onsite by constructing failed melter boxes and Failed Equipment Storage Vaults (FESV). The Contractor shall procure canisters for use in DWPF as necessary to ensure continued operations. DWPF canister production shall continue to meet the requirements of DOE/RW-0333P, Quality Assurance Requirements and Description, until and unless directed otherwise by DOE.

<u>Supplemental Information</u>

DWPF Canister Production

The DWPF facility receives and combines washed sludge and high activity waste from salt processing with glass frit for vitrification and pouring into canisters. Tank Farm sludge waste feed preparation has supported canister production of as high as 337 canisters in a 12-month period as well as feed preparation systems internal to DWPF. The total canister production is expected to vary during the Contract period commensurate with the receipt of high activity streams from SWPF.

To support higher glass throughput, the DWPF melter was retrofitted with four bubbler systems and the melter off-gas system was optimized in September 2010. Additional process improvements are necessary in order to support SWPF operations at a feed rate up to 9 Mgal per year. These improvements are scheduled to complete in FY21, and they are as follows:

- Implementation of an alternate reductant
- Processing of cesium Strip Effluent (SE) in the Slurry Mix Evaporator (SME)
- Laboratory Waste Handling modifications
- Management of the high activity waste streams to be received from SWPF
- Critical Spares in inventory

Based on the current Liquid Waste System Plan, canister production schedules include two one-week outages every year to allow for routine planned maintenance and another two weeks for the Site-wide steam outage each year. A four-month melter outage is assumed around FY2029 as melter life is conservatively estimated to be 10 years. Melter replacement is determined by actual melter performance. Melter #4 is anticipated to be operationally ready for use at the time of contract award. Canister production and sludge batch need dates were projected in the current Liquid Waste System Plan based on:

- DWPF recycle is beneficially reused.
- Pu discards from H-Canyon will be supported to the extent allowable without negatively impacting planned canister waste loadings while continuing to comply with the canister fissile material concentration limits.

DWPF Recycle

DWPF recycle is the largest influent stream received by the Tank Farm. Volume reduction of the recycle stream is handled through evaporation by the 2H Evaporator System and through beneficial reuse in tank waste removal operations. The DWPF recycle stream will remain between 1.5 and 1.9 Mgal/yr prior to SWPF operations. The rate could increase to as high as 3.7 Mgal/yr after the startup of SWPF. Diversion of the DWPF recycle stream to a treatment process vice its return to the Tank Farm will provide opportunities for simplification of the evaporator systems and the handling of sludge batch preparation facilitating waste removal from and closure of several tanks in H-Tank Farm. A Systems Engineering Alternative Analysis is in progress to identify the type and method of treatment necessary to enable this diversion.

Failed Equipment Storage Vaults (FESVs) and Melter Storage Boxes (MSBs)

Construction/fabrication of Failed Equipment Storage Vaults (FESVs) and Melter Storage Boxes (MSBs) are repetitive activities required to sustain ongoing DWPF operation by providing interim storage of failed DWPF melters. Currently there is one FESV constructed, containing two vaults. Each vault was designed to store one failed melter inside an MSB.

FESV is currently storing Melter #1 and Melter #2. Space has been reserved for construction of up to ten FESVs, if needed. Design and construction of the next FESV will be in progress when this

contract period of performance starts. One MSB for Melter #3 will be complete and available in storage.

Large contaminated failed equipment is currently stored in the 221-S Canyon.

C.2.1.2.2 Glass Waste Storage Buildings (GWSB)

The Contractor shall operate and maintain GWSB #1 and #2 to store glass waste canisters produced at the DWPF on an interim basis pending shipment for offsite disposal at a licensed Federal Repository. The Contractor shall continue on-going canister double-stacking activities in GWSB #1 and GWSB #2 to provide sufficient storage locations for all planned canister production.

Supplemental Information

DWPF canisters are currently stored onsite in two dedicated interim GWSBs. A Shielded Canister Transporter (SCT) moves one canister at a time from the DWPF to a GWSB. Both GWSBs are qualified to meet or exceed a Performance Category 2 design basis earthquake. It is anticipated an approach to double stack GWSB #2 will be identified prior to contract award.

GWSB #1 consists of a below-grade seismically qualified concrete vault containing support frames for vertical storage of 2,286 storage positions of which 2,262 standard canister positions are in use storing radioactive canisters. GWSB #2, with a similar design to GWSB #1, has 2,340 standard storage locations and is currently being filled with radioactive canisters as they are produced. There are also approximately 20 locations in DWPF available for canister storage pending transfer to a GWSB.

The GWSB #1 storage structure and services consist of four storage compartments, an SCT operating floor, air inlet and exhaust shafts, and attached building support facilities. The storage capacity of GWSB #1 is currently being expanded to double the capacity to 4,524 canisters by "double stacking" the canisters one on top of the other. Modification of canister positions and double stacking operations are in progress.

Based on the current System Plan, additional storage capacity will be required with availability beginning in FY30 as current storage capacity is 6,861 and the total projected storage requirement is 8,121 for a shortfall of 1,260 canisters.

C.2.1.3 Low Activity Waste Disposal

The Low Activity Waste Disposal is conducted by transferring Decontaminated Salt Solution (DSS) from Tank 50H to the Saltstone Facility consisting of the Saltstone Production Facility (SPF) and Saltstone Disposal Facility (SDF). The Contractor shall ensure that the low-activity salt waste stream sent to the Saltstone Facility from Tank 50H and/or SWPF shall complies with the SPF WAC.

C.2.1.3.1 Saltstone Production Facility (SPF)

The Contractor shall operate and optimize the SPF to support processing of low activity liquid waste, including DSS, for disposal in the SDF. The Contractor shall process up to 14 million gallons per year of low activity waste from Tank 50H and/or SWPF. This throughput assumes the operation of two TCCR units in addition to SWPF. SPF shall be operated to ensure compliance with Section 3116 Determination for Salt Waste Disposal at the SRS, Basis for Section 3116 Determination for Salt Waste Disposal at the SRS, DOE M 435.1, applicable SCDHEC permits, and the Site Treatment Plan (STP).

C.2.1.3.2 Saltstone Disposal Facility (SDF)

The Contractor shall operate and maintain Saltstone Disposal Facility (SDF) readiness to receive saltstone grout at all times except during a planned outage. Operations include filling the Saltstone Disposal Units (SDUs), maintaining the saltstone grout and transfer lines operational, maintenance and repair/replacement of valves, and maintaining SDU capacity available for operations. As each SDU construction is completed, the Contractor shall conduct acceptance testing prior to turn over of the SDU for SDF operations. Once an SDU is operationally filled, the Contractor shall maintain the SDUs in a safe condition and meet the applicable requirements of the Saltstone DSA and the state issued landfill permit. The Contractor shall perform modeling (in coordination with salt batch planning) for the inventory and concentrations of significant radionuclides placed in an SDU, in order to maximize emplacement while ensuring compliance with applicable performance objectives of the disposal facility, consistent with the SDF Performance Assessment.

Supplemental Information

The Saltstone Facility, consisting of the SPF and the SDF, processes DSS into saltstone grout at the SPF and permanently disposes of the resulting low level waste form in SDUs at the SDF. During Saltstone Facility operations, dry feeds (slag, fly ash, and cement) are weighed into batches and continuously fed into the SPF process room mixer where DSS is added at a controlled rate. DSS will be transferred daily at least in the amount of 33,000 gallons per transfer from Tank 50H (the SPF DSS feed tank) to two Salt Solution Receipt Tanks (SSRT) in SPF. Each SSRT has an operating level of 60,000 gallons. DSS is transferred from the SSRTs into the SPF process. For every one gallon of DSS combined and mixed with dry feeds, approximately 1.76 gallons of saltstone grout is produced. The saltstone grout is pumped via transfer lines into one of several SDUs at the SDF. The saltstone grout sets (hardens) in less than 24 hours and is no longer flowable. As the grout sets, some water remains. This excess water (drain water) is pumped back to the SPF on a daily basis during SPF operations to be combined with DSS feed to the SPF mixer.

Saltstone grout has historically been produced in daily batches containing approximately 35,000 gallons of DSS; however, it is anticipated that a significant increase in the production of saltstone grout will be required once the SWPF becomes operational and the Saltstone Facility may be in continuous operation (24 hours/7 days per week), except during planned outages. The annual processing requirement of about 13.7 million gallons includes minor contributions from the ETF and H-Canyon of up to 500,000 gallons and it is based on SWPF processing rate of 9 Mgal/yr combined with two operating TCCR units at 1 Mgal/yr each.

The SDF currently consists of eight SDUs. SDU #1 and SDU #4 no longer receive waste but will require operational surveillance and maintenance activity. SDUs #2A and #2B are operationally full (filled to the limiting height allowed by the Safety Basis); SDUs #3A, #3B, #5A, #5B and #6 are operational. By mid FY 2021, SDU#7 is projected to be operational, SDUs #8 and #9 are projected to be under construction, and designs for SDUs #10, #11 and #12 are projected to be complete and site preparation activities for these SDUs underway.

SDU #6 is a commercial 32-million gallon pre-stressed concrete tank enhanced to meet the requirements for permanent disposal of saltstone grout and its design is the basis for the construction of future SDUs. These concrete tanks are fitted with multiple pour spouts for depositing the grout uniformly and multiple drain water columns with submersible pumps to allow for return of drain water to the SPF. The SDUs have a network of piping on the tank top to direct saltstone grout to the selected pour spout and return drain water; instrumentation/equipment to monitor the temperature of the grout; and High Efficiency Particulate Air filtered vents to allow for air displacement as grout is deposited and to allow atmospheric breathing to prevent the accumulation of flammable vapors.

Due to constituents contained in the saltstone grout, radiological hazards are low but chemical consequences are moderate. As salt dissolution activities in the Tank Farms progress, the chemical constituents from the various waste tanks containing saltcake may vary and may require re-evaluation of the SDU concrete matrix and protective coating.

C.2.1.4 Salt Waste Processing Facility (SWPF)

Salt Waste Processing Facility (SWPF) operations will transition to this contract after the completion of one year of radioactive (i.e., hot) operations. The ninety day transition of this activity is currently scheduled to begin September 1, 2021. The Contractor shall maintain awareness of the actual SWPF schedule and shall have the flexibility to assume operation of SWPF earlier or later depending on the operational status of the facility. Following transition of operations, the Contractor shall bear responsibility for and operate and maintain the SWPF to process the salt waste feed stream resulting from tank waste removal operations to produce: (a) two high-activity waste feed streams for processing at the DWPF which meet all DWPF waste acceptance criteria and (b) a low-activity waste feed stream for processing at the SPF, which meets all SPF waste acceptance criteria.

The Contractor shall maximize SWPF waste processing throughput. In addition, the Contractor shall implement the Next Generation Solvent (NGS) into SWPF (see C.2.2.5.1) during the Contract period to ensure compliance with minimum salt waste processing requirements.

Supplemental Information

Salt waste from tank farm waste removal operations will be pumped to one of the designated blend tanks located in the H Tank Farm for blending to meet all SWPF waste acceptance criteria. Approximately 1 Mgal of waste will be prepared at a time. After sampling to ascertain that the blended waste meets the waste acceptance criteria, the waste will be transferred to a staging tank in

the H Tank Farm from which individual batches of approximately 23,200 gallons will be transferred to the SWPF for treatment.

The SWPF treats salt waste in three successive basic unit operations: Alpha Strike Process (ASP), Caustic-Side Solvent Extraction (CSSX), and Alpha Finishing Process (AFP) (only applicable in multi-strike mode). These processes separate the radioactive elements (primarily Strontium (Sr), actinides, and Cesium (Cs) from the salt solution transferred from H Tank Farm and concentrate them into a relatively small volume. This small volume is then transferred to the DWPF for vitrification. The remaining low activity Clarified Salt Solution (CSS) waste stream contains only low levels of radioactive materials and is transferred to the SPF for incorporation into grout. The ASP occurs first and is used to separate Sr and actinides from the waste feed by monosodium titanate (MST) adsorption and filtration. The CSSX process follows the ASP and is used to remove Cs from the ASP filtrate by solvent extraction. The AFP is a process step (only applicable when more than one round of MST adsorption and filtration is required) that mimics the ASP and is used as necessary to provide additional Sr/actinide removal downstream of the CSSX process.

The ASP is operated as a batch process. Each batch of salt waste received in the ASP alpha strike tank at the SWPF is chemically adjusted to achieve the proper pH and MST is added. The tank contents are mixed to allow the MST to adsorb the Sr and actinides (a 12-hour process for batches not expected to require additional processing via AFP and a 6-hour process for batches projected to require additional processing via AFP). The MST waste mixture is then filtered to produce a concentrated MST waste slurry and a CSS filtrate. The concentrated MST waste slurry is chemically adjusted to reduce its sodium concentration to meet the DWPF waste acceptance criteria and then transferred to DWPF for vitrification, while the CSS filtrate is routed to the CSSX process.

The second SWPF processing stage is CSSX, which is a continuous flow process utilizing 36 contactor stages for extraction, scrubbing, stripping, and washing of the CSS stream. Cs is removed by contacting the CSS with an engineered solvent in the extraction stage contactors. Following extraction, the Cs-enriched solvent is scrubbed to remove impurities (primarily sodium and potassium). The solvent is then contacted with a dilute nitric acid strip solution in the stripping stages, where the Cs is transferred to the aqueous strip effluent (SE). The SE (containing a high concentration of Cs) is sent to DWPF for vitrification. The Cs depleted aqueous raffinate stream from the extraction process is sent to the AFP.

The AFP, which is located downstream of the CSSX process, is the third SWPF processing stage. The Cs depleted aqueous raffinate stream from the CSSX extraction process for batches not expected to require additional processing via AFP, is sampled and analyzed at the AFP to confirm that it meets all SPF waste acceptance criteria as Decontaminated Salt Solution (DSS) and then transferred to SPF for incorporation into grout. Otherwise the Cs depleted aqueous raffinate stream from the CSSX process undergoes additional processing at the AFP using MST to further remove Sr and actinides to the point where, as confirmed by sampling and analysis, the stream meets all SPF waste acceptance criteria as DSS whereupon it is transferred to the SPF for incorporation into grout.

The SWPF is designed to process 7.3 Mgal/yr of salt solution and produce the following outputs for each gallon of salt waste processed:

- ~1.28 gal of DSS for processing at SPF;
- ~0.08 gal of SE for processing at DWPF; and
- ~0.02 gal of concentrated MST waste slurry for processing at DWPF.

The interface boundaries between SWPF and other liquid waste facilities as described in the SWPF Documented Safety Analysis are as follows:

- DWPF Interface - Seal plate outside of SWPF Waste Transfer Enclosure.
- HTF Interface - Seal plate outside of SWPF Waste Transfer Enclosure.
- SPF Interface - Seal plate outside of DSS Hold Tank/Filter Feed Tank-B of Alpha Finishing Facility

C.2.2 Liquid Waste Operations Support

The Contractor shall provide Liquid Waste Operations Support which consists of SDU Construction, SWPF Integration, SWPF Transition, Tank Closures, DOE-3009-2014 Implementation, Technology Development and Deployment, Production Enhancements, and Additional GWS Capability. All capital asset projects, and major capital asset modifications shall comply with DOE Order 413.3, *Program and Project Management for the Acquisition of Capital Assets, as applicable.* The SDU construction activity is the only currently identified capital asset project in the PWS.

C.2.2.1 Saltstone Disposal Unit Construction

The Contractor shall assume responsibility for the completion of SDU #7 and is responsible for the construction of future SDUs. The SDU #7 project will be ongoing at contract turnover and is scheduled to be operational mid-FY21. All SDUs, i.e., #7 - #12, will be a 32 Mgal pre-stressed concrete tank similar in design to SDU #6. Based on required salt waste processing volumes, approximately 20 Mgal of disposal volume for saltstone grout is required annually. SDUs #8 and #9 will be under construction, and SDUs 10 to 12 will be in the design phase, all with an approved project scope, cost, and schedule baseline at the time this contract period of performance starts. Based on the current System Plan, an additional and smaller SDU may be required and will be sized as needed to complete the mission.

The key performance parameters (KPPs) for each SDU structure include but are not limited to: 1) the SDU is free of leaks as demonstrated by leak testing, 2) provides saltstone grout containment, 3) provides infrastructure capable of receiving saltstone grout at a minimum of 100 gallons per minute, and 4) has a leak detection system in accordance with the Z-Area Industrial Solid Waste Landfill Permit requirements. Additional KPPs are identified during the conceptual design process and approved with the project performance baseline at Critical Decision point #2 (CD-2).

The Contractor shall conduct Performance Assessment analysis as necessary to maintain compliance as required by DOE O 435.1 for each SDU. Scope under this PWS element is considered to be complete for each SDU constructed upon declaration of CD-4 approval and turnover to operations including all balance of plant activities to support operations.

C.2.2.2 Salt Waste Processing Facility Transition

The Contractor shall execute the DOE-approved SWPF Operations Transition Plan to assume full accountability and responsibility for continued operations of the SWPF complex without negatively impacting other ongoing LW operations. The duration of transition shall not exceed 90 days. This Plan will be prepared by the incumbent Liquid Waste Contractor and will be ready for execution at the time of IMC contract award. The plan includes the review for inclusiveness and acceptance of all Government-owned real and personal property, all necessary facility asset documentation, safety basis plans and documentation, engineering drawings, FIMS required information, identification of any changes to operations and maintenance procedures, training and training requirements. This effort includes completing the transmittal of all SWPF documents to the SRS Document Control before the end of the transition period.

As part of the acceptance of all Government-owned real and personal property, the Contractor shall complete a formal inventory of all other nuclear and non-nuclear real property and personal property within 60 days upon SWPF and ancillary facilities transfer. Any discrepancies from the existing inventory records shall be reported to the CO.

The Contractor shall ensure that any required reach back to the SWPF construction contractor needed under this PWS element is completed within 60 days of the completion of transition of operations of SWPF to the Contractor.

Supplemental Information

An integral part of the IMC Contract is the requirement for a smooth transition of continued SWPF facilities (complex) operations, after one year of radioactive (i.e., hot) operations from the SWPF construction contractor to the Contractor.

C.2.2.3 Tank Closures

The Contractor shall complete operational closure of the F Tank Farm waste tanks and ancillary facilities including the deactivation of the F to H inter-area transfer line, operational closure of the high risk H Tank Farm waste storage tanks near or in the water table (tanks 9, 10, 11, 13, 14, and 15), and five additional H Tank Farm tanks during this contract period of performance. Tank closures shall be conducted in accordance with the Consolidated General Closure Plan, tank(s) specific Closure Module, and the DOE Order 435.1 Tier 1 Closure Authorizations and tank(s) specific Tier 2 Closure Plan.

