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## Chapter 9 Auxiliary Systems

### 9.1 Fuel Storage and Handling

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

#### 9.1.4 Light Load Handling System (Related to Refueling)

##### 9.1.4.13 Refueling Operations

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Add the following paragraphs at the end of this section.

---

#### STD COL 9.1.6-4-A

[Section 13.5](#) requires development of fuel handling procedures. Fuel handling procedures address the status of plant systems required for refueling; inspection of replacement fuel and control rods; designation of proper tools; proper conditions for spent fuel movement and storage; proper conditions to prevent inadvertent criticality; proper conditions for fuel cask loading and movement; and status of interlocks, reactor trip circuits and mode switches. These procedures provide instructions for use of refueling equipment, actions for core alterations, monitoring core criticality status, and accountability of fuel for refueling operations. Fuel handling procedures are developed six months before fuel receipt to allow sufficient time for plant staff familiarization, to allow NRC staff adequate time to review the procedures, and to develop operator licensing examinations.

Personnel qualifications and training for fuel handlers are addressed in [Section 13.2](#).

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##### 9.1.4.19 Inspection and Testing Requirements

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Add the following paragraph at the end of this section.

---

#### STD COL 9.1.6-4-A

[Section 17.5](#) describes the QA program that is applied to monitoring, implementing, and ensuring compliance with fuel handling procedures. As part of normal plant operations, the fuel-handling equipment is inspected for operating conditions before each refueling operation. During the operational testing of this equipment, procedures are followed that will affirm the correct performance of the fuel-handling system interlocks. Other maintenance and test procedures are developed based on manufacturer's requirements.

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### 9.1.5 Overhead Heavy Load Handling Systems (OHLHS)

#### 9.1.5.6 Other Overhead Load Handling System

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Add the following at the end of this section.

---

#### STD COL 9.1.6-5-A

#### Special Lifting Devices

For special lifting devices, the guidelines of ANSI N14.6 are implemented as specified with the following exceptions/clarifications:

- The acceptance criteria of paragraph 5.5.2 are applied to fabrication and repair welds only.
- The acceptance criteria for inservice inspection shall be limited to “No Cracks.”
- The use of later editions of ASME Section V may be used to permit the use of advanced NDE technology.
- For the Dryer/Separator Strongback the requirement to routinely examine the load bearing welds every fifth refueling outage by nondestructive examination (NDE) (Magnetic Particle or Liquid Penetrant) will not be used. The lifting device shall be examined visually and dimensionally. The visual and dimensional examination shall be performed prior to the initial lift each outage. Any cracks in the coating or dimension out of tolerance shall require magnetic particle or liquid penetrant examination of the suspect welds and/or additional welds as required by Design Engineering.

#### Other Lifting Devices

Slings used for heavy load lifts meet the requirements specified for slings in ANSI B30.9 with the following clarification. Since dynamic loads constitute a small percentage of the total load imposed on slings, the sling’s ratings are expressed in terms of maximum static load only.

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#### 9.1.5.8 Operational Responsibilities

---

Replace this section with the following.

---

#### STD COL 9.1.6-5-A

#### Procedures

[Section 13.5](#) requires the development of administrative procedures to control heavy loads prior to fuel load to allow sufficient time for plant staff familiarization, to allow NRC staff adequate time to review the

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procedures, and to develop operator licensing examinations. Heavy loads handling procedures address:

- Equipment identification
- Required equipment inspections and acceptance criteria prior to performing lift and movement operations
- Approved safe load paths and exclusion areas
- Safety precautions and limitations
- Special tools, rigging hardware, and equipment required for the heavy load lift
- Rigging arrangement for the load
- Adequate job steps and proper sequence for handling the load

Safe load paths are defined for movement of heavy loads to minimize the potential for a load drop on irradiated fuel in the reactor vessel or spent fuel pool or on safe shutdown equipment. Paths are defined in procedures and equipment layout drawings. Safe load path procedures address the following general requirements:

- When heavy loads must be carried directly over the spent fuel pool, reactor vessel or safe shutdown equipment, procedures will limit the height of the load and the time the load is carried.
- When heavy loads could be carried (i.e., no physical means to prevent) but are not required to be carried directly over the spent fuel pool, reactor vessel or safe shutdown equipment, procedures will define an area over which loads shall not be carried so that if the load is dropped, it will not result in damage to spent fuel or operable safe shutdown equipment or compromise reactor vessel integrity.
- Where intervening structures are shown to provide protection, no load travel path is required.
- Defined safe load paths will follow, to the extent practical, structural floor members.
- When heavy loads movement is restricted by design or operational limitation, no safe load path is required.
- Supervision is present during heavy load lifts to enforce procedural requirements.

### **Inspection and Testing**

Cranes addressed in this section are inspected, tested, and maintained in accordance with Section 2-2 of ANSI B30.2, Section 11.2 of ANSI B30.11, or Sections 16-1.2.1 and 16-1.2.3 of ANSI B30.16 with the exception that tests and inspections may be performed prior to use for infrequently used cranes. Prior to making a heavy load lift, an inspection of the crane is made in accordance with the above applicable standards.

### **Training and Qualification**

Training and qualification of operators of cranes addressed in this section meet the requirements of ANSI B30.2, and include the following:

- Knowledge testing of the crane to be operated in accordance with the applicable ANSI crane standard.
- Practical testing for the type of crane to be operated.
- Supervisor signatory authority on the practical operating examination.
- Applicable physical requirements for crane operators as defined in the applicable crane standard.

### **Quality Assurance**

Procedures for control of heavy loads are developed in accordance with [Section 13.5](#). In accordance with [Section 17.5](#), other specific quality program controls are applied to the heavy loads handling program, targeted at those characteristics or critical attributes that render the equipment a significant contributor to plant safety.

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#### **9.1.5.9 Safety Evaluations**

Add the following paragraph at the end of this section.

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**STD COL 9.1.6-5-A**

No heavy loads are identified that are outside the scope of the certified design.

---

#### **9.1.6 COL Information**

##### **9.1.6-4-A Fuel Handling Operations**

**STD COL 9.1.6-4-A**

This COL item is addressed in [Section 9.1.4.13](#) and [Section 9.1.4.19](#).

##### **9.1.6-5-A Handling of Heavy Loads**

**STD COL 9.1.6-5-A**

This COL item is addressed in [Section 9.1.5.6](#), [Section 9.1.5.8](#), and [Section 9.1.5.9](#).

## 9.2 Water Systems

### 9.2.1 Plant Service Water System

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

#### 9.2.1.2 System Description

---

Replace the Summary Description, Detailed System Description, and Operation portions of this section with the following.

---

#### VCS CDI

##### Summary Description

The plant service water system (PSWS) cools the nonsafety-related reactor component cooling water system (RCCWS) and turbine component cooling water system (TCCWS) heat exchangers. The PSWS water is, in turn, cooled by the mechanical draft plant service water system cooling towers (PSWSCTs), one tower per train, two towers per generating unit. The PSWSCTs are the auxiliary heat sinks discussed in the DCD. Makeup to the PSWSCTs is provided from the VCS cooling basin. The heat is ultimately rejected to the atmosphere. A simplified diagram of the PSWS is shown in [Figure 9.2.1-201](#).

##### Detailed System Description

The PSWS consists of two independent and 100% redundant trains that continuously circulate water through the RCCWS and TCCWS heat exchangers.

Each PSWS train consists of two 50%-capacity vertical pumps, taking suction in parallel, from the PSWSCT basin. Discharge is through a check valve, a self-cleaning strainer, and a motor-operated discharge valve at each pump to a common header. Each common header supplies plant service water to each RCCWS and TCCWS heat exchanger train, arranged in parallel. The plant service water is returned via a common header to the PSWSCT in each train. Remotely operated isolation valves and a cross-tie-line permit routing of the plant service water from either PSWS train to either PSWSCT. There is no PSWS cross-connection between VCS Units 1 and 2. The RCCWS and TCCWS heat exchangers are provided with remote-operated isolation valves. Manual balancing valves are provided at each heat exchanger outlet.

The PSWS pumps are located at the plant service water pumphouse. Each pump is sized for 50% of the train flow requirement for normal

operation. The pumps are low speed, vertical, wet-pit design with an allowance for increases in system friction loss and impeller wear. The cooling tower basin water level is monitored to ensure sufficient net positive suction head at design flow is maintained to each of the PSWS pumps.

The pumps in each train are powered from redundant electrical buses. During a loss of preferred power (LOPP), the pumps are powered from the two nonsafety-related standby diesel generators.

Where needed, valves are provided with hard seats to withstand erosion. The valves are arranged for ease of maintenance, repair, and in-service inspection. During a LOPP, the motor-operated valves are powered from the two nonsafety-related standby diesel generators.

