



California Environmental Protection Agency  
Department of Toxic Substances Control  
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**HAZARDOUS WASTE FACILITY PERMIT**

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**Facility Name:**

Southern California Edison Company  
San Onofre Nuclear Generating Station  
5000 Pacific Coast Highway  
San Clemente, California 92672

**Permit Number:** 04-BRK-XX

**Facility EPA ID No.:**  
CAD 000 630 921

**Facility Owner:**

Southern California Edison Company  
2244 Walnut Grove Avenue  
Rosemead, California 91770

**Effective Date:**

**Expiration Date:**

**Facility Operator**

Southern California Edison Company  
2244 Walnut Grove Avenue  
Rosemead, California 91770

Pursuant to Section 25200 of the California Health and Safety Code, this RCRA-equivalent Hazardous Waste Facility Permit is hereby issued to the Southern California Edison Company. The issuance of this permit is subject to the conditions set forth in Attachment "A" and the January 2001 Part "B" Application (Operation Plan). The Permit consists of a total of xxx pages including the cover page, Attachment "A" and Appendix A.

\_\_\_\_\_  
Mohinder S. Sandhu, P.E., Chief  
Standardized Permitting and Corrective Action Branch  
Hazardous Waste Management Program  
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Date: December 17, 2004

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**SOUTHERN CALIFORNIA EDISON  
SAN ONOFRE NUCLEAR GENERATING STATION  
HAZARDOUS WASTE FACILITY PERMIT**

**ATTACHMENT "A"**

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**HAZARDOUS WASTE FACILITY PERMIT  
SOUTHERN CALIFORNIA EDISON  
SAN ONOFRE NUCLEAR GENERATING STATION  
5000 Pacific Coast Highway  
San Clemente, California 92672  
USEPA ID NO.: CAD 000 630 921**

**PART I. DEFINITIONS**

All terms used in this Permit shall have the same meaning as those terms have in the California Health and Safety Code, division 20, chapter 6.5 and California Code of Regulations, title 22, division 4.5, unless expressly provided otherwise by this Permit.

1. **"Combined waste"** means waste that contains non-Resource Conservation and Recovery Act (RCRA) hazardous waste and source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.).
2. **"CFR"** as used in this permit means the Code of Federal Regulations.
3. **"DTSC"** as used in this Permit means the California Department of Toxic Substances Control.
4. **"Health and Saf. Code"** as used in this Permit means the Health and Safety Code.
5. **"Mixed waste"** as used in this Permit means waste that contains Resource Conservation and Recovery Act (RCRA) hazardous waste and source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954 as amended (42 U.S.C. 2011 et seq.).
6. **"NRC"** as used in this permit refers to the federally established Nuclear Regulatory Commission. The five-member commission regulates civilian uses of nuclear materials.
7. **"Permittee"** as used in this Permit means the Owner and Operator.

Unless explicitly stated otherwise, all cross-references to items in this Permit shall refer only to items occurring within the same part.

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**PART II. DESCRIPTION OF THE FACILITY AND OWNERSHIP**

1. OWNER

The land upon which the facility is sited is owned by the United States Government acting through the Department of the Navy and is part of the United States Marine Corps Base, Camp Pendleton. A grant of easement was made to the Southern California Edison Company (SCE), by the U.S. Navy on July 30, 1963.

2. OPERATOR

The facility operator is the Southern California Edison Company (hereafter "Operator").

3. LOCATION

The San Onofre Nuclear Generating Station (SONGS) is located in San Diego County, south of the City of San Clemente (Figure 1) and consists of two separate, non-contiguous parcels: 1) Mesa operation, located east of Interstate Highway 5; and 2) Main Site operations, located west of Highway 5. Mixed waste and combined waste storage operations covered under this permit are located at the southern-most end of the Main Site (Figure 2). The physical address of the Main Site is 5000 Pacific Coast Highway in San Clemente. The Assessor Parcel number for the Main Site is 101-520-12.

4. DESCRIPTION

SONGS is a nuclear power generating facility consisting of three pressurized water nuclear reactors (Units 1, 2 and 3) and several smaller standby diesel generating units. Reactor Unit 1 operated from January 1, 1968 to November 30, 1992 and, was shutdown in 1992. Unit 1 was rated at 450 megawatts of electrical output. Constructed in 1974 and 1976, Units 2 and 3 provide thermal energy to produce steam, that is then used to drive turbines which turn generators that produce electricity for the local power grid. Units 2 and 3 are rated to produce 1,100 megawatts, each.

The maintenance and decontamination of equipment may involve the generation of hazardous waste contaminated with radio nuclides. This waste is referred to as mixed waste or combined waste, depending upon the type of hazardous waste present, RCRA (mixed waste) or non-RCRA (combined waste). Mixed waste and combined waste generated from ongoing plant operations includes asbestos, solvents and oils. The decommissioning and decontamination (D&D) of Unit 1,

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which started 1999, has also led to the generation of waste. The D&D activities include the dismantling, removal and shipment of plant components. DTSC regulates the hazardous component of mixed waste and combined waste. The radioactive component is regulated by the Nuclear Regulatory Commission (NRC).

All mixed waste and combined waste must be stored in proper containers that are tightly sealed and properly labeled. Mixed waste and combined waste require special handling and may have limited disposal options. These extra considerations may require that mixed waste and combined waste remain in storage at SONGS longer than one year. After waste characterization and profiling, they may be shipped to a licensed, low-level radioactive waste or mixed waste repository.

This permit is based on a Part A dated August 13, 1999, revised July 26, 2002 and Part B application dated January 2001. This permit authorizes the storage of a total of 62,250 gallons of mixed waste and combined waste in a total of three hazardous waste management units at SONGS (see Table 1). The Part A identifies all possible waste codes or waste types authorized for storage, their annual generation rate and storage locations. A detailed description of the units, waste characterization procedures, emergency plan, training plan and closure plan are provided in the Part B application. The materials handling methods and waste analysis methods address the fourteen USEPA waste codes and thirty-one California waste codes generated at SONGS (Main Site). These codes are used to track the generation, storage, shipment and disposal of hazardous wastes.

