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## INTRODUCTION

### Contract Purpose

The purpose of the contract is to achieve as much progress as possible over the term of the contract towards completion of that portion of the Environmental Management (EM) mission at Savannah River Site (SRS) to treat, store and dispose of radioactive liquid waste.

EM mission completion at SRS will ultimately involve the treatment and disposal of the radioactive liquid wastes presently stored in 49 underground tanks as well as the radioactive liquid waste resulting from planned nuclear materials stabilization activities, the operational closure of the 49 underground storage tanks, and the deactivation of the major facilities and equipment that compose the radioactive Liquid Waste system. An overview of the Liquid Waste system is included in Attachment C-1.

This is a Cost Plus Award Fee (CPAF) contract that reflects the application of performance-based contracting approaches and techniques that emphasize results/outcomes and minimize “how to” performance descriptions. The Contractor has the responsibility for total performance under the contract, including determining the specific methods and approaches for accomplishing the work.

The balance of the activities at SRS will be conducted by other contractors and the Contractor shall coordinate its activities with these other contractors (primarily the SR Management and Operating (M&O) contractor) as specified herein and to the extent necessary to ensure accomplishment of the specified contract end states.

### Liquid Waste Program Planning and Optimization

Beginning in 1992, the Department of Energy (DOE) issued the first System Plan documenting the operating strategy for the lifecycle execution of the radioactive liquid waste receipt, storage, treatment, and disposition mission at SRS. Each subsequent revision of this plan has served to update the life cycle planning basis for this mission. This plan was last issued as Revision 13 in March 2002, with a supplement issued in December 2002. Subsequently, developments both within and outside of the Liquid Waste program introduced near term uncertainties which complicated long term detailed planning. In May 2006, DOE issued the FY06-FY12 Liquid Waste Disposition Processing Plan (LWDPP), Revision 0, to focus on accomplishment of nearer term objectives. This plan focused heavily on the FY06-FY12 period, and contained information regarding planning bases and planned work execution through FY15. Since that time, several changes have occurred which affect the planning baseline presented in that document. An Update to FY06-FY12 Liquid Waste Disposition Processing Plan, Rev. 0, August 22, 2007, has been issued and posted to the Liquid Waste Contract Request for Proposal Web Site (<http://professionals.pr.doe.gov/srs/lw.html>) under “News and Announcements”.

It is important to note that DOE desires to optimize Liquid Waste system performance, i.e., accelerate tank closures and maximize waste throughput at the Defense Waste Processing

Facility while ensuring sufficient tank space for continued long term operation and compliance with other requirements of this Statement of Work.

### **Overview of the Contract Workslope**

The Contractor is responsible for all aspects of the SRS Liquid Waste program. Services to be provided include but are not limited to:

- Operationally close noncompliant liquid radioactive waste storage tanks and associated facilities in support of the Federal Facilities Agreement (FFA)
- Operate and maintain the Defense Waste Processing Facility (DWPF), including operations in support of the proposed small-scale plutonium vitrification nonproliferation capability if implemented, to process sludge and high-activity salt waste feed streams into a vitrified stable solid waste form
- Complete Deliquification, Dissolution and Adjustment (DDA) processing of Tank 41H salt waste
- Operate and maintain the Actinide Removal Process (ARP) and the Modular Caustic Side Solvent Extraction Unit (MCU) pending the start of Salt Waste Processing Facility operations to process salt waste from waste removal operations into a high-activity feed stream for processing at DWPF and a low-activity feed stream for processing and disposal at the Saltstone Facility
- Support the timely completion, startup and operation of the Salt Waste Processing Facility (SWPF) by fulfilling all interface responsibilities, e.g. waste transfer infrastructure, delivery of salt waste from waste removal operations as feed for SWPF, and receipt from SWPF of (a) a high-activity feed stream for processing at DWPF and (b) a low-activity feed stream for processing and disposal at the Saltstone Facility
- Operate and maintain the Saltstone Facility consisting of the Saltstone Processing Facility (SPF) and the Saltstone Disposal Facility (SDF) to process and dispose of low-level waste
- Conduct Waste Removal operations to remove radioactive sludge waste and salt waste from tanks in the F and H-Area Tank Farms to support waste processing by other Liquid Waste facilities
- Process sludge waste for transfer as sludge waste feed to the DWPF
- Accept liquid radioactive waste from H Canyon nuclear material stabilization activities
- Operate and maintain the F and H-Area Tank Farms to receive, concentrate and store liquid radioactive waste
- Disposition Tank 48H waste, in accordance with Section C.2.1.1, including all its subparts, and complete all steps necessary to return Tank 48H to unrestricted tank farm service
- Complete construction of Saltstone Feed Facility (SFF) and operate the SFF to store waste feed to be processed at the SPF

- Operate and maintain the SWPF to process salt waste from waste removal operations into a high-activity feed stream for processing at DWPF and a low-activity feed stream for processing and disposal at the Saltstone Facility (if Option 2 is exercised)
- Operate and maintain Glass Waste Storage Building (GWSB) #1 and #2 to store the vitrified waste canisters produced by DWPF, including any DWPF canisters containing vitrified plutonium, and support any project that is initiated to construct an additional GWSB
- Support execution of the Canister Shipping Facility (CSF) project (if such project is initiated during the term of this contract) by fulfilling all interface responsibilities
- Operate and maintain the Effluent Treatment Facility (ETF) to process aqueous waste streams from Liquid Waste system operations and from other site operations into a form suitable for (a) release to a permitted outfall or (b) processing and disposal at the Saltstone Facility
- Identify, develop and implement improved, supplemental, or replacement processes, approaches and technologies for tank closure, 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, provided such processes, approaches and technologies comply with Section C.2.1, including all its subparts
- Maintain an interactive program/system planning process for Liquid Waste program project milestone and execution schedules
- Implement and conduct a comprehensive Environment, Safety, and Health (ES&H) program consistent with the overarching site-wide ES&H program administered by the SR M&O contractor
- Develop, maintain, and perform work in accordance with a safety basis for all Liquid Waste hazard category 1, 2, and 3 nuclear facilities
- Serve as engineering, design, and construction manager for all aspects of the Liquid Waste workscope
- Provide necessary operations support functions for all aspects of the Liquid Waste workscope
- Provide planning and administrative services for all aspects of the Liquid Waste workscope
- Operate the DWPF analytical laboratory and make arrangements to obtain other needed analytical laboratory services to support execution of all aspects of the Liquid Waste workscope
- Support the DOE National Nuclear Security Administration (NNSA) Radiological Assistance Program (RAP)

## General Contract End State Requirements

The Contractor is responsible for achievement of the following contract end states for the basic term of the contract:

- Operational closure of Tanks 18F and 19F
- Operational closure of other noncompliant liquid radioactive waste storage tanks with the expectation that FFA noncompliant tank closure commitment dates will be met
- Planning and execution of activities necessary to support the future operational closure of noncompliant liquid radioactive waste storage tanks in support of the FFA
- Production of at least 1,100 DWPF canisters at optimal sludge and salt waste loadings in keeping with achievement of all other contract end state requirements and support of the proposed small-scale plutonium vitrification nonproliferation capability if implemented
- Procurement and delivery to the SR M&O contractor of the requisite number of special ‘magazine’ equipped DWPF canisters necessary to support the continued and uninterrupted disposition of surplus plutonium depending on DOE’s decision to build and operate the proposed small-scale plutonium vitrification nonproliferation capability
- Delivery of at least 8,250,000 gallons of salt waste, fully conforming with SWPF salt feed waste acceptance criteria, to SWPF for processing, in keeping with SWPF’s capability to receive and process salt waste; and readiness to supply adequate salt waste feed to support the continued and uninterrupted SWPF operations
- Vault construction at the SDF conducted in full support of the sustained disposal of low-level waste at the SDF throughout the basic term of the contract and in accordance with Section C.2.1.1, including all its subparts; and construction activities staged to support the continued and uninterrupted disposal of low-level waste at the SDF
- Waste Removal operations planned and conducted throughout the basic term of the contract to maintain a constant source of waste feed to Liquid Waste processing facilities in keeping with each facility’s capability to receive and process waste; and planned and staged to support a continued and uninterrupted source of waste feed to Liquid Waste processing facilities
- Sludge waste feed processing to maximize sludge waste throughput at DWPF consistent with DWPF’s capability to receive and process waste; and planned and staged to maximize continued and uninterrupted sludge waste throughput at DWPF
- Biannual delivery of a system plan for successful mission achievement of Project Baseline Summary (PBS) 0014C
- Annual delivery of a Liquid Waste Disposition Processing Plan

Underlying the DWPF canister production Contract End State specified above, two major DWPF outages, each four months in duration, are forecast for the purposes of replacing a failing or failed melter during the basic term of the contract.

The Contractor is responsible for achievement of the following contract end states for Option 1 of the contract (2-Year Option Period: July 1, 2014 to June 30, 2016):

- Operational closure of noncompliant liquid radioactive waste storage tanks with the expectation that FFA noncompliant tank closure commitment dates will be met
- Planning and execution of activities necessary to support the future operational closure of noncompliant liquid radioactive waste storage tanks in support of the FFA
- Production of at least 440 DWPF canisters at optimal sludge and salt waste loadings in keeping with achievement of all other contract end state requirements and support of the proposed small-scale plutonium vitrification nonproliferation capability if implemented
- Procurement and delivery to the SR M&O contractor of the requisite number of special 'magazine' equipped DWPF canisters necessary to support the continued and uninterrupted disposition of surplus plutonium depending on DOE's decision to build and operate the proposed small-scale plutonium vitrification nonproliferation capability
- Delivery of at least 12,000,000 gallons of salt waste, fully conforming with the SWPF salt feed waste acceptance criteria, to SWPF for processing, in keeping with SWPF's capability to receive and process salt waste; and readiness to supply adequate salt waste feed to support continued and uninterrupted SWPF operations
- Vault construction at the SDF conducted in full support of the sustained disposal of low-level waste at the SDF throughout the Option 1 term of the contract and in accordance with Section C.2.1.1, including all its subparts; and construction activities staged to support the continued and uninterrupted disposal of low-level waste at the SDF
- Waste Removal operations planned and conducted throughout the Option 1 term of the contract to maintain a constant source of waste feed to Liquid Waste processing facilities in keeping with each facility's capability to receive and process waste; and planned and staged to support a continued and uninterrupted source of waste feed to Liquid Waste processing facilities
- Sludge waste feed processing to maximize sludge waste throughput at DWPF consistent with DWPF's capability to receive and process waste; and planned and staged to maximize continued and uninterrupted sludge waste throughput at DWPF
- Biannual delivery of a system plan for successful mission achievement of Project Baseline Summary (PBS) 0014C
- Annual delivery of a Liquid Waste Disposition Processing Plan

Underlying the DWPF canister production Contract End State specified above, no major DWPF outages are forecast for the purposes of replacing a failing or failed melter during the Option 1 term of the contract.

The Contractor is responsible for achievement of the following contract end state for Option 2 of the contract (Operation of SWPF During 2-Year Option Period: July 1, 2014 to June 30, 2016):

- Processing of at least 12,000,000 gallons of salt waste at SWPF to yield a high-activity salt stream which meets waste feed acceptance criteria for processing at DWPF and a low-activity salt stream which meets waste feed acceptance criteria for processing and disposal at the Saltstone Facility, in keeping with these facilities' capabilities to receive and process these SWPF output waste streams

## **C.1 – LIQUID WASTE STABILIZATION AND DISPOSITION**

Planning, oversight, engineering, operations, surveillance, maintenance, upgrade and modification are functions inherent to all elements of Liquid Waste Stabilization and Disposition. The Contractor shall perform these functions, as necessary, in executing the workscope described below.

### **C.1.1 Waste Removal and Tank and Associated Facilities Closure**

#### **C.1.1.1 Waste Removal**

The Contractor shall remove sludge waste from liquid radioactive waste tanks to support the preparation of sludge batches to serve as feed to the DWPF. The Contractor shall also plan for and stage salt waste feed from the liquid radioactive waste tanks to support the operation of ARP/MCU and SWPF. The Contractor shall ensure that sufficient salt waste feed is supplied to such salt processing operations to support their maximum operating capacities once operational. The Contractor shall effectively couple waste removal activities with sludge and salt waste feed preparation activities to assure that adequate sludge and salt waste feed is continuously available to all waste processing unit operations. Waste removal activities consisting of 1) bulk waste removal, 2) tank waste heel removal, 3) tank annulus waste removal, as necessary, 4) tank and annulus cleaning, and 5) sampling and characterization of residual source terms, shall also be conducted to support tank closure activities.

#### **C.1.1.2 Tank and Associated Facilities Closure**

The Contractor shall operationally close and isolate noncompliant liquid radioactive waste tanks and associated facilities in support of the FFA. Operational closure consists of those actions following completion of waste removal activities which bring liquid radioactive waste tanks and associated facilities to a state of readiness for final closure of the tank farms complex. Operational closure consists of: 1) filling the tank, tank annulus, and tank cooling coils with grout, 2) disabling waste transfer lines and tank ventilation systems, and 3) capping all tank risers. All operational tank and associated facilities closures will be conducted in accordance with the applicable determination by the Secretary of Energy under Section 3116(a) of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, the associated 3116 basis, State-approved closure plans, and any applicable agreements and Consent Orders. The Contractor shall prepare draft Section 3116 basis documents and related performance assessments for the tanks to be closed. The Contractor shall also meet all requirements imposed by Section C.2.1, including all its subparts, and imposed by and contained within Contractor-developed, State-approved closure plans.

## C.1.2 Waste Treatment

### C.1.2.1 Defense Waste Processing Facility Operations

The Contractor shall operate the DWPF to process sludge and salt feed streams into a vitrified waste form that meets or exceeds all requirements for interim storage at SRS and all requirements set forth by EM and the DOE Office of Civilian Radioactive Waste Management (RW) regarding the acceptability of the vitrified waste form for disposal in a licensed Federal Repository. The Contractor shall endeavor to maximize DWPF waste throughput. The Contractor shall ensure the availability of a spare melter to effect a timely replacement of an operational melter in the event its failure. The Contractor shall also provide for safe storage of failed melters by anticipating the need for and constructing failed melter boxes and Failed Equipment Storage Vaults (FESV).