Supplemental Information

The operational closure phase for the Tank Farm waste tanks generally consists of the following activities: 1) removal of heel waste from the tanks, 2) sampling and analysis of the remaining residual waste in the tanks, 3) isolation of the tanks from waste transfer systems and chemical

addition systems, 4) filling each tank, tank annulus, and tank cooling coils with grout; 5) capping all tank risers and 6) isolation of the tank from all other tank farm support systems. Following completion of all closure activities, each closed tank will be removed from the Wastewater Permit upon SCDHEC approval in accordance with the Consolidated General Closure Plan. A tank closure process flowchart is included as Attachment 3. Tank closure documents are prepared to demonstrate compliance with DOE and regulatory requirements as well as NDAA Section 3116. The Performance Assessments and the Tier 1 Closure Authorizations for both F and H Area Tank Farms are complete.

Types I, II, and IV older style high level waste tanks (Tanks 1F through 4F, 7F, 8F, 9H through 11H, 13H through 15H, and 21H through 24H) are planned for operational closure in accordance with a formal agreement (FFA) between the DOE, the SCDHEC and the EPA. Some of these tanks may require cooling coil flushing and annulus cleaning (Type I and II tanks).

C.2.2.3.1 Tank Heel Removal and Residual Sampling

Once bulk waste removal is completed, the remaining waste in a tank is referred to as the heel. The Contractor shall remove the heel waste from each tank. When heel waste removal efforts are determined to be sufficient, the Contractor shall submit a request to enter the Sampling and Analysis Phase and obtain preliminary cease waste removal concurrence from DOE, the EPA, and SCDHEC. The Contractor shall subsequently sample and analyze the resulting “residual” waste remaining in the tank(s), document the results in a Residual Inventory Determination Report, and prepare a Special Analysis as a supplement to the F or H Area Tank Farm Performance Assessment, as appropriate. The Contractor shall also prepare a Waste Removal report as well as a Waste Concentrations Calculation report to serve as inputs to the development of the Tier 2 Closure Plan. The Contractor shall prepare a Closure Module and Tier 2 Closure Plan to confirm the DOE Order 435.1 and regulatory performance objectives continue to be met and that the stabilized tank(s) is protective of human health and the environment. An FFA Final Cease Waste Removal concurrence shall be prepared by the Contractor and must be approved by the SCDHEC and the EPA for each tank.

Supplemental Information

Waste from each entire tank farm shall be removed to the maximum extent practicable achieving approximately 99 percent removal of the highly radioactive radionuclides as defined by the applicable Basis for Section 3116 Determination for Closure document.

Tank waste heel removal is required with documented waste removal results to demonstrate to DOE, SCDHEC, and EPA the diminishing effectiveness of each deployed waste removal technology and that additional waste removal is not practical. Residual sampling and analysis must be conducted in accordance with the SCDHEC-approved Liquid Waste Tank Residual Sampling and Analysis Plan and the associated Quality Assurance Program Plan, which specify SRNL as the only laboratory that can perform these analyses. These services are obtained via an SLA. Concentration and volume data are used to characterize the residual material to produce radiological and non-radiological inventories for the Special Analysis and Closure Module.

C.2.2.3.2 Tank Isolation

The Contractor shall isolate waste tanks and associated systems in accordance with the associated tank specific Closure Module, Tier 2 Closure Plan, and defined safety basis requirements.

Supplemental Information

Isolation activities prior to stabilizing a tank with grout are the physical process of disabling waste transfer and chemical addition systems from the tank such that no material may be transferred into or out of the tank. Tank transfer line isolation may include cutting and capping and blanking mechanical system components. Isolation of remaining intact services can be performed after the tank has been filled with grout. This includes but is not limited to air, electrical power to all components, and ventilation systems. Isolation plans for each tank being closed are prepared and described in the specific Closure Module.

C.2.2.3.3 Tank Grouting

Prior to grouting the Contractor shall develop the Residuals Inventory Determination Report, perform the Special Analysis, and prepare the Closure Module and Tier 2 Closure Plan. After the Closure Module is approved by SCDHEC, the Tier 2 Closure Plan is approved by DOE, and DOE, SCDHEC, and EPA provide their respective Final Cease Waste Removal decisions, the Contractor shall stabilize tanks with grout in accordance with the approved Closure Module and Tier 2 Closure Plan.

A tank is considered “closed” when DOE concurs that the Contractor has completed the work scope to remove the tank from service as defined in the approved Closure Module. Following closure, the Contractor shall complete any remaining isolation of each tank from Tank Farm services, prepare the tank(s) specific Final Configuration Report and tank(s) specific Explanation of Significant Differences, and then request the tank(s) be added to the Hazardous Waste Permit and removed from the Industrial Wastewater Permit.

Supplemental Information

Grouting is the process of placing reducing grout in the primary tank up to and including the risers, remaining equipment, annulus, and cooling coils. The reducing grout provides long-term chemical durability and minimizes leaching of residual waste over time. The reducing grout is self-leveling, and encapsulates the residual waste and equipment remaining inside the tank and annulus. Grouting activities include field modifications and grout procurement.

For tanks with installed equipment or cooling coils, internal voids are filled with a flowable grout mixture. In those tanks where the cooling coils have broken, alternative techniques are used to minimize voids in the grout matrix.

The final grouted tank configuration is an integral monolith free of voids and ensuring long-lasting protection of human health and the environment.

C.2.2.4 Safety Basis Upgrade

The Contractor shall revise the Documented Safety Analysis (DSA) and Technical Safety Requirements (TSRs), including development/revision of supporting hazards and accident analyses, for the Concentration, Storage, and Transfer Facilities (CSTF) and DWPF necessary to (1) optimize the safety basis for their enduring missions reflecting current/anticipated material processed and hazards; (2) address gaps identified in the gap analysis performed for each in response to Operating Experience Level 1, OE-1: 2015-1; and (3) address results of documented evaluations performed for each in response to lessons learned from the 2014 WIPP incidents. Revisions to the DSAs are expected to consider the latest DOE expectations provided in DOE-STD-3009-2014, as well as supporting documents issued since 3009-2014 (e.g., DOE-STD-1186-2016, DOE-HDBK-1224-2018).

The Contractor shall develop and submit to DOE-SR for concurrence a plan describing the strategy for developing the DSA/TSR revisions within 6 months of the Notice to Proceed.

The Contractor shall submit the DSA/TSR revisions to DOE-SR for approval within three years of the Notice to Proceed. The DSA/TSR submittals shall also include an associated implementation plan. If the implementation plan includes physical modifications or additions to the facilities, the modifications or additions shall be completed and shall be executed under the facility operations.

Supplemental Information

The gap analyses for CSTF and DWPF are documented in DOE-SR memorandum OSQA-17-0009 to DOE-HQ dated 12/7/2016. The evaluations for CSTF and DWPF in response to lessons learned from the WIPP incidents are documented in STAR records 2015-SA-001482 and 2015-CTS-001391.

C.2.2.5 System Optimization

The Contractor shall identify, develop, and implement improved approaches and technologies for tank closure, tank space management initiatives, waste removal, waste treatment, and/or waste disposal, which reduce lifecycle Liquid Waste program costs, accelerate radioactive liquid waste disposition schedules, or otherwise optimize system performance. The Contractor shall support and participate in DOE-sponsored technology initiatives, which benefit the Liquid Waste system.

The Contractor shall maintain an interactive program/system planning process for Liquid Waste program milestones and execution schedules including comprehensive salt and sludge batch planning. A comprehensive liquid waste system plan that addresses the scope necessary to complete the liquid waste program life cycle shall be developed and submitted to DOE annually.

C.2.2.5.1 Next Generation Solvent (NGS) Deployment

The Contractor shall perform final tie-in of the system modifications associated with NGS implementation into SWPF operations and implement SWPF NGS operations as directed by DOE.

Supplemental Information

A new solvent has been developed that results in significantly improved cesium decontamination factors and processing rates in a caustic side solvent extraction system. The new solvent, termed NGS, has been successfully deployed in the MCU. Use of NGS requires a different strip solution (boric acid) and scrub solution (caustic) to replace the current strip and scrub solutions (solutions of nitric acid). Modifications to provide boric acid storage/transfer and caustic scrub capability are required in order to support SWPF operation with the new solvent.

The necessary modifications in SWPF to allow for use of NGS are complete. These modifications include the three chemical storage tanks (concentrated boric acid, dilute boric acid, and caustic scrub) and the associated infrastructure (building, dikes, sumps, transfer pumps, piping, etc.).

C.2.2.5.2 At-Tank Cesium Removal

The Contractor shall assume responsibility for operating an at-tank cesium removal process, called the Tank Closure Cesium Removal (TCCR) System Unit on waste tank 9H. The Contractor shall also determine an offsite disposal facility for the TCCR filter media and any other contaminated equipment/material not suitable for disposal at SRS. The Contractor will collect the necessary data from the TCCR operation with Tank 9H waste to determine the feasibility and cost effectiveness of that operation on other waste tanks. Based on this determination, a decision will be made whether to proceed with the procurement of a second TCCR unit and plan for the operation of at least two units as supplemental salt processing to complete the LW mission.

Supplemental Information

The TCCR System is an at-tank ion exchange process for cesium removal from liquid salt waste to provide supplemental treatment capability. The TCCR system consists of a module that contains two pre-filters and four shielded ion exchange columns, using two columns at a time in a lead-lag configuration. Crystalline silicon titanate (CST) resin has been selected for current TCCR unit demonstration as the ion exchange media. Saltcake stored in the LW storage tank is dissolved by adding water and recirculating with pumps. The resultant salt solution is transferred out of the tank through jacketed transfer lines and passed through the pre-filters to remove any solids and then processed through the ion exchange columns to remove Cs-137 from the salt solution. Decontaminated salt solution is transferred to a nearby existing waste storage tank for eventual transfer to Tank 50H, feed tank for the Saltstone Production Facility. Resin columns loaded with Cs-137 to the extent practical ("spent") are removed and replaced with new ion exchange columns and new media. Spent columns are transported to the interim safe storage awaiting disposal. A HEPA-filtered ventilation system is used to maintain negative pressure in the process area of the module.

This TCCR demonstration has been initiated using Tank 10H salt waste. A total of 210,000 gallons of dissolved salt waste out of Tank 10H were processed through TCCR. Additional operations data is required as the salt dissolution in Tank 10H was less than satisfactory due to the presence of a Burkeite salt layer that was difficult to dissolve with the waste removal equipment employed in the operation. Salt solution density was lower than desired to prove Cs-137 loading capability of the ion exchange columns in addition to discovering higher than expected loading of calcium in the

columns. The existing TCCR unit will be modified based on lessons learned and deployed for use with Tank 9H waste to continue the technology demonstration.

C.2.2.5.3 Melter Fabrication

The Contractor shall monitor and evaluate DWPF operational performance of the melter's life expectancy and required HLW canister production in DWPF against the need to procure and fabricate additional melters. The Contractor shall maintain Melter #4 ready to install and complete fabrication of Melter #5 in a time period commensurate with the risk of premature melter failure based on planned DWPF production rates. Building 717-F will continue to be available for storage of unused melters and for the fabrication of future melters.

Supplemental Information

The performance of DWPF is reliant on the continued operation of the melter. The melter design is mature and readily available for the continued use for future melter fabrication. Planning for future melters is based on having a melter ready for installation upon a melter failure which requires one melter in storage ready for installation and a second melter in full fabrication. Currently, DWPF is operating on Melter #3, Melter #4 is completing assembly after undergoing corrective actions to resolve non-compliances. Melter #4 would be available for installation by the end of FY 2020. The refractory brick for Melter #5 is in storage onsite.

C.2.2.5.4 DWPF Operational Improvements

The Contractor shall implement operational improvements of the DWPF to minimize effluents and process additions, to streamline the DWPF feed process, and to maximize DWPF waste processing operations. The operational improvements must at a minimum address the increased SE influent to DWPF from SWPF. The Contractor shall provide all engineering, design, fabrication / modifications, installation of any jumpers, utility tie-in information, and the volumetric changes calculated to result from the proposed operational improvements.

Supplemental Information

The DWPF recycle stream back to the tank farm is highly influenced by the canister decontamination frit stream. Modifications implemented by the Contractor at DWPF could reduce the recycle waste stream back to the Tank Farms by 500,000 gallons annually.

C.2.2.5.5 Tank 48H Recovery

The Contractor shall maintain Tank 48H in a safe condition during the contract period. The Contractor shall also resume technology development activities to determine path forward for the treatment and disposition of Tank 48H waste with the intention of implementing the treatment method and completing treatment operations in the contract period of performance.

If the Contractor determines it is advantageous to return Tank 48H to service as a part of optimization efforts during the contract period, the Contractor shall provide an Analysis of Alternatives to the CO that includes consideration of previous alternatives analyses, identification of any new approaches, and a final recommended approach. Any recommendation to recover

Tank 48H and return it to high level waste service must address the technical approach, safety basis impacts, cost, and schedule among other attributes.

Supplemental Information

Tank 48H, located in the H-Tank Farm, is a 1.3 million gallon Type III compliant high level waste tank. It currently holds approximately 250,000 gallons of radioactive liquid waste material from the operation of the In-Tank Precipitation process. The tank contains approximately 26,000 kg of organic tetraphenylborate compounds. The organic material is incompatible with other waste treatment facilities at SRS; consequently, the tank is isolated from the other tanks in H-Tank Farm.

Tank 48H is located in close proximity to DWPF sludge preparation/qualification tank (Tank 51H), the Saltstone Production Facility feed tank (Tank 50H), and the SWPF feed tank (Tank 49H). As such, its return to service could greatly enhance the ability to prepare salt or sludge feed batches.

DOE and its contractors have considered several technologies and operational approaches to the recovery of Tank 48H. Those technologies have historically been cost prohibitive and have not developed beyond the design and laboratory scale testing phase.

C.2.2.5.6 Technology Development and Deployment

The Contractor shall identify and propose technology development and deployment activities required to optimize the liquid waste system in order to meet or exceed contract commitments and decrease the liquid waste program life cycle cost and/or schedule. Upon review and concurrence from DOE, the Contractor shall execute specific technology development and deployment activities.

C.2.2.6 Additional Glass Waste Storage Capability

The Contractor shall analyze planned production of HLW canisters in DWPF against the storage capabilities of the current GWSBs and determine when additional onsite storage capacity is required. Options to be considered shall include but are not limited to: 1) implementation of double stacking in GWSB #2; 2) a third GWSB similar to the two other facilities; 3) a concrete pad, above grade storage approach potentially with canister overpacks; and 4) design and construction of a canister shipping facility. The Contractor's analysis shall ensure that storage space is available for at least 1,260 canisters by the beginning of FY30. The Contractor's analysis, including a recommended alternative, shall be completed and submitted for DOE review and approval by the end of FY23. The final determination for any additional storage capability is subject to DOE approval, and the Contractor's analysis excludes the development of a complete specification for additional GWS capability.

C.3 Nuclear Materials Stabilization and Disposition and Non-Operating Nuclear Facilities (Surveillance, Maintenance, and Deactivation)

The regulatory and scope requirements for this section of the Master IDIQ PWS are undergoing review and are subject to change. Any Task Order(s) in support of C.3 scope is not anticipated to be issued before FY24 and will be subject to the same requirements as set forth in the above PWS.

C.4 ~~Reserved~~ Maintenance Mockup Facility (Bldg. 717-F)

Building 717-F, Maintenance Mockup Facility, will continue to be available to the Contractor for the receipt, storage and fabrication of existing and future replacement DWPF melters. The high bay area of this facility replicates features of the Melt Cell in DWPF for the purposes of facilitating DWPF replacement melter fabrication and future installation at DWPF.

~~C.4~~C.5 Core Functions: Program Support/Services

Definitions: As used in this section:

"Program" means an organized set of activities directed toward a common purpose or goal undertaken or proposed in support of an assigned mission area. It is characterized by a strategy for accomplishing a definite objective(s) that identifies the means of accomplishment, particularly in qualitative terms, with respect to work force, material and facility requirements. Programs are typically made up of technology-based activities, projects and supporting operations within the contract PWS.

"Program Management Plan (PgMP)" means a plan describing the systems, processes, procedures and other associated documentation to be used for management of programmatic and project work within each Task Order/CLIN under the authorized contract PWS.

"Performance Measurement Baseline (PMB)" means the uniquely identifiable and segregatable DOE approved baseline for each post-Critical Decision point #2 (CD-2) project being executed under DOE O 413.3 within the authorized contract PWS as defined in DOE O 413.3.

"Task Order Performance Baseline (TOPB)" means the uniquely identifiable and segregatable DOE approved baseline associated with each Task Order/CLIN within the authorized contract PWS. Within a TOPB may be one or more PMB(s).

"Contract Performance Baseline (CPB)" means the DOE approved integrated contract performance baseline that includes each approved TOPB and PMB logically linked, integrated, and time phased to represent all authorized work under the authorized contract PWS, as executed per the Contractor's PgMP.

~~C.4.1~~C.5.1 Project Support Performance Requirements

The Contractor shall:

(1) Adopt and maintain all required and associated documentation for each Post-Critical Decision–0 (CD-0) project being executed under DOE O 413.3.

(2) Maintain, and update, as appropriate, an EVMS as described in the DOE-H-2024 Earned Value Management System (Mar 2019) (Revised) clause of Section H.

(3) Evaluate Program and Project Management requirements and associated implementing instructions, as specified in the remainder of this section, and develop and provide a Program and Project Management Requirements Gap Analysis associated with the

incumbent Liquid Waste Contractor's Program and Project Management systems, processes, procedures, and other associated documentation, to DOE for approval.

(4) In addition to, and with submittal of, the Program and Project Management Requirements Gap Analysis, submit a proposal for DOE approval to replace, in part or in whole, the incumbent Liquid Waste Contractor's Program and Project Management systems, processes, procedures, and other associated documentation if the Contractor elects to affect such replacements.

(5) Prepare an independent and stand-alone proposal to DOE for approval make changes to, or deviate from, existing required / associated documentation for a Post-CD-0 project being executed under DOE O 413.3 if the Contractor elects to affect such changes or deviations.

Proposals submitted for the purposes described in Section C.5.1, (1) – (5) ~~(a)~~ shall apply the requirements and associated implementing instructions as defined in the following sections, for safely and effectively performing the cleanup mission at the Site, to all work within the PWS.