The authorized storage areas and associated capacities are identified in Table 1. Mixed waste and combined waste may be stored for greater than one-year with prior written DTSC approval. Each storage extension request by SONGS must identify the specific waste and container requiring extended storage. Treatment and disposal limitations for mixed waste and combined waste, as well as treatment standards imposed by Land Disposal Requirements (LDR), may be just cause for granting extended storage approval.

The mixed waste and combined waste storage areas at SONGS are located at the southern end of the facility, south of the South Yard Facility-Batch Plant building (Figure 2). The South Yard Facility-Batch Plant may be accessed by a roadway from the ~~south~~ north or from the west. This unit features secondary containment berms and below grade sumps in each of the storage sections (A, B and C). Section A has a total secondary containment capacity of ~~3,600~~ 13,400 gallons. Sections B and C share spill berms and have a total secondary containment capacity of ~~44,500~~ 47,000 gallons.

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Table 1: Mixed Waste and Combined Waste Storage Areas with Volume Limits

Unit #	Structure	Storage Unit(s)	Waste Volume (gal)
1	South Yard Facility - Batch Plant (SYF-BP)	Fenced concrete pad. Mixed waste and/or combined waste to be stored in: Section A, and/or Section B.	46,150
2	Multi-Purpose Handling Facility (MPHF)	Low Specific Activity Waste (LSAW) Storage Area Mixed waste and/or combined waste to be stored in southeastern corner of building.	8,050
3	Multi-Purpose Handling Facility (MPHF)	High Specific Activity Waste (HSAW) Storage Area Mixed waste and/or combined waste to be stored in western-most area closest to viewing port of the HSAW Storage Area.	8,050

To the west of the SYF-BP is the 119'x130' Multipurpose Handling Facility (MPHF). This structure provides additional shielding to allow for storage of materials and mixed waste and/or combined waste of higher activity radioactivity. The entire building encompasses 10,810 square feet. The floor has collection and run-off trenches which lead to a 40,500 gallon sump with leak detection and alarms in the sump. The floor of the HSAW Storage Area is 10 feet below the LSAW Storage Area. The HSAW Storage Area and LSAW Storage Area drain to a common sump in the HSAW Storage Area. Secondary containment capacity for both areas is greater than 100,000 gallons. Mixed waste and combined waste with radiation levels that do not exceed one (1) REM/hr will be stored in sealed containers in the LSAW Storage Area.

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5. FACILITY SIZE AND TYPE FOR FEE PURPOSES

The facility is categorized as a "Small Storage Facility" for purposes of Health and Safety Code section 25205.19. A Small Storage Facility is defined as a facility that

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stores more than or has the capacity to store 0.5 tons, but less than 1,000 tons, of hazardous waste during any one month of the current reporting period commencing on or after July 1, 1991.

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**PART III. GENERAL CONDITIONS**

1. **PERMIT APPLICATION DOCUMENTS**

The Part "A" Application dated July 26, 2002 and the Part "B" Application (Operation Plan) dated January 2001 are hereby approved and made a part of this Permit by reference.

2. **EFFECT OF PERMIT**

(a) The Permittee shall comply with the provisions of the California Health and Safety Code, and California Code of Regulations, title 22, division 4.5 (Cal. Code Regs., tit. 22, div. 4.5). The issuance of this Permit by DTSC does not release the Permittee from any liability or duty imposed by federal or state statutes or regulations or local ordinances, except the obligation to obtain this Permit. The Permittee shall obtain the permits required by other governmental agencies, including but not limited to, the applicable land use planning, zoning, hazardous waste, radioactive materials, air quality, water quality, and solid waste management laws for the construction and/or operation of the Facility.

(b) Storage or treatment of hazardous-only waste is not authorized by this Permit.

(c) The Permittee is permitted to store mixed waste and combined waste generated at the Main Site in accordance with the conditions of this Permit. Any treatment or storage of mixed wastes, combined wastes or hazardous wastes not specifically authorized in this Permit, or otherwise authorized by DTSC under Health and Safety Code section 25201 is strictly prohibited.

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(d) Storage of any mixed waste or combined waste in any permitted unit in excess of one year is prohibited, unless expressly allowed under Special Condition V.2 of this Permit.

(e) Compliance with the terms of this Permit does not constitute a defense to any action brought under any other law governing protection of public health or the environment, including, but not limited to, one brought for any imminent and substantial endangerment to human health or the environment.

(f) DTSC's issuance of this Permit does not prevent DTSC from adopting or amending regulations that impose additional or more stringent

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requirements than those in existence at the time this Permit is issued and does not prevent the enforcement of these requirements against the Permittee.

- (g) Failure to comply with any term or condition set forth in the Permit in the time or manner specified herein will subject the Permittee to possible enforcement action including but not limited to penalties pursuant to Health and Safety Code section 25187.
- (h) In addition, failure to submit any information required in connection with the Permit, or falsification and/or misrepresentation of any submitted information, is grounds for revocation of this Permit (California Code Regulations, tit. 22, section 66270.43).
- (i) In case of conflicts between the Operation Plan and the Permit, the Permit conditions take precedence.
- (j) This Permit includes and incorporates by reference any conditions of waste discharge requirements issued by the State Water Resources Control Board or any of the California Regional Water Quality Control Boards and any conditions imposed pursuant to section 13227 of the Water Code.

3. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The California Environmental Protection Agency, Department of Toxic Substances Control, as the lead agency for this project prepared an Initial Study to assess environmental impacts. The Initial Study concluded there would be no significant adverse impacts associated with the treatment and storage of mixed waste and combined wastes identified in the Operation Plan. A Negative Declaration was prepared, in accordance with the requirements of Public Resources Code, division 13 (section 21000 et seq.) and the CEQA Guidelines, California Code of Regulations, title 14, division 6, chapter 3, section 15070 et seq.

4. WASTE MINIMIZATION CERTIFICATION

Pursuant to Health and Safety Code section 25202.9, the Permittee shall certify annually, by March 1 for the previous year ending December 31, that:

- (a) The facility has a program in place to reduce the volume and toxicity of all mixed wastes or combined wastes, listed in its July 26, 2002 Part A application, that are generated by the facility operations to the degree, determined by the Permittee, to be economically practicable.