DOE has identified a preferred alternative for the disposition of up to 13 Metric Tons (MT) of DOE-EM surplus non-pit plutonium using a combination of technologies, including the proposed small-scale plutonium vitrification nonproliferation capability if needed. If DOE decides this capability is needed, the SR M&O contractor would be responsible for developing the capability to: 1) vitrify surplus plutonium into a lanthanide borosilicate glass matrix, 2) package the plutonium glass form into Bagless Transfer Cans, 3) load these vitrified plutonium cans into ‘magazines’ installed inside empty DWPF canisters, and 4) transport the DWPF canisters containing the vitrified plutonium loaded magazines to DWPF for turnover to the Contractor. The Contractor would be responsible for processing these canisters through DWPF, filling the remaining space in the canisters with HLW glass, and transporting and storing the canisters in GWSB vaults. DWPF operations in support of the proposed small-scale plutonium vitrification nonproliferation capability, if implemented, are projected to begin in 2013, following the start of SWPF operations, and continue through 2019 at a projected rate of 132 canisters per year. Over the life of the proposed small-scale plutonium vitrification nonproliferation capability, if implemented, 790 DWPF canisters containing the vitrified plutonium canisters are projected to be produced.

Project management responsibility for the proposed small-scale plutonium vitrification nonproliferation capability construction line item, including construction activities in DWPF, would be assigned to the SR M&O contractor; however the Contractor would have approval authority over all proposed modifications to DWPF and any other Liquid Waste facilities and would be responsible for overall operational activities within its facilities and the affected facilities’ safety bases relating to plutonium disposition.

If DOE decides to pursue the proposed small-scale plutonium vitrification nonproliferation capability, the Contractor shall be responsible for:

- Coordination with and support of SR M&O contractor installation of DWPF upgrades necessary to support the plutonium disposition mission

- Development of necessary safety basis and procedural upgrades to support receipt, pouring and storage (pre- and post-pouring) of DWPF canisters containing vitrified plutonium
- Procurement and delivery of DWPF canisters equipped with specified ‘magazines’ to the SR M&O contractor on a mutually agreed schedule
- Receipt, pouring and storage (pre- and post-pouring) of plutonium-bearing DWPF canisters on a mutually agreed upon schedule with the SR M&O contractor

#### **C.1.2.2 Deliquification, Dissolution and Adjustment Process Operations**

The Contractor shall complete DDA activities to disposition Tank 41H waste in compliance with Section C.2.1.1, including all its subparts.

#### **C.1.2.3 Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit Operations**

The Contractor shall operate the ARP and the MCU pending startup of the SWPF to treat dissolved saltcake waste in compliance with Section C.2.1.1, including all its subparts, and deliver a low-activity clarified salt solution waste stream (i.e., treated to remove actinides, strontium and cesium) as feed to the SPF for processing and to derive a high-activity concentrated radioactive cesium and actinide/strontium salt stream as feed for processing at the DWPF.

#### **C.1.2.4 Saltstone Facility Operations**

##### **C.1.2.4.1 Saltstone Processing Facility Operations**

The Contractor shall operate the SPF to process low-activity waste for disposal at the SDF.

The Contractor shall complete construction of a waste feed holding vessel known as the Saltstone Feed Facility (SFF) and operate and maintain the SFF to receive, store and supply waste feed to the SPF. SFF shall be available for service upon SWPF startup.

##### **C.1.2.4.2 Saltstone Disposal Facility Operations**

The Contractor shall operate the SDF for the permanent disposal of low-level radioactive waste in compliance with Section C.2.1.1, including all its subparts. The Contractor shall construct disposal vaults in full support of the sustained disposal of low-level waste at the SDF and in compliance with Section C.2.1.1, including all its subparts to assure the availability of adequate vault space to support SPF operations throughout the period of the contract and construction activities shall be staged to support the continued and uninterrupted disposal of low-level waste at the SDF.

### **C.1.2.5 Effluent Treatment Facility Operations**

The Contractor shall operate the ETF for the processing of low-activity radioactive wastewater from site operations to enable the free release of treated water to the environment and transfer of concentrated low-activity waste as feed to the SPF. For the Liquid Waste system, this includes evaporator overheads and other wastewater discharges from Liquid Waste system facilities.

### **C.1.2.6 Salt Waste Processing Facility Operations (Option 2)**

DOE may elect to exercise a contract option for the Contractor to assume responsibility for operation and maintenance of the SWPF. Option 2 covers the same 2-year time period as Option 1 (see Section B.2), i.e., 2 years beyond the end of the basic term of the contract.

Should DOE elect to exercise Option 2, the Contractor shall operate and maintain the SWPF to process the salt waste feed stream resulting from tank waste removal operations to produce: a high-activity waste feed stream for processing at the DWPF, which meets all DWPF waste acceptance criteria, and a low-activity waste feed stream to the SPF, which meets all SPF waste acceptance criteria.

## **C.1.3 Base Operations**

### **C.1.3.1 F and H-Tank Farm Base Operations**

The Contractor shall operate the F and H-Area tank farms to receive, concentrate, and store liquid radioactive waste influents in support of ongoing site activities and ensure the continued operability and structural integrity of the existing liquid radioactive waste tanks, waste evaporator facilities and waste transfer systems.

#### **Waste Receipt**

The Contractor shall accept: 1) appropriately characterized liquid waste from H Canyon operations that has no viable alternative path to disposition; 2) liquid waste resulting from ETF operations that does not otherwise have a disposition path, and 3) other material as may be directed by the Contracting Officer (CO). Waste influents to the tank farms from H Canyon operations shall be presumed to be approximately 300,000 gallons per year. However, the Contractor will be expected to accommodate influents to the tank farms at rates and volumes which do not prevent achievement of the performance objectives contained herein.

### **Waste Concentration and Storage**

The Contractor shall concentrate waste influents to the tank farms including those associated with the Contractor's execution of the Liquid Waste workscope described herein. There are three existing operational tank farm evaporators (2F, 2H & 3H) available to the Contractor to achieve this objective.

The Contractor shall, at a minimum, maintain adequate available tank space in keeping with the Authorization Basis (AB) for the tank farms and to permit execution of the workscope described herein in accordance with approved plans and schedules. The Contractor shall endeavor to identify and take steps to increase available tank space and reduce tank space availability as a risk factor.

### **Tank 48H Waste Disposition and Return to Service**

The Contractor shall complete the effort to disposition Tank 48H waste, in accordance with Section C.2.1.1, including all its subparts, and shall complete all steps necessary to return Tank 48H to unrestricted tank farm service. It is anticipated that this work will be initiated under a subcontract to the incumbent contractor and that the subcontract will be in place prior to award of this contract. During transition, this subcontract will be assigned to the Contractor.

### **Sludge Waste Feed Preparation**

The Contractor shall prepare sludge waste feed to sustain DWPF vitrification operations. Extended Sludge Processing (ESP) in H-Tank Farm currently serves the function of accepting sludge from waste removal operations and processing it into sludge waste feed suitable for processing at DWPF. The Contractor shall effectively couple tank waste removal operations with sludge waste feed processing operations to provide sludge waste: 1) within compositional ranges that support sludge waste blending and processing into batches that meet DWPF prescribed feed specifications, and 2) in sufficient volume to assure the continuous availability of sludge waste feed to DWPF to maximize DWPF throughput. The Contractor shall also stage sludge waste feed processing operations to provide confidence that DWPF vitrification operations can be sustained into the post-contract period.

#### **C.1.3.2 Glass Waste Storage Facilities Operations**

The Contractor shall operate existing GWSB #1 and #2 and any future GWSB that commences operation during the term of the contract, as directed by the CO, to store waste glass canisters produced at the DWPF on an interim basis pending shipment offsite for disposal at a licensed Federal Repository. DOE anticipates the future need for additional waste glass canister interim storage capacity beyond that afforded by the existing GWSBs and considers it likely that a project to construct a third GWSB will be executed during the term of the contract. It is further anticipated that this construction

project will be executed under a separate contract. Should this occur, the Contractor shall, throughout the period of this project, provide interface coordination and support, as appropriate, to ensure that the completed project will support ongoing DWPF operations.

### **C.1.3.3 Canister Shipping Facility Interface, Coordination and Operations**

#### **C.1.3.3.1 Canister Shipping Facility Project Interface and Coordination**

A project to design and construct a CSF may be initiated during the term of this contract. It is anticipated that this project will be executed under a separate contract. Should this occur, the Contractor shall, as directed by the CO, throughout the period of this project, provide interface coordination and support, as appropriate, to help ensure the timely execution of this project and turnover to the Contractor for operation. The Contractor has lead responsibility for interface and coordination with regulatory agencies for environmental permits related to CSF operations.

#### **C.1.3.3.2 Canister Shipping Facility Operations**

The Contractor shall, as directed by the CO, operate any Canister Shipping Facility constructed during the term of this contract (basic term and Option 1 term) in support of the transport of DWPF canisters to a facility to be identified by RW, in accordance with an EM and RW approved DWPF canister shipment and receipt schedule.

### **C.1.3.4 Salt Waste Processing Facility Interface and Coordination**

The Contractor shall fully support the timely execution of the SWPF Project throughout its design, construction, startup and radioactive operations. While the SWPF Project contractor bears ultimate responsibility for the timely and effective execution of this project, the success of the project also depends upon on the timely and effective execution of necessary interfaces with the Liquid Waste system. The Contractor shall work with the SWPF Project contractor to: 1) identify necessary interfaces between the SWPF Project and the Liquid Waste system, 2) identify appropriate actions to assure the interfaces are fully addressed, and 3) agree as to respective responsibilities for addressing the interfaces. The Contractor shall execute its agreed-upon/assigned responsibilities to adequately address identified interfaces in a timely and effective manner. The interfaces to be addressed include both physical and operational, and will necessitate the development of appropriate procedures to assure a smooth transition of SWPF operations into the Liquid Waste system.

## C.2 – LIQUID WASTE PROGRAM SUPPORT

This Section describes the scope of the support functions to be performed by the Contractor associated with the safe and effective execution of the Statement of Work. In some cases, the Contractor shall bear full responsibility for performance of necessary support functions. In other cases, substantial support will be provided to the Contractor by DOE via other site contractors. Section J, Appendix N identifies support functions to be performed by SR contractors, including the Contractor, and specifies the respective responsibilities of the involved SR contractors. In addition to, or in conjunction with, the support responsibilities specified in this section, the Contractor is responsible for execution of all assigned responsibilities specified in Section J, Appendix N.

### C.2.1 Waste Determinations

#### C.2.1.1 Conformity with Section 3116 Determination, Permit and Other Matters

In accordance with section 3116(a) of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, the Secretary of Energy, in consultation with the Nuclear Regulatory Commission, determined in January 2006 that disposal of certain treated, solidified low-activity radioactive salt waste from reprocessing meets the criteria in section 3116(a), is not high level waste, and may be disposed of as low level waste in the Saltstone Disposal Facility (SDF). The Secretary's Determination is set forth in the *Section 3116 Determination for Salt Waste Disposal at the Savannah River Site* (DOE-WD-2005-001, January 2006). The Secretary's Determination was based on the rationale and analysis in the Department of Energy's *Basis for Section 3116 Determination for Salt Waste Disposal at the Savannah River Site* (DOE-WD-225-001, January 2006), and its attachments and references. In addition, the South Carolina Department of Health and Environmental Control issued a modified permit in 2007 for disposal of this treated, solidified low-activity radioactive salt waste in the Modified Permit for the Savannah River Site (SRS) Z-Area Saltstone Disposal Facility, Facility ID No.02550-1603. The Department of Energy and other parties also entered into an agreement in August 2007 concerning the modified permit and other matters; this agreement is memorialized in the August 7, 2007 Consent Order of Dismissal in Natural Resources Defense Council et al. v. South Carolina Department of Health and Environmental Control, et al. (South Carolina Administrative Law Court, August 7, 2007).

The above-referenced documents together specify, among other things, the following two-phase, three-step process to segregate the low-activity fraction of the salt waste and to remove highly radioactive radionuclides from the waste: Deliquification, Dissolution, and Adjustment (DDA); the Actinide Removal Process (ARP) and a Modular Caustic Side Solvent Extraction Unit (MCU); and the Salt Waste Processing Facility (SWPF) (augmented as necessary by ARP). DDA, ARP and MCU are sometimes referred to as interim processing.

#### C.2.1.1.1 Required Conformity

a. The Contractor's processing, treatment, and disposal activities shall conform to, follow, and adhere to the following:

- 1) the Secretary of Energy's *Section 3116 Determination for Salt Waste Disposal at the Savannah River Site* (DOE-WD-2005-001, January 2006) ("3116 Determination");
- 2) the Department of Energy's *Basis for Section 3116 Determination for Salt Waste Disposal at the Savannah River Site* (DOE-WD-225-001, January 2006) ("3116 Basis") (NOTE: Numerous documents are attached to the 3116 Basis.);
- 3) the Modified Permit for the Savannah River Site (SRS) Z-Area Saltstone Disposal Facility, Facility ID No.02550-1603, January 23, 2007 ("Permit"); and
- 4) applicable paragraphs, including paragraphs 4, 5, and 6, of the August 7, 2007 Consent Order of Dismissal in Natural Resources Defense Council et al. v. South Carolina Department of Health and Environmental Control, et al. (South Carolina Administrative Law Court, August 7, 2007) ("Consent Order").

NOTE: In certain respects, the Permit and Consent Order identified above contain requirements and commitments which are more limiting or restrictive than what was assumed in the 3116 Basis; the more limiting or restrictive requirement or commitment shall take precedence.

b. Conformity with the documents listed in section C.2.1.1.1.a. includes but is not limited to:

- 1) the processing and disposal of salt waste treated by DDA alone shall be limited to only that material contained in Tank 41H as of June 9, 2003 (approximately 1.23 million gallons) and associated low level waste streams used to adjust salt to meet processing requirements described in Permit Condition A.1.a. and Consent Order paragraph 4;
- 2) the waste from Tank 48H shall be treated and disposed of through treatment and destruction of organic materials in the waste resident in Tank 48H, as described in Permit Condition A.1.b. and Consent Order paragraph 4;
- 3) the processing and disposal of waste using ARP and MCU shall comply with permit Condition A.1.c., as referenced in Consent Order paragraph 11;

- 4) the waste disposed of in the SDF shall meet the Land Disposal Restrictions contained in S.C. Code Ann. Regs. 61-79.268, as specified in Consent Order paragraph 11;
- 5) the waste disposed of in the SDF shall not contain hazardous constituents, as specified in Consent Order paragraph 11;
- 6) hazardous waste as defined by the South Carolina Hazardous Waste Management Regulations shall not be disposed of in SDF at any time, as specified in Permit Condition B.3.;
- 7) all conditions and terms of the Permit shall be complied with, including any permit modifications needed to comply with the Consent Order;
- 8) all terms of the Consent Order shall be complied with;
- 9) the total curies disposed of in SDF shall not be increased above that discussed in the 3116 Basis;
- 10) the total volume of waste, and the total curies, processed with interim processing shall not be increased above that discussed in the 3116 Basis;
- 11) the total curies processed with SWPF shall not be decreased below that discussed in the 3116 Basis;
- 12) waste transfers in the tank farms shall be managed in order to minimize radiation exposures to workers, minimize radiation exposures to the public, and reduce the risk to the environment;
- 13) the properties of the grout to be added to the waste in the Saltstone Production Facility (SPF) shall not be altered so as to decrease grout performance, decrease saltstone performance or decrease saltstone durability from that discussed in the 3116 Basis;
- 14) the waste disposed of in the SDF shall meet the concentration limitation for Class C low-level waste as set out in 10 CFR 61.55;
- 15) the processing and disposal of salt waste in vault 4 of the SDF shall not alter the analyses in the 3116 Basis which demonstrate that disposal of solidified salt waste in the SDF meets the concentration limitation for Class C low level waste in 10 CFR 61.55;
- 16) the waste disposed of in the SDF shall be in compliance with the performance objectives in 10 CFR Part 61, subpart C;

- 17) the processing and disposal of salt waste shall not adversely alter the analysis in the 3116 Basis which demonstrates compliance with the performance objectives in 10 CFR Part 61, subpart C; and
- 18) use of “old style” single-shell tanks that lack full secondary containment, for salt waste processing or disposal activities, or reintroduction of salt waste into such tanks, shall be minimized.