The Contractor and/or the CO shall identify and, if appropriate, mutually agree to any changes to other contract terms and conditions, including cost and schedule, associated with proposals submitted for the purposes described in Section C.5.1, ~~(a)~~ (1) – (5), pursuant to applicable requirements of the Task Ordering Procedure in Section H, and the changes clauses in Section I, of this contract.

~~C.4.1.1~~C.5.1.1 Program and Project Management

The desired outcome is predictable and consistent Contractor performance aligned to customer needs conducted within authorized baseline(s).

The Contractor shall ensure that program and project management practices are used in the performance of work including the development of plans, baselines, disciplined change control processes, and service level agreements.

The Contractor shall prepare and submit for DOE approval a PgMP that describes how the Contractor will provide all management and technical information to:

(1) Meet the requirements of DOE O 413.3, for those projects identified by DOE.

(2) Support the budget formulation activities including, but not limited to, emerging work items list; budget formulation input (including Integrated Priority List), the fall budget update submission, budget scenario development, and budget presentations (such as public and regulatory briefings, etc.).

(3) Meet the data requirements of the DOE Integrated Planning, Accountability, and Budgeting System (IPABS) for all PWS work

(4) Meet the data requirements of the Project Assessment and Reporting System (PARS II) for projects being executed under DOE O 413.3. Data for all scope in the PWS identified by DOE as required to be executed in compliance with DOE O 413.3 shall be

uploaded into PARS II in accordance with DOE O 413.3 and the "Contractor Project Performance Upload Requirements" document maintained by the DOE Office of Project Management.

(5) Ensure transparency in PWS performance and efficiency in PWS execution.

(6) Support audits, evaluations, and external technical reviews.

(7) Support other PWS performance assessments and information needs.

(8) Support development of integrated lifecycle cost estimate data, as directed by DOE, for EM Liability purposes.

All PWS management information developed under this Contract shall be accessible electronically by DOE.

~~C.4.1.2~~C.5.1.2Earned Value Management System (EVMS)

The Contractor shall maintain, and update, as appropriate, an Earned Value Management System Description (EVMSD), following adoption of the incumbent Liquid Waste Contractor's EVMS during Contract Transition, that describes the management processes and controls to be used to implement a compliant EVMS, manage and control work, and complete Contract requirements.

The EVMSD shall include:

(1) The baseline development process and the hierarchy of documents used to describe and maintain the CPB, each TOPB and each PMB.

(2) Identification of the systems, tools and software and integration of these systems with the WBS and accounting systems and data.

(3) The process the Contractor intends to use for earned value management, configuration control, interface control, and document control.

(4) The Contractor's Baseline Change Control Process, specifically describing any unique configuration control methodology intended to differentiate change control, if applicable, in relation to the CPB, each TOPB and/or each PMB.

(5) The Contractor's process for handling changes that impact costs and not schedule.

(6) The Organizational Breakdown Structure, including roles and responsibilities of each major organization and identification of management personnel.

(7) A list of EVMS software the Contractor proposes to use for program and project control per the business systems clauses in Section H.

The Contractor shall comply with the requirements of the Section H Clause entitled, DOE-H-2024, *Earned Value Management System*, and, if required have the EVMS evaluated against the EIA-748 standard per DOE direction. When EVMS certification is required for a project being executed

under DOE O 413.3, upon completion of the evaluation and closure of all corrective actions, DOE-PM will certify the Contractor's EVMS as compliant with the EIA-748 standard. After initial evaluation and determination of compliance and / or certification, DOE may at any time require the Contractor to repeat the evaluation and compliance / certification process. The Contractor shall provide all necessary support to conduct the initial and any subsequent evaluations and closure of all corrective actions.

The Contractor shall flow down EVMS requirements in accordance with the Section H Clause entitled, DOE-H-2024, *Earned Value Management System*.

~~C.4.1.3~~C.5.1.3Contract Performance Baseline (CPB)

The CPB, comprised of TOPB(s) and PMB(s), shall be an integrated and traceable technical scope, schedule, and cost execution baseline(s) that encompasses all activities to execute the requirements of this Contract, informs and is integrated with the other Site contractors' scope, schedule and cost baseline, as applicable, and enables safe, effective and efficient advancement and completion of the Site mission;

The CPB, and associated TOPB(s) and PMB(s), shall include the following:

(1) Technical Scope. The following baseline documents shall be viewed collectively as the technical scope for the cost/schedule control system:

(A) Contract PWS and other sections that define work scope and requirements;

(B) Waste site and facility lists;

(C) Approved interface agreements; and

(D) WBS Dictionary Sheets (the WBS submittal shall include a data column which cross-references the WBS elements at the lowest level to the appropriate Contract Line Item Number [CLIN]).

The CPB, and associated TOPB(s) and PMB(s), shall comply with the following requirements:

(1) The WBS shall encompass all activities required in this Contract and provide the basis for all project control system components, including:

(A) Estimating;

(B) Scheduling;

(C) Budgeting; and

(D) Program and Project performance reporting (as required under this contract).

(2) Control accounts within the WBS shall be identified; and

(3) The baseline and management thereof shall comply with EIA-748 Earned Value Management Systems as approved through the EVMSD.

The CPB, and associated TOPB(s) and PMB(s), schedule shall:

(1) Include all significant external interfaces, regulatory and Defense Nuclear Facilities Safety Board commitments, and Government-Furnished Services and Information (GFS/I) dependencies.

(2) Be an activity based, resource loaded, logical network-based and integrated plan that correlates to the WBS and is vertically traceable to the EVMS control accounts and aligns with the Contractor's field schedules.

(3) Include earned value method at the activity level and be capable of summarizing from control accounts to higher WBS levels.

(4) The CPB cost estimate shall include resource plans / task analyses, detailed resource estimates, basis of estimates, budgetary requirements, and identification of direct costs, indirect costs, management reserve, and fee.

(5) The method used to determine earned value shall be identified for each control account.

(6) The CPB shall be accessible to DOE at any time through access to electronic software and native data files.

The CPB shall be logically tied, driven, and integrated with:

(1) Financial system(s) for consistency and accurate reporting of information with traceability to budget and reporting requirements.

(2) DOE, congressional, regulatory, and external commitments.

(3) Performance milestones including contract performance incentives and other performance measures established by DOE.

~~C.4.1.4~~C.5.1.4 Contract Performance Baseline Submittals

The Contractor shall develop and submit an initial CPB as directed by DOE. Subsequent updates to the CPB will occur as each Task Order is negotiated and awarded, and the associated TOPB(s) and PMB(s) implemented into the CPB. These proposed CPB updates, for additional Task Order work only, will be submitted as part of the Task Ordering Process to the CO, for DOE and Contractor negotiation and DOE approval, as part of the Contractor's Task Order Proposals. The Contractor shall comply with the requirements of Section H Clause entitled, *Task Ordering Procedure*. The Contractor shall also follow the requirements of their EVMSD requirements for baseline change control process.

The Contractor shall provide the WBS, WBS dictionary data, and basis of estimate data in either Microsoft Word© or Microsoft Access© format. Cost data shall be provided in Microsoft Access© or Microsoft Excel© format and the schedule shall be provided utilizing the current version of Primavera Systems, Inc., Enterprise for Construction© software, unless agreed to otherwise by DOE.

The Contractor shall provide additional data that may be required by the SRS Operations Contractor for development of the Savannah River Sitewide lifecycle baseline, as directed by DOE.

The Contractor shall support DOE External Independent Review and Energy Systems Acquisition Advisory Board (ESAAB) review as required.

~~C.4.2~~C.5.2 Program and Project Performance Reporting

The Contractor shall provide DOE with the necessary CPB performance information to support budget planning and execution, program and project planning and execution; program and project performance reporting, audit, and evaluation; and other DOE performance assessment and information needs.

~~C.4.2.1~~C.5.2.1 Monthly Performance Report

The Contractor shall submit to DOE CO, with copy to ContractorsMPR@hq.doe.gov, not later than the fifteenth business day prior to the end of each calendar month, a Monthly Performance Report representing the prior month's performance monthly. The Monthly Performance Report shall include a summary of overall contract performance, a separate report for each of the major work scopes and projects at the PBS and Task Order level, and a PMB report for each post CD-0 project executed under DOE 413.3.

The summary of overall contract performance shall include:

(a) Significant accomplishments.

(b) Major issues including actions required by the Contractor and DOE.

(c) Analysis of funds expenditure, with projections for the contract, each task order and each DOE O 413.3 project, by FY and life of the Contract.

(d) Technical scope, schedule, and cost variance analysis; including implications to near term and long-term milestones and deliverables at risk of being missed.

(e) Discussion of corrective actions currently in place to address performance issues including initiation date of corrective actions.

(f) Information on any safety or quality matters that emerged or persisted during the reporting month.

(g) CPB EVMS information using Contract Performance Report formats (DI-MGMT-81466) Format 1, DD Form 2734/1, Mar 05, Work Breakdown Structure, and Format 5, DD Form 2734/5, Mar 05, Explanations and Problem Analysis.

(h) CPB level summary information from applicable TOPB and PMB sections.

The report for each TOPB shall include:

Significant accomplishments and progress towards completion of project goals and objectives.

(a) Key risks and challenges.

(b) Evaluation of safety performance (including Integrated Safety Management Systems [ISMS] metrics and all recordable injuries, lost-time injuries, and near misses).

(c) Business structure information to demonstrate ongoing compliance with the requirements of the Section H Clause entitled, *Subcontracted Work*.

(d) TOPB EVMS performance information using the following Contract Performance Report formats (DI-MGMT-81466):

(e) Format 1, DD Form 2734/1, Mar 05, Work Breakdown Structure; and

(f) Format 5, DD Form 2734/5, Mar 05, Explanations and Problem Analysis;

(g) TOPB schedule status, which reflects progress against the baseline and includes critical path analysis, performance trends, variance discussion(s), and potential issues related to milestones;

(1) Task Order Estimate To Completions (ETCs) and Estimate At Completions (EACs);

(h) A change control section that summarizes the scope, technical, cost, and/or schedule impacts resulting from any implemented actions; and that discusses any known or pending baseline changes and utilization of management reserve;

(1) Project risk assessment, including identification of critical risks, actions planned, and actions taken to address those risks, potential problems, impacts, and alternative courses of action, including quality issues, staffing issues, assessment of the effectiveness of actions taken previously for significant issues, or the monitoring results of recovery plan implementation;

(2) The project risk assessment shall also identify the engineering and technology to reduce the risk and uncertainty with the project; and

(3) Actions required by DOE, including GFS/I and DOE decisions.

(i) The PMB report for each post CD-0 project executed under DOE 413.3 shall include:

(1) Significant accomplishments and progress towards completion of project goals and objectives.

(2) Key risks and challenges.

(3) Evaluation of safety performance (including ISMS metrics and all recordable injuries, lost-time injuries, and near misses).

(4) Business structure information to demonstrate ongoing compliance with the requirements of the Section H Clause entitled, Subcontracted Work;

(5) For each post CD-2 project, PMB Performance including EVMS information using the following Contract Performance Report formats (DI-MGMT-81466):

- Format 1, DD Form 2734/1, Mar 05, Work Breakdown Structure;
- Format 2, DD Form 2734/2, Mar 05, Organizational Categories;
- Format 3, DD Form 2734/3, Mar 05, Baseline;
- Format 4, DD Form 2734/4, Mar 05, Staffing; and
- Format 5, DD Form 2734/5, Mar 05, Explanations and Problem Analysis.

(6) The Contract Performance Reports shall be provided in the format forms referenced in the Integrated Program Management Report (IPMR) Data Item Description (DID) DI-MGMT-81861, unless the Contract specifies otherwise;

(7) Contract Funds Status Report (CFSR) shall be provided in accordance with DID, DI-MGMT-81468, CFSR, or equivalent;

(8) Baseline schedule status, which reflects progress against the baseline and includes critical path analysis, performance trends, variance discussion(s), and potential issues related to milestones;

(9) Contract ETCs and EACs;

(10) A change control section that summarizes the scope, technical, cost, and/or schedule impacts resulting from any implemented actions; and that discusses any known or pending baseline changes and utilization of management reserve;

(11) Project risk assessment, including identification of critical risks, actions planned, and actions taken to address those risks, potential problems, impacts, and alternative courses of action, including quality issues, staffing issues, assessment of the effectiveness of actions taken previously for significant issues, or the monitoring results of recovery plan implementation;

(12) The project risk assessment shall also identify the engineering and technology to reduce the risk and uncertainty with the project; and

(13) Actions required by DOE, including GFS/I and DOE decisions.

~~C.4.2.2~~C.5.2.2 Project Review Meetings

The Contractor shall participate in contract/project reviews and be prepared to address any of the information in contract project reviews and be prepared to address in project reports and other information as requested by DOE. Contract or project status meeting shall be conducted at DOE's request to provide interim updates and address issues.

~~C.4.3~~C.5.3 Cost Estimating

Contractor developed cost estimates form the basis of the cost baseline of the CPB, and associated TOPB(s) and PMB(s) and are important when evaluating proposed Contract changes. DOE uses these cost estimates for budget formulation, Contract change management, cleanup program planning, establishing a database of estimated and actual costs, and performance measurement.

Cost estimates shall be credible, well documented, accurate, and comprehensive.

The Contractor shall prepare cost estimates in accordance with the requirements in Section H Clause entitled, *Cost Estimating System Requirements*, and Section H Clause entitled, *Task Ordering Procedure*, of this Contract and using the twelve steps of high-quality cost estimating process identified by the Government Accountability Office (GAO) in GAO-20-195G, *GAO Cost Estimating and Assessment Guide*, for all priced Contract actions exceeding the simplified acquisition threshold.

~~C.4.4~~C.5.4 Scheduling

The Contractor's CPB and Integrated Master Schedule (IMS), comprised of TOPB(s) and PMB(s) schedules, shall utilize the DOE provided coding structure in (b) to integrate the Contractor's programmatic activities and projects executed under DOE O 413.3 into the CPB IMS. The CPB IMS integrates the TOPB programmatic activities and activities for projects executed under DOE O 413.3 managed by the Contractor into one schedule.

The Contractor shall develop the IMS in accordance with the National Defense Industrial Association's Planning & Scheduling Excellence Guide (v3.0), EIA-748 Guidelines and be resource loaded. The Contractor's IMS shall utilize the first four levels defined by the EM Corporate Work Breakdown Structure (CWBS), which are 1) Level 1 – EM, 2) Level 2 – SRS/ Savannah River Operations Office (SR), 3) Level 3 - Program Baseline Summary (PBS) and 4) Level 4 - Analytical Building Blocks (ABBs). The CWBS should then be extended below Level 4 based on the way the Contactor plans to manage the work, must address all requirements of the Contractor PWS for all Task Orders under this contract, and be extended to the appropriate lower level(s) that satisfies critical visibility and reporting requirements as defined by the Contractor's EVMSD.

~~C.4.5~~C.5.5 Risk Management

Successful execution of the Site cleanup mission requires an integrated risk management program where crosscutting risks and mitigation actions are identified, communicated, and coordinated with DOE and other Site contractors. The conduct of risk management shall result in risk informed

prioritization of program, project, and infrastructure investments that facilitate successful project execution and program management.

The Contractor shall implement a risk management program in compliance Office of Management and Budget (OMB) Circular A-123 for Enterprise Risk Management, with risk management plans associated with each project being executed under DOE O 413.3, and DOE policy Requirements for Management of the EM's Cleanup Program. The Contractor shall also incorporate the principles of DOE G 413.3-7A, *Risk Management Guide*, and GAO-09-3SP in its risk management process.

The Contractor shall submit a CPB level Risk Management Plan (RMP) to DOE, comprised of risk management plan(s) for TOPB(s) and risk management plans for project PMBs executed under DOE O 413.3. PMB risk management plans shall be submitted to DOE for approval as required by DOE O 413.3. The PMB risk management plans do not need to be standalone risk management plans and instead, may be an appendix to the TOPB RMP. The plan shall identify the processes and procedures that will be implemented to address risk identification, qualitative risk assessment, quantitative risk analysis, risk handling, schedule risk analysis, risk monitoring and reporting, and calculating the recommended management reserve and schedule reserve required for adequate management of Contractor-controlled risk.

The Contractor shall communicate its risk analysis pertaining to crosscutting decisions to DOE and, other Site contractors, including agreement as to who shall be the lead for managing each risk. These crosscutting impacts shall be quantified in terms of probability, cost, and schedule impact to the overall Site cleanup mission, where possible.

~~C.5~~C.6 Environment, Safety, Health, & Quality

The Contractor shall establish and maintain the programs, procedures, and processes necessary to ensure the safety and health of the workers, the public, and the environment, and the quality of operations for all activities included in the Contract.

~~C.5.1~~C.6.1 Worker Safety and Health

The Contractor shall develop (or adapt), staff and implement a Worker Safety and Health Program (WSHP) that complies with 10 CFR 851, *Worker Safety and Health Program.* The WSHP must be approved before work commences.

~~C.5.1.1~~C.6.1.1 Workplace Substance Abuse Programs

The Contractor shall:

(1) Provide a Workplace Substance Abuse Programs (WSAP) Implementation Plan to DOE for approval, and review and update the plan as necessary;

(2) Comply with the requirements in 10 CFR 707, *Workplace Substance Abuse Programs at DOE Sites*; DOE O 350.1, *Contractor Human Resource Management Programs*; and 49 CFR 40, *Procedures for Transportation Workplace Drug and Alcohol Testing Programs*, as administered by the overall WSAP Implementation Plan;

(3) Flow down the WSAP to all subcontractors with personnel in testing-designated positions.

(4) Comply with the SRS Operations Contractor established testing program for employees in testing designated positions. Testing designated positions are identified by the Contractor and apply to employees whose duties involve: Access to or handling of classified information; Access to or handling of Special Nuclear Material (SNM); High risk of danger to life, the environment, public health and safety, or national security; and Transportation of hazardous materials to or from a DOE Site.

(5) Coordinate and provide drug/alcohol testing information to SRS Operations Contractor, as required by their program and U.S. Department of Transportation (DOT) regulations;

(6) Comply with the SRS Operations Contractor established procedures and records management requirements for the implementation of the WSAP;

(7) Comply with procedures and programs established by SRS for education awareness on illegal substance use in the workplace, supervisory training regarding their responsibilities with impaired employees, and Employee Assistance Program services; and

(8) Report occurrence and/or reasonable suspicion testing regarding the WSAP to the SRS Operations Contractor within the timeframe established to allow notice to DOE within four hours from the time the testing is ordered.