The PSWSCT provided for each PSWS train is a separate, multi-celled, 100% capacity mechanical draft cooling tower. The fans in the tower for each train supplied by one of the two redundant electrical buses. During an LOPP, the fans are powered from the two nonsafety-related standby diesel generators. Each tower cell has an adjustable-speed, reversible motor fan unit that can be controlled for cold weather conditions to prevent freezing in the basin. A full flow bypass is provided to return water directly to the PSWS basin to allow ease of cold weather startup.

Mechanical and electrical isolation capability allows maintenance on one PSWSCT, including complete disassembly, during full power operation.

The VCS cooling basin provides makeup for blowdown, drift and evaporation losses from the basin of the PSWSCT.

---

**VCS COL 9.2.1-1-A**

Fiberglass-reinforced polyester pipe is used for buried PSWS piping to preclude long-term corrosion. Appropriate chemical treatment is added to the PSWS basin to preclude long-term corrosion and fouling of the PSWS based on site water quality analysis.

---

**VCS CDI**

In the event of an LOPP, the PSWS supports the RCCWS in bringing the plant to a cold shutdown condition in 36 hours assuming the most limiting single active or passive component failure.

The Units 1 and 2 PSWS design heat loads are shown in [DCD Table 9.2-1](#). The PSWS component design characteristics are shown in [Table 9.2.1-201](#).

The PSWS design detects any potential gross leakage and alarms in the main control room and permits the isolation of any such leak in a sufficiently short period of time to preclude extensive plant damage.

Means are provided to detect leakage into the PSWS from the RCCWS, which may contain low levels of radioactivity.

The potential for water hammer is mitigated through the use of various system design and layout features, such as automatic air release/vacuum valves installed at high points in system piping and at the pump discharge; proper valve actuation times to minimize water hammer; procedural requirements ensuring proper line filling before system operation and after maintenance operations; and use of check valves at the pump discharges to prevent backflow into the pump.

### **Operation**

The PSWS operates during startup, normal power operation, hot standby, cooldown, shutdown/refueling, and LOPP.

During normal plant operation, the cross-tie valves in the PSWS pump discharge header are open, allowing two of the four 50% capacity PSWS pumps to supply water to both PSWS trains. Heat removed from the RCCWS and TCCWS is rejected to the atmosphere by the PSWSCT.

Operation of any two of the four PSWS pumps is sufficient for the design heat load removal in any normal operating mode. During normal and LOPP cooldown modes, three pumps may be used for operational convenience or to bring the plant to cold shutdown condition in 24 hours.

During an LOPP, the running PSWS pumps restart automatically using power supplied by the nonsafety-related standby diesel generators.

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#### **9.2.1.6 COL Information**

##### **9.2.1-1-A Material Selection**

**VCS COL 9.2.1-1-A**

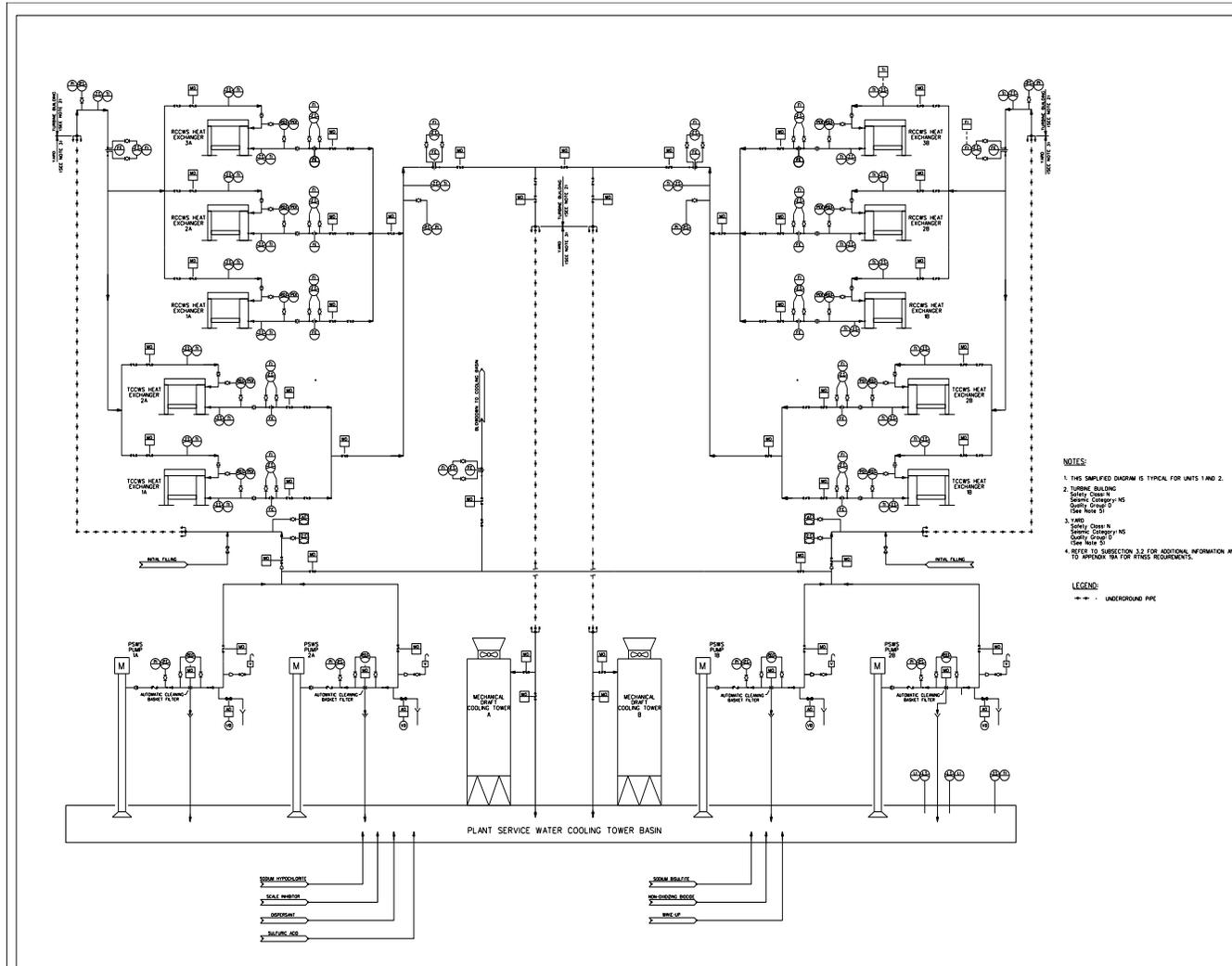
This COL item is addressed in [Section 9.2.1.2](#).

VCS CDI

**Table 9.2.1-201**  
**PSWS Component Design Characteristics for Each VCS Unit**

<b>PSWS Pumps</b>	
Type	Vertical, wet-pit, centrifugal turbine
Quantity (per unit)	4
Capacity (each) <sup>a</sup>	1.365 m <sup>3</sup> /s (Approx. 21,600 gpm)
<b>Plant Service Water System<sup>b</sup></b>	
Flow	2.524 m <sup>3</sup> /s (40,000 gpm)
<b>PSWS Cooling Towers and Basins</b>	
Type	Mechanical draft, multi-cell, dual speed, reversible fans
Quantity (per unit)	2
Heat Load (each) <sup>c</sup>	90 MW (3.07 x 10 <sup>8</sup> BTU/hr)
Flow Rate (Water) (each)	2.524 m <sup>3</sup> /s (40,000 gpm)
Ambient Wet Bulb Temperature	26.3°C (79.3°F)
Design Inlet Wet Bulb Temperature <sup>d</sup>	27.4°C (81.3°F)
Design Approach Temperature	3.7°C (6.7°F)
Cold Leg Temperature	31.1°C (88.0°F)
Basin Reserve Storage Capacity <sup>b</sup>	2.6 million gallons
<b>Strainers</b>	
Type	Automatic cleaning, basket type
Quantity (per unit)	4
<b>PSWS Makeup Pumps</b>	
Type	Vertical, wet-pit, centrifugal
Quantity (per unit)	2 x 100%
Flow (each)	0.343 m <sup>3</sup> /s (Approx. 5440 gpm)

- a. Each pump includes added capacity for blowdown of the PSWSCTs to the VCS main cooling basin.
- b. PSWS required to remove 2.02 x 10<sup>7</sup> MJ (1.92 x 10<sup>10</sup> Btu) for period of 7 days without active makeup.
- c. Minimum heat load cooling towers need to be able to reject, Reference DCD Table 2.2-2.
- d. Design inlet wet bulb temperature includes a 1.11°C (2°F) recirculation and interference allowance.