#### **C.2.1.2 Future 3116 Determinations and Related Matters**

The Secretary of Energy, in consultation with the Nuclear Regulatory Commission, may make other determinations pursuant to section 3116(a) of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 concerning, for example, closure of one or more Liquid Waste tanks and associated Liquid Waste facilities at the Savannah River Site. The Contractor shall conform to, follow, and adhere to: any future 3116 determinations by the Secretary; the associated 3116 basis; any permits and state-approved closure plans; and any agreements or consent orders concerning the Liquid Waste system.

#### **C.2.2 Environment, Safety, and Health (ES&H) Support and Assurance**

The Contractor shall implement and conduct a comprehensive ES&H program that provides for the protection of workers, the public, and the environment in accordance with the clause in Section I, entitled “Integration of Environment, Safety and Health into Work Planning and Execution” and consistent with the overarching ES&H program implemented by the SR M&O Contractor. The Contractor shall include provisions for the protection of human health and safety and the environment in all activities for which it has contractual responsibilities. The Contractor shall implement and continuously improve the existing ES&H program and shall conduct its activities in full compliance with DOE ES&H requirements. The Contractor shall also coordinate with the SR M&O Contractor for issues pertaining to site-wide ES&H matters as specified herein and Section J, Appendix N.

The Contractor shall include, at a minimum, the following disciplines as part of its ES&H program:

- Nuclear safety (including criticality safety)
- Occupational, industrial, and construction safety
- Transportation safety
- Industrial hygiene
- Occupational medicine
- Quality Assurance
- Fire protection
- Radiation protection

- Emergency operations
- Emergency preparedness (including coordination with outside agencies)
- Hazardous material management
- Environmental compliance, management and protection
- Pollution prevention and waste minimization
- Technical training and qualification
- Conduct of operations and occurrence reporting
- Radiological assistance and/or support for emergency response
- Contractor assurance system (e.g., assessment programs, event reporting, worker feedback, issues management, lessons learned, and performance monitoring)

As part of its overall performance assurance program, the Contractor shall implement and maintain an Integrated Safety Management System (ISMS) for the Liquid Waste program that is consistent, as confirmed by DOE assessment, with the ISMS implemented and maintained by the SR M&O contractor. The Contractor shall submit and maintain an ISMS System Description document. Pending the initial issuance and approval of its ISMS program, the Contractor shall implement the existing ISMS program established by the predecessor contractor and documented in its ISMS Description Document. The Contractor shall provide support for any activity on site, as needed, in emergency situations. The Contractor shall also provide ES&H support to others when directed by the CO. This may include activities such as onsite and offsite environmental analysis and assisting in the preparation of required regulatory information. The Contractor shall immediately report to DOE any ES&H related issues arising with its adherence to the SR M&O contractor's overarching site-wide ES&H program which it cannot resolve with the SR M&O contractor.

The Contractor shall implement and maintain a set of requirements to ensure the protection of human health and safety and the environment. In the event the Contractor becomes out of compliance, appropriate action to protect human health and safety and the environment shall be taken until compliance is reestablished. When activities are not in compliance with appropriate requirements, the Contractor shall accept violation notices and be responsible to pay any resulting fines assessed in accordance with the clause in Section H, entitled "Allocation of Liability for Fines and Penalties to Responsible Party."

The Contractor shall work effectively with other site contractors, subcontractors, external regulators, and others (e.g., the Defense Nuclear Facilities Safety Board) to maintain and improve ES&H performance at SRS. The Contractor shall ensure ES&H excellence in subcontractor performance and flowdown of all applicable requirements to subcontractors. The Contractor shall consider ES&H past performance as an evaluation factor in the selection of subcontractors performing work in Government-owned or leased facilities.

The Contractor shall periodically evaluate its ES&H program for effectiveness by using both self and independent assessments, monitor ES&H performance continuously by the use of ES&H

performance indicators, and affect continued ES&H improvement in a cost effective manner. The Contractor shall use these tools and others identified in its contractor assurance system in its pursuit to be the DOE complex-wide leader in self-assessing compliance with ES&H requirements.

The Contractor shall be compliant with all permits it is individually responsible for with the State and for those portions of permits it is responsible for with the State which may be held by DOE or other site contractors. The Contractor shall anticipate and seek new permit authority should the need arise.

### **C.2.3 Development and Maintenance of Safety Documentation**

The Contractor shall develop, maintain, and perform work in accordance with safety bases for all Liquid Waste hazard category 1, 2, and 3 nuclear facilities. The major components of the safety basis for a nuclear facility include the Documented Safety Analysis (DSA), the Technical Safety Requirements (TSRs), and an Unreviewed Safety Question (USQ) process.

In accordance with ISMS principles, the Contractor shall ensure that facilities that contain different types of hazards are addressed in a systematic and integrated manner. The Contractor shall operate its facilities in accordance with applicable documented safety bases.

### **C.2.4 Engineering, Design and Construction Services**

The Contractor shall plan and integrate all engineering, design, procurement and construction services. The Contractor shall be the engineering, design and construction manager for all aspects of the Liquid Waste workscope, including maintenance and repair. The Contractor shall utilize appropriate contracting mechanisms for engineering, design and construction services, with a preference for fixed-price contracting to the maximum extent practicable. DOE reserves the right to assign responsibility for individual projects to organizations other than the Contractor.

#### **C.2.4.1 Engineering Services**

The Contractor shall provide or procure engineering services to implement programs for:

- Systems engineering
- Configuration management
- Suspect parts

#### **C.2.4.2 Design and Construction Services**

The Contractor shall:

- Ensure all customer/engineering/construction interfaces and requirements of all functions including research and development, operations, maintenance,

environmental protection, design review, staffing, training, operational readiness and startup are properly reflected in designs

- Provide a proven, systematic project management system which provides cost estimating, scheduling, and change control systems for maintenance of an appropriate baseline
- Provide or procure architect-engineering services as required to support the design of facilities
- Provide or procure construction services as required to meet project requirements
- Provide other services, such as: schedule coordination to avoid conflict with other projects; construction site orientation; safety program monitoring; utility service coordination; quality assurance and inspection; determination of progress payments for work accomplished; change management; and management of construction goods and services
- Include cost, technical, and schedule performance measures in subcontracts

### **C.2.5 Operations Support**

The Contractor shall provide necessary operations support functions for all aspects of the Liquid Waste workscope including, but not limited to oversight, surveillance, maintenance, and system modifications and upgrades. Note: This scope does not include the activity-specific operation support functions identified in Section C.1.

The Contractor is responsible for any other support except that to be provided to the Contractor by other SR contractors delineated in Section J, Appendix N, and by the Government in the form of the Government Furnished Services and Items (GFS&I) delineated in Section J, Appendix L.

### **C.2.6 Planning, Administrative and Business Services**

The Contractor shall provide planning and administrative services for all aspects of the Liquid Waste workscope. The Contractor shall provide landlord and custodial services for real and personal property assigned to the Liquid Waste program, including facilities identified in Attachment C-2. Services include, but are not limited to:

- Strategic planning, program planning, and long and short range planning
- Facility and site use planning
- Program integration planning involving other DOE organizations and contractors
- Procurement
- Accounting, budgeting and financial management
- Personnel administration and labor relations
- Information resources management, development, and operation

- Property management
- Legal
- Administrative services
- Public Affairs

The Contractor shall provide input to the SR M&O contractor's planning and administrative activities as specified in Section J, Appendix N.

### **C.2.7 Analytical Laboratory Support**

The Contractor shall operate and maintain the DWPF laboratory in support of DWPF operations. The Contractor may use the services of other SRS analytical laboratories, e.g., the Savannah River National Laboratory and the Central Laboratory. These other SRS analytical laboratories will be operated and maintained by the SR M&O contractor. The Contractor shall reimburse the SR M&O contractor for the costs of analytical services performed by these other SRS analytical laboratories.

### **C.2.8 Radiological Assistance Program Support**

The Contractor shall support the DOE/NNSA Radiological Assistance Program for Region 3 (North Carolina, South Carolina, Georgia, Florida and Alabama) by making specially designated personnel available to serve on RAP Team deployments. Presently, there are five individuals in the Liquid Waste program that are designated to this collateral duty. The Contractor shall, as directed by the CO, support RAP personnel maintenance of qualifications through RAP training attendance, and participation in RAP training exercises. The funds associated with RAP personnel deployment and training will be separately provided by the DOE/NNSA. A fact sheet that describes the RAP program can be found at the National Nuclear Security Administration Office of Public Affairs web site: <http://www.doeal.gov/opa/Freedom.htm>

**C.3 – RESPONSIBILITIES FOR SPONSORHIP, MANAGEMENT AND  
ADMINISTRATION OF CONTRACTOR EMPLOYEE PENSION AND OTHER  
BENEFIT PLAN**

The Contractor shall become a sponsor of the Multiple Employer Pension Plan (MEPP) for Incumbent Employees, with responsibility for management and administration of the plan. The Contractor shall also sponsor and be responsible for management and administration of welfare benefit plans for Incumbent Employees. In addition, the Contractor shall sponsor and be responsible for management and administration of the pension and medical benefit plans for Non-Incumbent Employees. The requirements associated with these responsibilities are set forth in Section H.9, Employee Compensation: Pay and Benefits.

## Attachment C-1 – Overview of the Liquid Waste System

### Background

The Liquid Waste system is the integrated series of facilities at Savannah River Site (SRS) that safely manage the existing waste inventory and disposition waste stored in the tanks into a final glass or grout form. This system includes facilities for storage, evaporation, waste removal, pre-treatment, vitrification, and disposal.

Since it became operational in 1951, SRS, a 300-square-mile DOE Complex located in the State of South Carolina, has produced nuclear material for national defense, research, medical, and space programs. The separation of fissionable nuclear material from irradiated targets and fuels resulted in the generation of large quantities of radioactive waste which are currently stored onsite in large underground waste storage tanks. Approximately 36.5 million gallons (Mgal) of radioactive waste are currently stored at SRS. Most of the tank waste inventory is a complex mixture of chemical and radioactive waste generated during the acid-side separation of special nuclear materials and enriched uranium from irradiated targets and spent fuel using the Plutonium–Uranium Extraction (Purex) process in F-Canyon and the modified Purex process in H Canyon (referred to as H-Modified or simply HM). Waste generated from the recovery of Plutonium-238 in H Canyon for the production of heat sources for space missions is also included. The waste was converted to an alkaline solution; metal oxides settled as sludge; and supernate evaporated to form saltcake.

The variability in both nuclide and chemical content is due to the fact that waste streams from the 1<sup>st</sup> cycle (high heat) and 2<sup>nd</sup> cycle (low heat) extractions from each canyon were stored in separate tanks to better manage waste heat generation. When these streams were neutralized with caustic, the resulting precipitate settled into four characteristic sludges presently found in the tanks where they were originally deposited. The soluble portions of the 1<sup>st</sup> and 2<sup>nd</sup> cycle waste were similarly partitioned but have and continue to undergo blending in the course of waste transfer and staging of salt waste for evaporative concentration to supernate and saltcake. Historically, fresh waste receipts have been segregated into four general categories in the SRS Tank Farms: Purex high-activity waste, Purex low-activity waste, HM high-activity wastes and HM low-activity wastes. Because of this segregation, settled sludge solids contained in tanks that received fresh waste are readily identified as one of these four categories. Fission product concentrations are about three orders of magnitude higher in both Purex and HM high-activity waste sludges than the corresponding low-activity waste sludges.

Because of differences in the Purex and HM processes, the chemical compositions of principal sludge components (iron, aluminum, uranium, manganese, nickel, and mercury) also vary over a broad range between these sludges. Combining and blending salt solutions has tended to reduce soluble waste into blended Purex salt and concentrate and HM salt and concentrate, rather than maintaining four distinct salt compositions. Continued blending and evaporation of the salt solution deposits crystallized salts with

overlying and interstitial concentrated salt solution in salt tanks located in both Tank Farms. More recently with transfers of sludge slurries to sludge washing tanks, removal of saltcakes for tank closure, receipts of Defense Waste Processing Facility (DWPF) Recycle, and space limitations restricting full evaporator operations, salt solutions have been transferred between the two Tank Farms. Intermingling of Purex and HM salt waste will continue until large scale salt processing can begin.

Continued long-term storage of these radioactive wastes poses an environmental risk. Since the startup of DWPF in 1996, SRS has been removing waste from tanks, pre-treating it, vitrifying it, and pouring the vitrified waste into canisters for long-term disposal in a Federal repository. As of April 30 2007, 2,306 canisters of vitrified waste have been produced at DWPF. All canisters vitrified to date contain sludge-only waste.

Figure 1, found on page C-31, presents a lifecycle process flowsheet for the Liquid Waste system.