Supplemental Information

The authorities and requirements for a WSAP are derived from 10 CFR 707, Workplace Substance Abuse Programs at DOE Sites and 49 CFR 40, Procedures for Transportation Workplace Drug and Alcohol Testing Programs. The SRS Operations Contractor will establish program requirements, provide program procedures, conduct employee and supervisory training, establish testing programs, and maintain the official WSAP records.

~~C.5.1.2~~C.6.1.2Safety Culture

The Contractor shall:

(a) Adopt and continuously improve organizational culture (Site core values and behaviors).

(b) Establish and maintain a safety culture and safety conscious work Environment in accordance with Departmental expectations, including implementation and utilization of programs/processes that support employees raising concerns without fear of retaliation. These programs/processes include, but are not limited to, the Employee Concerns Program (ECP); the Differing Professional Opinions Process; Ethics and Compliance Program/Process; and Alternative Dispute Resolution;

(c) Continuously promote a work environment where employees are encouraged to raise concerns. The Contractor shall define expectations, rigorously reinforce those expectations, and take actions to mitigate the potential for a chilling effect;

(d) Conduct business in a manner fully transparent to DOE. Activities are demonstrated by open, clear, and well-communicated management actions and technical and project documentation. Identified issues and trends are proactively shared with DOE;

(e) Champion a culture that promotes proactive self-identification and reporting of issues that identifies and takes action on systemic weaknesses leading to sustained continuous self-improvement; and

(f) Champion a culture that emphasizes the three safety focus areas of Leadership. Employee Engagement and Organizational Learning and their associated attributes as set forth in Attachment 10 of DOE G 450.4-1C, Integrated Safety Management System Guide.

C.6.2 Nuclear Safety Management~~Reserved~~

The Contractor shall establish and maintain a Nuclear Safety Program in compliance with 10 CFR 830, Nuclear Safety Management, including Subpart A, Quality Assurance Requirements, and Subpart B, Safety Basis Requirements and consistent with relevant DOE orders, guides and standards. The Contractor shall ensure that the structure of requirements to achieve nuclear safety is based on sound principles such as defense in depth, redundancy of protective measures, robust technical competence in engineering, operations and management oversight, and compliance with DOE directives embodying nuclear safety requirements. During transition, the Contractor shall adopt the existing SRS Unreviewed Safety Question (USQ) process. The Contractor shall ensure that all nuclear facilities are maintained and operated within the DOE approved safety bases.

~~C.5.2~~C.6.3 Radiation Protection

The Contractor shall develop and implement a Radiation Protection Program that complies with the requirements of 10 CFR 835, *Occupational Radiation Protection*. Utilize guidance from DOE-STD-1098-2008, *Radiological Control*, to develop the program.

~~C.5.3~~C.6.4 Radiological Assistance Program (RAP)

The Contractor shall:

~~(a) Establish an agreement with National Nuclear Security Administration (NNSA) detailing the specific services to be provided by the contractor in support of the DOE Region 3 RAP.~~

~~(b)~~(a) Provide ~~qualified personnel, technical expertise, equipment as delineated in the inter-contractor agreement to ensure maintenance and staffing of emergency teams with the ability to respond under the direction of DOE NNSA and the U.S. Department of Homeland Security.~~ radiological protection professionals to support the Nuclear Emergency Support Team, specifically the DOE Region 3 Radiological Assistance Program (RAP) and Aerial Measuring System (AMS) assets. The contractor shall ensure

that individuals designated to support RAP/AMS are provided the opportunity to participate in required training and drills/exercises to maintain their qualifications for these collateral duties. Once qualified, personnel will be assigned to teams with rotating on-call duties to ensure responses to requests for offsite radiological assistance are provided within DOE/NNSA response timelines on a 24/7 basis. In addition to their emergency response duties, RAP/AMS personnel will also be made available to support other RAP/AMS missions, including training for offsite response partners, exercise participation, and support for Special Events and National Special Security Events, as directed by NNSA.

~~(c)~~(b) ~~As specified in the agreement with NNSA, a~~Adhere to the requirements established by NNSA, consistent with DOE Order 153.1.

Supplemental Information

The NNSA manages the Nuclear Emergency Support~~Region 3 Radiological Assistance Program (RAP)~~, as described in DOE O 153.1, Departmental Radiological Emergency Response Assets, on behalf of DOE. DOE Region ~~The Region~~ 3 encompasses the states of Alabama, Florida, Georgia, North Carolina, and South Carolina; however, RAP and AMS support may also be directed outside of Region 3, including OCONUS locations. ~~RAP is responsible for Alabama, Florida, Georgia, North Carolina and South Carolina and others, as directed by DOE Headquarters (HQ).~~

The mission of RAP is to provide a deployable, tailored capability to assist other Federal, State, Tribal and local agencies, as well as private businesses and individuals, in responding to incidents involving nuclear/radiological materials. RAP also provides training assistance to Federal, State, Tribal, and local agencies to enhance the overall national response capability to a nuclear/radiological event. RAP responds to a variety of crisis response and consequence management missions, such as: incidents involving fixed nuclear facilities, transportation events, lost or stolen radioactive sources, nuclear weapons incidents/ accidents, and terrorist use or threatened use of nuclear/radiological materials. AMS provides an aerial based response for rapid survey of radiation and contamination following a radiological event as well as a search capability for lost or stolen radioactive sources. ~~The RAP Mission is to provide first-responder radiological assistance to protect the health and safety of the general public and the environment; assist DOE program elements, and other federal, state, Tribal and local agencies in the detection, identification and analysis, and response to events involving the use of radiological/nuclear material. The RAP provides 24-hour-a-day radiological response capabilities. The RAP teams consist of DOE and DOE contractor personnel that perform radiological assistance duties as part of their normal employment or as part of the terms of the Contract between their employer and DOE. The RAP Response Team will require augmentation of personnel, equipment, and expertise as delineated in work scope arrangements with the Contractor, other Site contractors or offsite vendors.~~

~~C.5.4~~C.6.5 Quality Assurance

The Contractor shall submit a Quality Assurance Plan (QAP) that implements Quality Assurance (QA) program requirements identified in Section J, Attachment J-2 and Section E.1 using a graded approach for DOE approval. The graded approach shall be documented and submitted for DOE approval as a standalone document or combined with the QAP.

C.6.6 Criticality Safety~~Reserved~~

The Contractor shall establish and maintain a Criticality Safety Program in compliance with DOE O 420.1, Facility Safety and relevant directives, and consistent with relevant guides, and standards identified in this contract.

~~C.5.5~~C.6.7 Training

The Contractor shall:

(a) Establish a training program in accordance with DOE O 426.2, *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*, and all applicable laws and regulations. The program shall include a Training Implementation Matrix (TIM) or a Training Program Plan (TPP), which shall be updated annually and submitted to DOE for approval.

(b) Track employee training status and notify employees of training needs (this includes training provided by other Site contractors, instrument vendors, and internal Contractor training). Training records shall be maintained and retrievable for current employees.

(c) Coordinate with other Site contractors to consolidate training modules, where practicable; and

(d) Ensure that its training program is configured/managed so the personnel who do not have the necessary training (e.g., not trained, not pre-qualified, etc.) are prohibited from performing the work that requires the training.

~~C.5.6~~C.6.8 Environmental Regulatory Management

~~C.5.6.1~~C.6.8.1 Environmental Regulatory Activities

The Contractor shall:

(a) Plan and safely execute a program that meets regulatory commitments reflected in the SRS Federal Facility Agreement, Clean Air Act permit #TV-0080-0041, Clean Water Act permit #SC0000175, Resource Conservation and Recovery Act (RCRA) permit #SC1890008989 and closure plans, National Environmental Policy Act (NEPA), settlement agreements, administrative orders, consent decrees, notices of violation(s), Memoranda of Agreements or other notices of direction from DOE and/or regulatory agencies, as applicable.

(b) Execute work consistent with DOE NEPA decisions.

(c) When requested by DOE, prepare technical information required for additional NEPA analyses and/or documentation.

(d) Execute the Site environmental permitting and regulatory compliance activities per Section J.

(e) Support DOE in responding to regulatory issues.

(f) Cooperate and coordinate when requested by DOE during enforcement actions including tracking, trending, and evaluating actions; coordinating and integrating responses; developing a protocol with the other Site contractors for enforcement inspections; and, for resolving compliance issues.

(g) Assume ownership of regulatory notices of violations that were caused by the facilities assigned under the contract and make the necessary actions to correct the situation and prevent further noncompliance occurrences.

(h) Support Site visits from regulatory agencies and provide escorts as needed.

~~C.5.6.2~~C.6.8.2Environmental Compliance Activities

The Contractor shall:

(a) Interface with other contractors in providing legally and contractually required air, liquid effluent, and other media environmental monitoring data. Collect, compile, and/or integrate air and liquid effluent (including radionuclides) monitoring data from IMCC facilities assigned under the contract.

(b) Provide the SRS Operations Contractor legally and contractually required air, liquid effluent, and other media environmental monitoring mission source and chemical inventory data as applicable.

(c) Implement a Best Management Practices plan for the management of toxic substances in accordance with the Site's NPDES permit(s).

(d) Implement a Scavenger Wastewater Program in accordance with the Site's M&O Contractor and the Site's NPDES permit(s). Provide a Scavenger Wastewater Program to other contractors; coordinate with other site contractors where IMCC handles other site contractors Scavenger wastewater; and implement appropriate SLA's where necessary.

(e) Compile a list of regulatory commitments with deadlines and track the completions of such commitments.

(f) Collect and compile solid waste data from facilities assigned under the contract and provide the SRS Operations Contractor with this data on an as-needed basis.

(g) Cooperate with all other Site contractors to ensure environmental compliance.

(h) Submit an Environmental Management System (EMS) internal audit compliant with DOE O 436.1, Department Sustainability.

~~(g)~~(i) Every three years, obtain a qualified third-party audit of the Contractor's EMS.

~~C.5.7~~C.6.9 Conduct of Operations

The Contractor shall:

(a) Establish and implement a Conduct of Operations (CONOPS) Program in accordance with DOE O 422.1, *Conduct of Operations*, using the graded approach to CONOPS requirements and attributes for all Hazard Category 2, and 3 nuclear facilities and for other than Hazard Category 2, and 3 nuclear facilities. Facilities may be grouped as appropriate.

(b) Define a graded approach for causal analysis and corrective actions for High, Low, and Informational Level reports as required by DOE O 232.2A, *Occurrence Reporting and Processing of Operations Information*, in the QAP.

(c) Include the Contractor's implementing process or procedure for activity level work planning and control in the CONOPS Program that:

(1) Applies to all facilities and is not limited to nuclear facilities and activities.

(2) Protects the worker, the public, and the environment by scoping, planning, scheduling, and preparing in a manner that results in the safe execution of work.

(3) Mitigates or eliminates the hazards associated with the work.

(4) Identifies the impact of work to the facility and work groups and plan, control, and execute the work without incurring unanticipated issues resulting from the work.

(5) Maximizes efficiency and effectiveness of Site personnel and material resources.

(6) Maximizes availability and reliability of facility equipment and systems.

(7) Maximizes continuous feedback and improvement including worker feedback mechanisms.

~~C.5.8~~C.6.10 Reserved

~~C.5.9~~C.6.11 Conduct of Engineering

The desired outcome is an Engineering service that provides engineering leadership and resources to accomplish the work scope. The Contractor will utilize a systematic integrated disciplined approach to perform engineering work using sound principles that support clearly defining the problem; managing system functions and requirements; identifying and managing risk; establishing bases for informed decision-making; and verifying engineering products and services meet customer needs.

Coordinate with DOE the delegations below which are provided for operational flexibility. DOE retains overall authority for the SRS.

The Contractor shall:

(1) Function as the Design Authority when appointed in accordance with DOE O 413.3.

(2) Accept delegation of limited Authority having jurisdiction functions related to 10CFR851 and O 420.1~~C~~.

(3) Accept assignment of limited Authority having jurisdiction roles and responsibilities for 10CFR851 requirements for NFPA codes and standards dealing primarily with electrical design, installation, and operation of electrical systems.

(4) Be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other services furnished by the contractor under this Contract.

(5) With the SRS Operations Contractor as the lead, support the development and maintenance of the Site Natural Phenomena Hazards (NPH) requirements documents.

(6) Utilize the SRS Site NPH requirements documents in the design, construction, and analysis of facilities assigned to this Contract in accordance with DOE O 420.1.

~~C.5.10~~C.6.12 Conduct of Maintenance

~~C.5.10.1~~C.6.12.1 Real Property Maintenance

In accordance with DOE O 430.1C, *Real Property Asset Management,* real property assets must be sustained by maintenance, repair, and renovation activities to ensure: mission readiness; operational safety; worker health, environmental protection and compliance; security; and property preservation to cost-effectively meet program missions.

The Contractor shall establish, and implement a maintenance management program for real property assigned to this Contract that includes the following:

(1) A software database that provides the ability to track, capture, document, and demonstrate the real property maintenance cost expenditures at the component level.

(2) A method to determine the minimum acceptable level of condition for each asset; methods for categorizing Repair Needs deficiencies that are also classified as Deferred Maintenance (DM); management of the DM backlog if funding allows; and a method to prioritize maintenance work.

(3) Keeping existing facilities in an acceptable condition, functional, and sustainable in support of current mission. This includes a management process for planning and budgeting for known future cyclical maintenance, repair, and renovation requirements for major building components or infrastructure systems; and a mechanism to track direct and indirect funded expenditures for maintenance and repair and renovation at the asset level.

(4) A technical and management process to align the performance, functional, and physical attributes of real property facilities, structures, systems, and components in the maintenance program with associated requirements, design, and operational information.

(5) Real property asset availability for planned use or disposition using preventive and predictive maintenance and repairs.

(6) A five-year forecast, by fiscal year, and update annually to identify financial investments for sustainment of real property assets to support DOE strategic plans, program guidance, and Departmental performance targets. Include consideration for desired level of service, remaining service life, current condition assessments, Energy Independence and Security Act energy and water evaluations, utilizations surveys, the mission dependency of the asset, and projected funding for DM reduction.

The Contract shall support the SRS Operations Contractor in the Site Condition Assessment Surveys/Condition Assessment Information System (CAIS) for assigned facilities, other structures and facilities, real property trailers, and real property CONEX boxes. Any issues found during condition assessments surveys will be handled in accordance with the Contractor Assurance System (CAS).

~~C.5.10.2~~C.6.12.2 Nuclear Facility Maintenance

The Contractor shall perform maintenance in accordance with the requirements of DOE O 433.1B, *Maintenance Management Program for DOE Nuclear Facilities*, to minimize the likelihood and consequences of human fallibility or technical and organizational system failures.

The Contractor shall:

(1) Develop and implement a Nuclear Maintenance Management Program (NMMP) using the general and specific requirements and attributes identified in DOE O 433.1B for the DOE Hazard Category 2 and 3 Nuclear Facility;

(2) Provide to DOE for approval of the NMMP Description Documents, at least every three years or as directed by DOE (minor administrative changes and corrections or routine updates to cited documents do not require new DOE approval) in accordance with the requirements in DOE O 433.1B.

(3) An NMMP may be written to encompass both nuclear and non-nuclear facility maintenance in a single program.

~~C.5.11~~C.6.13 Fire Protection Program

The Contractor shall:

(1) Establish and implement a Fire Protection Program in accordance with DOE O 420.1, Facility Safety.

(2) Develop a Fire Protection Program and Wildlife Fire Management Plan. Coordinate this plan with the SRS Operations Contractor in the development and integration of the baseline needs assessment. Obtain DOE approval of the plan.

(3) Provide Fire Protection Inspection, Testing & Maintenance services for the IMCC facilities.

(4) Establish and maintain the Contractor Authority Having Jurisdiction (CAHJ) in coordination with the SRS Operations Contractor and direction from DOE-SR. ~~in accordance with FP CAHJ Reference Document.~~

(5) Accept assignment of limited Authority having jurisdiction responsibilities related to the Fire Protection. ~~Contractor Authority having jurisdiction program."~~

~~C.6~~C.7 Personal Property Management

~~C.6.1~~C.7.1 Personal Property Management Program

The Contractor shall manage all government property utilized under this contract. As of the end of contract transition the Contractor shall accept the transfer of and accountability for government property and equipment, including special nuclear material. This requirement includes government property in the possession or control of subcontractors. The Contractor shall establish and maintain a Personal Property Management System (PPMS) in accordance with Section I. 180(FAR) 52.245-1 Government Property, 41 CFR Chapter 102 Federal Management Regulation, and 41 CFR Chapter 109 Department of Energy Property Management Regulations to manage Government property in its possession. The Contractor PPMS shall be submitted to DOE for review and approval in accordance with Section J, Attachment J-~~2~~7, List of Contract Deliverables. All Government Furnished Property (GFP) under this contract is furnished on an "as is/ where is" basis. The Government makes no warranty with respect to the serviceability and/or suitability of the property for contract performance. Any repairs, replacement, and/or refurbishment shall be the Contractor's responsibility.

The Contractor shall:

(1) Interface with the SRS Operations Contractor in the execution of the SRS Personal Property and Materials Management Program.

(2) Manage a Contract-specific Personal Property and Materials Management Program consistent with the SRS Operations Contractor's Program.

(3) A Contract-specific Personal Property and Material Management Program (Property Management System) and submit for DOE approval.

(4) Work with the SRS Operations Contractor and other Site contractors in establishing Site Personal Property and Materials Management policies and procedures.

(5) Conduct a complete, wall-to-wall physical Contractor Controlled Inventory, including bar coding and tagging as applicable, and provide a report to DOE.

(6) Participate in Sitewide personal property borrowing and loaning activities (domestically and abroad); loans of Government property to and from non-contractors, other DOE Sites, and/or other agencies.

(7) Participate in the Sitewide precious metals recycling program.

(8) In the material management program, maintain an accurate inventory throughout the lifecycle of the Contract.

Supplemental Information

The Savannah River Personal Property and Materials Management Program managed by the SRS Operations Contractor is conducted in accordance with established DOE directives and other regulations and laws (FAR Part 52.245-1, Government Property; DEAR Part 952.245-5, Government Property (Cost Reimbursement; Time and Materials, or Labor-Hour Contracts; Section H, Laws, Regulations, and DOE Directives; and 41 CFR 109, DOE Property Management Regulations) that enables effective and efficient stewardship of personal property assets, and optimum reuse and disposal of federal personal property.

The program provides for efficient tracking of accountable personal property Sitewide, management of the primary property management Sitewide database, including providing Sitewide property management reports and other related systems, central recycling, excess property dispositioning, equipment transfers and loans, and maintenance of central warehouses and associated inventory. Discrepancies amongst the other Site contractors that cannot be resolved internally shall be resolved through the interface management process.