VCS CDI

Figure 9.2.1-201 Plant Service Water System Simplified Diagram

### 9.2.2 Reactor Component Cooling Water System

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

### 9.2.3 Makeup Water System

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

#### 9.2.3.1 Design Bases

##### **Safety (10 CFR 50.2) Design Bases**

---

Replace the last two sentences of the first paragraph with the following.

---

#### **VCS DEP 9.2-1**

The VCS makeup water system (MWS) is a common system shared by VCS, Units 1 and 2. The system meets GDC 5 for shared systems and components important to safety, because the sharing does not impair the ability of any system, structure, or component from performing their safety functions.

---

#### 9.2.3.2 System Description

#### **VCS CDI**

Replace this section excluding the storage and transfer subsystem with the following:

---

The MWS consists of two subsystems: (1) the demineralization subsystem and (2) the storage and transfer subsystem. The storage and transfer subsystem is a standard design applicable to any site. The makeup water transfer pumps and the demineralization subsystems are sized to meet the demineralized water needs of all operational conditions. During the shutdown/refueling mode, the increases in plant water consumption may require the use of a temporary demineralization subsystem and temporary makeup water transfer pumps to be used as a supplemental water source.

The MWS major equipment is housed entirely in the water treatment building except for the demineralized water storage tank (which is outdoors and adjacent to this building) and the distribution piping to the interface systems. Freeze protection is provided, as required, for the demineralized water storage tank and piping exposed to freezing conditions.

The MWS equipment and associated piping in contact with demineralized water are fabricated from corrosion resistant materials such as stainless steel to prevent contamination of makeup water.

[Table 9.2.3-201](#) lists the major components of the MWS. This list is based on the flow path as shown on [Figure 9.2.3-201](#).

### **Demineralization Subsystem**

Feedwater for the demineralization subsystem is provided by the pretreatment components of the station water system. Production of demineralized water by the demineralization subsystem can be initiated and shut down either manually or automatically based on the demineralized water storage tank level.

The demineralization subsystem consists of three trains, each train with approximately 200 gpm of demineralized water production capacity.

Feedwater is treated in the following sequence:

1. Cartridge filters
2. Reverse osmosis (RO) Pass 1 trains
3. RO Pass 2 trains
4. Electro-deionization (EDI) modules
5. Mixed Bed Demineralizers – Portable

Filtered and treated water from the station water storage tank is pumped by the RO low-pressure supply pumps through the cartridge filters prior to additional processing in the RO equipment.

A chemical addition system is located upstream of the RO low pressure supply pumps to pretreat the water supplied by the station water system. The low pressure feed pumps are designed to provide the pressure required for flow through cartridge filters, as well as to provide feed during feed water dump periods for stabilizing the chemical treatment.

To compensate for the pressure loss across the RO membranes, a second set of feed pumps is provided to increase the pressure for processing through RO pass 1 modules. The first pass permeate (RO treated product) is then collected in the decarbonator well.

From the decarbonator well, the RO pass 2 feed pumps forward the first pass product to the RO pass 2 modules. The product water from the second pass RO is temporarily stored in the RO product storage tank.

The RO trains reject flow, depending on the water quality, is either recycled to the station water storage tank or sent to the water treatment building sump for subsequent discharge to the cooling basin.

The water from the RO product storage tank is pumped by EDI feed pumps through the EDI modules. EDI unit effluent is temporarily stored in the EDI product tank before being transferred by the mixed bed feed pumps through the portable mixed bed demineralizer vessels for final treatment. The mixed bed demineralizer unit consists of both strong cation and anion resins in the same vessel that polishes the EDI product water. The mixed bed unit effluent is monitored for water quality. The effluent may automatically be recirculated to the station water storage tank in the event water quality requirements are not met.

From the mixed bed demineralizers, water of suitable quality is then sent to the MWS demineralized water storage tank.

The modular design of the RO, EDI, and the mixed bed package allows continuous demineralized water production. Interconnections between the trains provide the redundancy for failure and maintenance requirements of MWS components. Cleaning, back flushing, and module removal are manual operations based on operating system parameters. No onsite regeneration of mixed bed modules is performed; therefore, there is not a requirement to use or discharge the acids and caustic chemicals normally associated with regeneration.

VCS CDI

**Table 9.2.3-201**  
**Makeup Water System Major Components**

- Three RO pass 1 low-pressure supply pumps, one pump for each train
- Three 5 micron cartridge filters
- Three RO pass feed pumps, one pump for each train
- Three RO pass 1 trains with multiple modules
- One decarbonator unit
- Three RO pass 2 feed pumps, one pump for each train
- Three RO pass 2 trains with multiple modules
- One chemical treatment system that provides chemical conditioning for the RO system
- One clean-in-place chemical cleaning skid common for RO membranes and EDI electrodes
- One RO product water storage tank
- Two RO membrane flush pumps
- Three EDI feed pumps, one pump for each module
- Three EDI modules
- One EDI product water storage tank
- Three mixed bed feed pumps, one pump for each mixed bed demineralizer vessel
- Three mixed bed demineralizer vessels
- One demineralized water storage tank
- Two demineralized water makeup transfer pumps



#### 9.2.4 Potable and Sanitary Water Systems

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

---

Delete the first paragraph of this section, and replace the last paragraph of this section with the following:

---

#### VCS CDI

The potable water system (PWS) and sanitary water discharge system (SWDS) are common systems that are shared by Units 1 and 2.

##### 9.2.4.1 Design Bases

###### Safety Design Basis

The PWS and SWDS do not perform any safety-related function. Therefore, the PWS and SWDS have no safety design bases.

###### Power Generation Design Basis

The PWS and SWDS are designed to provide potable water supplies and to collect sewage for treatment, respectively, for normal operation of VCS Units 1 and 2 and also when one of the units is in normal operation while the other unit is in an outage. The PWS is designed to supply the peak demand requirement of 225 gallons per minute (14.2 liters per second) of potable water.

The PWS meets the potable water quality requirements set by the authorities having jurisdiction.

The SWDS is designed to produce wastewater effluent quality required by federal, state, and local regulations and permits.

##### 9.2.4.2 System Description

###### Potable Water System

The PWS water supply is from the well water supply header from the groundwater deep well pumps. Groundwater deep well pumps are installed at various locations on site, and provide a common supply to the PWS and station water system. To safeguard against cross-contamination to the PWS, backflow preventers are installed at the station water branch line from the common header. Sodium hypochlorite is injected downstream of the well pumps for disinfection. Chemically treated water is stored in the potable water storage tank (PWST) with a working volume of 27,000 gallons. The PWST and PWS components are located in the water treatment building.

In addition to the PWST, the PWS consists of two potable water pumps of 100% capacity each, hydro-pneumatic tanks, air compressors, and interconnecting piping and valves. The hydro-pneumatic tank supplies pressurized potable water through a common header connecting various VCS buildings as shown on [Figure 9.2.4-201](#). Isolation valves installed in the branch line that connect the individual buildings from the PWS underground header provide for operational flexibility and ease of maintenance.

In addition to nonradiological areas, potable water is provided to areas where inadvertent backflow into the system could result in radiological contamination of the potable water. For those PWS branches with outlets in the areas where the potential for radiological contamination exists, backflow prevention is provided through the installation of backflow preventers.

### **Sanitary Waste Discharge System**

The sanitary waste generated from various buildings is collected by a network of sumps and is pumped to a common sewage treatment plant (STP). The STP consists of extended aeration-type packaged units. Packaged units are designed to meet the influent quantities for sanitary water collection, treatment, and disposal at the following plant operating conditions: (1) 25 gpm while both the VCS Units 1 and 2 are in normal operation, (2) 60 gpm while one of the VCS units is in normal operation and the other unit is in an outage, and (3) 225 gpm peak demand requirement during shift changes with one of the VCS units in normal operation and the other unit is in an outage. The SWDS treated effluent is discharged to the VCS common blowdown water collection sump for subsequent discharge to the cooling basin.

For buildings with systems containing radioactivity, there are no connections from those buildings to the STP. A composite sampler is installed at the STP effluent discharge piping for detection of inadvertent radiological contamination before final discharge to the plant blowdown sump. The quality of effluent meets, at a minimum, the standards established by federal, state, and local regulations and permits. Sewage sludge is transferred to a truck for offsite disposal. The SWDS is shown on [Figure 9.2.4-202](#).

#### 9.2.4.3 Safety Evaluation

##### **Potable Water System**

The PWS has no safety-related function and is not connected to any safety-related system or component. Failure of the system does not compromise any safety-related equipment or component and does not prevent safe shutdown of the plant. The PWS does not handle radioactive fluids. It is not connected to, nor does it interface with, any system that may contain radioactive fluids.