### Tank Storage

SRS has a total of 51 underground waste storage tanks, all of which were placed into operation between 1954 and 1986. There are four types of waste tanks – Types I through IV. Type III tanks are the newest tanks and were placed into operation between 1969 and



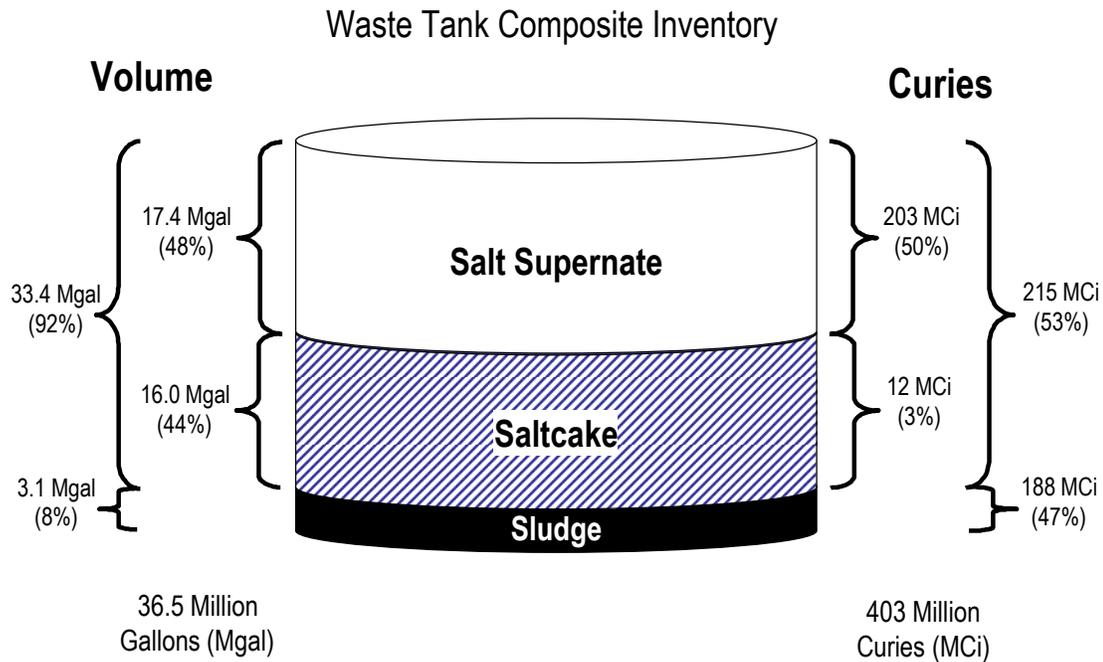
Tanks under construction. Note tank size relative to construction workers. Later, dirt was backfilled around the tanks to provide shielding.

1986. There are a total of 27 Type III tanks. These tanks meet current Environmental Protection Agency (EPA) requirements for full secondary containment and leak detection. The remaining 24 tanks do not have full secondary containment and do not meet EPA requirements for secondary containment. Type I tanks are the oldest tanks and were constructed between 1952 and 1953. Type II waste tanks were constructed between 1955 and 1956. There are eight Type IV tanks that were constructed between 1958 and 1962. Two of these Type IV tanks, Tanks 17F and 20F in F-Tank Farm, have been isolated, operationally closed, and grouted. Twelve tanks without secondary containment have a history of

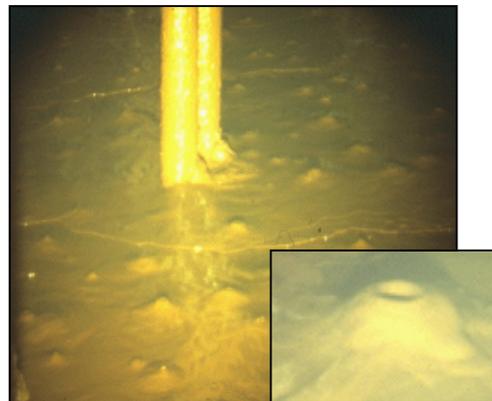
leakage. Sufficient waste has been removed from these tanks such that there are currently no active leak sites. The first tank, lacking secondary containment, began receiving waste in 1954. This tank is still in service.

Approximately 36.5 Mgal of radioactive waste, containing 403 million curies (MCi) of radioactivity, are currently stored in 49 active waste storage tanks located in two separate locations, H-Tank Farm (29 tanks) and F-Tank Farm (20 tanks). This waste is a complex

mixture of insoluble metal hydroxide solids, commonly referred to as sludge, and soluble salt supernate. The supernate volume is reduced by evaporation which also concentrates the soluble salts to their solubility limit. The resultant solution crystallizes as salts. The crystalline salt solids are commonly referred to as saltcake. The supernate and saltcake combined are referred to as salt waste.



Sludge represents approximately 3.1 Mgal (8% of the total stored waste) and contains approximately 188 MCi (47% of the total radioactivity). Salt waste makes up the remaining 33.4 Mgal (92% of the total stored waste) and contains approximately 215 MCi (53% of total radioactivity). Of that salt waste, the supernate portion accounts for 17.4 Mgal and 203 MCi and the saltcake portion accounts for the remaining 16.0 Mgal and 12 MCi. The sludge contains the majority of the long-lived (half-life greater than 30 years) radionuclides (i.e., actinides) and strontium. The sludge is currently being stabilized in DWPF through a vitrification process that immobilizes the waste in a borosilicate glass matrix.



Sludge consists of insoluble solids that settle to the bottom of a tank. Note the offgas bubbles, including hydrogen generated from radiolysis.

Radioactive waste volumes and radioactivity inventories reported herein are based on the Waste Characterization System (WCS) database, which includes the chemical and

radionuclide inventories on a tank-by-tank basis. WCS is a dynamic database frequently updated with new data from ongoing operations such as decanting and concentrating of free supernate via evaporators, preparation of sludge batches for DWPF feed, waste transfers between tanks, waste sample analyses, and influent receipts such as H-Canyon waste and DWPF Recycle. Volumes and curies referenced herein are current as of February 28, 2007.

Well over 95% of the salt waste radioactivity is short-lived (half-life 30-years or less) Cesium-137 and its daughter product, Barium-137m, along with lower levels of actinide contamination. Depending on the particular waste stream (e.g., canyon waste, DWPF Recycle waste), the cesium concentration may vary. The precipitation of salts following evaporation can also change the cesium concentration. The concentration of cesium is significantly lower than non-radioactive salts in the waste, such as sodium nitrate and nitrite; therefore, the cesium does not reach its solubility limit and only a small fraction precipitates. As a result, the cesium concentration in the saltcake is much lower than that in the supernate and interstitial liquid fraction of the salt waste.



Salt waste can be in normal solution as Supernate (top picture) or, after evaporation, as salt cake (bottom picture) or concentrated supernate. The pipes in all the pictures are cooling coils.

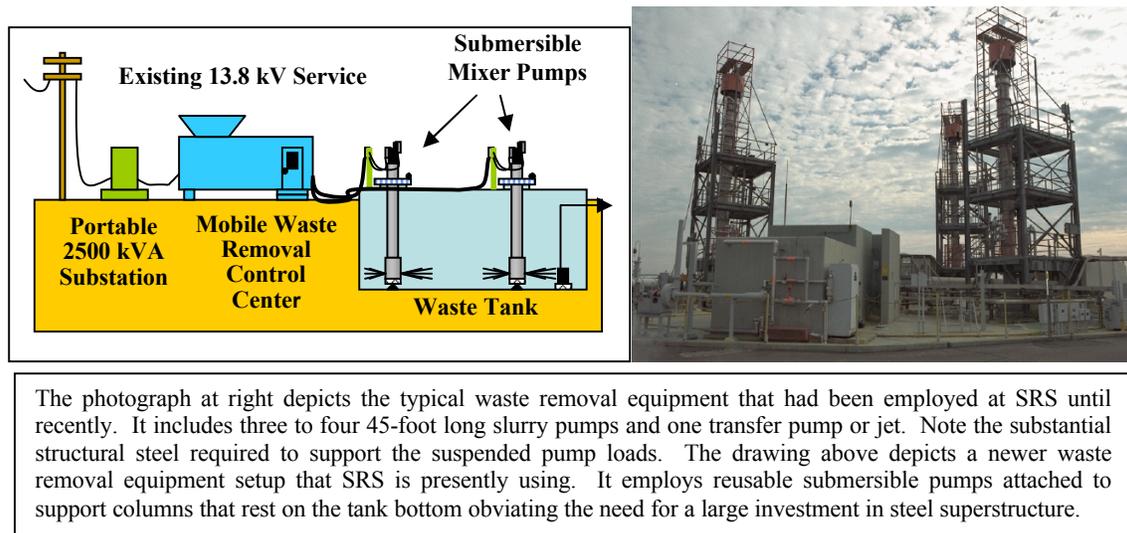
### Waste Tank Space Management

To make better use of available tank storage capacity, incoming liquid waste is evaporated to reduce its volume. This is critical because most of the SRS Type III waste storage tanks are already at or near full capacity. Since 1951, the Tank Farms have received over 140 Mgal of liquid waste, of which over 100 Mgal have been evaporated, leaving approximately 36.5 Mgal in the storage tanks. Projected available tank space is carefully tracked to ensure that the Tank Farms do not become “water logged”, a term meaning that so much of the usable Type III compliant tank space has been filled that normal operations and waste removal and processing operations cannot continue. A portion of tank space is reserved at all times as contingency storage space ready to receive a waste transfer should a new tank leak occur. Waste receipts and transfers are normal Tank Farm activities as the Tank Farms receive new or “fresh” waste from the H-Canyon stabilization program, DWPF Recycle, and wash water from sludge washing. The Tank Farms also make routine transfers to and from waste tanks and evaporators. Currently, there is very little “fresh” waste that has not had the water evaporated from it to its maximum extent. The working capacity of the Tank Farms has steadily decreased and this trend will continue until salt processing becomes operational or the system

becomes water logged. Three evaporator systems are currently operating at SRS - the 2H, 3H, and 2F systems.

### Waste Removal From Tanks

During waste removal, inhibited water (IW) (water that has been chemically treated to prevent corrosion of the carbon steel waste tanks) is added to the waste tanks and agitated by slurry pumps. If the tank contains salt, IW and agitation, if required, dilutes the concentrated salt or re-dissolves the saltcake. If the tank contains sludge, IW and agitation suspends the insoluble sludge particles. In either case, the resulting liquid slurry, which now contains the dissolved salt or suspended sludge, can be pumped out of the tanks and transferred to appropriate downstream waste processing unit operations.



The photograph at right depicts the typical waste removal equipment that had been employed at SRS until recently. It includes three to four 45-foot long slurry pumps and one transfer pump or jet. Note the substantial structural steel required to support the suspended pump loads. The drawing above depicts a newer waste removal equipment setup that SRS is presently using. It employs reusable submersible pumps attached to support columns that rest on the tank bottom obviating the need for a large investment in steel superstructure.

Waste removal is a multi-year process. First, each waste tank must be retrofitted with mixing and transfer pumps, infrastructure to support the pumps, and various service upgrades (power, water, air, and/or steam). Then, the pumps are operated to slurry the waste. Initially, the pumps operate near the top of the liquid and are lowered sequentially to the proper depths as waste is slurried and transferred out of the tanks. Waste removal activities remove the bulk of the waste to prepare the tank for closure.

### Safe Disposal of the Waste

The goal is to convert all of the waste into one of two final waste forms: Glass, which will contain 99% of the radioactivity; and Saltstone grout, which will contain most of the volume. Each of the waste types at SRS needs to be treated to accomplish disposal in these two waste forms. The sludge must be washed to remove non-radioactive salts that would interfere with glass production. The washed sludge can then be sent to DWPF for vitrification. The salt must be treated to separate the bulk of the radionuclides from the non-radioactive salts in the waste. Starting in approximately 2012, this separation will be accomplished in the Salt Waste Processing Facility (SWPF). However, until the startup of SWPF, other salt processing alternatives discussed below will be used to accomplish this separation.

## Salt Processing

A DOE technology selection for salt solution processing was completed and a Record of Decision for the Salt Processing Environmental Impact Statement was issued in October 2001. The Record of Decision designated Caustic Side Solvent Extraction (CSSX) as the preferred alternative to be used to separate cesium from the salt waste. The SWPF, which is projected to commence operations in 2012, employs the CSSX process. In January 2006, DOE prepared a Supplemental Analysis and issued an Amended Record of Decision, in which DOE decided to use Deliquification, Dissolution and Adjustment (DDA), the Actinide Removal Process (ARP), and a Modular CSSX Unit (MCU) in the interim before the SWPF begins operation. DDA, ARP and MCU are also known as interim processing. Pursuant to section 3116(a) of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, the Secretary of Energy, in consultation with the Nuclear Regulatory Commission, determined in January 2006 that disposal of certain treated, solidified low-activity radioactive salt waste from reprocessing meets the criteria in section 3116(a), is not high level waste, and may be disposed of as low level waste in the Saltstone Disposal Facility (SDF). The Secretary's Determination is set forth in the *Section 3116 Determination for Salt Waste Disposal at the Savannah River Site* (DOE-WD-2005-001, January 2006). The Secretary's Determination was based on the rationale and analysis in the Department of Energy's *Basis for Section 3116 Determination for Salt Waste Disposal at the Savannah River Site* (DOE-WD-225-001, January 2006), and its attachments and references. In addition, the South Carolina Department of Health and Environmental Control issued a modified permit in 2007 for disposal of this treated, solidified low-activity radioactive salt waste in the Modified Permit for the Savannah River Site (SRS) Z-Area Saltstone Disposal Facility, Facility ID No.02550-1603. Among other things, the Modified Permit provides that the processing and disposal of salt waste treated by DDA alone shall be limited. The Department of Energy and other parties entered into an agreement in August 2007 concerning the modified permit and other matters; this agreement is memorialized in the August 7, 2007 Consent Order of Dismissal in National Resources Defense Council et al. v. South Carolina Department of Health and Environmental Control, et al. (South Carolina Administrative Law Court, August 7, 2007).

Accordingly, a two-phase, three-step process shall be used to treat salt waste:

- **Deliquification, Dissolution, and Adjustment (DDA)** —Disposal of salt waste treated by DDA alone shall be limited to that material contained in Tank 41H as of June 9, 2003 (approximately 1.23 Mgal) and associated low level waste streams used to adjust salt to meet processing requirements. This Tank 41H salt waste is relatively low in radioactive content such that the DDA treatment is sufficient to produce a salt waste that meets the Saltstone Processing Facility (SPF) Waste Acceptance Criteria (WAC), can be mixed with a grout matrix at SPF, and disposed in Saltstone Disposal Facility (SDF) vaults. Deliquification is an effective decontamination process because the primary radionuclide in salt is Cesium-137, which is highly soluble. To accomplish the process, the salt is first deliquified by draining and pumping. The deliquified salt is dissolved by adding water and pumping out the salt solution. The resulting salt solution is given time to allow additional insoluble solids to settle prior to being sent to the SPF feed tank. If

necessary, the salt solution may be aggregated with other Tank Farm waste to adjust batch chemistry for processing at SPF.