~~C.6.2~~C.7.2 Disposition of Excess Personal Property

When personal property in Condition Code 1, 4, or 7 (41 CFR 102-36.240) is determined to be excess to the needs of this Contract, it shall be posted on the Sitewide Excess Personal Property Bulletin Board for seven days. If the asset is not reutilized on the Site, then the Contractor shall consult with the SRS Operations Contractor for further and final disposition.

The Contractor shall:

(1) Manage planning, coordination, asset isolation, cleanup, preparation for removal, transfer, and other activities required to complete the transfer of targeted assets.

(2) Process scrap metal, paper, wood, and recyclable materials through the SRS Operations Contractor.

(3) Report excess items to the DOE Organizational Property Management Officer (OPMO) /DOE Property Administrator within the timeframes specified in FAR Part 52.245-1, *Government Property*, and 41 CFR 109, *Department of Energy Property Management Regulations*.

(4) Disposition nuclear-related or proliferation sensitive property in accordance with the requirements of 41 CFR 109 and DOE O 474.2, *Nuclear Material Control and Accountability*.

~~C.6.3~~C.7.3 Inventory Management

The Contractor shall:

(1) Manage assigned inventory warehouses. Warehouse facility operations shall provide for tracking, storage, and disbursement of inventory items.

(2) Perform an annual inventory of Government property within warehouse facilities assigned to this Contract.

(3) Support an annual inventory with SRS Operations Contractor as the lead of the Site convenience storage warehouse and any other shared warehouses containing personal property for this Contract.

(4) Maintain appropriate levels of designated supplies and emergency response-related items, to ensure the timely availability of critical items.

(5) Establish the most cost-effective method to provide common-use and critical items, including onsite storage, just-in-time contracts, and basic ordering agreements.

(6) Follow the priorities for use of mandatory government sources listed in FAR Part 8, *Required Sources of Supplies and Services*, prior to purchasing personal property.

(7) Maintain stock on hand or provide immediate access to critical items.

(8) Support the Asset Management Information System (AMIS) required to provide customer access and accountability for stored items.

(9) Develop, implement, and administer the Spare Parts Program for this contract in compliance with DOE O 433.1B, *Maintenance Management Program for DOE Nuclear Facilities*.

~~C.6.4~~C.7.4 Real Property Asset Management

The Contractor shall participate and coordinate with the SRS Operations Contractor in strategic and tactical planning of real property short-term and long-term forecasts for this Contract and provide information to the SRS Operations Contractor to document appropriately in the following plans: SRS Infrastructure and Services Alignment Study (ISA), Five Year Site Plan (FYSP), Master Infrastructure List (MIL), and other planning activities being developed and maintained by the SRS Operations Contractor.

Supplemental Information

In accordance with DOE O 430.1C, Real Property Asset Management, real property must be managed in a safe, secure, cost-effective, and sustainable manner; ensure that financial investments in real property are aligned to meet DOE mission needs and requirements; and ensure the real property portfolio is appropriately sized, aligned, and in proper condition to support efficient mission execution. This also includes providing reliable FIMS information to the SRS Operations Contractor that provides current, complete, and accurate information on real property holdings, enabling informed decision making in the planning, budgeting, operation, maintenance, and disposal of real property.

~~C.6.5~~C.7.5 Facilities Information Management System

The Contractor shall:

(a) Provide the SRS Operations FIMS Administrator on an annual basis, the required maintenance costs, and other data elements that need to be updated in FIMS at the asset level utilizing the captured component level maintenance data to meet the FIMS reporting requirements and timelines.

(b) Participate in the annual FIMS data validation effort led by the SRS Operations Contractor, encompassing records review, onsite asset inspection, and validation of a select number of records. Support development of validation scorecard results and corrective action plan.

(c) Support the SRS Operations Contractor to develop real property performance measurement/metrics for the Site to trend lifecycle management of real property assets.

~~C.6.6~~C.7.6 General Purpose Facility Planning and Management

The Contractor shall, with the SRS Operations Contractor as the lead, provide information in the Comprehensive Consolidated Housing Plan (CCHP) to:

(a) Coordinate, manage, and integrate office and warehouse needs within the IMCC PWS and provide cost-effective, efficient, safe, and secure posture of real property to meet operating requirements.

(b) Evaluate the supply and demand of facilities for the IMCC to ensure a collective strategy that support and improve the effectiveness and efficiencies of facilities, as documented in the ISAP, FYSP, and CCHP.

~~C.6.7~~C.7.7 Land-Use Planning and Management

The desired outcome for land-use planning and management is to perform work in compliance with the Savannah River Land Use Plan (SLUP) and its implementing plans and procedures, support the SRS Operations Contractor in performing management of real property at the Site for DOE, and cooperate in the use of real property among other Site contractors.

The Contractor shall coordinate with and support the SRS Operations Contractor in a range of real property activities, such as conducting land-use planning for areas and specific parcels; conducting reviews and integrating land-use requests for new facilities, infrastructure systems, land

improvements, or change of land use; conducting land management activities, including day-to-day implementation of the Savannah River Land Use Plan SRNS-RP-2014-00537; managing land use requirements and beneficial reuse of land; and conducting real estate activities in the out-grant and disposal of real property or interests therein.

The Contractor shall:

(1) Comply with the SLUP and associated land use plans as directed or interpreted by DOE for the IMCC.

(2) Provide input to the SRS Operations Contractor to assess the need for updating or revising the SLUP and provide necessary information for performing Savannah River land use planning.

(3) Provide necessary data and information to the SRS Operations Contractor for performing SR S land use planning and management.

(4) Maintain real property assets and identify corrective actions for deficiencies in land use.

~~C.7~~C.8 Information Management

C.8.1 Information Technology and Cyber Security Management

The primary goal of this scope of work is to enable the successful execution of the IMCC mission and associated activities by providing effective, efficient, and innovative information management (IM) and information technology (IT) solutions, maintenance of IMCC technical data in support of regulatory decision-making, and long-term stewardship. The Contractor shall manage and maintain secure automated information systems, network and server operations, desktop services, software application development and maintenance and other information technology (IT) support and infrastructure necessary for the IMCC mission in accordance with National, Federal, Departmental, and program policies. This includes execution of a hardware and software lifecycle replacement/upgrade plan that ensures IT resources do not become outdated or unsupported across the IMCC mission organizations throughout the contract period. The Contractor shall submit a property management system plan under requirements of FAR 52.245-1.

Achievement of these goals and requirements stated in section C.8 can be accomplished through one of three options:

(1) Developing, implementing, and maintaining these services utilizing the Contractor's resources (unless expressly required to procure services from the SRS Operations Contractor);

(2) Procuring the necessary resources from the SRS Operations Contractor as outlined in Section J, Attachment J-3, *Savannah River Site Services and Interface Matrix* (unless the Contractor is expressly required to provide the service); or

(3) Utilizing a combination of internal services as well as procuring services through the SRS Operations Contractor.

The Contractor is required to provide plans for implementation of the IT and Cyber Security programs within the first 90 days of the contract period. Plan should address method of implementation, resources being procured/developed, and timeline for implementation, at a minimum. These plans must receive concurrence from DOE prior to implementation.

For IT Support, the Contractor shall:

(1) Provide support for DOE IT Strategic Planning, Capital Planning & Investment Control, Enterprise Architecture, and other IT activities required for the Contractor's operation. This includes the Contractor performing and documenting its IT strategic and enterprise architecture plans, portfolio planning and investment control, and management and tracking of IT/Cyber budgets. Capital Planning support personnel shall have a good working knowledge of OMB requirements and best practices for IT Investment Reporting, Application Portfolio Management, Governance (specifying the decision rights and accountability framework to encourage desirable behavior in the use of IT), and Project Management. The Contractor shall perform, at a minimum, the following tasks associated with IT Capital Planning:

(a) Support the management of information, IT assets and IT investments, including OMB Capital Planning and Investment Control Exhibit investments and reports. These reports are generated monthly, annually, and/or during the OMB Passback, and involves analyzing, collating, and reporting detailed information on the utilization of IT resources (e.g., applications, hardware, software, and labor).

(b) Coordinate with DOE to facilitate the timely and accurate submission of applicable Capital Planning and Investment Control Exhibits for IT investments in OMB A-11 for monthly and annual reports and data calls.

(c) Provide analysis and reporting of cost and risk reduction activities (including creating and maintaining guidance) to improve investment performance.

(d) Provide IT portfolio management support by evaluating and monitoring the portfolio on a continuous basis.

(e) Support ad hoc portfolio requests for portfolio analysis and other ad hoc reporting requests.

(f) Support the information gathering and reporting for data calls in a timely and accurate manner and within the due date specified by the requesting organization.

(g) Support the Application Portfolio Management process by evaluating the portfolio to increase its efficiency and effectiveness to support stakeholder needs.

(h) Support the information gathering and reporting for Enterprise Architecture/Strategic Planning data calls from OMB, EM, or Office of the Chief Information Officer (OCIO) in a timely and accurate manner, within the due date specified by the requesting organization and through the local federal DOE-SR.

(i) Provide a report of accomplishments, activities, issues, and recommendations monthly, or as requested by DOE.

(2) Ensure IT capabilities specifically for desktop services, server operations, network backbone, security appliances and related tools, remote connectivity, and wireless communications (cell, radio, etc.) are available to support the contract missions based on current best business practices to ensure appropriate capabilities are maintained and secured. This also includes necessary telecommunications management, security, planning and control in support of IMCC missions.

(3) Conduct a robust BIA in order to assess and prioritize business applications and processes supporting information management; identify potential disruptions, legal and regulatory requirements; estimate maximum allowable downtime and acceptable losses; and estimate recovery time objectives to give managers strategic business insight to support decisions about each major program assessed through the BIA. This includes the following:

(a) Develop, review, and test (annually), a Continuity of Operations Plan (COOP) and/or Disaster Recovery Plan based on the BIA. A report of the annual test of the COOP shall be submitted to DOE as requested.

(b) Develop and electronically publish publicly consumable IT program performance metrics comparable to the externally accessible performance metrics for review and concurrence by DOE for the purposes of transparency.

(4) Establish necessary MOUs and Interconnection Security Agreements between SRS contractors, DOE-SR and DOE HQ for any necessary computing services. Parties will accept the responsibility for adhering to DOE Directives, National Policy and OMB guidance.

(5) Provide DOE access to the Contractor's local systems, applications, and databases as necessary to support DOE's contractor oversight efforts.

For Cyber Security Support, the Contractor shall:

(1) Execute this Contract in accordance with OMB Circulars A-11 & A-130, including associated memoranda.

(2) Manage information management and cyber security in accordance with related laws, regulations, requirements, and standards (e.g., 10 Code of Federal Regulations (CFR) 1004 et seq.; 36 CFR Chap. XII Subchapter B et seq; 41 CFR 102 et seq.; 6 United States Code (USC) 6 et seq.; 29 USC 16, Subchapter V, 794 (d) et seq.; 40 USC Subtitle III et seq., related Executive Orders, OMB Circulars and Memorandums).

(3) Ensure necessary Federal Information System Management Act (FISMA) systems achieve and maintain a full active Certification and Accreditation (C&A) to support an ongoing Authorization to Operate (ATO) for the life of the systems from the SRS Authorizing Official (AO) pursuant to related regulations. Related program elements

shall be implemented and approved via active coordination with the Authorizing Official Designated Representative (AODR).

(4) Rely on related Federal Information Processing Standards (FIPS) and the appropriate NIST special publications (SP) and ensure they are adhered to as the leading technical requirements. This includes DOE related directives, regulations, policies, and standards referenced in Section H clause entitled, *"Baseline Information Technology and Cyber Security Requirements* and *attachment J-2, "Requirements Sources and Implementing Documents*."

(5) Support and implement applicable current initiatives by the Office of Management and Budget, the Cyber Security and Infrastructure Security Agency (CISA), and applicable Department of Homeland Security (DHS) directives

(6) Implement applicable "binding operational directives" and "emergency directives," which require action on the part of Federal agencies and their contractors to adhere to the Binding Operational Directives (BOD).

(7) Support the information gathering and reporting for data calls in a timely and accurate manner and within the due date specified by the requesting organization.

(8) Implement a Cyber Security Program that ensures adequate protection of DOE's IMCC system operations, identifies threats and vulnerabilities, assesses overall risk to systems, provides incident response and system logging and mitigates those risks based on sound cyber security practices and the Risk Management Framework. The Cyber Security Program shall be developed in accordance with current applicable DOE Orders (DOE O 205.1, *Department of Energy Cyber Security Program*) and guidance, National Institute of Standards and Technology (NIST) guidance, and other government regulations. In addition, the contactor shall:

(a) Provide a centralized Cyber Security Program, integrated with other SRS capabilities in support of the IMCC missions to include a contractor assurance system, which reports related critical metrics to DOE.
(b) Collaborate with DOE-HQ, EM Program Office, and other SRS contractors to ensure compliance with DOE requirements is maintained and that DOE requirements are implemented consistent with the overall Cyber Security Program supporting the SRS.
(c) Notify DOE Cyber Security Officials of the discovery of cyber security incidents per DOE requirements. This includes providing a detailed, unredacted, and current accounting of the incident(s) or violation(s) to DOE Cyber Security Officials, including the AODR upon request.
(d) Collaborate and exchange information with the counterintelligence office as well as the integrated Joint Cybersecurity Coordination Center (iJC3) to facilitate a cooperative risk picture, including but not limited to cyber events, supply chain threats and incident reporting through resolution.

(e) Identify an Information Systems Security Officer (ISSO) to conduct the cyber security program. Upon identification, the ISSO must meet the requirements for appointment by their respective federal Information Systems Security Manager (ISSM).
(f) Coordinate cyber security matters with the DOE AODR as required and to facilitate resolution of security issues and incident reporting.
(g) Implement a robust Operational Technology (OT)/Industrial Control Systems (ICS) environment in accordance with NIST 800-82 Rev. 2 that will feed information into the Business Impact Analysis (BIA) process. The contractor shall extend and integrate IT practices, programs, procedures, and requirements (engineering, configuration management, governance, architecture, and cybersecurity) into its OT/ICS. Implement a sound Supply Chain risk management program for information systems based on NIST 800-161.
(h) Maintain a cyber security program continuous monitoring program to ensure the approved cyber security posture is maintained based on NIST 800-137 and 800-53.
(i) Maintain current system security plans and risk assessment documentation and provide DOE required system assessments based on NIST 800-53, 800-37 Rev. 2, and 800-30 Rev. 1.

C.8.1.1 Additional Network Access Guidelines

The Contractor Shall:

(1) Provide network capability and may negotiate Network Access with the SRS Operations Contractor for IT services if located within SRS facilities or off-site. If Contractor is located offsite from the SRS, the Contractor will incur installation and all related connectivity costs. If Contractor is onsite, the SRS Operations Contractor provides and maintains basic data service to the existing data jacks within the protected network based on the number and location of connections in service at the time of turnover in accordance with negotiated or established rates. Costs associated with minor moves and relocations within existing IMCC facilities may be provided by the SRS Operations Contractor at established rates.

(2) Comply with the SRS cyber security requirements and processes if utilizing the SRS Network known as SRSNet.

(a) The SRS Operations Contractor may provide some IT-related technical services and associated engineering with any potential negotiated costs to the Contractor.

(b) The Contractor shall reimburse the SRS Operations Contractor for licensing and support costs as applicable via the necessary Interface Agreement. All Contractor equipment connected to the SRSNet shall meet SRS computer architecture requirements to ensure continued network integrity.

(c) Services provided by DOE-HQ IT services, such as connectivity to DOENet supporting Entrust will be provided by the SRS Operations Contractor. The Contractor shall reimburse the SRS Operations Contractor.

C.8.1.1.1 DMZ Computer Operations

The SRS Operations Contractor may provide logical "de-militarized zone" (DMZ) space.

The Contractor Shall:

(1) Follow cyber security rules and change control processes for systems residing in the DMZ as per the referenced requirements.

(2) Self-supply network servers or negotiate for services from the SRS Operations Contractor.

(3) Self-supply business management, e-mail, and work control systems, as desired.

(4) Provide remote access to allow the DOE access to information, within the scope of this contract, within the Contractor's firewall.

C.8.1.1.2 Government-Furnished and Other Available Software

The Contractor will be provided access to the software systems listed in Section J, Attachment J-8, *Government-Furnished Services and Information,* and other software systems as may be necessary to coordinate information exchange with customers and interface partners.

The Contractor shall:

(1) Where applicable, use the software systems listed in Section J, Attachment J-8, *Government-Furnished Services and Information*. The Contractor is not responsible for any updates of listed software except where noted;

(2) Identify software development needs to the attention of the Governance Advisory Board per Section J, Attachment J-3, *Savannah River Site Services and Interface Matrix*;

(3) Provide any additional databases and software programs deemed necessary to manage staff training requirements, facility equipment, analytical data, compliance with environmental regulations, and protection of the safety and health of its employees, in accordance with the strategic planning and governance provided above; and

(4) Ensure that all software meet the QA Requirements of their software QAP.

C.8.2 Government-Furnished Services and Information

The Contractor will be provided with some programs and services to accomplish its mission. A detailed listing of services and information is given in Section J, Attachment J-8 *Government-Furnished Services and Information*.

DOE is committed to providing effective support to the Contractor throughout the period of Contract performance, and the Contractor may request that DOE consider providing additional GFS/I. To manage the GFS/I furnished under this Contract and to evaluate the additional GFS/I that may be required by the Contractor, the Contractor shall submit for DOE approval:

(1) GFS/I Request: Twelve month advance projection of GFS/I to be furnished under the Contract and additional Contractor-requested GFS/I, prior to each FY, for DOE approval; and

(2) GFS/I Request - Update quarterly update to the projection of GFS/I to be furnished under the Contract and additional Contractor-requested GFS/I, prior to each quarter, for DOE approval.

DOE will review the 12 month and quarterly advance projections. If DOE can support the additional Contractor-requested GFS/I, DOE will notify the Contractor within 30 days that the additional Contractor-requested GFS/I can be provided and will provide the Contractor details regarding DOE action(s). The supported GFS/I will be added to Section J, Attachment J-8, *Government-Furnished Services and Information*, by Contract modification. If DOE cannot support a Contractor request, DOE will notify the Contractor within 30 days that the requested GFS/I cannot be provided, and there will be no DOE commitment to the Contractor to furnish the GFS/I.