##### **Sanitary Waste Discharge System**

The SWDS has no safety-related function and is not connected to any safety-related system or component. Failure of the system does not compromise any safety-related equipment or component and does not prevent safe shutdown of the plant.

The SWDS is not designed to handle radioactive fluids. It is neither connected to, nor does it interface with, any system that may contain radioactive fluids. As a precautionary measure and as shown on [Figure 9.2.4-202](#), the SWDS effluent is monitored for potential radiological contamination at required locations in the sanitary waste lines to the STP.

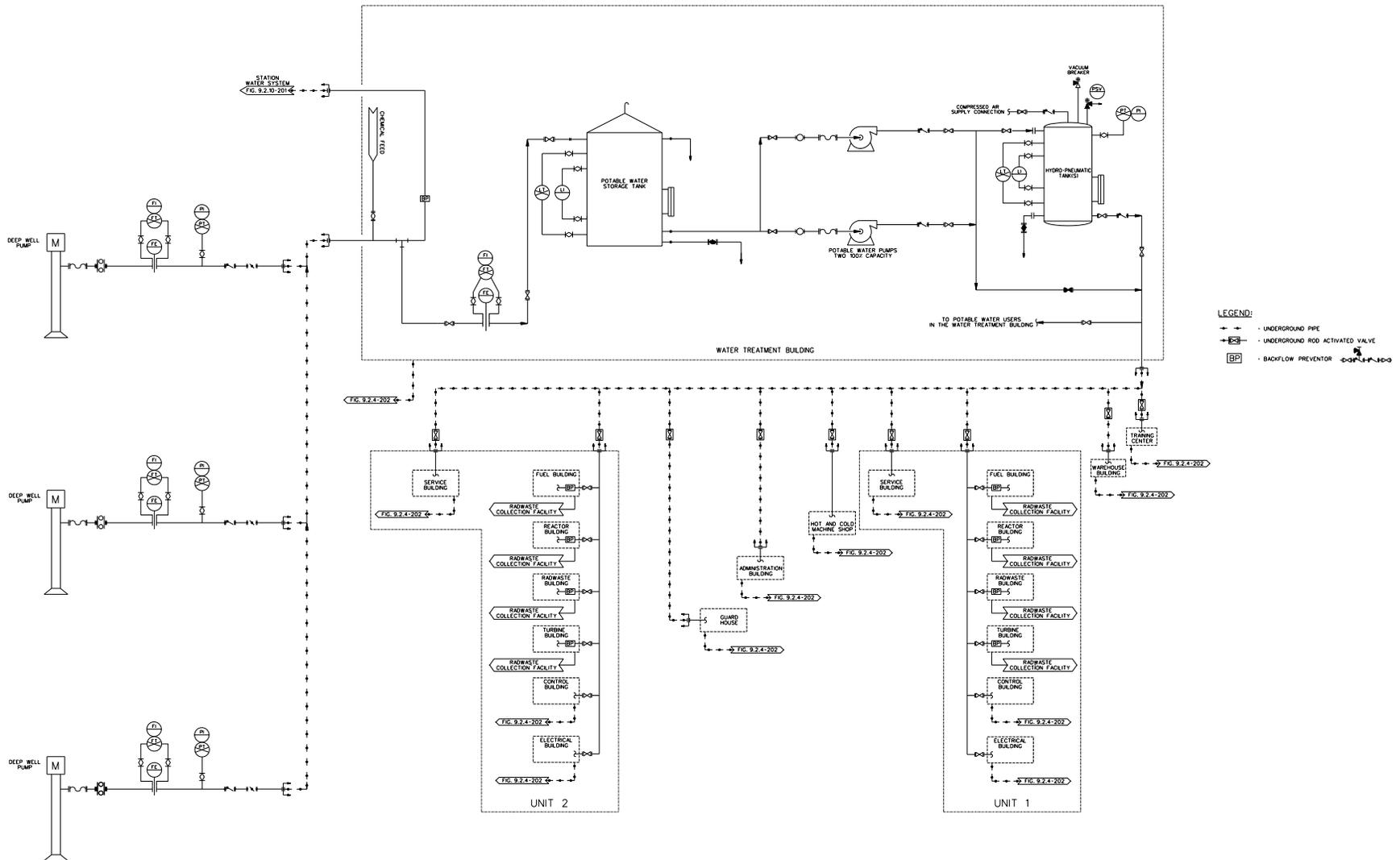
Controls will be in place before Unit 1 fuel load to evaluate potential radiological contamination of sewage sludge to ensure compliance with permitted disposal limits.

#### 9.2.4.4 Testing and Inspection Requirements

The PWS and SWDS are in continuous use. Before placing the systems in service, the system components, including the piping, are tested hydraulically to ensure system integrity. These systems are proven to operate by their use to meet the users' requirement during plant operation. No other special testing or inspection is required other than routine maintenance.

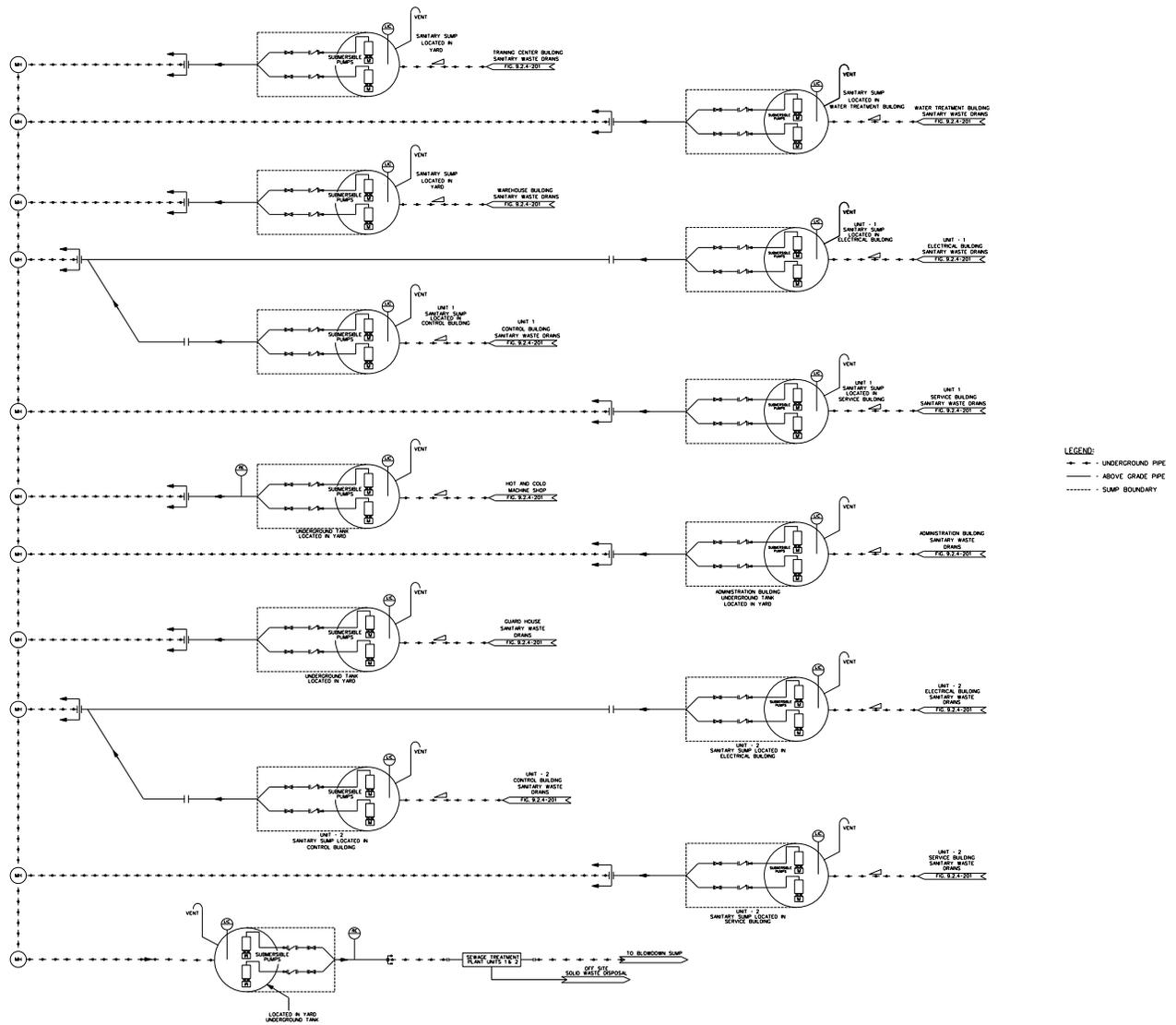
#### 9.2.4.5 Instrumentation Requirements

The PWS and SWDS are furnished with instrumentation that permits local and/or remote monitoring, and local control of respective processes. This instrumentation includes switches, indicators, pressure gauges, flow meters, flow switches, composite samplers, transmitters, controllers, and valves required for service, operation, and maintenance and that ensures protection of plant personnel and equipment.