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- (b) The method of storage or treatment is the only practicable method or combination of methods currently available to the facility that minimizes the present and future threat to human health and the environment.

The Permittee shall make this certification, in accordance with California Code of Regulations, title 22, section 66270.11. The Permittee shall submit the certification to Branch Chief, Standardized Permitting and Corrective Action Branch and shall record and maintain onsite such certification in the facility Operating Record.

(5) WASTE MINIMIZATION CONDITIONS

The Permittee shall comply with the Hazardous Waste Source Reduction and Management Review Act (SB 14) requirements that are specified in the Health and Safety Code sections 25244.19, 25244.20 and 25244.21, and any subsequent applicable statutes or regulations promulgated thereunder. This would include submittal of SB 14 documents to DTSC upon request.

DTSC may require the Permittee to submit a more detailed status report explaining any deviation from, or changes to, the approved waste minimization plan.

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#### **PART IV. PERMITTED UNITS AND ACTIVITIES**

This Permit authorizes operation only of the facility units and activities listed below. The Permittee shall not treat or store mixed waste or combined waste in any unit other than those specified in this Part. Any modifications to a unit or activity authorized by this Permit require the written approval of DTSC in accordance with the permit modification procedures set forth in California Code of Regulations, title 22. Three separate sections have been designated for the storage of hazardous waste at SONGS. The three units are described in more detail below.

##### **UNIT NAME:**

South Yard Facility-Batch Plant (SYF-BP) Mixed Waste and Combined Waste Storage Sections A and B.

##### **LOCATION:**

The Batch Plant is located on the southeastern portion of the property just east of the Multipurpose Handling Facility and west of Interstate 5.

##### **ACTIVITY TYPE:**

STORAGE IN CONTAINERS

##### **ACTIVITY DESCRIPTION:**

Containerized mixed waste and combined waste with radiation levels below ~~50~~ mREM/hr are placed in Sections A or B of the SYF-BP.

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##### **PHYSICAL DESCRIPTION:**

The SYF-BP storage facility is a reinforced concrete pad measuring approximately 115 feet long and 94 feet at its widest point and has a perimeter berm of 12 inches in height (see Figure 3). The perimeter of the pad has a locking chain link fence, with additional fences and gates dividing the pad into three sections (A, B and C). The two eastern most sections "A" and "B" are separated by a concrete block wall. These sections are used to store mixed waste and combined waste. The third section "C" is used for hazardous waste 90-day storage only and is not part of the permitted unit. Section "B" is separated from section "C" by a two inch berm and a chain link fence.

~~A 1,900-gallon portable tank, used for waste oil storage under Conditional Exemption, is located in section "A". A portable oil separator (cone-shaped tank), operating under~~

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Conditional Authorization, is located in Section "B". A 1,900-gallon empty tank is in Section B for emergency use to store spillage wastewater. Each of the three two sections (A and B) has an 800 gallon sump. Section C has a 450-gallon sump, and is separated. All three sections are surrounded by a minimum of 6 inch high berm to provide secondary containment. The total secondary containment capacity for all three sections is more than 40,000 60,000 gallons. The entire pad is covered by a steel framed roof.

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MAXIMUM CAPACITY:

Maximum capacity for each section (A or B) of the SYF-BP is limited to a total of 23,075 gallons of mixed waste and combined waste in drums, containers or 3.5 cubic yard boxes (see Table 8).

The maximum mixed waste and combined waste capacity limit for Section A and B is 46,150 gallons. Section A is limited to 16,500 gallons and Section B is limited to 29,650 gallons. Types and quantities of containers may vary but the total waste volume in storage at any time shall not exceed 46,150 gallons (See Table 8).

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Inserted: Maximum mixed waste and combined waste capacity limit for Section A and B is 46,150 gallons. Section A is limited to 16,500 gallons an

WASTE TYPES:

All mixed waste or combined waste are to be stored in sealed containers. More than 50% of the waste generated will be in solid or solidified form. There may be by multiple constituents in the wastes such that several waste codes may be packaged in the same container. Combined waste with any of thirty-one California waste codes listed in Table 2 may be stored in the SYF-BP (Table 2). Mixed waste with any of thirteen fourteen RCRA waste codes listed in Table 3 may be stored in the SYF-BP (Table 3).

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Flammable waste are to be stored primarily in Section "A".

Section "B" is divided into four cells. Mixed waste containing hydrazine (U133) shall be stored in a designated and placarded bermed "Hydrazine Cell" at the northeast corner in Section "B". Caustic (D002) mixed waste shall be stored in an adjacent designated bermed and placarded "Caustic Cell". A third cell "Acids Cell", along the southeastern corner of Section "B" shall be used for the storage of acids (Figure 3).

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The fourth "Overflow Cell" can be used to store waste, including any overflow wastes of flammable, hydrazine, caustic and acidic wastes. See waste stream description in Appendix A.

Table 2: Authorized California Waste Codes for SYF-BP

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California Waste Code	Description
551	Laboratory Waste Chemicals
122, 123, 131, 791, 792	Corrosive solutions
351, 352, 431, 491, 741, 751	Solids and sludges
135	Antifreeze
151	Asbestos containing waste
181	Paint chips/absorbent or sludge lance or steam generator chemical cleaning/zinc metal oxide
221, 222, 223	Waste Oil
223	Synthetic oil
241	Tank bottoms
214, 341, 342, 343, 461	Paint Sludge and Liquids
132, 135, 722, 723, 724, 725, 726, 727	Liquids Containing Metals

Table 3: Authorized Federal Waste Codes for SYF-BP

RCRA Waste Codes	Description
D001, D006, D007, D008, F001, F002, F003, F005	Flammable solvents/liquids and paint sludges
D002	Corrosive liquid/solid sludge
D005, D010, D011	Aqueous metals containing waste
D008	Lead containing
F002	Oil/trichloroethane
F002	Freon filters and Freon sludges

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UNIT SPECIFIC SPECIAL CONDITIONS

- (1) The Hydrazine Cell, Caustic Cell, and Acids Cell each shall store no more than 220-gallons of containerized mixed waste.
- (2) When in use, the designated storage cells must have placards clearly visible identifying the hazards of the mixed waste and/or combined waste in storage.
- (3) ~~Maximum number and type of containers used to store mixed waste and combined waste are designated in Table 8.~~  
The maximum mixed waste and combined waste capacity limit for Section A and B is 46,150 gallons. Section A is limited to 16,500 gallons and Section B is limited to 29,650 gallons. Types and quantities of containers may vary but the total waste volume in storage at any time shall not exceed 46,150 gallons (See Table 8). Each metal box used is equivalent to 220 gallons (or four 55-gallons drums).
- (4) To assure availability of the secondary containment capacity, an operational limit of a combined total of 76,000 gallons shall be stored in Sections B and C.