- **Actinide Removal Process (ARP)** —ARP and the Modular CSSX Unit (MCU) (see below) are facilities which will permit treatment and disposal of certain salt waste pending startup of the SWPF (see below). For salt in certain tanks (other than Tank 41H) that is relatively low in radioactive content, e.g., Tank 25F, extraction of the interstitial liquid will help to reduce Cesium-137 and soluble actinide concentrations, but the Cesium-137 or actinide concentrations remaining in the resulting salt will still exceed the SPF WAC. Salt from these tanks first will be sent to ARP. In ARP, Monosodium Titanate (MST) is added to the waste as a finely divided solid. Actinides are sorbed on the MST and then filtered out of the liquid to produce a low-activity waste stream that is sent to MCU.
- **Modular CSSX Unit (MCU)** —MCU and ARP (see above) are facilities which will permit treatment and disposal of certain salt waste pending startup of the SWPF (see below). Salt waste that is suitable for processing by ARP and MCU will first be sent to ARP for actinide removal and then on to MCU. MCU is a small-scale facility that will employ the CSSX process to remove Cesium-137 from the ARP-treated salt stream to yield a salt waste stream that will meet the SPF WAC.
- **Salt Waste Processing Facility (SWPF)** —this is the full-scale CSSX process. The facility incorporates both the ARP and CSSX process in a full-scale shielded facility capable of handling salt with higher levels of radioactivity. Startup of SWPF is planned for 2012.

### Sludge Processing

Sludge is “washed” to reduce the amount of non-radioactive soluble salts remaining in the sludge slurry. The processed sludge is called “washed sludge.” During sludge processing, large volumes of wash water are generated and must be volume-reduced by evaporation. Over the life of the waste removal program, the sludge currently stored in tanks at SRS will be blended into separate sludge “batches” to be processed and fed to DWPF for vitrification.

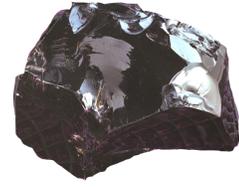
### Waste Vitrification

Final processing for the washed sludge and processed salt waste occurs at DWPF. This waste includes MST/sludge from ARP or SWPF, the cesium strip effluent from MCU or SWPF, and the washed sludge slurry. In a complex sequence of carefully controlled chemical reactions, this waste is blended with glass frit and melted to vitrify it into a borosilicate glass form. The resulting molten glass is poured into stainless steel canisters. As the filled canisters cool, the molten glass solidifies, immobilizing the radioactive waste within the glass structure. After the canisters have cooled, they are permanently sealed, and



Canisters being received (prior to being filled with radioactive glass)

the external surfaces are decontaminated to meet United States Department of Transportation requirements. The canisters are then ready to be stored on an interim basis on-site in a Glass Waste Storage Building (GWSB), pending shipment to a Federal Repository for permanent disposal. A low-activity recycle waste stream from DWPF is returned to the Tank Farms. DWPF has been fully operational since 1996.



Sample of Vitrified  
Radioactive Glass

### Saltstone Disposition

The Saltstone Facility consists of two facility segments: the Saltstone Processing Facility (SPF) and the Saltstone Disposal Facility (SDF). SPF is permitted as a wastewater treatment facility per SCDHEC Regulations R.61-67. SPF receives and treats salt solution to produce grout by mixing the low-level liquid waste stream with cementitious materials (cement, flyash, and slag) to form a grout slurry. This slurry is pumped into the disposal vaults, located in SDF, where the grout solidifies into a monolithic, non-hazardous, solid low-level waste (LLW) form. SDF is permitted as an Industrial Solid Waste Landfill site as defined by SCDHEC Regulations R.61-66 and R.61-107.16.



View of Saltstone Processing Facility

The SDF will contain many large concrete vaults. Each of the vaults will be filled with Saltstone grout. The grout itself provides primary containment of the waste, and the walls, floor, and roof of the vaults provide secondary containment.

Approximately 15 feet of overburden were removed to prepare and level the site for vault construction. All vaults will be built at or slightly below the grade level that exists after the overburden and leveling operations are complete. The bottom of the Saltstone grout monoliths will be at least 5 feet above the historic high water table beneath the SDF site, thus, avoiding disposal of waste in a zone of water table fluctuation. Run-on and runoff controls are installed to minimize site erosion during the operational period.

Two vaults have been constructed to date. One (Vault 4) has dimensions of approximately 200 feet wide, by 600 feet in length, by 26 feet in height. This vault is divided into 12 cells, with each cell measuring approximately 100 feet by 100 feet. The vault is covered with a sloped, permanent roof that has a minimum thickness of 4 inches, and a minimum slope of 0.24 inches/foot. The vault walls are approximately 1.5 feet



View of Existing Saltstone Vaults

thick, with the base mat having a thickness of 2 feet. Operationally, the cells of the vault will be filled to a height of approximately 25 feet with Saltstone, and then a layer of uncontaminated grout, with an average thickness of 2 feet, will be poured to fill in the space between the Saltstone grout and the sloped roof. The other vault (Vault 1) has the dimensions of approximately 100 feet wide, by 600 feet in length, by 25 feet in height. The vault is divided into 6 cells, with each cell measuring approximately 100 feet by 100 feet. These vaults will comply with the terms of the Consent Order of Dismissal in National Resources Defense Council et al. v. South Carolina Department of Health and Environmental Control, et al. (South Carolina Administrative Law Court, August 7, 2007).

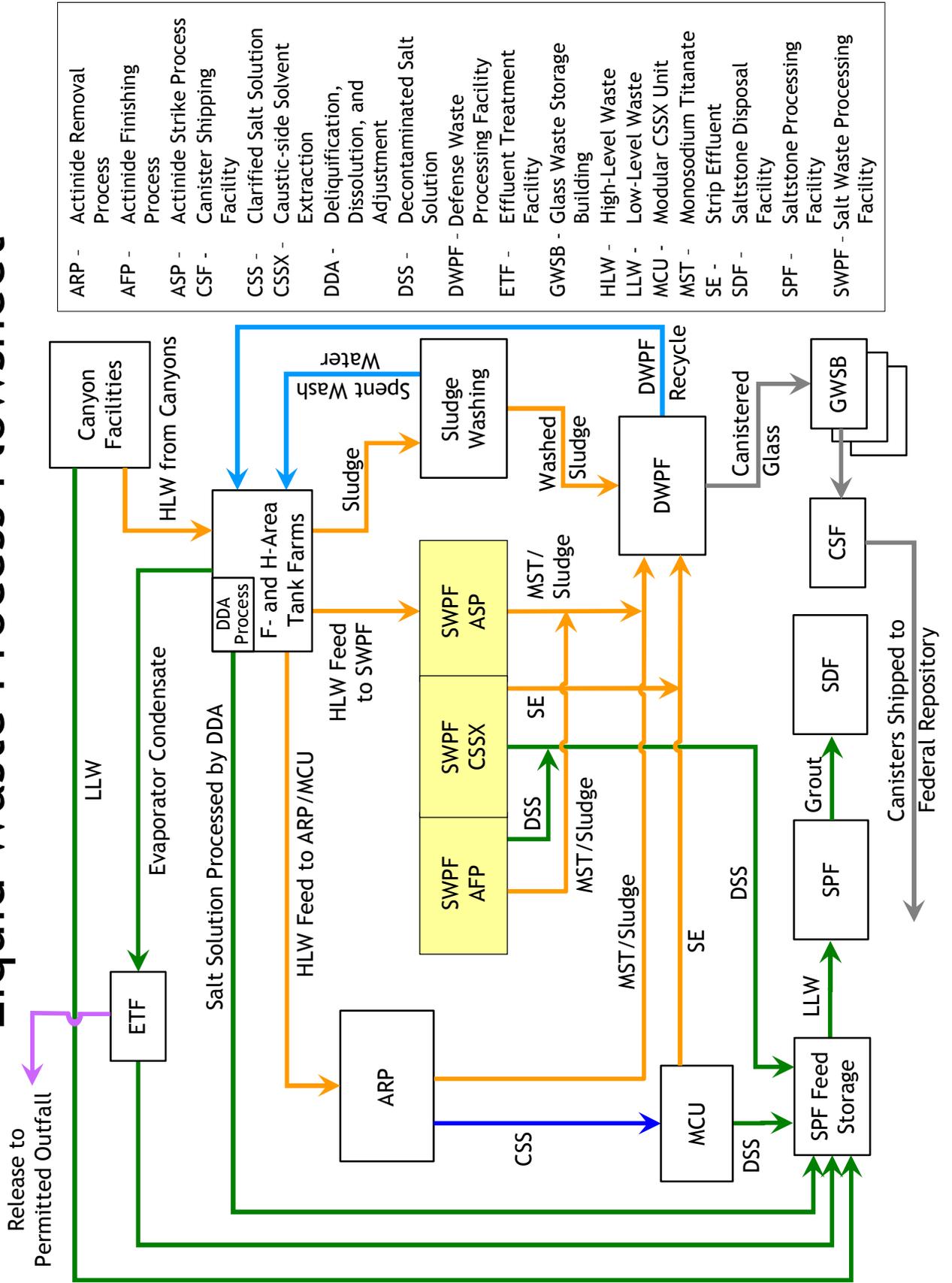
DOE plans that future vaults will be cylindrical concrete tanks approximately 20 feet high and 150 feet in diameter. Tanks of this design are used commercially for storage of water. Each tank will hold approximately 1.5 Mgal of grout. One vault will consist of two tanks, so each vault will have a capacity of approximately 3 Mgal of grout. These vaults will comply with the terms of the above referenced Consent Order of Dismissal.

Closure operations will begin near the end of the active disposal period in the SDF, i.e., after most or all of the vaults have been constructed and filled. Backfill of native soil will be placed around the vaults. The present closure concept includes two moisture barriers consisting of clay/gravel drainage systems along with backfill layers and a shallow-rooted bamboo vegetative cover.

Construction of the SDF and the first two vaults was completed between February 1986 and July 1988. The SDF started radioactive operations June 12, 1990. Future vaults will be constructed on a “just-in-time” basis in coordination with salt processing production rates.

Figure 1

# Liquid Waste Process Flowsheet



ARP -	Actinide Removal Process
AFP -	Actinide Finishing Process
ASP -	Actinide Strike Process
CSF -	Canister Shipping Facility
CSS -	Clarified Salt Solution
CSSX -	Caustic-side Solvent Extraction
DDA -	Deliquification, Dissolution, and Adjustment
DSS -	Decontaminated Salt Solution
DWP/Recycle -	Defense Waste Processing Facility
ETF -	Effluent Treatment Facility
GWSB -	Glass Waste Storage Building
HLW -	High-Level Waste
LLW -	Low-Level Waste
MCU -	Modular CSSX Unit
MST -	Monosodium Titanate
SE -	Strip Effluent
SDF -	Saltstone Disposal Facility
SPF -	Saltstone Processing Facility
SWPF -	Salt Waste Processing Facility

### Attachment C-2 – Listing of Liquid Waste System Facilities

Structure numbers are provided through the SR Acquisition Web Site. The structure numbers can be requested through the UCI DVD approval process. The SR Acquisition Web site is located at <http://professionals.pr.doe.gov/srs/index.html>.

Structure Number	Type	Description	Status	Gross Area ( FT <sup>2</sup> )	Capital
<b>E-Area</b>					
*	BUILDING	HIGH POINT DRAIN	OPERATIONAL	273	Y
<b>F-Area</b>					
*	OTHER STRUCTURE	CONTAMINATED STORAGE AREA	OPERATIONAL	14,533	N
*	BUILDING	STORAGE BUILDING	OPERATIONAL	288	N
*	OTHER STRUCTURE	RUBBLE PIT (ABANDONED)	OPERATIONAL	0	N
*	BUILDING	BREATHING AIR COMPRESSOR SOUTH OF 717-F	OPERATIONAL	492	N
*	OTHER STRUCTURE	WASTE STORAGE TANKS 1-8	OPERATIONAL	714	Y
*	OTHER STRUCTURE	GANG VALVE HOUSE	OPERATIONAL	137	Y
*	BUILDING	WEST PUMPHOUSE	OPERATIONAL	847	Y
*	OTHER STRUCTURE	EFFLUENT PUMP STATION	OPERATIONAL	2027	N
*	BUILDING	EAST PUMPHOUSE	OPERATIONAL	1139	Y
*	BUILDING	CONTROL ROOM / MOTOR CONTROL CENTER	OPERATIONAL	7564	Y
*	OTHER STRUCTURE	EMERGENCY DIESEL GENERATOR SERVICING TANKS 25-28, 44-47, & 2F EVAPORATOR	OPERATIONAL	118	Y
*	OTHER STRUCTURE	COOLING TOWERS / PUMPHOUSE SERVICING TANKS 25-28 & 44-47	OPERATIONAL	1292	Y
*	OTHER STRUCTURE	F DIVERSION BOX 4 (FDB-4) / F PUMP PITS (FPPS) 2 & 3	OPERATIONAL	0	Y
*	OTHER STRUCTURE	STORM WATER DIVERSION BOX SERVICING TANKS 25-28, 44-47, MON 4F	OPERATIONAL	0	Y
*	TRAILER	RCO TRAILER	OPERATIONAL	1493	N
*	UNKNOWN	BUILDING	OPERATIONAL	0	N
*	BUILDING	OFFICE/CHANGE ROOMS	OPERATIONAL	2602	Y
*	OTHER STRUCTURE	COOLING TOWER FOR 2F EVAPORATOR	OPERATIONAL	320	Y
*	OTHER STRUCTURE	F DIVERSION BOX 6 (FDB-6)	OPERATIONAL	320	N
*	OTHER STRUCTURE	F DIVERSION BOX 5 (FDB-5)	OPERATIONAL	0	Y
*	BUILDING	AIR COMPRESSOR BUILDING	OPERATIONAL	600	Y
*	BUILDING	MAINTENANCE SHOP BUILDING	OPERATIONAL	2671	Y
*	TRAILER	E&I (SHIFT) FACILITY	OPERATIONAL	480	N
*	TRAILER	E&I EQUIPMENT STORAGE	OPERATIONAL	600	N
*	BUILDING	MOTOR CONTROL CENTER BUILDING	OPERATIONAL	400	Y

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<b>Structure Number</b>	<b>Type</b>	<b>Description</b>	<b>Status</b>	<b>Gross Area (FT<sup>2</sup>)</b>	<b>Capital</b>
*	BUILDING	AIR COMPRESSOR BUILDING	OPERATIONAL	480	Y
*	BUILDING	BREATHING AIR COMPRESSOR BUILDING	OPERATIONAL	440	Y
*	BUILDING	CONTROL ROOM / MOTOR CONTROL CENTER	OPERATIONAL	1800	Y
*	BUILDING	CESIUM REMOVAL CONTROL PUMP HOUSE	OPERATIONAL	141	Y
*	OTHER STRUCTURE	DIVERSION BOX	OPERATIONAL	0	Y
*	OTHER STRUCTURE	F DIVERSION BOX 3 (FDB-3)	OPERATIONAL	0	N
*	BUILDING	INTERIM RECORD STORAGE	OPERATIONAL	680	Y
*	BUILDING	WASTE CERTIFICATION BUILDING	OPERATIONAL	2413	Y
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	0	N
*	BUILDING	ALARA STORAGE BUILDING	OPERATIONAL	640	Y
*	TRAILER	CHEMICAL ADDITION BUILDING	OPERATIONAL	182	Y
*	TRAILER	CHANGE HOUSE	OPERATIONAL	48	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	1760	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	1760	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	1760	N
*	BUILDING	STORAGE/SUPPLY BUILDING	OPERATIONAL	2399	Y
*	OTHER STRUCTURE	DILUTION FACILITY FOR F-TANK FARM	OPERATIONAL	999	Y
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1749	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1773	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1770	N
*	OTHER STRUCTURE	PORTABLE HEATING AND VENTILATION SKID	OPERATIONAL	161	N
*	BUILDING	STORAGE SHACK	OPERATIONAL	160	N
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5169	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5169	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5169	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5176	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5176	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5176	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5137	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	16	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	INACTIVE	6346	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6346	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6346	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	INACTIVE	6346	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7071	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7071	Y