VCS CDI

Figure 9.2.4-201 Potable Water and Sanitary Waste System Simplified Diagram



VCS CDI

Figure 9.2.4-202 Sanitary Waste Discharge System Simplified Diagram

**9.2.5 Ultimate Heat Sink**

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

---

Replace the second to last sentence in the seventh paragraph with the following.

---

**STD COL 9.2.5-1-A**

Procedures that identify and prioritize available makeup sources seven days after an accident, and provide instructions for establishing necessary connections, will be developed in accordance with the procedure development milestone in [Section 13.5](#).

---

**9.2.5.1 COL Information**

**9.2.5-1-A Post 7 day Makeup to UHS**

**STD COL 9.2.5-1-A**

This COL Item is addressed in [Subsection 9.2.5](#).

### 9.2.6 **Condensate Storage and Transfer System**

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

#### 9.2.6.2 **System Description**

---

Add the following at the end of the first paragraph.

---

#### **VCS SUP 9.2.6-1**

Freeze protection, as required, is provided for the CS&TS.

### 9.2.7 Chilled Water System

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

### 9.2.8 Turbine Component Cooling Water System

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

### 9.2.9 Hot Water System

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

### 9.2.10 Station Water System

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

#### 9.2.10.1 Design Basis

##### **Safety (10 CFR 50.2) Design Bases**

---

Add the following at the end of the first paragraph.

---

**VCS CDI**

The VCS station water system (SWS) is a common system shared by Units 1 and 2.

---

##### **Power Generation Design Bases**

**VCS CDI**

Delete the first two bullets of the associated services list.

---

#### 9.2.10.2 System Description

**VCS CDI**

Replace the Detailed System Description and System Operation of this section with the following.

---

##### **Detailed System Description**

The SWS provides pretreated feedwater for the makeup water system (MWS), and pretreated fill water for the fire protection system (FPS).

The SWS is fed by groundwater deep well pumps installed at various locations at the VCS site ([Subsection 9.2.4](#)).

The SWS chemically conditions and filters the groundwater supplied to the MWS ([Subsection 9.2.3](#)) for further treatment for use as demineralized water. Water required for the filter backwashes is also supplied from the SWS.

The SWS supplies water to the FPS ([Subsection 9.5.1](#)) for filling the fire water storage tanks.

The SWS consists of a groundwater supply from deep well pumps, backflow preventers, chemical injection equipment, multimedia filters, a station water storage tank, filter backwash pumps, fire water storage tank filling pumps, miscellaneous users supply pumps, a station water tank recycle pump, piping, valves and instrumentation as shown in [Figure 9.2.10-201](#).

[Table 9.2.10-201](#) provides the component design parameters for the SWS.

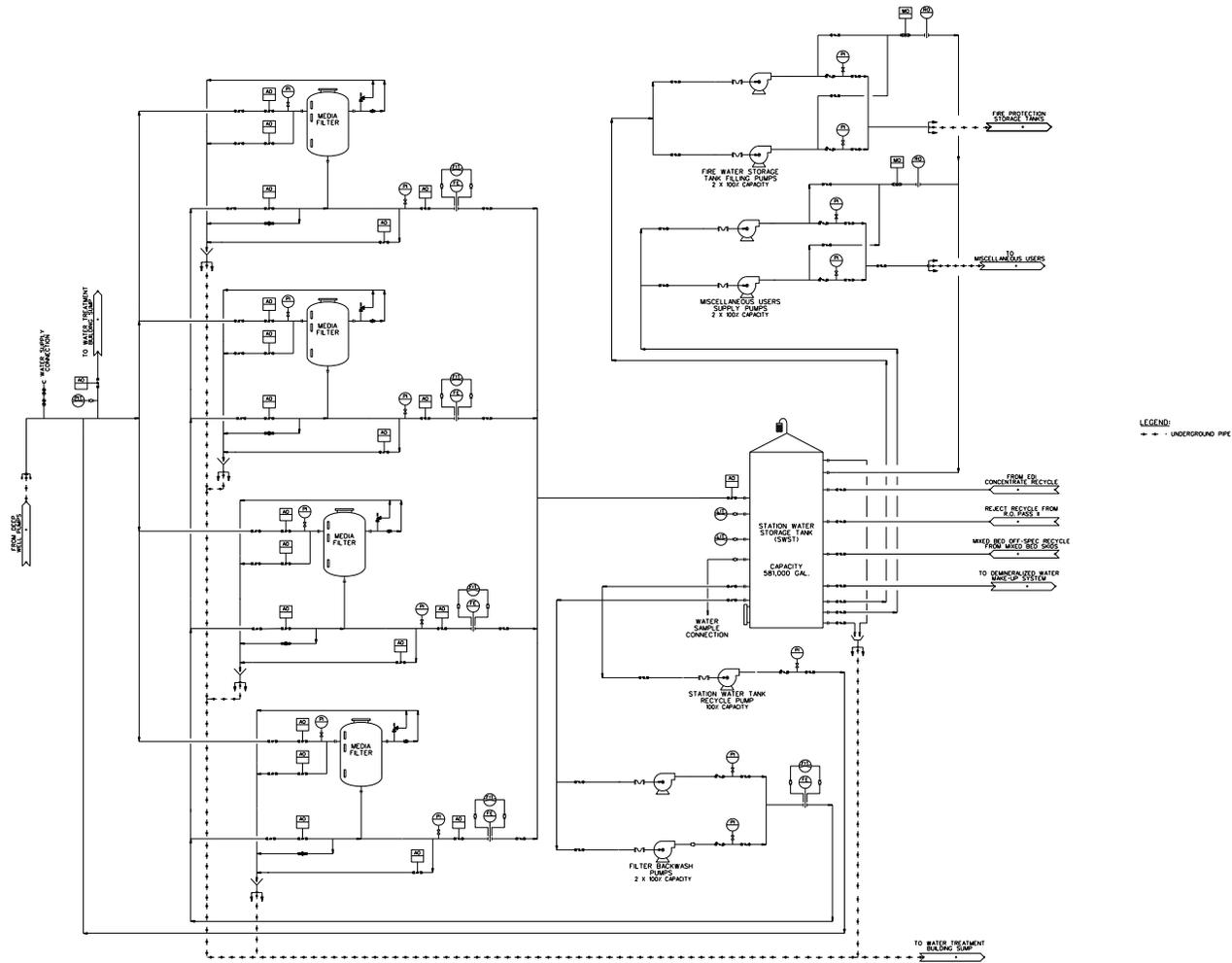
### **System Operation**

The SWS is not required to operate to support any safety mode of plant operation.

VCS CDI

**Table 9.2.10-201**  
**Station Water System Component Design Parameters**

<b>Multimedia Filters</b>	
Quantity	4
<b>Miscellaneous Users Supply Pumps</b>	
Type	Horizontal, centrifugal
Quantity	2 X 100%
Capacity each	Approximately 110 gpm
<b>Fire Water Storage Tank Filling Pumps</b>	
Type	Horizontal, centrifugal
Quantity	2 X 100%
Capacity each	Approximately 780 gpm
<b>Station Water Storage Tank</b>	
Storage Tank capacity	Approximately 581,000 gallons
<b>Filter Backwash Pumps</b>	
Type	Horizontal, centrifugal
Quantity	2 X 100%
Capacity each	Approximately 865 gpm
<b>Station Water Tank Recycle Pump</b>	
Type	Horizontal, centrifugal
Quantity	1 X 100%
Capacity each	Approximately 200 gpm



VCS CDI

Figure 9.2.10-201 Station Water System Simplified Diagram

### 9.3 Process Auxiliaries

#### 9.3.1 Compressed Air Systems

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

#### 9.3.2 Process Sampling System

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

##### 9.3.2.2 System Description

---

Add the following at the end of this section.