For the additional Contractor-requested GFS/I, DOE will use its best efforts to meet these requests; however, in the event that DOE is unable, for any reason, to provide the Contractor with its requested additional GFS/I, the Contractor remains fully and solely responsible for obtaining the needed services and/or information in a timely manner and without any further recourse against DOE.

~~C.8~~C.9 Records

Records Management is a key component of documenting the SRS's legacy, compliance, cleanup progress, and decisions. The Contractor shall maintain and manage records to ensure adequate and proper documentation of work accomplishments and document DOE stewardship of federal responsibilities and funds. The scope includes developing a strategy for lifecycle management of records, including inventory and schedule management, vital records, restoration, preservation for litigation actions, major collection management, and long-term records storage. Conduct Records Management in accordance with 44 USC Chapters 21, 29, 31, 33, and 35; 36 CFR, Subchapter B (Chapter XII), *Records Management*; the current DOE O 243.1 entitled, *Records Management Program* and any other DOE requirements as directed by the CO. These functions include, but are not limited to: Tasks associated with creation/receipt, maintenance, storage/preservation, protecting, scheduling, indexing, and dispositioning active and inactive records; Retrieving records from on and offsite storage facilities; and Supporting new and ongoing Freedom of Information Act (FOIA), Privacy Act, Energy Employees Occupational Illness Compensation Program Act, Former Worker Medical Screening Program, Chronic Beryllium Disease Prevention Program, congressional inquiries, litigation holds, and legal discovery requests to ensure that records in Electronic Information Systems can provide adequate and proper documentation for as long as the information is needed.

The Contractor shall:

(1) Ensure records generated in the performance of the Contract containing personal information routinely retrieved by name or other personal identifier are classified and

maintained in Privacy Act System of Records (SOR) in accordance with FAR 52.224-2, *Privacy Act (Apr. 1984)* and DOE O 206.1, *Department of Energy Privacy Program*;

(2) Preserve and disposition records in accordance with National Archives and Records; Administration-approved records disposition schedules. (Note: Records retention standards are applicable for the classes of records described therein, whether the records are owned by the Government or the Contractor [DEAR 970.5204-3]); and

(3) Prepare/revise, submit for DOE approval, and execute an approved Records Management Plan, which addresses at a minimum, Records Disposition Plan, Vital Records Program Plan, Vital Records Update, and Records Management Close-out Plan consistent with records management regulations.

All records (see 44 USC 3301 for statutory definition of a record) acquired or generated by the Contractor in performance of this Contract, except for those defined as Contractor-owned (see Section I, DEAR 970.5204-3, *Access to and Ownership of Records*) and including, but not limited to, records from a predecessor contractor (if applicable) and records described by the Contract as being maintained in Privacy Act SORs shall be the property of the Government.

C.9.1 Records Management and Document Control

The Contractor shall manage and serve as the Record Custodian for all records (regardless of media) generated/received in the performance of the Contract and those from the NRC License Contractor in accordance with 44 U.S.C. 21; 44 U.S.C. 29; 44 U.S.C. 31; 44 U.S.C. 33; 44 U.S.C. 36; 36 CFR Chapter XII, Subchapter B, Records Management; DOE Order 243.1, Records Management Program, applicable NRC requirements (NRC License Contractor records), any other DOE requirements as directed by the CO and an approved Records Management Plan or documented process (see Section J, Attachment J-~~2~~7, Contract Deliverables). This scope also includes maintaining Vendor Data, Correspondence control, Scientific and Technical Information (STI), and Technical Library Subscriptions.

C.9.2 Electronic Records Management System

The only certified Electronic Records Management System on the SRS is the Electronic Document Workflow System (EDWS) based on the OpenText content server product, administered and maintained by the SRS Operations Contractor.

EDWS shall be used as the repository for electronic records unless a replacement system is implemented.

The Contractor shall develop and implement a plan, subject to approval by DOE, to manage the Contractor's records in EDWS.

C.9.3 Electronic Records (including emails)

The Contractor shall develop and implement records management controls to ensure that the identification, maintenance and disposition of all records (regardless of media are managed utilizing an Electronic Records Management System (ERMS) in accordance with Federal and DOE requirements and guidelines for all records, including historical and subcontractor records.

The Contractor shall develop and implement a process to ensure electronic records submitted to Records Management have been scanned to meet National Archives and Records Administration (NARA) requirements. All records (regardless of media) must be scheduled, arranged, and cutoff by collections (e.g., case file, project, chronologically, numerically, alphabetically, etc.) for proper disposition in accordance with the NARA-approved DOE Records Control Schedules.

C.9.4 Audiovisual Records

The Contractor shall ensure the creation, maintenance, and storage of audiovisual records are in accordance with 36 CFR 1235.42, 36 CFR 1237, and up-to-date NARA requirements/guidance.

C.9.5 Essential (formerly Vital Records Program) Records Program

The Contractor shall develop and implement an essential records program and maintain an up-to-date essential records inventory in accordance with 36 CFR § 1223, Managing Vital Records, and DOE Order 243.1, Records Management Program.

C.9.6 Records Ownership

Except for those defined as Contractor-owned (in accordance with DEAR 970.5204-3, "Access to and Ownership of Records," see Section I), all records (see 44 U.S.C. 3301, Definition of Records, for the statutory definition of a record) acquired or generated by the Contractor (and subcontractors) in the performance of this Contract including, but not limited to, records from a predecessor contractor (if applicable) and records described by the Contract as being maintained in Section H.24 Privacy Act Systems of Records, shall be the property of the Government.

C.9.7 Creation/Receipt

The Contractor shall develop and implement recordkeeping requirements that reflect adequate and proper documentation of all Contractor (and subcontractor) records generated/received (regardless of media) in the performance of the contract, as well as those created/received by the NRC License Contractor as required by Federal regulations found in 36 CFR, Chapter XII, Subchapter B, ecords Management.

C.9.8 Electronic Information Systems

The Contractor shall manage records contained in electronic information systems by incorporating recordkeeping controls into the system or export the records into the ERMS in accordance with 36 CFR Part 1236, Electronic Records Management. The Contractor must design and implement migration strategies to counteract hardware and software dependencies of electronic records whenever the records must be maintained and used beyond the life of the information system in which the records are originally created and captured. The Contractor shall provide a list of all Electronic Information Systems to DOE annually utilizing the format provided by DOE (see Section J, Attachment J-~~2~~7, Contract Deliverables).

C.9.9 Inventory and File Plan

The Contractor shall develop and maintain up-to-date records inventories, file plans and systems that provide for the identification, location, arrangement, assignment of disposition authority and

retrieval of all categories (record series) of records created and received in performance of this contract and those by the Contractor .

C.9.10 Maintenance

The Contractor shall ensure the proper arrangement, disposition authority assignment and maintenance/preservation of all records created and received in performance of this contract.

C.9.11 Quality Assurance Records

The Contractor shall ensure records identified as Quality Assurance records under American National Standards Institute (ANSI)/American Society of Mechanical Engineers (ASME) National Quality assurance (NQA)-1 are categorized (lifetime/non-permanent); managed in accordance with NQA-1 and 36 CFR Chapter XII, Subchapter B; and maintained for traceability to the applicable item, activity or facility.

C.9.12 Privacy Act Records

The Contractor shall ensure records that contain personal information retrieved by name, or another personal identifier, are maintained in Privacy Act Systems of Records, in accordance with FAR 52.224-2, Privacy Act, and DOE Order 206.1, DOE Privacy Program.

C.9.13 Classified Records

The Contractor shall protect and handle classified information and critical information in accordance with applicable laws, regulations, policies, and directives. Classified documents may be processed electronically so long as the computer systems meet all classified security requirements. Until the required computer systems are available to copy, log, process, transmit, and/or store classified documents, they shall be processed as hard copy. See Section C.11, Safeguards and Security, and Emergency Services.

C.9.14 Records Requests

The Contractor shall respond to National Archives and Records Administration (NARA) data calls and DOE requested information for the Freedom of Information Act (FOIA), the Privacy Act, the former worker medical screening program, the Chronic Beryllium Disease Prevention Program, congressional inquiries, legal discoveries and other record requests by completing the proper searches and providing responsive documents.

The Contractor shall respond to Energy Employee Occupational Compensation Act (EEOICPA) requests by performing the proper searches and providing responsive documents to the SRS Site Operations Contractor within the required response times. The Contractor shall track the activities under EEOICPA and submit monthly financial reports to the SRS Site Operations Contractor. The Contractor shall respond to any other inquiries and perform special projects as required by EEOICPA.

C.9.15 Records Disposition

The Contractor shall document its disposition process, which shall include processing of all the transfer of records to storage (e.g., on-site, FRC, NARA) and the retention and destruction process

for records and record information content. The Contractor shall disposition all records, including historical and those transferred from the NRC License Contractor, in accordance with NARA-approved DOE Records Disposition Control Schedules and applicable federal laws and regulations. Disposition activities include digitizing, maintenance, approval and disposal of temporary and permanent records into ERMS and transferring records to a Federal Records Center (FRC) or NARA. Disposition activities include scanning to electronic media (permanent records), transferring of paper records to a Federal Records Center (FRC), maintaining electronically in an ERMS and/or destroying once retention has been met and proper approvals obtained.

C.9.16 Document Control

The Contractor shall develop, implement and maintain sound document control systems and processes to ensure efficient tracking, retrieval, revision control and distribution of documents, including drawings.

~~C.9.17 Records Storage Program~~ Supplemental Information

The SRS Operations Contractor shall provide Physical Records Management at the SRS Site Record Center ~~(IF-663) for DOE-ID and DOE-ID contractors~~, which includes maintaining a compliant program and facility that meets applicable federal laws and regulations ensuring applicable storage, receipt, retrieval, dispositioning (including holds and destruction), reporting, transferring, and migration (for applicable media) of the federal records within the facility. This includes timely and compliant reviews of boxes transferred into the facility; retrieval of records stored in the facility; reports of records which have met retention for destruction or transfer to a Federal Records Center or the National Archives and Records Administration.

~~NOTE: The upcoming changes from the NARA memo M-19-21 may affect the storage and management of the physical records. https://www.whitehouse.gov/wpcontent/uploads/2019/06/M-19-21.pdfThe Contractor shall operate and maintain electronic records storage.~~

~~C.9~~C.10 Contractor Assurance System

The Contractor shall:

(1) Develop and implement an effective CAS that complies with DOE O 226.1, *Implementation of Department of Energy Oversight Policy*.

(2) Utilize the existing SRS issues management system Site Tracking, Analysis, and Reporting (STAR) system. If the contractor deems another system is appropriate for issues tracking, develop a business case for DOE approval to move to another system.

Supplemental Information

The CAS covers the full scope of contractor operations and is applied to all operating and business functions, including systems for the protection of the worker, public, environment, property, business, and financial matters.

~~C.9.1~~C.10.1 Requirements Management Program

The Contractor shall develop, document, and implement an effective requirements management system that establishes and maintains an adequate requirements dataset and provides bi-directional traceability.

C.10.2 Industrial Hygiene

The Contractor shall implement a comprehensive Industrial Hygiene Program in compliance with 10 CFR 851 and the associated regulatory and consensus standards that are incorporated by reference.

C.10.3 Beryllium Program

The Contractor shall develop (or adapt) and implement a Chronic Beryllium Disease Prevention Program (CBDPP) and perform work in compliance with 10 CFR 850, Chronic Beryllium Disease Prevention Program. The Contractor remains responsible for a CBDPP.

~~C.10~~C.11 Safeguards, Security and Emergency Services

~~C.10.1~~C.11.1 Safeguards and Security Program

The Contractor shall:

(1) Coordinate and interface with the SRS Operations Contractor and obtain all S&S Services (with the exception of Protective Force which is provided by the Site Protective Force Contractor – a prime contract to DOE) from the SRS Operations Contractor.

(2) Execute Functional and Service Level Agreements in coordination with the SRS Operations Contractor in applicable S&S Program areas.

The Contractor shall perform the following S&S program management functions. Baseline services include but are not limited to, the following:

C.11.1.1 Program Planning and Management

The Contractor shall coordinate with the SRS Operations Contractor to establish a S&S planning approach that will provide facilities and sites with a consistent method for identifying, developing and documenting sound risk mitigation strategies and implementing an effective S&S system in the Contractor's facilities. The Contractor shall provide the SRS Operations Contractor technical, cost, and schedule performance information.

C.11.1.1.1 S&S Training

The Contractor shall:

(1) Identify S&S training needs for IMCC staff (initial, refresher, and on-the-job) consistent with the knowledge and skills required to perform assigned S&S tasks and/or responsibilities as determined by valid and complete job analyses.

(2) Arrange, fund, and schedule training in accordance with applicable requirements.

(3) Develop an IMCC S&S Annual Training Plan that includes all S&S awareness activities based on the IMCC S&S responsibilities and interests.

(4) Ensure S&S personnel are trained to a level of proficiency and competence that ensures they are qualified to perform assigned S&S tasks and/or responsibilities.

(5) Ensure continuing training is provided to maintain job proficiency.

C.11.1.1.2 S&S Plans

The Contractor shall coordinate with the SRS Operations Contractor to:

(1) Implement S&S actions, procedures, and/or processes as assigned by DOE to comply with DOE design basis threat (DBT) requirements. The Contractor shall coordinate DBT implementation actions and/or plans with the SRS Operations (Interface responsible for vulnerability analysis and DBT) which will be reviewed and approved by DOE.

(2) Provide the necessary operational and technical expertise in support of the SRS Operations Contractor in the preparation of vulnerability assessments, security analyses, and special S&S studies and evaluations as identified by the SRS Operations Contractor for the SRS.

(3) Provide information to the SRS Operations Contractor, which includes Site-specific assets and security interests, in support of maintaining the SRS Safeguards and Security Plan and other S&S plans. The Contractor shall comply with the SRS Safeguards and Security Plan and other applicable approved S&S Plans.

(4) Ensure all facilities at IMCC have a security plan that reflects the assets, security interests, approved S&S program implementation at that location, and any residual risks associated with operation under the security plan.

(5) Ensure S&S plans for IMCC facilities are supported by security risk assessments which include, as applicable: qualitative and quantitative simulations; force-on-force system performance tests and other applicable performance tests; and expert analyses used in combination to establish the requirements for specific security measures and equipment, the effectiveness of the proposed security posture, and the consequences of loss or unauthorized access or use of the security assets present.

Under Equivalencies and Exemptions, the Contractor shall:

(1) Coordinate with the SRS Operations Contractor to submit equivalencies and exemptions to DOE. Equivalencies and exemptions requests shall be applicable and unique to the project/program scopes of work and submitted only when other means to meet requirements would not meet DOE S&S program objectives.

(2) Ensure equivalencies or exemptions from DOE S&S Policy requirements are documented, are supported by sufficient analysis to form the basis for an informed risk management decision and identify compensatory measures or alternative controls to be implemented.

C.11.1.1.3 Security Conditions

The Contractor shall coordinate with the SRS Operations Contractor to establish plans which conform to and comply with the DOE security conditions system, protective measure requirements implemented in the event of a crisis or emergency and/or in response to a malevolent or terrorist threat to any or all DOE facilities, assets, and personnel.

C.11.1.1.4 Surveys, Reviews, Self-Assessments, and Corrective Actions

The Contractor shall:

(1) Provide operational and technical expertise, when requested, to support S&S surveys, reviews, assessments, and/or S&S performance tests conducted by DOE for S&S program elements.

(2) Coordinate with the SRS Operations Contractor to conduct self-assessments at all IMCC facilities as part of an assurance system that: provides evidence that work is being performed safely, securely, and in compliance with all S&S requirements; risks are being identified and managed; and that the systems of control are effective and efficient.

(3) Identify, implement, and close corrective actions for IMCC deficiencies in accordance with the S&S corrective action management programs and applicable DOE requirements.

(4) Input information into various S&S tracking databases for findings identified in self-assessments, DOE periodic S&S surveys, and by other outside sources in the S&S Program.

C.11.1.1.5 Performance Assurance Program

The Contractor shall coordinate with the SRS Operations Contractor to:

(1) The Contractor shall provide information to the SRS Operations Contractor to support preparation of the SRS Performance Assurance Program Plan (PAP) as part of the SRS Site Safeguards and Security Plan.

(2) Perform operability and effectiveness testing of any elements in the SRS Operations PAP to validate performance against established requirements for reliability, operability, readiness, and performance prior to and during operational use.

C.11.1.1.6 Incidents of Security Concern

The Contractor shall coordinate with the SRS Operations Contractor to:

(1) Provide information and facility access to the SRS Operations Contractor for investigation of security incidents.

(2) Develop and implement corrective actions.

(3) Provide a qualified individual to act as an Inquiry Official for the IMCC Contractor, if required.

C.11.1.1.7 Foreign Ownership, Control or Influence (FOCI) and Facility Clearance (FCL) and Registration

The Contractor shall:

(1) Submit all required information to DOE-SR for FOCI and FCL and registration actions.

(2) Ensure that IMCC Contractor and subcontractor personnel do not have access to classified information/material and or special nuclear material until a FCL has been granted.

(3) Report any changes to FOCI or facility clearance information upon discovery to the DOE-SR.

(4) Ensure subcontractors are eligible for access to and meet the requirements to possess and secure classified information/matter or SNM and, as applicable, to protect other assets and conduct other security activities on behalf of DOE.

(5) Ensure subcontractors provide all required information to support FOCI determinations to DOE-SR.

(6) Coordinate with DOE-SR to establishes and maintain subcontractor FCLs by providing updated information to facilitate timely registering, updating, suspending, reinstating, and terminating FCLs and related security activities.

(7) Ensure DOE and National S&S policy requirements are included in subcontracts, as applicable.

~~C.10.2~~C.11.2 Protective Force

The Contractor shall:

(1) Obtain all Protective Force services from the SRS Protective Force Contractor through the DOE-SR.

(2) Support and integrate operational/business activities in conjunction the SRS Protective Forces in use at SRS for the physical protection of SNM, classified materials, industrial assets, and mitigation and deterrence of radiological and toxicological sabotage events.

Supplemental Information

The DOE-SR has a prime contractor that provides Protective Forces (e.g., armed personnel, specialized equipment, and tactical procedures) to protect DOE assets, including people and property on the SRS. The Protective Force contractor is responsible for the protective force activities; however, many areas (e.g., information about the facility, reporting about events in the facility and access to the facility) of facility operations management that will require cooperation and/or support from the IMCC Contractor.

C.11.3 Physical Protection

C.11.3. 1 Physical Security and Access Control

Under Physical Security, the Contractor shall:

(1) Support the SRS Operations Contractor in developing or updating facility asset protection agreements for IMCC facilities, and conduct operations consistent with the agreements.