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Structure Number	Type	Description	Status	Gross Area ( FT <sup>2</sup> )	Capital
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7071	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7058	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7085	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7085	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7071	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7071	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7071	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7071	Y
*	OTHER STRUCTURE	1F EVAPORATOR	INACTIVE	1117	Y
*	BUILDING	1F EVAPORATOR CONTROL HOUSE	OPERATIONAL	1071	Y
*	OTHER STRUCTURE	CTS PIT	INACTIVE	256	Y
*	TRAILER	RADCON TRAILER NEAR FDB-2	OPERATIONAL	224	Y
*	TRAILER	RADCON TRAILER NEAR TANKS 33/34	OPERATIONAL	224	Y
*	TRAILER	RADCON TRAILER NEAR TANK 4	OPERATIONAL	222	Y
*	TRAILER	RADCON TRAILER NEAR 1F EVAPORATOR	OPERATIONAL	160	Y
*	TRAILER	RADCON TRAILER NEAR 2F EVAPORATOR	OPERATIONAL	325	Y
*	TRAILER	RADCON TRAILER NEAR 241-28F	OPERATIONAL	673	N
*	BUILDING	2F EVAPORATOR	OPERATIONAL	887	Y
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION	OPERATIONAL	376	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION	OPERATIONAL	116	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION FOR 701-F	OPERATIONAL	44	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION FOR 717-11F	OPERATIONAL	90	N
*	OTHER STRUCTURE	15KV OUTDOOR PADMOUNT SWITCHGEAR	OPERATIONAL	437	N
*	OTHER STRUCTURE	DIESEL GENERATOR SERVICING PUMPHOUSE / TANKS 25-28 & 44-47	OPERATIONAL	118	Y
*	OTHER STRUCTURE	DIESEL GENERATOR	OPERATIONAL	165	Y
*	BUILDING	MONITOR BUILDING RAILROAD ENTRANCE 221-F	OPERATIONAL	128	N
*	TRAILER	PORTABLE BUILDING #908	OPERATIONAL	282	N
*	OTHER STRUCTURE	WEIR BOX #2	OPERATIONAL	114	N
*	OTHER STRUCTURE	POWER MAINTENANCE OFFICE & CHANGE FACILITY	OPERATIONAL	0	N
*	OTHER STRUCTURE	TEMPORARY ASH DISPOSAL BASIN (CLOSED)	OPERATIONAL	149940	N
*	BUILDING	CHEMICAL FEED FACILITY	OPERATIONAL	377	N
*	BUILDING	GENERAL MONITORING BUILDING	OPERATIONAL	120	N
*	OTHER STRUCTURE	DIESEL FUEL TANK	OPERATIONAL	0	N
*	OTHER STRUCTURE	INTER TRANSFER LINES DIVER BOX/PUMP PIT (FDB-2)	OPERATIONAL	1014	Y

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<b>Structure Number</b>	<b>Type</b>	<b>Description</b>	<b>Status</b>	<b>Gross Area ( FT<sup>2</sup> )</b>	<b>Capital</b>
*	TRAILER	HP TRAILER WF-95	OPERATIONAL	0	N
*	TRAILER	RZ CHANGE FACILITY	OPERATIONAL	175	N
*	BUILDING	PIPE SHOP	OPERATIONAL	1670	N
*	BUILDING	OFFICE BUILDING	OPERATIONAL	4867	Y
*	TRAILER	MODULAR OFFICE	OPERATIONAL	880	N
*	TRAILER	RESTROOM FACILITY	OPERATIONAL	543	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	551	N
*	TRAILER	TOOL STORAGE HOUSE	OPERATIONAL	64	N
*	BUILDING	STORAGE BUILDING	OPERATIONAL	240	N
*	OTHER STRUCTURE	PARK SHELTER, TANK FARM	OPERATIONAL	51	N
*	OTHER STRUCTURE	PROCESS LINES	OPERATIONAL	0	Y
*	OTHER STRUCTURE	DIVERSION BOX	OPERATIONAL	0	Y
*	OTHER STRUCTURE	FIRE WATER TANK	OPERATIONAL	2118	N
*	OTHER STRUCTURE	WELL, NORTHWEST OF 284-F	OPERATIONAL	290	N
*	OTHER STRUCTURE	STORM SEWERS	OPERATIONAL	0	Y
*	OTHER STRUCTURE	DIVERSION BOX	OPERATIONAL	0	Y
*	OTHER STRUCTURE	STORM WATER MONITORING STATION	OPERATIONAL	88	Y
*	OTHER STRUCTURE	STORM WATER MONITORING STATION	OPERATIONAL	16	Y
*	OTHER STRUCTURE	STORM WATER MONITORING STATION	OPERATIONAL	0	Y
*	TRAILER	MODULAR OFFICE	OPERATIONAL	2106	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1749	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1749	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
<b>G-Area</b>					
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
*	TRAILER	RESTROOM FACILITY	OPERATIONAL	519	N
*	TRAILER	RESTROOM FACILITY	OPERATIONAL	501	N
*	TRAILER	LUNCHROOM FACILITY	OPERATIONAL	938	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1721	N
*	OTHER STRUCTURE	DOMESTIC DEEPWELL	OPERATIONAL	138	Y

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Structure Number	Type	Description	Status	Gross Area (FT <sup>2</sup> )	Capital
<b>H-Area</b>					
*	OTHER STRUCTURE	SAFETY FLAG POLE	OPERATIONAL	0	N
*	BUILDING	RAIN SHELTER	OPERATIONAL	0	N
*	BUILDING	STORAGE BUILDING	OPERATIONAL	41	N
*	BUILDING	STORAGE BLDG	OPERATIONAL	0	N
*	BUILDING	STORAGE BUILDING	OPERATIONAL	36	N
*	TRAILER	MATERIAL STORAGE AREA	OPERATIONAL	2230	N
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	5942	N
*	OTHER STRUCTURE	JUMPER STORAGE PAD	OPERATIONAL	4255	N
*	OTHER STRUCTURE	JUMPER STORAGE PAD	OPERATIONAL	1621	N
*	BUILDING	SAMPLING HOUSE	OPERATIONAL	113	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	727	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	971	N
*	TRAILER	STORAGE BUILDING	OPERATIONAL	219	N
*	OTHER STRUCTURE	DINKEY BATTERY CHARGER ENCLOSURE	OPERATIONAL	80	N
*	BUILDING	CENTER SECTION BOOSTER FAN HOUSE	OPERATIONAL	440	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	588	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	583	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	224	N
*	BUILDING	STORAGE BUILDING	OPERATIONAL	1135	N
*	BUILDING	OFFICE BUILDING	OPERATIONAL	1142	Y
*	BUILDING	B-LINE STORAGE BUILDING	OPERATIONAL	1260	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	2533	N
*	BUILDING	WAREHOUSE	OPERATIONAL	8000	Y
*	TRAILER	TRAILER	OPERATIONAL	1753	N
*	TRAILER	JANITOR STORAGE BUILDING	OPERATIONAL	79	N
*	TRAILER	TEMPORARY STORAGE BUILDING	OPERATIONAL	430	N
*	OTHER STRUCTURE	HANDI-HOUSE	OPERATIONAL	500	N
*	TRAILER	STORAGE BUILDING	OPERATIONAL	0	N
*	TRAILER	STORAGE SHED	OPERATIONAL	0	N
*	OTHER STRUCTURE	H DIVERSION BOX 1 (HDB-1)	OPERATIONAL	2229	Y
*	BUILDING	3H CONTROL ROOM & OFFICE BUILDING	OPERATIONAL	14992	Y
*	OTHER STRUCTURE	H DIVERSION BOX 3 (HDB-3)	OPERATIONAL	0	N
*	OTHER STRUCTURE	LOW LEVEL WASTE STORAGE TANKS 21-24	OPERATIONAL	0	N
*	BUILDING	H DIVERSION BOX 4 (HBB-4) & GANG VALVE HOUSE	OPERATIONAL	0	N
*	BUILDING	WEST PUMP HOUSE	OPERATIONAL	642	Y
*	BUILDING	EAST PUMP HOUSE	OPERATIONAL	847	Y

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Structure Number	Type	Description	Status	Gross Area (FT <sup>2</sup> )	Capital
*	OTHER STRUCTURE	WASTE STORAGE TANKS 38 THRU 43	OPERATIONAL	0	Y
*	BUILDING	BREATHING AIR COMPRESSOR BUILDING	OPERATIONAL	373	Y
*	OTHER STRUCTURE	CHEMICAL STORAGE TANK	OPERATIONAL	0	N
*	TRAILER	HANDI-HOUSE	OPERATIONAL	707	N
*	TRAILER	RCO OFFICE TRAILER	OPERATIONAL	2162	Y
*	BUILDING	PORTABLE GANG VALVE HOUSE	OPERATIONAL	150	Y
*	OTHER STRUCTURE	DIVERSION BOX	OPERATIONAL	0	Y
*	BUILDING	2H CONTROL ROOM & OFFICE BUILDING	OPERATIONAL	3862	Y
*	OTHER STRUCTURE	COOLING TOWER FOR 2H EVAPORATOR	OPERATIONAL	198	Y
*	OTHER STRUCTURE	H DIVERSION BOX 7 (HDB-7) & GANG VALVE HOUSE	OPERATIONAL	543	Y
*	OTHER STRUCTURE	COLD FEEDS AREA	OPERATIONAL STANDBY	9247	Y
*	BUILDING	COLD FEED MCC BUILDING	OPERATIONAL	240	N
*	OTHER STRUCTURE	IX/RO/EVAPORATOR OH TANK CONTAINMENT	OPERATIONAL	2938	N
*	OTHER STRUCTURE	H DIVERSION BOX 2 (HDB-2) & PUMP PITS 1-4	OPERATIONAL	2177	Y
*	BUILDING	FAR EAST PUMP HOUSE	OPERATIONAL	1897	Y
*	OTHER STRUCTURE	STORM DIVERSION BOX	OPERATIONAL	0	Y
*	OTHER STRUCTURE	DIVERSION BOX DB#5	OPERATIONAL	83	Y
*	TRAILER	OFFICE/LUNCH ROOM TRAILERNT OFFICE	OPERATIONAL	670	N
*	OTHER STRUCTURE	H DIVERSION BOX 6 (HDB-6)	OPERATIONAL	269	Y
*	BUILDING	LAUNDRY BUILDING	OPERATIONAL	835	Y
*	BUILDING	MAINTENANCE AND E & I SHOP	OPERATIONAL	3707	Y
*	OTHER STRUCTURE	TANK TRUCK UNLOADING STATION	OPERATIONAL	903	N
*	BUILDING	MOTOR CONTROL CENTER	OPERATIONAL	356	Y
*	BUILDING	PROCESS AIR COMPRESSOR BUILDING	OPERATIONAL	621	Y
*	TRAILER	MAINTENANCE OFFICE BUILDING	OPERATIONAL	329	Y
*	OTHER STRUCTURE	GANG VALVE HOUSE FOR PUMP PIT 5-6 (241-70H)	OPERATIONAL	153	Y
*	OTHER STRUCTURE	VALVE HOUSE FOR PUMP PIT 5-6 (241-70H)	OPERATIONAL	135	N
*	OTHER STRUCTURE	PROCESS PUMP PIT FOR NEW WASTE HEADER	OPERATIONAL	880	Y
*	TRAILER	CHANGE HOUSE	OPERATIONAL	95	N
*	BUILDING	CONTROL ROOM & MOTOR CONTROL CENTER BUILDING	OPERATIONAL	1926	Y
*	BUILDING	COLD FEED NITROGEN STORAGE BUILDING	OPERATIONAL	249	N
*	BUILDING	STORAGE FACILITY	OPERATIONAL	321	N
*	TRAILER	STORAGE HANDI HOUSE	OPERATIONAL	200	N
*	BUILDING	ITP CONTROL ROOM	OPERATIONAL	5702	Y
*	BUILDING	PERSONNEL MONITOR BUILDING NORTH GATE	OPERATIONAL	400	Y
*	BUILDING	PERSONNEL MONITOR BUILDING A	OPERATIONAL	117	Y

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Structure Number	Type	Description	Status	Gross Area ( FT <sup>2</sup> )	Capital
*	BUILDING	PERSONNEL MONITOR BUILDING NW OF 241-58H	OPERATIONAL	100	Y
*	BUILDING	EQUIPMENT STORAGE	OPERATIONAL	105	Y
*	BUILDING	STORAGE & SUPPLY BUILDING	OPERATIONAL	967	Y
*	BUILDING	STORAGE & SUPPLY BUILDING	OPERATIONAL	1389	Y
*	TRAILER	RCO MONITORING SHACK	OPERATIONAL	49	N
*	BUILDING	FILTER/STRIPPER BUILDING	OPERATIONAL	4194	Y
*	TRAILER	CHEMICAL ADDITION PORTABLE BUILDING	OPERATIONAL	227	Y
*	TRAILER	CHEMICAL ADDITION PORTABLE BUILDING	OPERATIONAL	201	Y
*	BUILDING	H DIVERSION BOX 8 (HDB-8) FACILITY	OPERATIONAL	10470	Y
*	BUILDING	HDB-8 HVAC FILTER BUILDING	OPERATIONAL	1580	Y
*	BUILDING	OFFICE/WAREHOUSE	OPERATIONAL	9934	Y
*	OTHER STRUCTURE	HVAC FAN CONTAINMENT	OPERATIONAL	322	N
*	TRAILER	STORAGE BUILDING	OPERATIONAL	160	N
*	TRAILER	TRAILER	OPERATIONAL	1743	N
*	TRAILER	TRAILER	OPERATIONAL	1749	N
*	TRAILER	TRAILER	OPERATIONAL	1749	N
*	TRAILER	RESTROOM UNIT	OPERATIONAL	363	N
*	TRAILER	LEVEL B STORAGE TRAILER	OPERATIONAL	235	N
*	TRAILER	MAINTENANCE TRAILER	OPERATIONAL	235	N
*	OTHER STRUCTURE	PROCESS AIR COMPRESSOR FACILITY	OPERATIONAL	1043	N
*	OTHER STRUCTURE	PROCESS AIR COMPRESSOR FACILITY	OPERATIONAL	1049	N
*	TRAILER	E&I SHOP/LUNCH ROOM	OPERATIONAL	545	N
*	TRAILER	MAINTENANCE SHOP	OPERATIONAL	552	N
*	TRAILER	R&HE TRAILER	OPERATIONAL	350	N
*	TRAILER	E&I SHOP TRAILER	OPERATIONAL	469	N
*	TRAILER	E&I STORAGE BUILDING	OPERATIONAL	186	N
*	BUILDING	FIRE SUPPRESSION FOAM HOUSE	OPERATIONAL	623	N
*	TRAILER	E&I OFFICE TRAILER	OPERATIONAL	711	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	698	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1743	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1744	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1749	N
*	TRAILER	TRAILER	OPERATIONAL	1919	N
*	TRAILER	TRAILER	OPERATIONAL	2671	N
*	TRAILER	TRAILER	OPERATIONAL	1685	N
*	TRAILER	TRAILER	OPERATIONAL	1685	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	1746	N
*	BUILDING	MODULAR TRAILER	OPERATIONAL	537	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	543	N
*	TRAILER	E&I STORAGE BUILDING	OPERATIONAL	237	N