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Inserted: table 8). Each metal box used is equivalent to 220 gallons (or four 55-gallons drums).

AIR EMISSION STANDARDS FOR CONTAINERS, TANKS, AND SURFACE IMPOUNDMENTS (SUBPART CC)

This unit is not subject to the Air Emission Standards of the California Code of Regulations, title 22, division 4.5, chapter 14, article 28.5 for the following reasons:

- (1) Managed waste streams have organic concentrations of less than 500 ppmw average.
- (2) Unit used only for the storage of mixed waste and combined waste.

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UNIT NAME:

Low Specific Activity Waste (LSAW) Mixed Waste and Combined Waste Storage Area

LOCATION:

The LSAW Storage Area is a designated location in the eastern corner of the LSAW Bay in the Multi-purpose Handling Facility (MPHF). The MPHF, a 119' x 130' building, is situated just west of the South Yard Facility-Batch Plant. The MPHF is depicted in Figure 4 and identifies the locations of the High Specific Activity Waste (HSAW) storage area and Low Specific Activity Waste (LSAW) storage area.

ACTIVITY TYPE:

STORAGE IN CONTAINERS

ACTIVITY DESCRIPTION:

Mixed waste and combined waste with radiation levels that do not exceed (1) REM/hr may be stored in sealed containers in the LSAW Storage Area.

PHYSICAL DESCRIPTION:

The LSAW storage area is a designated area running along the eastern corner of the MPHF. The approximate dimension of LSAW storage area is 30'x30'. The area is marked by a painted grid and has a rope fence with warning placards.

The MPHF is a reinforced concrete structure designed to provide a high level of shielding by using ~~a two-foot thick concrete and steel reinforced walls~~. The building has a fire suppression system rated as a pre-action fire system which requires a smoke alarm and sprinkler head fusible links which melt prior to activation. It features access security with controlled entry and personnel monitoring stations to measure radiation levels upon entry and exit. The MPHF was designed to seismic category III criteria and is a quality class IV structure. The design of the facility follows NRC criteria as specified in NRC generic letter 91-38, and 10 CFR Part 20 and 40 CFR Part 91 for radioactive materials storage.

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The base of the HSAW Storage Area is 10 feet below the LSAW Storage Area. The run-off trench in the HSAW acts as a 40,500 gallon sump. The LSAW Storage Area and HSAW Storage Area drain to the sump. Secondary containment capacity for both areas is greater than 10% of the total mixed waste or combined waste storage capacity.

MAXIMUM CAPACITY:

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~~Maximum capacity is limited to 8,050 gallons of mixed waste and combined waste in drums, containers or 3.5 cubic yard boxes (see Table 8).~~

The maximum mixed waste and combined waste capacity limit for the LSAW is 8,050 gallons. Types and quantities of containers may vary but the total waste volume in storage at any time shall not exceed 8,050 gallons (see Table 8).

**WASTE TYPES:**

All mixed waste or combined waste are to be stored in sealed containers. All waste within a 3.5 cubic yard or 1.75 cubic yard box shall be solid or in a solidified form. On average, more than 50-20% of the waste generated stored will be in solid or solidified form. There may be ~~by~~ multiple constituents in the wastes such that several waste codes may be packaged in the same container. Combined waste with any of thirty-one California waste codes listed in Table 4 may be stored in the LSAW (Table 4). Mixed waste with any of ~~thirteen~~ twelve RCRA waste codes listed in Table 5 may be stored in the LSAW (Table 5). See waste stream description in Appendix A.

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Table 4: Authorized California Waste Codes for LSAW Storage Area

California Waste Code	Description
551	Laboratory Waste Chemicals
122, 123, 131, 791, 792	Corrosive solutions
351, 352, 431, 491, 741, 751	Solids and sludges
135	Antifreeze
151	Asbestos containing waste
181	Paint chips/absorbent or sludge lance or steam generator chemical cleaning/zinc metal oxide
221, 222, 223	Waste Oil
223	Synthetic oil
214, 341, 342, 343, 461	Paint Sludge and Liquids

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 132, 135, 722, 723, 724, 725, 7... [2]

Table 5: Authorized Federal Waste Codes for LSAW Storage Area

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RCRA Waste Codes	Description
D001, D006, D007, D008, F001, F002, F003, F005	Flammable solvents/liquids and paint sludges
<a href="#">D002</a>	<a href="#">Corrosive liquid/solid sludge</a>
D005, D010, D011	Aqueous metals containing waste
D008	Lead containing
D009	Mercury containing
F002	Oil/trichloroethane
F002	Freon filters and Freon sludges

**UNIT SPECIFIC SPECIAL CONDITIONS**

- (1) Spill control pallets and/or over packs shall be used to provide added secondary containment and separation for corrosive waste.
- (2) ~~Maximum number and type of containers used to store mixed waste and combined waste are designated in Table 8.~~

The maximum mixed waste and combined waste capacity limit for the LSAW is 8,050 gallons. Types and quantities of containers may vary but the total waste volume in storage at any time shall not exceed 8,050 gallons (see Table 8). Each metal box used is equivalent to 220 gallons (or four 55-gallons drums).

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**AIR EMISSION STANDARDS FOR CONTAINERS, TANKS, AND SURFACE IMPOUNDMENTS (SUBPART CC)**

This unit is not subject to the Air Emission Standards of the California Code of Regulations, title 22, division 4.5, chapter 14, article 28.5 for the following reasons:

- (1) Managed waste streams have organic concentrations of less than 500 ppmw average.
- (2) Unit used only for the storage of mixed waste and combined waste.