(2) Submit through the SRS Operations Contractor for DOE review and approval any S&S arrangements or changes prior to operations commencing, or changing operations, or configurations that might alter the performance of existing S&S systems (e.g., limited/protected area boundaries, physical security configurations and associated hardware [sensors/cameras], patrol coverage and responses, safeguards methods or boundaries, and entry/access control systems/procedures).

Under Access Control, the Contractor shall coordinate with the SRS Operations Contractor to ensure the following requirements are met at IMCC Contractor facilities, as applicable:

(1) Ensure that access controls are in place to ensure only appropriately cleared and authorized personnel are permitted.

(2) Ensure an entry and exit screening/ inspection program is implemented at security area boundaries, as required, to detect prohibited and controlled articles before being brought into DOE facilities.

(3) Ensure signs are posted to convey information on the prohibited and controlled articles; the inspection of vehicles, packages, hand carried items, and persons entering or exiting the security area; the use of video surveillance equipment; and trespassing (see 42 U.S.C. Section 2278a).

(4) Implement and comply with the SRS Locks and Keys Program which protects, controls, and accounts for S&S locks and keys.

(5) Comply with the SRS Prohibited and Controlled Articles program which defines articles that may not be introduced in SRS security areas and the process for introducing such articles.

C.11.3.2 Intrusion Detection and Assessment Systems and Barriers

The Contractor shall coordinate with the SRS Operations Contractor to ensure the following requirements are met at Contractor facilities, as applicable:

(1) Ensure IDAS systems are configured to protect classified matter, Government property, and SNM and implemented to detect breaches of security barriers or boundaries so appropriate response actions may be initiated.

(2) Ensure security related subsystems and components are maintained in operable condition.

(3) Ensure a regularly scheduled testing and maintenance program is established and documented.

(4) Ensure barriers such as fences, walls, and doors or activated barriers serve as the physical demarcation of the security area and are used to deter and delay unauthorized access.

C.11.3.3 Communications

The Contractor shall coordinate with the SRS Operations Contractor to ensure the following requirements are met at Contractor facilities, as applicable:

(1) Ensure S&S communications equipment is provided to facilitate reliable information exchanges between protective force personnel.

(2) Ensure security system transmission lines and data are protected in a graded manner from tampering and substitution.

(3) Ensure primary and auxiliary electrical power supply elements are protected from malicious physical attacks.

(4) Ensure lighting systems enable detection and assessment of unauthorized persons.

(5) Ensure S&S alarm management and control systems comply with DOE Policy requirements regarding annunciation, redundancy, and monitoring.

C.11.4 Information Security

The Contractor shall:

Ensure that appropriate resources are applied, and processes are developed to integrate and comply with the SRS Safeguards and Security Plan and DOE requirements for the identification and protection of sensitive and classified information and matter. The scope shall include, but is not limited to, Controlled Unclassified Information (CUI) (e.g., Official Use Only [OUO]), Unclassified Controlled Nuclear Information (UCNI), Classified Matter Protection and Control (CMPC), Classified, Operations Security (OPSEC) and Technical Security (TSCM).

C.11.4.1 Basic Requirements – Controlled Unclassified Information

The Contractor shall:

(1) Develop and implement plans and procedures to integrate and comply with the SRS Sitewide CUI program for the identification and protection of sensitive information and matter.

(2) Ensure that all sensitive information is protected and controlled commensurate with its classification level, category, and applicable caveats.

(3) Ensure that information that will be released to the public has been approved in accordance with the SRS Operations Contractor SRS Release of Information process requirements.

(4) Ensure that Contractor documents released to the public or assigned a formal document number and tracked in a document control system are reviewed for CUI, including documents released to the public that are not given a formal document number (e.g., presentations, notices, press releases, and information contained or posted on the internet).

C.11.4.2 Classified Matter Protection and Control

The Contractor shall coordinate with the SRS Operations Contractor to:

(1) Develop and maintain a system of procedures, facilities, and equipment to identify, protect, and control classified matter that is being generated, received, transmitted, used, stored, reproduced, or destroyed in accordance with DOE directives.

(2) Be responsible for asset protection reviews for facilities that contain classified matter.

(3) Support security risk assessments and asset protection reviews for facilities that contain classified matter.

(4) Maintain an updated list of security containers, locations, and custodians.

(5) Approve copiers and shredders used in classified document reproduction or destruction.

(6) Continuously reduce unneeded classified matter.

(7) Investigate potential and actual compromises of classified information.

(8) Ensure cleared personnel receive and complete CMPC training.

C.11.4.3 Classification Program

The Contractor shall coordinate with the SRS Operations Contractor to:

(1) Develop and implement plans and procedures to integrate and comply with the DOE and SRS Operations Contractor's requirements for the identification and protection of classified information and matter.

(2) Ensure all sensitive and classified information is protected and controlled commensurate with its classification level, category, and applicable caveats.

(3) Conduct a 100 percent review of documents generated in a potentially classified subject so that information is appropriately classified, marked, disseminated, and stored.

(4) Coordinate the destruction of classified records.

(5) Ensure that its management, as well as other onsite Contractor management, is informed of potentially classified subject areas, and inform its employees of sensitive and potentially classified topical areas.

(6) Ensure that appropriate classification guidance is available to Contractor facilities that are potential generators of classified information.

(7) Ensure that a sufficient number of Derivative Classifiers and Reviewing Officials are appointed, approved (by the SRS Operations Contractor's Classification Officer), and trained to support the Contractor's facilities and mission areas.

(8) Maintain statistical data regarding: Documents generated; Documents destroyed; Document received; and Documents transmitted.

(9) Provide for receipt and storage of classified documents from SRS Operations Classified Document Control Center.

C.11.4.4 Operations Security (OPSEC)

The Contractor shall coordinate with the SRS Operations Contractor to:

(1) Implement an OPSEC program to ensure that sensitive information is protected from compromise and unauthorized disclosure.

(2) Participate in and support the Site OPSEC Working and Awareness groups and perform the necessary management and support functions required for an effective OPSEC program.

(3) Annually review and update the Critical Information List to ensure it reflects current assets, threats, operations, and other relevant factors at IMCC Contractor facilities.

(4) Conduct and support OPSEC assessments or reviews of IMCC Contractor facilities that have SNM or classified or sensitive information.

(5) Ensure reviews of information for export control information (ECI), applied technology (AT), and other CUI.

(6) Assist the SRS Operations Contractor and/or DOE-SR in the development of indicators and countermeasures and the critical information list.

C.11.4.5 Technical Security

The Contractor shall coordinate with the SRS Operations Contractor to:

(1) Appoint a TSCM officer supporting the Contractor's IMCC facilities, as required. The TSCM officer also interfaces with the federal TSCM Operations Manager to coordinate the Contractor's TSCM program.

(2) Identify Contractor facilities that require TSCM services to support processing of classified information and coordinate TSCM services with the target facility and DOE.

(3) Comply with the Site procedures and policies regarding activities involving Communications Security, protected distribution systems, and TEMPEST/Transmission Security programs of Telecommunications Security.

(4) The Contractor shall comply with the SRS Operations Contractor's site procedures and policies regarding activities involving Communications Security, protected distribution systems, and TEMPEST/Transmission Security programs of Telecommunications Security.

C.11.5 Personnel Security

C.11.5.1 Badging and Access Authorization (Clearance) Processing

The Contractor shall coordinate with DOE-SR and the SRS Operations Contractor to:

(1) Comply with the SRS badging and access control program.

(2) Support the badging and personnel security clearance process by providing the necessary information to DOE-SR for downgrading and terminating clearances, as required.

(3) Coordinate and support SRS Operations processes for obtaining security badges, proximity cards, etc. from terminating employees and removing such individuals from automated access control systems.

Supplemental Information:

The Personnel Security function for SRS involves processing requests for employee security clearances and non-cleared Homeland Security Presidential Directive (HSPD)-12 credentials, enrollment, and maintenance of employees in the Human Reliability Program (HRP), and foreign nationals for visits and assignments. The SRS Operations Contractor manages and conducts a centralized Personnel Security program for the SRS on behalf of DOE.

C.11.5.2 Classified Visits

The Contractor shall:

(1) Submit required information for classified visits to DOE-SR and the SRS Operations Contractor and comply with the requirements of the approved Site Security Plan managed by the SRS Operations Contractor.

(2) Comply with the SRS Operations Contractor's Classified Visits procedures which shall ensure that only persons with the appropriate access authorizations and need-to-know receive access to classified information or matter in connection with visits involving the release or exchange of classified information or matter.

C.11.5.3 S&S Awareness

The Contractor shall coordinate with the SRS Operations Contractor to:

(1) Implement a Security Awareness Program in the Contractor's facilities.

(2) Maintain awareness of Site-wide security issues/topics and incorporate them into the Contractor's internal practices and procedures.

(3) Conduct supplementary S&S awareness activities and/or briefings (e.g., at staff and safety meetings across the Site) in coordination with Site-wide policies.

(4) Ensure that IMCC Contractor's staff complete all required awareness briefings, to included initial, comprehensive, annual, and termination briefings.

C.11.5.4 Unclassified Foreign National Visits and Assignments (FNVA)

The Contractor shall coordinate with DOE-SR and the SRS Operations Contractor to:

(1) Conduct FNVA in compliance with approved security plans.

(2) Notify DOE-SR and the SRS Operations Contractor of potential foreign visitors or employees

Require Foreign National Visits and Assignments (FNVA) training for Contractor personnel who host FNVAs.

(3) Submit a list of authorized delegates with authority to approve unclassified foreign visits and assignments.

(4) Prepare and submit security plans to DOE-SR for foreign national visitors to the Site before approval of the visit/assignment.

C.11.5.5 Foreign Travel

The Contractor shall:

(1) Comply with the DOE-SR requirements for Official Foreign Travel.

(2) Submit projections of potential foreign travel.

(3) Submit all official foreign travel request packages to DOE for review and subsequent submittal to DOE-HQ for approval in accordance with established timeframes, prior to any official foreign travel.

C.11.6 Material Control and Accountability

The Contractor shall:

(1) Ensure appropriate resources and qualified personnel are available and comply with the SRS EM Facilities MC&A Plan and applicable DOE requirements for the control and accountability of accountable nuclear material (i.e., Other, Source, and SNM) in Contractor facilities.

(2) Implement controls appropriate for the nuclear material attractiveness and quantities as described in DOE requirements.

C.11.7 Emergency Management Program

The Contractor shall:

(1) Establish and maintain an emergency management program that complies with the emergency management core program requirements in DOE O 151.1. The Contractor's Emergency Management Program shall be consistent with DOE requirements and the centralized SRS Operations Contractor's EP Program. The SRS Operations Contractor's EP program establishes processes and instructions for all Contractor Site wide EP activities. Because of the potential for the IMCC Contractor to become the event contractor, the IMCC Contractor shall maintain a 24 hours per day, 7 days per week capability to staff the required facility specific emergency response organization positions within 60 minutes of receipt of notification from the Occurrence Notification Center. The IMCC Emergency Management program shall be coordinated with the SRS Operations Contractor who has overall responsibility for integrating Site emergencies.

(2) Designate an individual to administer the Emergency Management Program and coordinate with the SRS Operations Contractor.

(3) Develop an Emergency Readiness Assurance Plan (ERAP) and coordinate this plan with the SRS Operations Contractor. The IMCC ERAP should be coordinated with the SRS Operations Contractor's Emergency Management Plan.

(4) The SRS Operations Contractor

Baseline services include but are not limited to, the following:

(a) Savannah River Site Operations Center (SRSOC) operations;

(b) SRS Fire Department;

(c) Emergency Response Organization, including facilities and equipment;

(d) Facility emergency preparedness programs; and,

(e) Site and facility-level drills/exercises and assessments.

(5) Provide support and information as requested by the SRS Operations Contractor and DOE-SR for development of Emergency Management / Preparedness programs.

(6) Participate in the SRS Operations Contractors Emergency Preparedness Training drills and exercises as requested.

(7) Support facility access to fire services personnel and notify the SRS Operations Contractor of work activities, events, and incidents that may require Fire Services involvement and/or response (e.g., medical assistance, hazardous or radiological emergency help, etc.).

Supplemental Information

SRS Operations Contractor establishes and maintains a centralized Emergency Operations Program and the SRS Sitewide Emergency Preparedness (EP) Program for the SRS on behalf of DOE-SR. The EP Program is responsible for the SRSOC, develops and maintains emergency plans and procedures, performs hazard surveys and assessments, reviews hazard assessments for all facilities at SRS, and supports SRS Sitewide EP training and drills.

~~C.11~~C.12 External Affairs

The Contractor shall establish and maintain an External Affairs/Public Affairs program that provides: timely responses to requests for information and assistance; proactive outreach to keep the media and other external constituencies informed about work under the Contract; effective social media; and integrated and effective Site tour planning.

External Affairs includes information and involvement programs to reach and respond to diverse external parties interested in the SRS (e.g., stakeholders, news media, elected officials and their staffs, local community officials, and the public) with the status, challenges, and objectives of the cleanup work.

For external constituencies, the Contractor shall anticipate specific areas of concern, interest, or controversy and employ communication strategies that inform and ensure close coordination with DOE communications personnel throughout. DOE retains the primary role in directing the timing, substance and form of public information and must approve products and outreach.

The Contractor shall:

(1) Submit an External Affairs/Internal Communications Program Description for DOE approval that provides a comprehensive description of the External Affairs Program,

staffing, products, and services with an emphasis on innovative approaches to communications.

(2) Submit responses to information requested by DOE in compliance with FOIA and Privacy Act requirements.

(3) Develop, plan, and coordinate proactive approaches to dissemination of timely information regarding DOE activities, with an emphasis on innovative approaches to communications. The Contractor shall implement this responsibility through coordination with DOE in such a manner that the public, whether it is the media, citizens' groups, private citizens or local, state or federal government officials, has a clear understanding of DOE activities at the Site.

(4) Participate in and attend citizen advisory board activities in support of DOE and specific to scope of overall Contract work.

(5) Provide strategy and resources for required public comment and outreach processes related to upcoming decision making (e.g., NEPA and CERCLA).

(6) Participate in tour planning and preparation and make facilities and personnel available as requested by DOE. Visits to the project sites shall be part of ongoing communication and outreach activities.

(7) Provide DOE SR External Affairs and the SRS Operations Contractor with current information related to the Contract scope to maintain the external SRS Website.

(8) Provide ongoing support to DOE in the preparation of communication materials such as presentations, fact sheets, specialized graphics and charts, large posters, up-to-date photography, video and audio clips, and stories for internal and/or external publication.

(9) Coordinate internal employee communication products through DOE for review and approval if they are related to issues/incidents that have the potential to garner external media and stakeholder interest.

(10) Receive DOE approval prior to externally releasing information related to the Site.

These interfaces shall be in coordination with DOE: media, members of the U.S. Congress and their staff, stakeholders and local government.

~~C.11.1~~C.12.1 External Review and Support

The Contractor shall provide support to DOE in hosting the Defense Nuclear Facilities Safety Board, GAO, Office of Inspector General, and other Government and DOE oversight staff from auditing and assessing organizations, providing required presentations, preparing DOE responses, responding to information requests, and by providing required Subject Matter Experts to respond to questions and information requests.

The Contractor shall:

(1) Provide access to work areas, personnel, and information, as necessary; and

(2) In coordination with DOE audit liaisons, provide support during audits and assessments, including delivering information within a specified time, arranging briefings, preparing presentation materials, maintaining a record of documents provided in response to requests.

~~C.12~~C.13 Savannah River Site Interface Management

Interface Management is a key Savannah River Site function for the effective and efficient delivery of services between multiple Site contractors. It is also an integral part of resolving issues involving various Site operations activities among contractors, promoting efficient mission accomplishment for EM and NNSA and ensuring Site policies and procedures are integrated to promote mission success. Interface management success is defined by the results that stem from two or more organizations working together to develop solutions within the parameters of their contracts. The role of interface management is to exchange services and solve issues in the best interest of the Government at the lowest level possible in the respective organizations.

The Contractor shall:

(a) Establish and maintain an Interface Management function in coordination with other Site contractors and work cooperatively to improve mutual understanding and seek resolutions in the best interest of the government and the SRS.

(b) Initially adopt existing interface agreements and then appropriately document, execute, and manage interfaces and agreements made with other Contractors, DOE, and other Site users in accordance with Section J, Attachment J-3, *Savannah River Site Services and Interface Matrix*, and the Section H Clause entitled, *Site Services and Interface Requirements Matrix*, and other documented interfaces. Changes to those agreements, processes, and work schedules, as related to interface management, shall be executed per this PWS and Section H Clause entitled, *Site Services and Interface Requirements Matrix*. Changes to Section J, Attachment J-3, *Savannah River Site Services and Interface Matrix* shall be signed showing concurrence by the Contractor and other Site contractors.

(c) Participate in the maintenance of the SRS Interface Management Plan by membership on the Contractor Interface Board (CIB).

(d) Appropriately document, execute, and manage interfaces and agreements made with other Site contractors, in accordance with Section J, Attachment J-3, *Savannah River Site Services and Interface Matrix*; Section H Clause entitled, *Site Services and Interface Requirements Matrix*; and other documented interfaces. Interface agreements shall detail the scope of the interface, including boundaries and constraints, standard and special service circumstances including but not limited to any nuclear safety, quality assurance and quality control, health, safety, Site access, schedule concerns, and/or environmental protection requirements.

(e) Work with other Site contractors in generating agreements in order to support working relationships.

(f) Generate new interface agreements as may be necessary during this contract to support IMCC operations.

(g) Work with other Site Contractors to develop service agreements with sufficient detail for DOE to determine whether the task is consistent with customer baselines and represents a reasonable use of resources.

(h) Provide input to the SRS Operations Contractor to support development and maintenance of the interface management processes and storage of the interface agreements. The SRS Operations Contractor will be responsible for housing all Service Level Agreements. The IMCC Contractor may retain a copy of Interface Agreements for internal use. The SRS Operations Contractor shall in conjunction with the Site Contractors shall develop a SRS Interface Governance Policy to be signed by all other Site contractors.

(1) The policy shall outline the interface management documents and business structure, including change control processes and hours supported by Section J, Attachment J-3 *Savannah River Site Services and Interface Matrix*, direct funded services; and,
(2) Illustrate the different interface types and processes for managing the inter-contractor transactions, including Service Delivery Documents, Memorandums of Agreement, Administrative Interface Agreements.