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<b>Structure Number</b>	<b>Type</b>	<b>Description</b>	<b>Status</b>	<b>Gross Area (FT<sup>2</sup>)</b>	<b>Capital</b>
*	TRAILER	PORTABLE GAS CHROMATOGRAPH TRAILER	OPERATIONAL	0	N
*	TRAILER	E&I STORAGE BUILDING	OPERATIONAL	249	N
*	TRAILER	E&I TRAILER	OPERATIONAL	350	N
*	TRAILER	TOOL CONTROL TRAILER	OPERATIONAL	470	N
*	BUILDING	CONSTRUCTION TOOL ROOM	OPERATIONAL	314	N
*	TRAILER	RBA ENTRANCE SHACK TO THE HDB-8 FACILITY	OPERATIONAL	160	N
*	TRAILER	TRAILER	OPERATIONAL	1713	N
*	BUILDING	MAINTENANCE STORAGE SEA BOX	OPERATIONAL	325	N
*	BUILDING	DCS I/O STATION	OPERATIONAL	221	Y
*	TRAILER	MODULAR OFFICE	OPERATIONAL	0	N
*	TRAILER	RBA ENTRANCE SHACK TO TANKS 9-12	OPERATIONAL	234	Y
*	TRAILER	RBA ENTRANCE SHACK TO TANKS 21-24	OPERATIONAL	149	N
*	TRAILER	PCM-1B MONITOR BUILDING SITE NO. 3	OPERATIONAL	150	N
*	TRAILER	RBA ENTRANCE SHACK TO TANKS 29-32 AND 35-37	OPERATIONAL	156	Y
*	TRAILER	RBA ENTRANCE SHACK TO TANKS 13-16	OPERATIONAL	150	Y
*	TRAILER	RBA ENTRANCE SHACK TO PUMP PIT 5 & 6	OPERATIONAL	150	Y
*	TRAILER	RBA ENTRANCE SHACK TO TANKS 38 & 43	OPERATIONAL	165	N
*	TRAILER	ITP RMA BUILDING	OPERATIONAL	157	N
*	TRAILER	E&I SHOP MODULAR BUILDING	OPERATIONAL	527	N
*	OTHER STRUCTURE	ITP LEAK DETECTION BOX	OPERATIONAL	0	N
*	TRAILER	EAST HILL RCO OFFICE TRAILER	OPERATIONAL	703	N
*	BUILDING	EPVE STORAGE BUILDING	OPERATIONAL	751	N
*	OTHER STRUCTURE	NITROGEN STORAGE FACILITY	OPERATIONAL	1357	Y
*	TRAILER	OPERATOR BREAK TRAILER	OPERATIONAL	533	N
*	TRAILER	TANK 1 RCO MONITORING SHACK	OPERATIONAL	394	N
*	TRAILER	CF RCO MONITORING SHACK	OPERATIONAL	377	N
*	TRAILER	MAINTENANCE SHOP	OPERATIONAL	1758	N
*	TRAILER	MAINTENANCE OFFICE	OPERATIONAL	1329	N
*	TRAILER	MAINTENANCE CHANGE HOUSE	OPERATIONAL	290	N
*	TRAILER	PERSONNEL MONITOR BUILDING WEST OF 241-100H	OPERATIONAL	168	N
*	OTHER STRUCTURE	STORM WATER DIVERSION BOX	OPERATIONAL	189	Y
*	OTHER STRUCTURE	STORM WATER DIVERSION BOX	OPERATIONAL	267	Y
*	TRAILER	STORAGE BUILDING	OPERATIONAL	540	N
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5157	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5171	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	5169	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	3901	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6358	Y

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<b>Structure Number</b>	<b>Type</b>	<b>Description</b>	<b>Status</b>	<b>Gross Area ( FT<sup>2</sup> )</b>	<b>Capital</b>
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6358	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6358	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	INACTIVE	6358	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6358	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	15	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6358	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6358	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7083	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7084	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7084	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7084	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7084	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7084	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7084	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6694	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6693	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6694	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6693	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6694	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6694	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	6998	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7043	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7093	Y
*	OTHER STRUCTURE	WASTE STORAGE TANK	OPERATIONAL	7043	Y
*	OTHER STRUCTURE	1H EVAPORATOR	INACTIVE	1184	Y
*	BUILDING	1H EVAPORATOR CONTROL BUILDING	OPERATIONAL	725	Y
*	OTHER STRUCTURE	CONCENTRATE PUMP TANK PIT	OPERATIONAL	135	N
*	BUILDING	HEPA FILTER BUILDING FOR 3H EVAPORATOR	OPERATIONAL	1953	Y
*	BUILDING	SERVICE BUILDING FOR 3H EVAPORATOR	OPERATIONAL	3737	Y
*	BUILDING	2H EVAPORATOR	OPERATIONAL	317	Y
*	OTHER STRUCTURE	CTS - H-AREA	INACTIVE	323	Y
*	TRAILER	SWP CLOTHING CHANGE STATION	SAFE STORAGE	560	N
*	OTHER STRUCTURE	CTS H&V FOR 242-18H	OPERATIONAL	403	N

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<b>Structure Number</b>	<b>Type</b>	<b>Description</b>	<b>Status</b>	<b>Gross Area ( FT<sup>2</sup> )</b>	<b>Capital</b>
*	BUILDING	CHANGE ROOM AND OFFICE BUILDING	OPERATIONAL	3054	Y
*	BUILDING	3H EVAPORATOR	OPERATIONAL	2226	N
*	TRAILER	PHA EQUIPMENT ROOM	OPERATIONAL	0	N
*	BUILDING	LAUNDRY BUILDING	OPERATIONAL	309	N
*	BUILDING	PERSONNEL PROTECTION SHELTER	OPERATIONAL	2165	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1727	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1727	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION	OPERATIONAL	0	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION	OPERATIONAL	281	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION	OPERATIONAL	100	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION	OPERATIONAL	204	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION	OPERATIONAL	125	N
*	OTHER STRUCTURE	500 KVA TRANSFORMER FOR 211-10H	OPERATIONAL	0	N
*	OTHER STRUCTURE	500 KVA TRANSFORMER FOR 241128 H	OPERATIONAL	61	N
*	OTHER STRUCTURE	SECONDARY SUBSTATION, 241-F&H	OPERATIONAL	216	N
*	OTHER STRUCTURE	SUBSTATION 252-24H	OPERATIONAL	16	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION 281-2H	OPERATIONAL	0	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION 704-2H	OPERATIONAL	0	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION 704-8H	OPERATIONAL	0	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER STATION 221-10H	OPERATIONAL	0	N
*	OTHER STRUCTURE	1000 KVA TRANSFORMER FOR 707-H	OPERATIONAL	58	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER FOR 703-H	OPERATIONAL	24	N
*	OTHER STRUCTURE	SECONDARY TRANSFORMER FOR 705-H	OPERATIONAL	23	N
*	OTHER STRUCTURE	TRANSFORMER	OPERATIONAL	416	N
*	OTHER STRUCTURE	ELECTRICAL SUBSTATION (FEEDS 299-002H)	OPERATIONAL	320	N
*	OTHER STRUCTURE	TRANSFORMER FOR 704-2H	OPERATIONAL	58	N
*	OTHER STRUCTURE	KVA TRANSFORMER	OPERATIONAL	17	N
*	OTHER STRUCTURE	SUBSTATION FOR 228-H	OPERATIONAL	17	N
*	OTHER STRUCTURE	DISTRIBUTION TRANSFORMER FOR 902-3H	OPERATIONAL	31	N
*	OTHER STRUCTURE	UNIT SUBSTATION FOR 902-3H	OPERATIONAL	41	N
*	OTHER STRUCTURE	TRANSFORMER/TRANSFORMER PAD	OPERATIONAL	94	N
*	OTHER STRUCTURE	TRANSFORMER/TRANSFORMER PAD	OPERATIONAL	0	N
*	OTHER STRUCTURE	DIESEL GENERATOR AND TANK (FOR 241-49H)	OPERATIONAL	97	N

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<b>Structure Number</b>	<b>Type</b>	<b>Description</b>	<b>Status</b>	<b>Gross Area ( FT<sup>2</sup> )</b>	<b>Capital</b>
*	OTHER STRUCTURE	DIESEL GENERATOR AND TANK	OPERATIONAL	64	Y
*	OTHER STRUCTURE	DIESEL GENERATOR AND TANK	OPERATIONAL	0	Y
*	OTHER STRUCTURE	ITP EMERGENCY DIESEL GENERATOR	OPERATIONAL	204	N
*	OTHER STRUCTURE	DIESEL GENERATOR AND TANK	OPERATIONAL	60	N
*	OTHER STRUCTURE	DIESEL GENERATOR AND TANK	OPERATIONAL	216	Y
*	OTHER STRUCTURE	DIESEL GENERATOR FOR 241-2H	OPERATIONAL	105	Y
*	OTHER STRUCTURE	DIESEL GENERATOR FOR 241074H	OPERATIONAL	103	N
*	TRAILER	MONITOR BUILDING RAILROAD ENTRANCE	OPERATIONAL	46	N
*	BUILDING	OFFICE BUILDING	OPERATIONAL	240	Y
*	BUILDING	FIRE SUPPRESSION FACILITY	OPERATIONAL	300	N
*	OTHER STRUCTURE	RETURN WATER RETENTION BASIN (CLOSED)	OPERATIONAL	21407	N
*	BUILDING	MONITORING HOUSE	OPERATIONAL	284	N
*	OTHER STRUCTURE	WEIR BOX #3	OPERATIONAL	0	N
*	BUILDING	COOLING WATER MONITOR HOUSE	OPERATIONAL	152	N
*	BUILDING	COOLING WATER MONITOR HOUSE	OPERATIONAL	148	N
*	BUILDING	COOLING WATER MONITOR HOUSE	OPERATIONAL	154	N
*	BUILDING	COOLING WATER MONITOR HOUSE	OPERATIONAL	145	N
*	BUILDING	COOLING WATER MONITOR HOUSE	OPERATIONAL	144	N
*	BUILDING	COOLING WATER MONITOR HOUSE	OPERATIONAL	91	N
*	OTHER STRUCTURE	WEIR BOX #4	OPERATIONAL	0	N
*	TRAILER	CHANGE FACILITY	OPERATIONAL	2084	N
*	TRAILER	SEA TRAIN	OPERATIONAL	306	N
*	TRAILER	SEA TRAIN	OPERATIONAL	315	N
*	OTHER STRUCTURE	COOLING TOWERS & CHEMICAL ADDITION BUILDING	OPERATIONAL	1494	Y
*	OTHER STRUCTURE	ASH DISPOSAL BASIN	OPERATIONAL	569253	N
*	BUILDING	VESSEL VENT FAN HOUSE	OPERATIONAL	0	N
*	BUILDING	FAN HOUSE BUILDING	OPERATIONAL	3144	N
*	BUILDING	STACK MONITORING EQUIPMENT BUILDING	OPERATIONAL	643	N
*	BUILDING	MAINTENANCE FACILITY	OPERATIONAL	8637	Y
*	OTHER STRUCTURE	DIESEL GENERATOR	OPERATIONAL	88	Y
*	BUILDING	AIR COMPRESSOR BUILDING	OPERATIONAL	2656	Y
*	BUILDING	STORAGE/SUPPLY BUILDING	OPERATIONAL	1431	Y
*	BUILDING	CRANE SHELTER	OPERATIONAL	608	Y
*	OTHER STRUCTURE	ROADS (INC. BRIDGES & CULVERTS)	OPERATIONAL	0	Y
*	OTHER STRUCTURE	WALKS	OPERATIONAL	0	Y
*	OTHER STRUCTURE	FENCES	OPERATIONAL	0	Y