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UNIT NAME:

High Specific Activity Waste (HSAW) Mixed Waste and Combined Waste Storage Area

LOCATION:

The HSAW Storage Area is located near the interior rolling gate of the HSAW Bay of the Multi-purpose Handling Facility (MPHF). The MPHF, a 119' x 130' building, is situated just west of the South Yard Facility-Batch Plant.

ACTIVITY TYPE:

STORAGE IN CONTAINERS

ACTIVITY DESCRIPTION:

Containerized mixed waste and combined waste, in sealed containers, with radiation levels above 1 REM/hr are placed in the HSAW storage area depending on their waste characteristics and available storage space. [To potentially reduce worker exposure to radioactivity to as low as reasonably achievable, mixed waste and combined waste with less than 1 REM/hr may be stored in the HSAW.](#)

PHYSICAL DESCRIPTION:

The HSAW Storage Area that is used for the storage of mixed waste or combined waste is a 20 foot by 20 foot area near the interior rolling gate of the HSAW Bay. The area has secondary containment in excess of 100% of the unit's storage capacity. An overhead crane is used for remote handling.

The MPHF is a reinforced concrete structure designed to provide a high level of shielding by using ~~a~~ two-foot thick concrete and steel reinforced walls. The building has a fire suppression system rated as a pre-action fire system which requires a smoke alarm and sprinkler head fusible links which melt prior to activation. It features access security with controlled entry and personnel monitoring stations to measure radiation levels upon entry and exit. The MPHF was designed to seismic category III criteria and is a quality class IV structure. The design of the facility follows NRC criteria as specified in NRC generic letter 91-38, and 10 CFR Part 20 and 40 CFR Part 91 for radioactive materials storage.

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The base of the HSAW Bay is 10 feet below the LSAW Bay. The run-off trench in the HSAW Bay acts as a 40,500 gallon sump. The HSAW Storage Area and LSAW Storage Area drain to the sump. Secondary containment capacity for both areas is greater than 10% of the total mixed waste or combined waste storage capacity.

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**MAXIMUM CAPACITY:**

~~Maximum capacity is limited to 8,050 gallons of mixed waste and combined waste in drums, containers or 3.5 cubic yard boxes (see Table 8).~~

The maximum mixed waste and combined waste capacity limit for the HSAW is 8,050 gallons. Types and quantities of containers may vary but the [total waste volume in storage at any time shall not exceed 8,050 gallons \(see Table 8\).](#)

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**WASTE TYPES:**

All mixed waste or combined waste are to be stored in sealed containers. ~~More than 50 % of the waste generated will be in solid or solidified form.~~ There may ~~be~~ multiple constituents in the wastes such that several waste codes may be packaged in the same container. Combined waste with any of thirty-one California waste codes [listed in Table 6](#) may be stored in the HSAW ~~(Table 6)~~. Mixed waste with any of ~~thirteen~~ ~~twelve~~ RCRA waste codes [listed in Table 7](#) may be stored in the HSAW ~~(Table 7)~~. See waste stream description in Appendix A.

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Table 6: Authorized California Waste Codes for HSAW Storage Area

California Waste Code	Description
551	Laboratory Waste Chemicals
122, 123, 131, 791, 792	Corrosive solutions
351, 352, 431, 491, 741, 751	Solids and sludges
135	Antifreeze
151	Asbestos containing waste
181	Paint chips/absorbent or sludge lance or steam generator chemical cleaning/zinc metal oxide
221, 222, 223	Waste Oil
223	Synthetic oil
241	Tank bottoms
214, 341, 342, 343, 461	Paint Sludge and Liquids

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Table 7: Authorized Federal Waste Codes for HSAW Storage Area

RCRA Waste Codes	Description
D001, D006, D007, D008, F001, F002, F003, F005	Flammable solvents/liquids and paint sludges
<del>D002</del>	<del>Corrosive liquid/solid sludge</del>
D005, D010, D011	Aqueous metals containing waste
D008	Lead containing
D009	Mercury containing
F002	Oil/trichloroethane
F002	Freon filters and Freon sludges

UNIT SPECIFIC SPECIAL CONDITIONS

- (1) All mixed waste and/or combined waste stored in the HSAW must at all times remain in clear view from the room's viewing port.
- (2) ~~Maximum number and type of containers used to store mixed waste and combined waste are designated in Table 8.~~

~~The maximum mixed waste and combined waste capacity limit for the HSAW is 8,050 gallons. Types and quantities of containers may vary but the total waste volume in storage at any time shall not exceed 8,050 gallons (see Table 8). Each metal box used is equivalent to 220 gallons (or four 55-gallons drums).~~

- (3) ~~Spill control pallets and/or over packs shall be used to provide added secondary containment and separation for corrosive waste.~~

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AIR EMISSION STANDARDS FOR CONTAINERS, TANKS, AND SURFACE IMPOUNDMENTS (SUBPART CC)

This unit is not subject to the Air Emission Standards of the California Code of Regulations, title 22, division 4.5, chapter 14, article 28.5 for the following reasons:

- (1) Managed waste streams have organic concentrations of less than 500 ppmw average.

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- (2) Unit used only for the storage of mixed waste and combined waste.

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SUMMARY OF PERMITTED UNITS AND ACTIVITIES

Table 8 summarizes mixed waste and combined waste types allowed for storage and maximum quantity limits for the authorized units.

Table 8: Mixed Waste and Combined Waste Storage Limits for SONGS

Unit #	Facility Name	Mixed Waste and Combined Waste Storage Units	Types and Quantities of Containers*	Waste Volume Limit (gal)
1	SYF-BP	Sections A and B only.	<del>800x</del> 55-gal Drums <del>5x</del> 3.5 yd <sup>3</sup> Metal Boxes** <del>30x</del> 30-gal Containers <del>30x</del> 5-gal Containers	46,150
2	MPHF	Low Specific Activity Waste (LSAW) Storage Area.	<del>400x</del> 55-gal Drums <del>40x</del> 3.5 yd <sup>3</sup> Metal Boxes** <del>40x</del> 30-gal Containers <del>40x</del> 5-gal Containers	8,050
3	MPHF	High Specific Activity Waste (HSAW) Storage Area.	<del>400x</del> 55-gal Drums <del>40x</del> 3.5 yd <sup>3</sup> Metal Boxes** <del>40x</del> 30-gal Containers <del>40x</del> 5-gal Containers	8,050

Note: \* ~~Designates maximum number of specified container types used to store mixed waste and combined waste.~~ Other types of containers may be used, including 40 cubic yard (yd<sup>3</sup>) roll-off bins in the SYF-BP. Any combination of container types is limited to the storage unit's waste volume limit.