---

#### STD COL 9.3.2-1-A

#### Post-Accident Sampling Program

The post-accident sampling program consists of the following:

- Emergency Operating Procedures that rely on Emergency Action Levels, defined in the Emergency Plan, are used to classify fuel damage events. These procedures rely on installed post-accident radiation monitoring instrumentation described in [DCD Section 7.5](#) and do not require the capability to obtain and analyze highly radioactive coolant samples although sample analyses may be used for classification as well.
- Plant procedures contain instructions for obtaining highly radioactive grab samples from the following:

Reactor Coolant - from the RWCU/SDC sample line using the Reactor Building Sample Station. These samples can be analyzed for the parameters indicated in [DCD Table 9.3-1](#). If coolant activity is greater than 1.0 Ci/ml, handling of the samples is delayed to avoid overexposure of personnel.

Suppression Pool - from FAPCS sample line at the Reactor Building Sample Station. These samples can be analyzed for the parameters indicated in [DCD Table 9.3-1](#). If coolant activity is greater than 1.0 Ci/ml, handling of the samples is delayed to avoid overexposure of personnel.

Containment Atmosphere - may be taken as described in [DCD Section 11.5.3.2.12](#) and analyzed for fission products.

- [DCD Section 7.5.2.2](#) describes Containment Monitoring System operation in post-LOCA mode for gaseous sampling for O<sub>2</sub> and H<sub>2</sub>.
- Effluent radiation monitoring is described in [DCD Section 7.5](#). Field sampling and monitoring capability is maintained in accordance with the Emergency Plan.
- Post accident monitoring is adequate to implement the Emergency Plan without reliance on post accident sampling capability; therefore, the absence of a dedicated Post-Accident Sampling System does not reduce the effectiveness of the Emergency Plan.
- The post-accident sampling program meets the requirements of NUREG-0800, Section 9.3.2 for actions required in lieu of a Post Accident Sampling System.

---

#### 9.3.2.6 **COL Information**

##### 9.3.2-1-A **Post-Accident Sampling Program**

**STD COL 9.3.2-1-A**

This COL item is addressed in [Section 9.3.2.2](#).

---

#### 9.3.3 **Equipment and Floor Drain System**

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

#### 9.3.4 **Chemical and Volume Control System**

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

#### 9.3.5 **Standby Liquid Control System**

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

##### 9.3.5.2 **System Description**

###### **Detailed System Description**

---

Add the following to the end of the fifth paragraph.

**STD SUP 9.3.5-1**

The above provisions adequately prevent loss of solubility of borated solutions (sodium pentaborate).

---

### 9.3.6 Instrument Air System

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

---

#### 9.3.6.2 System Description

Replace the last sentence of the first paragraph with the following and replace [DCD Figure 9.3-3](#) with [Figure 9.3-3R](#).

---

VCS CDI

The IAS is shown in Figure 9.3-3R.

---

### 9.3.7 Service Air System

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

---

#### 9.3.7.1 Design Basis Safety (10 CFR 50.2) Design Basis

Add the following to the fourth paragraph.

---

VCS CDI

Only Unit 1 provides service air to the shared Hot Machine Shop/Cold Machine Shop. No structures, systems, or components important to safety are shared between Units 1 and 2. The requirements of GDC 5 are met.

---

#### 9.3.7.2 System Description

Replace the second paragraph with the following.

---

VCS CDI

The SAS is shown in Figure 9.3-3R.

---

Add the following after the fourth sentence of the seventh paragraph.

---

VCS SUP 9.3.7-1

As the Hot Machine Shop/Cold Machine Shop is shared by Units 1 and 2, only the SAS from Unit 1 distributes air to this building.

---

### 9.3.8 High Pressure Nitrogen Supply System

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

---

### 9.3.9 Hydrogen Water Chemistry System

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

---

Replace the first paragraph with the following.

---

**STD COL 9.3.9-1-A**

The site specific design includes HWCS.

---

#### 9.3.9.1 Design Basis

##### Power Generation Design Basis

---

Replace the first sentence with the following:

---

**STD CDI**

Hydrogen is added into the feedwater at the suction of the feedwater pumps and oxygen into the offgas system.

---

#### 9.3.9.2 System Description

---

Replace this section with the following.

---

**VCS CDI**

The HWCS, illustrated in [DCD Figure 9.3-5](#), is composed of hydrogen and oxygen supply systems to inject hydrogen in the feedwater and oxygen in the offgas and several monitoring systems to track the effectiveness of the HWCS. Storage requirements are based on the HWC system usage, ESBWR generator usage and estimated losses.

**VCS COL 9.3.9-2-A**

The hydrogen supply system is integrated with the generator hydrogen supply system (as described in [DCD Section 10.2.2.2.8](#)).

---

**VCS CDI**

**VCS COL 9.3.9-2-A**

##### 9.3.9.2.1 Hydrogen Storage Facility

The bulk hydrogen storage facility stores liquid hydrogen in an 18,000 gallon vacuum-jacketed pressure vessel. The storage facility is located within a fenced area outside the plant protected area and is open to prevent the accumulation of hydrogen and meets the requirements of [DCD References 9.3.9-1](#) and [9.3.9-2](#). The hydrogen storage facility consists of a cryogenic tank, cryogenic pumps, atmospheric vaporizers, a compressor, a high-pressure gas storage tubes bank, a hydrogen supply line, pressure regulating valves, an excess flow check valve, and relief valves. The cryogenic tank meets ASME Section VIII, Division 1, requirements for unfired pressure vessels. The pressure regulating valves limit the supply pressure of hydrogen; a relief valve is provided

downstream of the regulating valve station to protect the downstream piping in case of regulating valve failure. The excess flow check valve ensures that a large release is limited to the storage facility location. The relief valves provide protection for the storage tank and each isolable liquid hydrogen filled piping section.

The HWCS is implemented with On-line Noble Chem™. Plant personnel conduct the OLNC process while the plant is operating.

The Oxygen Storage Facility is described in [Section 9.3.10.2](#).

---

#### 9.3.9.4 Inspection and Testing Requirements

---

Replace this section with the following.

#### STD CDI

The connections for the HWCS are tested and inspected with the feedwater and offgas piping.

Major components of the HWCS are tested and inspected as separate components prior to installation. The system is tested in accordance with vendor requirements after installation to ensure proper performance.

---

#### 9.3.9.5 Instrumentation and Controls

---

Replace the first sentence with the following.

#### STD CDI

Instrumentation is provided to control the injection of hydrogen and augment the injection of oxygen.

---

#### 9.3.9.6 COL Information

##### 9.3.9-1-A Implementation of Hydrogen Water Chemistry

#### STD COL 9.3.9-1-A

This COL item is addressed in [Section 9.3.9](#).

##### 9.3.9-2-A Hydrogen and Oxygen Storage and Supply

#### VCS COL 9.3.9-2-A

This COL item is addressed in [Section 9.3.9.2](#).

---

### 9.3.10 Oxygen Injection System

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

#### 9.3.10.2 System Description

---

Delete the last sentence of this section, and add the following at the end of this section.

#### VCS COL 9.3.10-1-A

The bulk oxygen storage facility is located outside the plant fenced area. The facility consists of a 34 cubic meter (9000 gallon) cryogenic tank, atmospheric vaporizers, an oxygen supply line, a pressure regulating valve, an excess flow check valve, and relief valves. The pressure regulating valve limits the oxygen supply pressure. The excess flow check valve ensures that large releases are limited to the storage facility. The redundant relief valves provide protection for the storage tank and each isolable liquid oxygen filled piping section. The piping carrying gaseous oxygen from the storage facility to the turbine building is routed underground. The storage tank meets ASME Code Section VIII, Division 1, requirements for unfired pressure vessels, and [DCD References 9.3.9-1](#) and [9.3.9-2](#).

---

### 9.3.10.6 COL Information

#### 9.3.10-1-A Oxygen Storage Facility

#### VCS COL 9.3.10-1-A

This COL item is addressed in [Section 9.3.10.2](#).

---

### 9.3.11 Zinc Injection System

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

#### 9.3.11.2 System Description

---

Replace the second paragraph with the following.

#### STD COL 9.3.11-1-A

A Zinc Injection System is not utilized.

---

### 9.3.11.4 Test and Inspections

---

Replace the second paragraph with the following.

#### STD COL 9.3.11-2-A

A Zinc Injection System is not utilized.