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<b>Structure Number</b>	<b>Type</b>	<b>Description</b>	<b>Status</b>	<b>Gross Area ( FT<sup>2</sup> )</b>	<b>Capital</b>
*	OTHER STRUCTURE	SEPTIC TANK	OPERATIONAL	0	N
*	OTHER STRUCTURE	EQUALIZATION BASIN	INACTIVE	0	N
*	OTHER STRUCTURE	CHEMICAL STORAGE	OPERATIONAL	0	N
*	BUILDING	GENERAL MONITORING BUILDING	OPERATIONAL	107	N
*	OTHER STRUCTURE	DIESEL FUEL TANK	OPERATIONAL	0	N
*	OTHER STRUCTURE	DIESEL FUEL TANK	OPERATIONAL	0	N
*	OTHER STRUCTURE	DIESEL FUEL TANK FOR 254-15H	OPERATIONAL	0	N
*	OTHER STRUCTURE	DIESEL FUEL TANK FOR 241-2H	OPERATIONAL	0	N
*	OTHER STRUCTURE	INTERAREA TRANSFER LINE	OPERATIONAL	0	Y
*	OTHER STRUCTURE	LPDT SUPPORT BUILDING	OPERATIONAL	74	N
*	BUILDING	LOW POINT DRAIN TANK SUPPORT BUILDING	OPERATIONAL	152	N
*	BUILDING	MAIN GATEHOUSE	OPERATIONAL	49	N
*	BUILDING	GUARDHOUSE SHELTER	OPERATIONAL	112	N
*	TRAILER	MONITOR SHACK	OPERATIONAL	168	N
*	BUILDING	ENTRY CONTROL FACILITY (FOR HTF AREA)	OPERATIONAL	65	Y
*	TRAILER	STORAGE SHACK NEAR 701-15H	OPERATIONAL	73	N
*	BUILDING	GUARDHOUSE	OPERATIONAL	1054	N
*	BUILDING	OFFICE BUILDING	OPERATIONAL	24787	Y
*	BUILDING	SRPCU ATM MACHINE	OPERATIONAL	60	N
*	TRAILER	OFFICE BUILDING	OPERATIONAL	5040	N
*	TRAILER	MAINTENANCE STORAGE BUILDING	OPERATIONAL	344	N
*	TRAILER	STORAGE BUILDING	OPERATIONAL	700	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	513	N
*	TRAILER	TRAILER	OPERATIONAL	1648	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	864	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	702	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	1756	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	1760	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	1760	N
*	TRAILER	BATHROOM TRAILER	OPERATIONAL	166	N
*	TRAILER	RESTROOM FACILITY	OPERATIONAL	0	N
*	TRAILER	RESTROOM FACILITY	OPERATIONAL	0	N
*	BUILDING	OFFICE BUILDING	OPERATIONAL	12574	Y
*	TRAILER	TRAILER	OPERATIONAL	2837	Y
*	TRAILER	TRAILER	OPERATIONAL	971	N
*	TRAILER	TRAILER	OPERATIONAL	908	N
*	TRAILER	TRAILER	OPERATIONAL	894	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	867	N

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Structure Number	Type	Description	Status	Gross Area ( FT <sup>2</sup> )	Capital
*	TRAILER	CONSTRUCTION ADMINISTRATION FACILITY	OPERATIONAL	0	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1680	N
*	TRAILER	INCINERATION FACILITY	OPERATIONAL	0	N
*	TRAILER	STORAGE FACILITY	OPERATIONAL	168	N
*	TRAILER	TRAILER	OPERATIONAL	0	N
*	TRAILER	SEA TRAIN STORAGE FACILITY	OPERATIONAL	307	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	1754	N
*	TRAILER	OFFICE TRAILER	OPERATIONAL	1754	N
*	TRAILER	TEMPORARY MODEL DISPLAY HANDI-HOUSE #1	OPERATIONAL	0	N
*	TRAILER	TEMPORARY MODEL DISPLAY HANDI-HOUSE #2	OPERATIONAL	480	N
*	TRAILER	SAFEGUARDS & SECURITY E&I WORKSHOP	OPERATIONAL	955	N
*	TRAILER	STORAGE BUILDING	OPERATIONAL	240	N
*	TRAILER	STORAGE BUILDING	OPERATIONAL	240	N
*	TRAILER	STORAGE BUILDING	OPERATIONAL	510	N
*	TRAILER	STORAGE BUILDING	OPERATIONAL	0	N
*	BUILDING	OFFICE BUILDING	OPERATIONAL	4000	Y
*	TRAILER	OFFICE ANNEX	OPERATIONAL	1517	N
*	TRAILER	HANDI-HOUSE	OPERATIONAL	233	N
*	BUILDING	OFFICE BUILDING	OPERATIONAL	16580	Y
*	TRAILER	TRAILER	OPERATIONAL	1694	N
*	TRAILER	TRAILER	OPERATIONAL	1730	N
*	OTHER STRUCTURE	STORES DROP POINT	OPERATIONAL	353	N
*	TRAILER	STORAGE AND RIGGER BUILDING	OPERATIONAL	718	N
*	TRAILER	STORAGE BUILDING	OPERATIONAL	0	N
*	TRAILER	TRAILER	OPERATIONAL	431	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	701	N
*	OTHER STRUCTURE	DIVERSION BOX	OPERATIONAL	1311	N
*	OTHER STRUCTURE	JUNCTION BOX	OPERATIONAL	64	N
*	OTHER STRUCTURE	FIRE WATER TANK	OPERATIONAL	1722	N
*	OTHER STRUCTURE	STORM SEWERS	OPERATIONAL	0	Y
*	OTHER STRUCTURE	DIVERSION BOX	OPERATIONAL	0	Y
*	OTHER STRUCTURE	STORM WATER MONITORING STATION	OPERATIONAL	25	Y
*	OTHER STRUCTURE	STORM WATER MONITORING STATION	OPERATIONAL	11	Y
*	OTHER STRUCTURE	STORM WATER MONITORING STATION	OPERATIONAL	73	Y
*	OTHER STRUCTURE	STORM WATER MONITORING STATION	OPERATIONAL	20	Y
*	OTHER STRUCTURE	STORM WATER MONITOR	OPERATIONAL	0	Y

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Structure Number	Type	Description	Status	Gross Area ( FT <sup>2</sup> )	Capital
<b>M-Area</b>					
*	BUILDING	RADIOLOGICAL OPERATION SUPPORT CENTER	OPERATIONAL	27264	Y
<b>S-Area</b>					
*	OTHER STRUCTURE	FLAG POLE	OPERATIONAL	8	N
*	TRAILER	RAIN SHELTER, SE CORNER OF 704-50S	OPERATIONAL	72	N
*	TRAILER	RAIN SHELTER	OPERATIONAL	61	N
*	TRAILER	RAIN SHELTER, WEST OF 714-S	OPERATIONAL	0	N
*	TRAILER	RAIN SHELTER	OPERATIONAL	0	N
*	BUILDING	SERVICE BUILDING	OPERATIONAL	61019	Y
*	BUILDING	VITRIFICATION BUILDING	OPERATIONAL	198152	Y
*	BUILDING	SPARE EQUIPMENT STORAGE BUILDING	OPERATIONAL	3030	Y
*	BUILDING	PORTABLE STORAGE BUILDING	OPERATIONAL	1999	Y
*	OTHER STRUCTURE	CONCRETE PAD	OPERATIONAL	4006	N
*	OTHER STRUCTURE	CONCRETE PAD	OPERATIONAL	1677	N
*	BUILDING	FAILED EQUIPMENT STORAGE VAULT/CRANE CONTROL ROOM	OPERATIONAL	575	Y
*	OTHER STRUCTURE	VENT EXHAUST STACK	OPERATIONAL	824	Y
*	BUILDING	FAN HOUSE	OPERATIONAL	13472	Y
*	OTHER STRUCTURE	SAND FILTER	OPERATIONAL	25690	Y
*	BUILDING	COLD FEED STORAGE	OPERATIONAL	231	Y
*	OTHER STRUCTURE	FORMIC / CAUSTIC ACID UNLOAD	OPERATIONAL	0	N
*	BUILDING	BULK FRIT FACILITY	OPERATIONAL	4734	N
*	OTHER STRUCTURE	REG DRAINS COLLECT TANK	OPERATIONAL	468	N
*	OTHER STRUCTURE	CLEAN CONDENSATE TANK	OPERATIONAL	958	N
*	OTHER STRUCTURE	DEIONIZER STATION	OPERATIONAL	0	N
*	OTHER STRUCTURE	SOUTHWEST SI STATION	OPERATIONAL	0	N
*	OTHER STRUCTURE	ORGANIC WASTE STORAGE FACILITY	INACTIVE	1080	Y
*	OTHER STRUCTURE	REF ORGANIC RECOVERY UNIT	OPERATIONAL	0	Y
*	OTHER STRUCTURE	BACK UP NITROGEN SYSTEM MANIFOLD	OPERATIONAL	78	N
*	OTHER STRUCTURE	OFF GAS & OPERATING STATION	OPERATIONAL	0	N
*	OTHER STRUCTURE	FOAM HOUSE BUILDING	OPERATIONAL	631	N
*	BUILDING	LOW POINT PUMP PIT	OPERATIONAL	7220	Y
*	BUILDING	LOW POINT PUMP PIT HVAC	OPERATIONAL	1278	Y
*	BUILDING	TANKER UNLOADING FACILITY	OPERATIONAL	2021	N
*	TRAILER	PORTABLE BUILDING	OPERATIONAL	160	N

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<b>Structure Number</b>	<b>Type</b>	<b>Description</b>	<b>Status</b>	<b>Gross Area ( FT<sup>2</sup> )</b>	<b>Capital</b>
*	BUILDING	ACTINIDE REMOVAL PROCESS FACIITY	OPERATIONAL	10782	Y
*	BUILDING	LATEWASH FACILITY HVAC BUILDING	OPERATIONAL	1000	Y
*	BUILDING	INSTRUMENTATION SHELTER	OPERATIONAL	133	N
*	OTHER STRUCTURE	LATEWASH FACILITY (PRIMARY)	OPERATIONAL	1000	Y
*	BUILDING	LATEWASH FACILITY	OPERATIONAL	1031	Y
*	OTHER STRUCTURE	LATEWASH COLD CHEMICAL FEED SHELTER	OPERATIONAL	5001	Y
*	OTHER STRUCTURE	LANDSCAPING AND EROSION CONTROL	OPERATIONAL	0	Y
*	BUILDING	ENTRY CONTROL FACILITY	OPERATIONAL	290	Y
*	BUILDING	TELEPHONE BUILDING	OPERATIONAL	1701	Y
*	BUILDING	OPERATIONS BUILDING	OPERATIONAL	25988	Y
*	TRAILER	AREA ADMINISTRATION ANNEX	OPERATIONAL	1117	N
*	TRAILER	AREA ADMINISTRATION ANNEX	OPERATIONAL	1296	N
*	TRAILER	AREA ADMINISTRATION ANNEX	SAFE STORAGE	1505	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1736	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1731	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1731	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1731	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1736	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1736	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1731	N
*	TRAILER	MODULAR OFFICE	SAFE STORAGE	1731	N
*	TRAILER	OFFICE COMPLEX	OPERATIONAL	5369	Y
*	TRAILER	MODULAR OFFICE TRAILER	OPERATIONAL	1120	N
*	TRAILER	MODULAR OFFICE TRAILER	OPERATIONAL	1075	N
*	TRAILER	MODULAR OFFICE TRAILER	OPERATIONAL	1123	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1493	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1704	N
*	TRAILER	MODULAR OFFICE TRAILER	OPERATIONAL	959	N
*	TRAILER	MODULAR OFFICE TRAILER	OPERATIONAL	949	N
*	TRAILER	MODULAR UNIT	OPERATIONAL	917	N
*	TRAILER	MODULAR OFFICE TRAILER	OPERATIONAL	965	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1909	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1909	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1347	N
*	BUILDING	TC-S1 ADMINISTRATION BLDG	OPERATIONAL	21123	Y
*	BUILDING	TC-S2 RECEIVING STORES	OPERATIONAL	19900	Y
*	TRAILER	HANDI-HOUSE	OPERATIONAL	81	N
*	BUILDING	CYLINDER STORAGE SHELTER	OPERATIONAL	323	Y
*	TRAILER	HANDI-HOUSE	OPERATIONAL	679	N
*	TRAILER	LABORATORY TRAILER	OPERATIONAL	387	N

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<b>Structure Number</b>	<b>Type</b>	<b>Description</b>	<b>Status</b>	<b>Gross Area ( FT<sup>2</sup> )</b>	<b>Capital</b>
*	TRAILER	LABORATORY TRAILER	OPERATIONAL	387	N
*	BUILDING	DISTRIBUTIVE CONTROL STAGING BUILDING	OPERATIONAL	8776	Y
*	BUILDING	MAINTANCE SHOP	OPERATIONAL	4378	Y
*	BUILDING	SPARE PARTS BUILDING	OPERATIONAL	10680	Y
*	TRAILER	MODULAR OFFICE	OPERATIONAL	1041	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	955	N
*	TRAILER	MODULAR OFFICE	OPERATIONAL	955	N
*	TRAILER	E&I SHOP TRAILER	OPERATIONAL	955	N
*	TRAILER	LABORATORY TRAILER	OPERATIONAL	955	N
*	TRAILER	LABORATORY TRAILER	OPERATIONAL	955	N
*	BUILDING	OFFICE BUILDING & MAINTENANCE SHOP	OPERATIONAL	1839	Y
*	BUILDING	LUBRICATION STORAGE BUILDING	OPERATIONAL	719	N
*	BUILDING	TC-S7 LABORATORY SUPPORT FAC.	OPERATIONAL	2664	Y
*	BUILDING	TC-S3 PIPE SHOP	OPERATIONAL	9590	Y
*	BUILDING	TC-S5 ELECTRICAL SHOP	OPERATIONAL	15206	Y
*	BUILDING	TC-S6 INSTRUMENT SHOP	INACTIVE	373	N
*	OTHER STRUCTURE	DWPF JUMPER STORAGE PAD	OPERATIONAL	1999	N
*	BUILDING	SWIRL CELL FACILITY	OPERATIONAL	226	Y
*	BUILDING	CHEMICAL STORAGE BUILDING	OPERATIONAL	460	N
*	OTHER STRUCTURE	DIESEL FUEL TANK AND GENERATOR	OPERATIONAL	0	N
*	OTHER STRUCTURE	WATER WELL #1	OPERATIONAL	0	Y
*	OTHER STRUCTURE	WATER WELL #2	OPERATIONAL	0	Y
*	BUILDING	PRIMARY SUBSTATION	OPERATIONAL	2123	Y
*	OTHER STRUCTURE	TRANSFORMER 7	OPERATIONAL	173	N
*	OTHER STRUCTURE	TRANSFORMER 952-7S	OPERATIONAL	49	Y
*	OTHER STRUCTURE	FUEL OIL STORAGE	OPERATIONAL	1055	Y
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	225	N
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	222	N
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	578	N
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	1468	N
*	OTHER STRUCTURE	MOCK-UP SHOP SLAB	OPERATIONAL	1017	N
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	797	N
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	182	N
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	667	N
*	OTHER STRUCTURE	STORAGE PAD	OPERATIONAL	2472	N
*	BUILDING	WATER & CHEMICAL WASTE TREATMENT FAC	OPERATIONAL	8709	Y

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*	OTHER STRUCTURE	NEUTRALIZED FIRE WATER TANK	OPERATIONAL	2795	Y
*	OTHER STRUCTURE	DOMESTIC WATER TANK	OPERATIONAL	0	Y
*	OTHER STRUCTURE	COOLING TOWER	OPERATIONAL	2249	Y
<b>T-Area</b>					
*	OTHER STRUCTURE	SEMIWORKS WASTE TANK MOCK-UP	OPERATIONAL	5482	Y
*	TRAILER	STORAGE BUILDING	OPERATIONAL	359	N
<b>Z-Area</b>					
*	BUILDING	SALTSTONE PROCESS FACILITY (#1)	OPERATIONAL	9109	Y
*	OTHER STRUCTURE	INTER-AREA LINE	OPERATIONAL	0	N