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\*\* ~~The A 3.5 yd<sup>3</sup> or 1.75 yd<sup>3</sup> metal box represents an equivalent of 220 gallons of solidified mixed waste, and combined waste.~~

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**PART V. SPECIAL CONDITIONS.**

1. SPECIAL CONDITIONS WHICH APPLY TO ALL DESIGNATED STORAGE AREAS

- (a) A minimum aisle space of three feet shall be maintained between container pallets to allow for movement of emergency equipment and personnel.
- (b) Compliance with capacity requirements will be determined based on the number and types of containers placed into the storage areas. All containers will be assumed full for the purpose of determining compliance with the permitted unit capacity.
- (c) Containers shall be properly labeled according to the California Code of Regulations, title 22, section 66262.34, and may be stacked no greater than two high (double stacking).
- ~~(d) The maximum permissible number and type of containers used to store mixed waste and combined waste are designated in Table 8.~~

2. DURATION OF STORAGE

- (a) The Permittee is authorized to store mixed waste and combined waste at the designated storage units for up to a maximum of one calendar year from the date of acceptance, unless the Permittee obtains DTSC authorization for extended storage in accordance with Condition V.2.
- (b) DTSC has previously authorized extending storage beyond one year under the Consent Order, docket number HWCA 96/96-2015, dated June 15, 1999 (Consent Order) ~~for waste streams identified in Table 9.~~ Upon the effective date of this Permit, the Consent Order will be superseded by this Permit. Formatted: Strikethrough
- (c) Within 60-days of the effective date of this Permit, the Permittee shall submit an Initial Inventory of wastes stored under extension (extended storage). The inventory shall identify all mixed/combined wastes under extended storage, their hazardous constituents, hazardous waste description, radioisotope(s), RCRA and California waste codes, volumes in storage by waste stream, storage expiration date(s), and projected shipment date(s), and shall include a detailed description of Permittee's continuing efforts to locate available treatment technology and/or disposal capacity for all mixed waste or combined waste generated onsite. Deleted: [s  
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- (d) In addition to the Initial Inventory, the Permittee shall submit to DTSC a semi-annual inventory report, due June 30 and December 31 of each year. The report shall be submitted to:

Branch Chief  
Standardized Permitting and Corrective Action Branch  
700 Heinz Avenue  
Berkeley, California 94710

- (e) ~~A permit modification shall be required prior to waste from any waste stream or waste code not identified in Table 9 exceeding the one year storage limitation. DTSC will determine the permit modification classification, Class 1, 2 or 3, based on specific waste characteristics.~~

- (f) (e) The Permittee is required to submit a Storage Extension Request to DTSC no later than sixty (60) days prior to exceeding the one year storage limitation for any waste placed into the designated storage areas. Within 45 days of the receipt of the extension request extension, DTSC shall inform the Permittee in writing if that the request is deficient and identify the specific information required. DTSC shall make a decision on the extension request within 120 days of the filing of a completed request. The Permittee shall be deemed to be in compliance with the storage time limit while the application is pending review by DTSC. unless the extension is a permit modification. The Storage Extension Request shall include:

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- (1) The description of waste streams, waste codes, quantities, one-year storage expiration date, projected shipment date, and container identification of each waste container that will exceed the one year storage limitation;
- (2) The justification or statement of basis for requesting extended storage. The Permittee shall demonstrate the efforts being made to comply with the one-year storage requirement.
- (3) ~~DTSC within 45 days of the receipt of the request extension shall inform the Permittee in writing that the request is deficient and what specific information is required. DTSC shall make a decision on the extension request within 120 days of the filing of a completed application, unless the extension is consider a permit modification.~~

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Table 9: Mixed Waste and Combined Waste Streams Potentially Eligible for Storage Extension

No.	Description of Mixed Waste and Combined Waste (radiation levels based on contact handling)	RCRA Waste Codes	State Waste Codes
1.	Antifreeze	N/A	135
2.	Asbestos with <50 mR	N/A	151
3.	Freon Filters/Sludge with <10 mR	F001	741 or 751
-	Freon Filters/Sludge with <160 mR	F001	741 or 751
4.	Grease	N/A	181
5.	Hydrazine	N/A	134
6.	Lead	D008	181
7.	Oil with <2.5mR	F001, F002	221, 741
-	Oil with <4mR	F001, F002	221
-	Oil with 20-450 mR	F001, F002	221
-	Oily Sludge	D006-D007 D008-D010 F001	222
8.	Paint Chips	N/A	181
9.	Steam Generator Sludge with < 0.2 mR	N/A	181

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### **PART VI - CORRECTIVE ACTION**

1. A RCRA Facility Assessment (RFA) was conducted and a report summarizing the findings was prepared by DTSC in August 2002. The RFA identified three Solid Waste Management Units (SWMUs) and two Areas of Concern (AOC):

SWMU No. 1: South Yard - Batch Plant  
SWMU No. 2: Low Specific Activity Waste (LSAW) Area  
SWMU No. 3: High Specific Activity Waste (HSAW) Area

AOC No. 1: Unit #1 and Supporting Structures  
AOC No. 2: Former Demineralizer Sumps

As these units are either permitted units subject to closure, or presently undergoing decontamination and decommissioning, no further corrective action is required at the present time.

2. In the event the Permittee identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous constituents, or discovers new Solid Waste Management Units (SWMUs) not previously identified, the Permittee shall notify DTSC orally within 24 hours of discovery and notify DTSC in writing within 10 days of such discovery summarizing the findings including the immediacy and magnitude of any potential threat to human health and/or the environment.
3. DTSC may require the Permittee to investigate, mitigate and/or take other applicable action to address any immediate or potential threats to human health and/or the environment and newly identified releases of hazardous waste and/or hazardous constituents. For newly identified SWMUs, the Permittee is required to conduct corrective action. Corrective action will be carried out either under a Corrective Action Consent Agreement or a Unilateral Corrective Action Order pursuant to Health and Safety Code, Section 25187.