---

9.3.11.6 **COL Information**

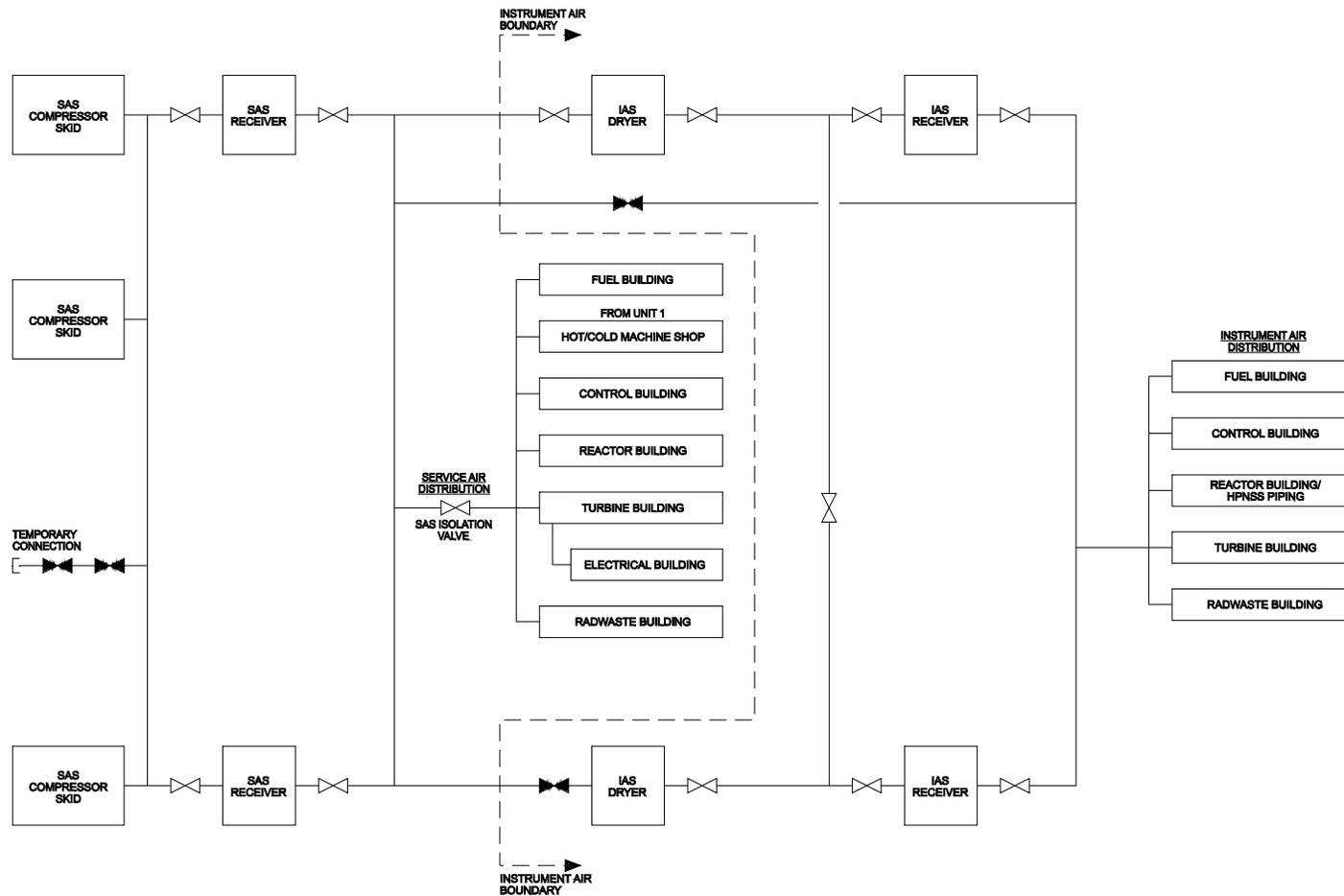
**STD COL 9.3.11-1-A** 9.3.11-1-A **Determine Need for Zinc Injection System**  
This COL item is addressed in [Section 9.3.11.2](#).

**STD COL 9.3.11-2-A** 9.3.11-2-A **Provide System Description for Zinc Injection System**  
This COL item is addressed in [Section 9.3.11.4](#).

---

9.3.12 **Auxiliary Boiler System**

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.



VCS CDI

Figure 9.3-3R Service Air and Instrument Air System Simplified Diagram

## 9.4 Heating, Ventilation, and Air Conditioning

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

---

### 9.4.1.1 Design Bases

#### Power Generation Design Bases

---

Add the following after the last bullet.

---

VCS SUP 9.4-1

- Detects and alarms the presence of toxic gases in the CRHAVS air intake as described in [Subsection 6.4.5](#).
- 

### 9.4.1.2 System Description

#### Detailed System Description

---

Replace the first sentence to the third paragraph.

---

VCS SUP 9.4-2

These areas constitute the operations control area, which can be isolated and remain habitable for 72 hours, if required, following the occurrence of a LOCA, station blackout (SBO), high toxic gas condition with or without AC power, or high radiation condition with or without AC power.

---

Add the following after the eleventh paragraph.

---

[Subsection 6.4.5](#) provides a detailed system description of the toxic gas detection system.

---

#### System Operation

---

Add the following after the end of the section.

---

Toxic Gas Event Operation:

---

VCS SUP 9.4-3

[Subsection 6.4.4](#) provides a description of system operation in the event of toxic gas detection in the CRHAVS air intake.

---

### 9.4.1.5 Instrumentation Requirements

---

Add the following at the end of the subsection.

---

VCS SUP 9.4-4

Toxic gas detectors are provided as described in [Subsection 6.4.5](#) for the detection of toxic chemicals in the CRHAVS air intake.

---

## 9.5 Other Auxiliary Systems

### 9.5.1 Fire Protection System

This [section](#) of the DCD is incorporated by reference with the following departures and/or supplements.

#### 9.5.1.1 Design Bases

##### Codes, Standards, and Regulatory Guidance

---

Add the following at the end of this section.

---

VCS SUP 9.5.1-1

[Table 9.5-201](#) supplements [DCD Table 9.5-1](#) for those portions outside the DCD and operational aspects of the fire detection and suppression systems.

---

#### 9.5.1.2 System Description

---

Add the following sentence after the first sentence in the first paragraph.

---

VCS COL 9.5.1-4-A

[Figures 9.5-201](#) and [9.5-202](#) provide simplified diagrams of the site-specific firewater supply piping.

---

#### 9.5.1.4 Fire Protection Water Supply System

##### Water Source

---

Replace the first paragraph with the following.

---

VCS COL 9.5.1-4-A

VCS COL 9.5.1-1-A

As identified by [DCD Figure 9.5-1](#) and [Figure 9.5-201](#), water for the Fire Protection System is supplied from a minimum of two sources: i) at least one "primary" source to the suctions of primary fire pumps and corresponding jockey fire pump dedicated to each unit and, ii) at least one "secondary" source to suctions of secondary fire pumps and corresponding jockey fire pump that are shared by both units. The primary source consists of two dedicated 515,000 gallon, Seismic Category I, firewater storage tanks. Each primary firewater storage tank has sufficient capacity to meet the maximum firewater demand of the system for a period of 120 minutes. The secondary firewater source is an additional 300,000 gallon capacity firewater storage tank. This tank satisfies the total fire water demand for a period of 120 minutes and meets the minimum capacity of 300,000 gallons required by NFPA 804. The secondary firewater storage tank is dedicated for fire protection use only. The station water system that feeds the primary and secondary

---

firewater storage tanks has enough capacity to fill one of two 515,000 gallon primary fire water storage tanks in 11 hours, in accordance with NFPA 804 (A.9.2.2).

---

Replace the fourth paragraph with the following.

---

**VCS CDI**

Freeze protection, as necessary, is provided for the primary and secondary firewater storage tanks and exposed piping, as required by NFPA 22 and allowed by NFPA 13. Freeze protection is to be provided to all components as required by NFPA 22.

---

### **Fire Pumps**

---

Replace the sixth sentence in the first paragraph with the following.

---

**STD COL 9.5.1-2-A**

Testing will be performed to demonstrate that the secondary fire protection pump circuit supplies a minimum of 484 m<sup>3</sup>/hr (2130 gpm) with sufficient discharge pressure to develop a minimum of 107 psig at the Turbine Building/yard interface boundary. This cannot be performed until the system is built. This activity will be completed prior to fuel receipt.

---

#### **9.5.1.5 Firewater Supply Piping, Yard Piping, and Yard Hydrants**

---

Replace the first sentence with the following.

---

**VCS COL 9.5.1-4-A**

[DCD Figure 9.5-1](#) and [Figures 9.5-201](#) and [9.5-202](#) depict the primary firewater supply piping and power block interfaces with the secondary firewater supply piping.

---

Delete the last sentence in this section and add the following sentence at the end of the first paragraph of this section.

---

[Figure 9.5-202](#) provides a simplified diagram of the site-specific fire protection yard piping.

---

#### **9.5.1.10 Fire Barriers**

---

Replace the last paragraph with the following.