(i) Participate in a review of the SRS Services and Interface Matrix which shall be led by the SRS Operations Contractor with cooperation and participation of other Site Contractors within 6 months of completion of transition of the Site Operations Contractor. Proposed and agreed upon changes to the SRS Services and Interface Matrix shall be submitted by the Site Operations Contractor for incorporation into SRS contracts.

(j) At least yearly, review the interface agreements established during transition and propose any changes in the best interest of the Government, the Laboratory and Site mission activities. During the remainder of the Contract, review and propose changes as needed.

(k) Participate in SRS Presidents Forum to improve overall delivery of effective accomplishment of the Site mission. The council is comprised of Site contractor presidents, with participation from DOE Field Offices' Representatives. Site contractors shall attempt to resolve interface issues prior to escalating an issue to DOE.

~~C.13~~C.14 Business Performance Requirements

The scope of this section includes activities such as Business Administration, Internal Audit, ECP, and other general performance requirements. The Contractor shall develop, implement, and maintain the required plans and actions in accordance with the laws, regulations, and DOE directives applicable to each of the scope areas described in this section and have optimized these services through an integrated planning approach.

~~C.13.1~~C.14.1 Business Administration

The Contractor shall establish and maintain cost-effective internal business administration that enables good business decisions, sufficient resources to manage the Contract activities, and a cooperative and (as appropriate) collaborative working relationship with the SRS stakeholders, and DOE.

The Contractor shall provide the management expertise, leadership, and business administration processes (e.g., administration of market-based employee benefits, independent oversight, legal) and systems (e.g., Finance/Accounting, Contracts/Procurement, and Human Resources) to perform Contract PWS requirements safely, securely, efficiently, and in a cost-effective manner.

~~C.13.2~~C.14.2 Internal Audit

The Contractor shall establish and maintain an internal audit function that is fully compliant with applicable requirements.

The Contractor shall:

(1) Provide internal audit activities in accordance with the Section I Clause DEAR 970.5232-3 Alternate 19 II, *Accounts, Records, and Inspection*.

(2) Conduct internal audits and examination of the records, operations, management systems and controls employed in programs and administrative areas, expenses, subcontractor costs and the transactions with respect to costs claimed to be allowable under Federal Acquisition Regulation (FAR) 30, Cost Accounting Standards Administration, and FAR 31, Contract Cost Principles and Procedures. Ensure the systems of controls employed are audited, documented, and satisfactory to the CO. Up to eight additional audit engagements shall be conducted based on risk analysis, including input from DOE or direction from the DOE CO. The results of such audits, including the working papers, shall be submitted or made available to the DOE CO, or a Contracting Officer's Representative or other designee. The Contractor shall include this requirement in cost-reimbursement subcontracts (time and materials, labor hour, cost plus for non-fixed price contracts) with an estimated cost exceeding $5 million and expected to run for more than two years, and other cost-reimbursement subcontracts as determined by DOE.

(3) Provide annual Subcontract Audit plans for CO approval which lists planned audits to be performed. The Contractor shall perform internal audits consistent with unmodified

Institute of Internal Audit (IIA) Standards and external audits consistent with unmodified Generally Accepted Government Auditing Standards (GAGAS).

(4) Provide annual Internal Audit plans for CO approval which lists planned audits to be performed. The Contractor shall perform internal audits consistent with IIA audit standards.

(5) Provide to the CO annually, or at other intervals as directed by the CO, copies of the reports reflecting the status of recommendations resulting from management audits performed by its internal audit activity and any other audit organization.
This requirement may be satisfied in part by the reports required under paragraph (i) of DEAR 970.5232-3, *Accounts, Records, and Inspection*.

~~C.13.3~~C.14.3 Employee Concerns Program

The Contractor shall establish and maintain an ECP that effectively addresses, resolves, and prevents recurrence of employees' concerns.

In addition, the Contractor shall establish and maintain an ECP that complies with CRD DOE O 442.1 entitled, *Department of Energy Employee Concerns Program*.

The Contractor shall:

(1) Assist DOE in the resolution of employee concerns in a manner that protects the health and safety of both employees and the public and ensures effective operation of DOE-related activities under their jurisdiction.

(2) Conduct an annual self-assessment to measure the effectiveness of the ECP and implement corrective actions, as necessary.

(3) Provide timely notification to DOE of significant staff concerns or allegations of retaliation or harassment.

~~C.13.4~~C.14.4 Outgoing Contract Transition – Closeout Activities

The Contractor shall perform those activities that are necessary to ensure a smooth transition of the work scope under this contract to a successor contractor in a manner that (1) ensures that all work for which the Contractor is responsible for under this Contract is continued without disruption, and does not impact accomplishing the SRS mission; (2) provides for an orderly transfer of resources, responsibilities, and accountability from the Contractor; (3) cooperates with DOE and assist the incoming contractor(s) to facilitate an overall effective and seamless Contract transition; and (4) provides for the ability of the Contractor to perform the work in an efficient, effective, and safe manner.

The Contractor shall submit a Closeout Plan to include its approach to adequately closeout the Contract and/or Task Order activities. The Closeout Plan shall be submitted in accordance with this PWS and the requisite Contract Deliverable in J-7 and/or deliverable as specified in the Task Order. The Closeout Plan shall also include a schedule of major activities and address as a minimum, but not limited to:

- Communication process among DOE, the Contractor, assigned subcontractors, incumbent employees, and the successor contractor and/or subcontractors;
- Identification of Closeout issues and milestones;
- Approach to minimizing impacts on continuity of operations;
- Transition of programs, plans and projects;
- Transition and/or modification of necessary permits, which shall include a list of permits and purpose;
- Transition of existing management and operating systems, plans, procedures, programs (e.g., Worker Safety and Health plan, QA plan, ISMS program, Occupational Radiation Protection Program, Waste Management Program, Records Management Program, etc.);
- Disposition of classified material (if any) and disposition of Government property and equipment, including special nuclear material;
- Transition of all Contract responsibilities, functions, and activities;
- Transition of all interface control documents; and, transition of any other documents or records that would be required for a successor contractor to adequately and efficiently perform;
- Identification of deliverables submitted and accepted to include Contractor date submitted, DOE acceptance date (if applicable) and status of any remaining open deliverables;
- Status of all requirements (complete and incomplete);
- Identification of all subcontracts along with status of each subcontract's settlement and final payment (for each subcontract identification whether final invoices have been paid, date of final payment, current status of settlement, and any other outstanding issues related to final settlement and payment of subcontracts);
- Status of all unallowable cost issues; other financial issues; outstanding audits; unresolved requests for equitable adjustments, and contract change proposals and claims (if any);
- Status of outstanding litigation;
- Disposition of records;
- Final settlement of fee;
- Submittal of the final invoice and any incurred cost audit; and
- Coordination of the final Contractor Performance Assessment Report System (CPARS) report.

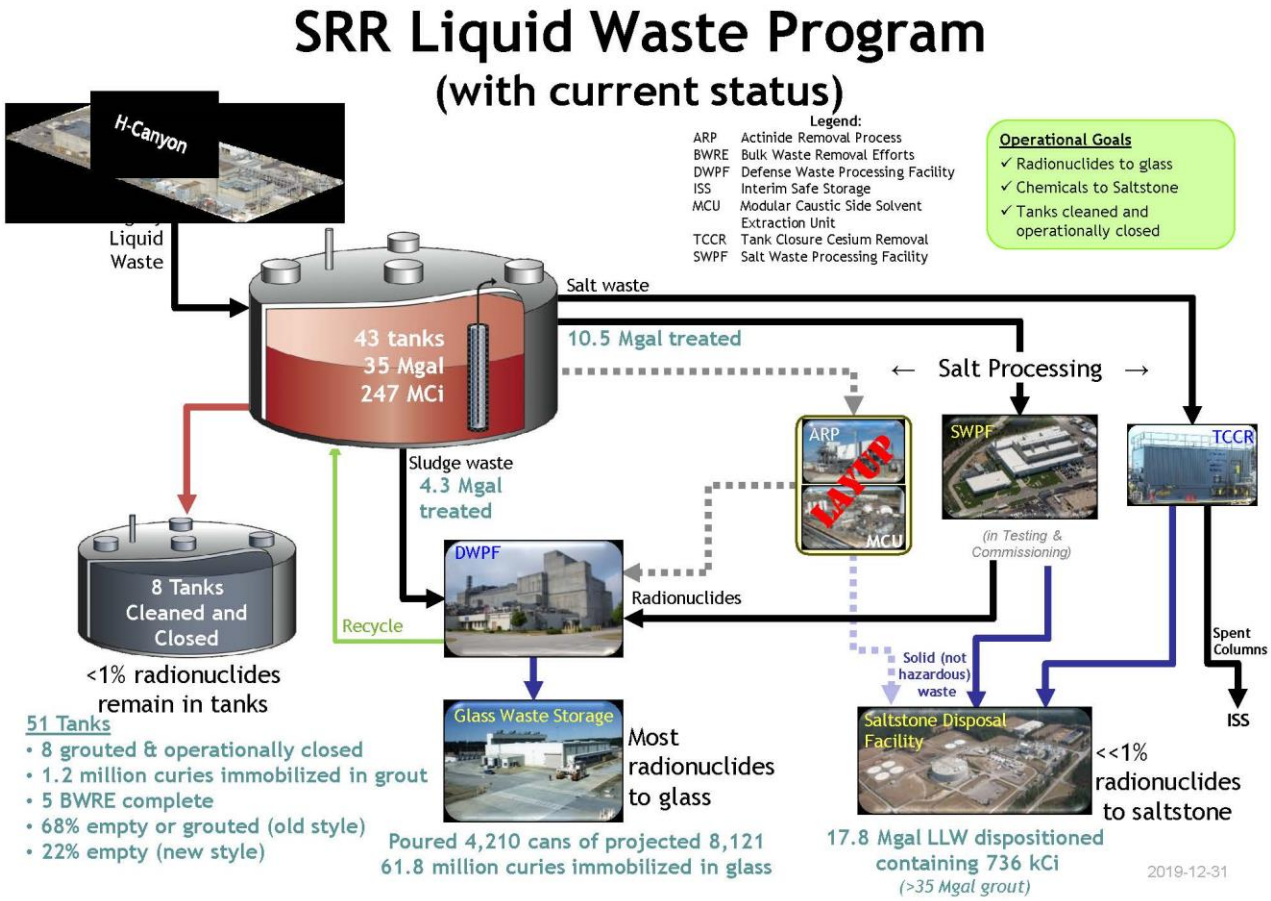
The Contractor shall maintain full responsibility for such work until assumption thereof by the successor contractor. Execution of the proposed Closeout Plan or any part thereof shall be accomplished in accordance with the CO's direction and approval.

The Closeout Plan shall be submitted in accordance with this PWS and the requisite Contract or Task Order deliverable. Final payment may be withheld by DOE until all of the necessary activities are completed by the Contractor.

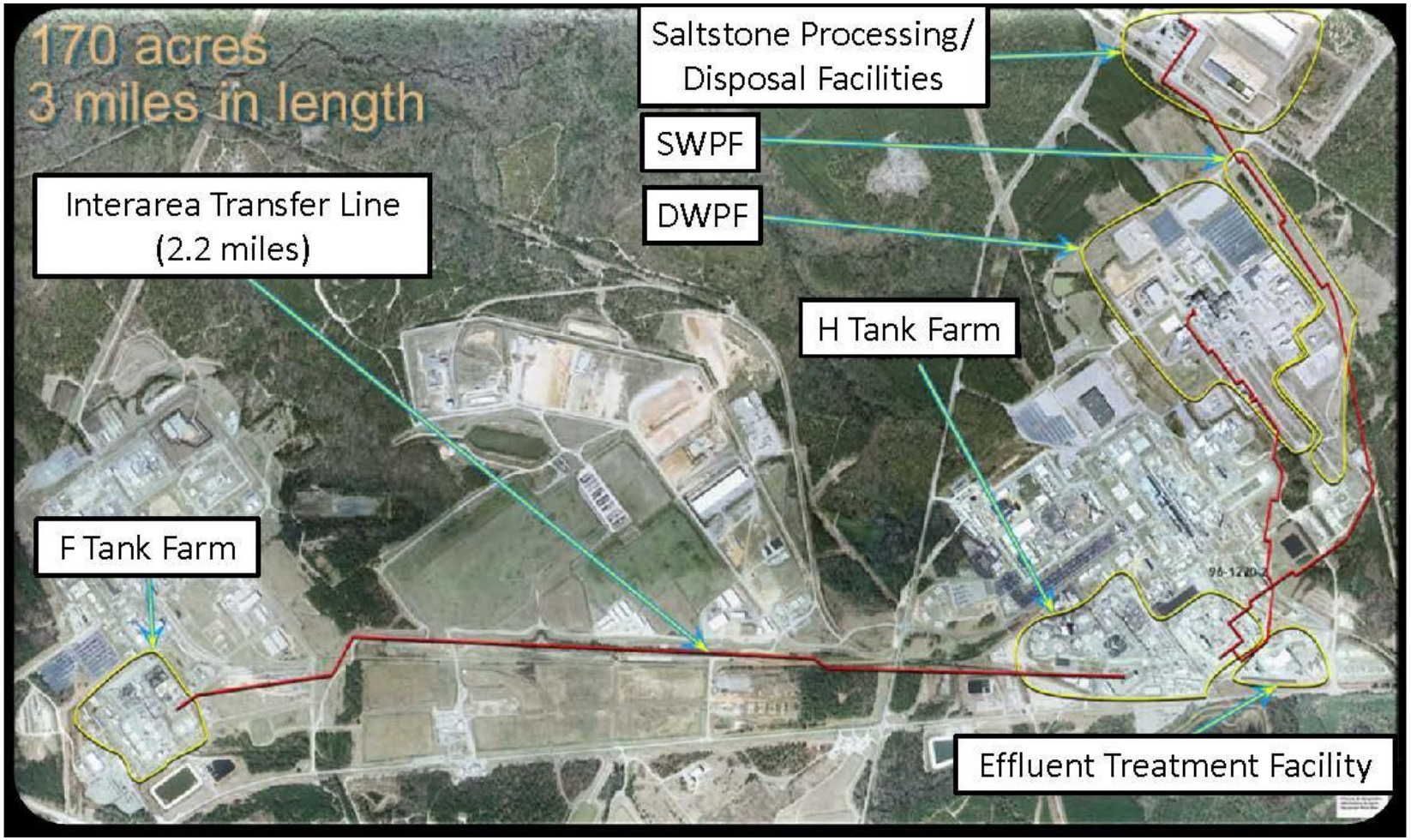
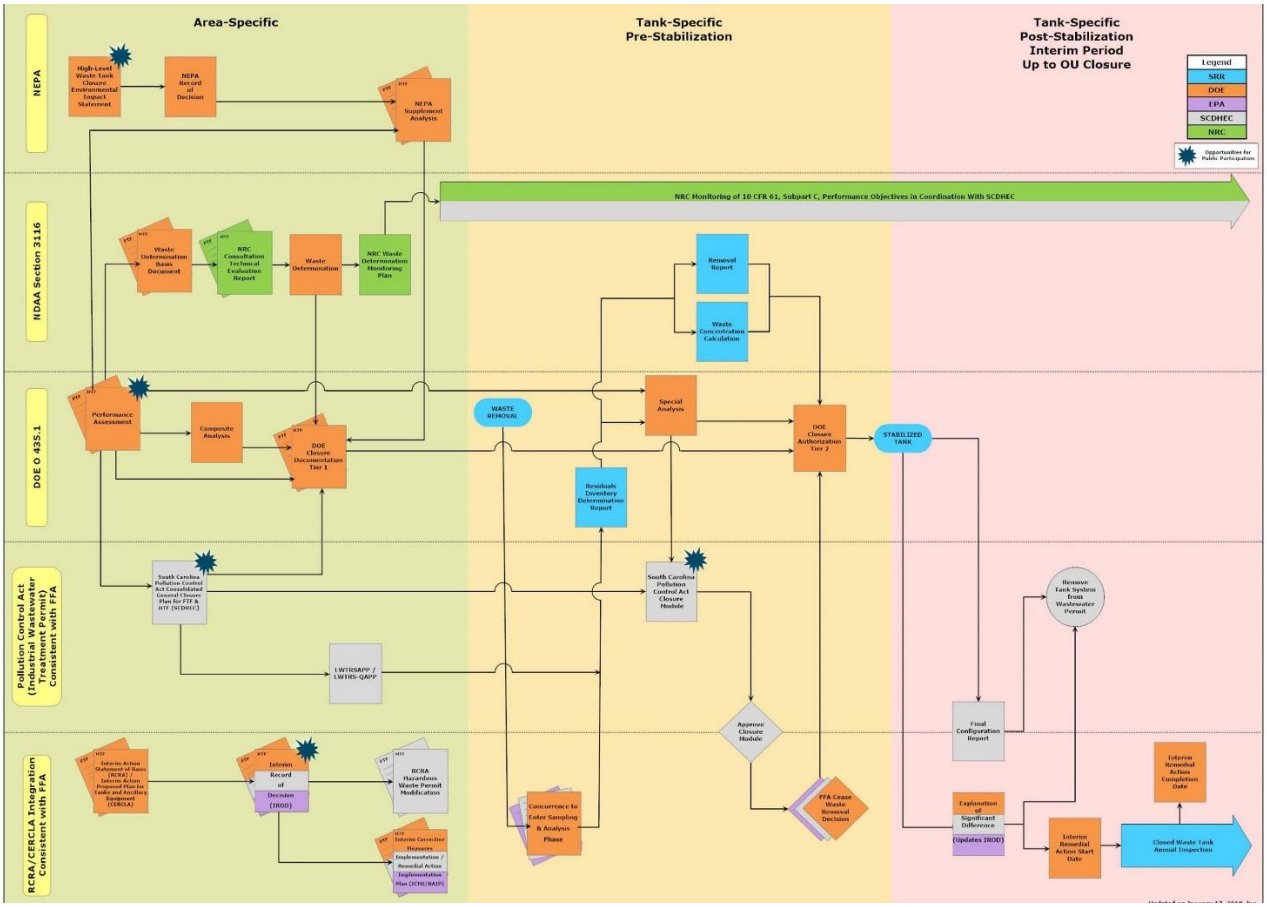
Upon completion of the Contract and each Task Order, a final modification will be executed to officially close out the Contract and/or each task order. A final release statement will be included in the applicable closeout modification where the Contractor discharges the Government, its officers, agents and employees from all liabilities, obligations and claims under the contract and/or each task order.

Attachments

Attachment 1 – Liquid Waste Process Diagram



Attachment 2 – Liquid Waste Facilities



Attachment 3 – SRS Tank Closure Regulatory Roadmap