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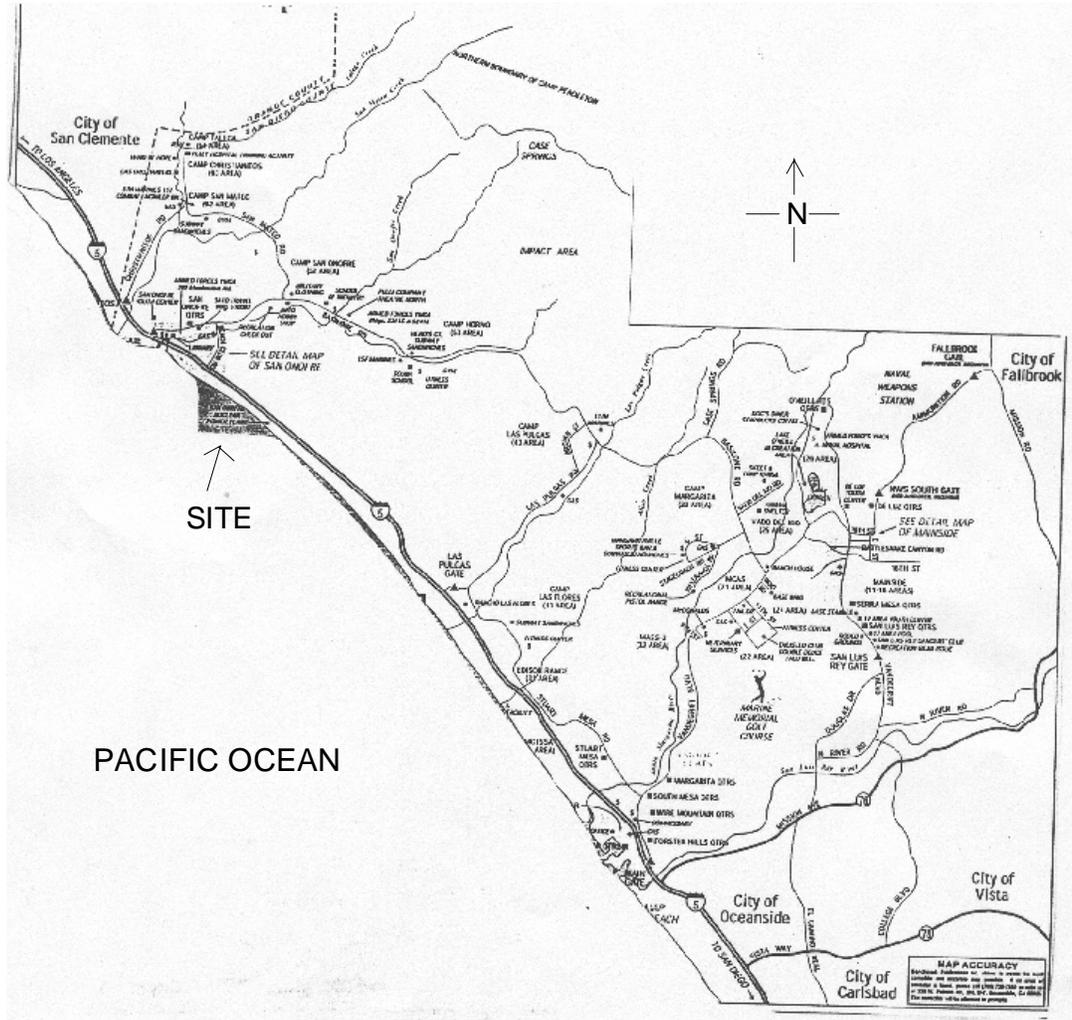


Figure 1 Site Location Map

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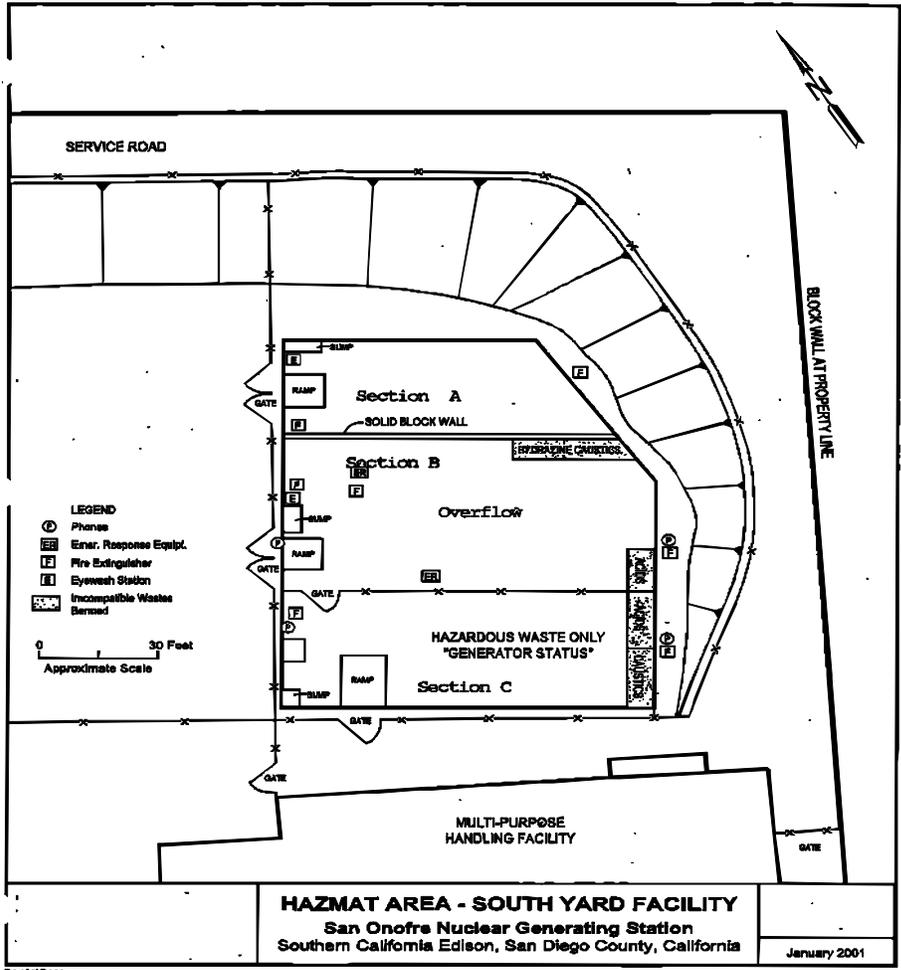


Figure 3 South Yard facility – Batch Plant (SYF-BP)

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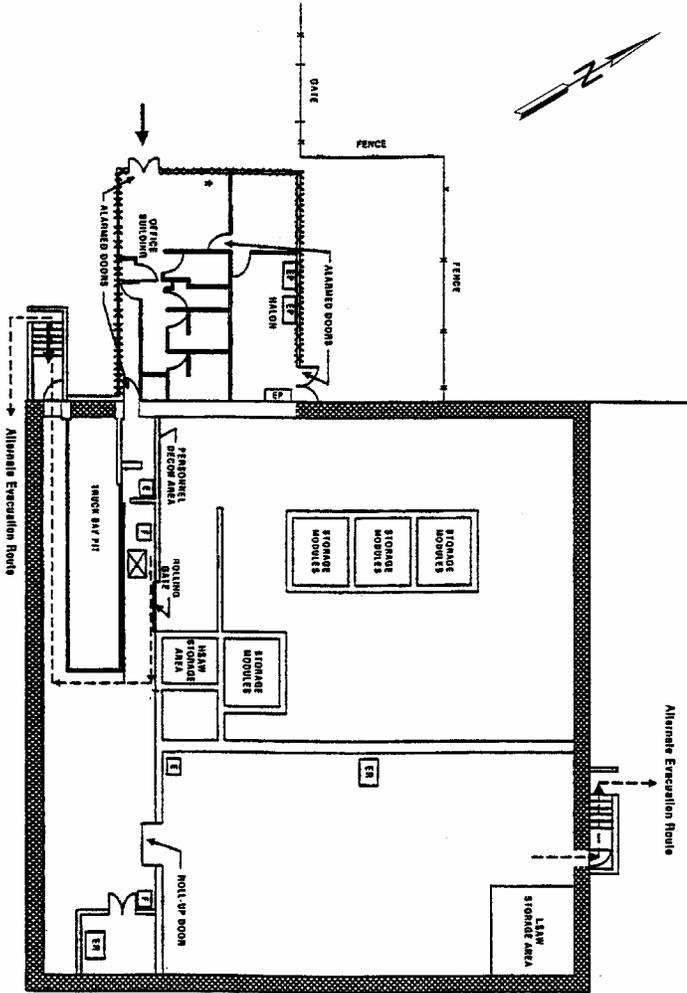


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APPENDIX A: MIXED WASTES AND COMBINED WASTE STREAMS AT SONGS

Waste Name	USEPA Hazardous Waste #	California Waste Code	Hazardous Properties of the Waste	Process(es) that produced the waste
Flammable Liquid	D001, F001, F002, F003, F005, D006, D007, D008	214, 343, 551	Ignitability	Painting/laboratory
Sulfuric Acid	D002	791	Corrosivity	Water Chemistry, Resin Regeneration
Sodium Hypochlorite	D002	131	Corrosivity	Water Chemistry
Sodium Hydroxide	D002	122	Corrosivity	Water Chemistry, Resin Regeneration
Hydrazine	U133	123	Reactivity, Toxicity, Corrosivity	Water Chemistry
Ammonium Hydroxide	n/a	123	Toxicity, Corrosivity	Water Chemistry, Resin Regeneration
1,1,1-Trichloroethane	F001	551, 741	Toxicity	Painting
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon)	F002	741, 751	Toxicity	Laboratory, Freon Filters, Rags
Combustible Liquid (Oil)	n/a	221	Toxicity	Pumps, Motors, Lubricating
Asbestos	n/a	151	Toxicity	Insulation
Combustible Solid	n/a	222	Toxicity	Oil/Absorbent Rags
Corrosive Liquid				Acid/Caustic

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Waste Name	USEPA Hazardous Waste #	California Waste Code	Hazardous Properties of the Waste	Process(es) that produced the waste
	D002	135	Corrosivity	Clean-ups, Other Acids/Caustics
Flammable Solid	D001, F001, F002, F003, F005, D006, D007, D008	352, 461	Ignitability	Painting
Sandblast Grit	n/a	181	Toxicity	Inorganic Sandblast Grit
Synthetic Oil	n/a	221	Toxicity	Pumps, Motors, Lubricating
Ethylene Glycol	n/a	135	Toxicity	Cooling Systems
Steam Generator Sludge	n/a	181	Toxicity	Steam Generator, Sludge Lancing
Oil-Trichloroethane	F001, F002	741	Toxicity	Oil Cleaning Parts, etc.
Misc. Non RCRA Hazardous Wastes	n/a	223, 132, 214, 241, 341, 342, 343, 351, 352, 461, 491	Toxicity	Unspecified oil containing wastes, aqueous solutions w/ metals, unspecified solvent mixtures, tank bottom waste organic liquids, (non solvents) w/ halogens, organic liquids with metals, unspecified organic liquid mixtures, organic solids w/ halogens, other organic solids, paint sludge, unspecified sludge waste

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Waste Name	USEPA Hazardous Waste #	California Waste Code	Hazardous Properties of the Waste	Process(es) that produced the waste
Lead	D008	181	Toxicity	Lead Shielding, paint chips, computers
Mercury	D009	181, 725	Toxicity	Mercury Instruments
Aqueous Metal Containing	D005, D006, D007, D008, D009, D010, D011	181, 722, 723, 724, 725, 726, 727	Toxicity	Miscellaneous Plant Systems

NOTE: This table is for the SYF- BP Mixed Waste Area and/or the MPHf LSAW/HS AW Mixed Waste Areas. The mixed waste is placed in the areas by radioactivity levels as the general guidance.

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U133	Hydrazine liquids/spill residue
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132, 135, 722, 723, 724, 725, 726, 727	Liquids Containing Metals
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