---

**STD COL 9.5.1-5-A**

Mechanical and electrical penetration seals and electrical raceway fire barrier systems are qualified to the requirements delineated in RG 1.189 by an independent testing laboratory in accordance with the applicable guidance of NFPA 251 and/or ASTM E-119. Detailed design in this area

---

is not complete. Specific design and certification test results for penetration seal designs and electrical raceway fire barrier systems will be available for review at least six months prior to fuel receipt.

---

#### 9.5.1.11 Building Ventilation

---

Replace the last sentence in the third paragraph with the following.

---

#### STD COL 9.5.1-6-H

Procedures for manual smoke control will be developed as part of the Fire Protection Program implementation. The required elements of the Fire Protection Program are fully operational prior to receipt of new fuel for buildings storing new fuel and adjacent fire areas that could affect the fuel storage area. Other required elements of the Fire Protection Program described in this section are fully operational prior to initial fuel loading per [Section 13.4](#).

---

#### 9.5.1.12 Safety Evaluation

---

Replace the fifth paragraph with the following.

---

#### STD COL 9.5.1-7-H

A compliance review of the as-built design against the assumptions and requirements stated in the FHA will be completed in accordance with the milestones in [Section 13.4](#).

---

Add the following after the fifth paragraph.

---

#### STD SUP 9.5.1-2

An as-built review of final post-fire safe-shutdown analysis will be performed based on final plant cable routing and equipment arrangement. This review will include verification that purchased components required for post-fire safe shutdown are not impacted by indirect effects of fire such as smoke migration from one fire area to another. This activity will be completed in accordance with the milestones in [Section 13.4](#).

---

#### 9.5.1.15 Fire Protection Program

---

Replace the last sentence of the first paragraph with the following.

---

#### STD COL 9.5.1-8-A

The elements of the Fire Protection Program necessary to support receipt and storage of fuel onsite for buildings storing new fuel and adjacent fire areas that could affect the fuel storage area are fully operational prior to receipt for new fuel. Other required elements of the

---

Fire Protection Program described in this section are fully operational prior to initial fuel loading per [Section 13.4](#).

---

**9.5.1.15.1 Fire Protection Program Criteria**

---

Add the following sentence at the end of this section.

---

**VCS SUP 9.5.1-1**

[Table 9.5-201](#) supplements [DCD Table 9.5-1](#).

---

**9.5.1.15.2 Organization and Responsibilities**

---

Replace the last sentence of the thirteenth bullet of the section as follows.

---

**STD COL 9.5.1-9-A**

Control of changes to the fire protection program is defined in a license condition. Changes to the approved fire protection program may be made without prior approval of the NRC only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

---

**9.5.1.15.4 Onsite Fire Operations Training**

---

Replace the first paragraph with the following.

---

**VCS COL 9.5.1-10-H**

Implementation of the fire brigade will be in accordance with the milestones in [Section 13.4](#) for the Fire Protection Program. The organization of the Fire Brigade is discussed in [Section 13.1](#).

---

**9.5.1.15.9 Quality Assurance**

---

Replace the last sentence of this section with the following.

---

**STD COL 9.5.1-11-A**

The Quality Assurance Program implements the requirements of RG 1.189 through site-specific administrative controls procedures. The procedures will be developed six months prior to fuel receipt and will be fully implemented prior to fuel receipt.

---

**9.5.1.16 COL Information**

**9.5.1-1-A Secondary Firewater Storage Source**

**VCS COL 9.5.1-1-A**

This COL item is addressed in [Subsection 9.5.1.4](#).

**9.5.1-2-A Secondary Firewater Capacity**

**VCS COL 9.5.1-2-A**

This COL item is addressed in [Subsection 9.5.1.4](#).

---

<b>VCS COL 9.5.1-4-A</b>	<b>9.5.1-4-A Piping and Instrument Diagrams</b> This COL item is addressed in <a href="#">Subsections 9.5.1.2, 9.5.1.4, 9.5.1.5</a> , and <a href="#">Figures 9.5-201 and 9.5-202</a> .
<b>STD COL 9.5.1-5-A</b>	<b>9.5.1-5-A Fire Barriers</b> This COL item is addressed in <a href="#">Subsection 9.5.1.10</a> .
<b>STD COL 9.5.1-6-H</b>	<b>9.5.1-6-H Smoke Control</b> This COL item is addressed in <a href="#">Subsection 9.5.1.11</a> .
<b>STD COL 9.5.1-7-H</b>	<b>9.5.1-7-H FHA Compliance Review</b> This COL item is addressed in <a href="#">Subsection 9.5.1.12</a> .
<b>STD COL 9.5.1-8-A</b>	<b>9.5.1-8-A Fire Protection Program Description</b> This COL item is addressed in <a href="#">Subsection 9.5.1.15</a> .
<b>STD COL 9.5.1-9-A</b>	<b>9.5.1-9-A Fire Protection License Changes</b> This COL item is addressed in <a href="#">Subsection 9.5.1.15.2</a> .
<b>VCS COL 9.5.1-10-H</b>	<b>9.5.1-10-H Fire Brigade</b> This COL item is addressed in <a href="#">Subsections 9.5.1.15.4 and 13.1.1.2.1</a> .
<b>STD COL 9.5.1-11-A</b>	<b>9.5.1-11-A Quality Assurance</b> This COL item is addressed in <a href="#">Subsection 9.5.1.15.9</a> .

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**DCD Table 9.5-2**

<b>VCS COL 9.5.1-1-A</b>	Delete the first footnote and the "*" from inside the table. Delete the first sentence from the second footnote ("**").
--------------------------	--

**9.5.2 Communications System**

This [section](#) of the referenced DCD is incorporated by reference with the following departures and/or supplements.

**9.5.2.2 System Description**

**Emergency Communication Systems**

---

Replace the first bullet with the following:

<b>VCS COL 9.5.2.5-1-A</b>	<ul style="list-style-type: none"><li>Emergency Notification System (ENS) — The VCS ENS is described in the Station Emergency Plan. The ENS phone lines are routed directly to the local telephone company central office via fiber-optic</li></ul>
----------------------------	---

phone lines through a telephone utility switch that is located on site in the telephone equipment building. The normal power for this device is nonsafety-related station power. The telephone system will lose its normal power supply during a loss of offsite power; however, the phone system is battery-backed for a period of approximately 8 hours. This design ensures that the ENS located at the site is fully operable from the site in the event of a loss of offsite power at the site and is in compliance with the requirements of NRC Bulletin 80-15 for the ENS. The emergency planning communication systems (described in the Station Emergency Plan) connect the station to the local and state emergency offices, and are also normally powered from the nonsafety-related station power and backed with approximately 8 hours of battery backup power. In addition to the connections to the local telephone company, a separate company-owned and maintained fiber-optic network exists that provides communication between the station, the system operations center, and the NRC. This company network is also capable of external long-distance and local telephone calls.

---

Replace the last bullet with the following:

**VCS COL 9.5.2.5-2-A**

- Transmission System Operator Communications Link — The voice communications with the grid operator (ERCOT) is provided over a wide area network (WAN). ERCOT interfaces with the station and transmission service provider. The ERCOT WAN is a fully redundant, highly available network designed for real-time data transport and is split into two separate private networks; a multiprotocol label switching (MPLS) network and a point-to-point network. The MPLS provides data communication and the point-to-point network's main function is to provide operational voice communication for both normal and emergency situations. The point-to-point network is also configured to provide redundancy to the MPLS network. Two voice communication circuits (off-premise exchange and hotline) from ERCOT WAN are available to the station for voice communication. The off-premises exchange circuit is connected to the station PABX system and the hotline is extended to a stand-alone ring down phone in the control room.

---

	<b>9.5.2.5 COL Information</b>
<b>VCS COL 9.5.2.5-1-A</b>	<b>9.5.2.6-1-A Offsite Interfaces</b> This COL item is addressed in <a href="#">Section 9.5.2.2</a> .
<b>VCS COL 9.5.2.5-2-A</b>	<b>9.5.2.7-1-A Grid Transmission Operator</b> This COL item is addressed in <a href="#">Section 9.5.2.2</a> .
	<hr/> <b>9.5.3 Lighting System</b> This <a href="#">section</a> of the referenced DCD is incorporated by reference with no departures or supplements.
	<b>9.5.4 Diesel Generator Fuel Oil Storage and Transfer System</b> This <a href="#">section</a> of the referenced DCD is incorporated by reference with the following departures and/or supplements.
	<b>9.5.4.2 System Description</b> <b>Detailed Design Description</b>
	<hr/> Replace the third to last sentence in the first paragraph with the following.
<b>STD COL 9.5.4-1-A</b>	Procedures require that the quantity of DG fuel oil in the fuel oil storage tanks is monitored on a periodic basis. The diesel fuel oil usage is tracked against planned deliveries. Regular transport replenishes the fuel oil inventory during periods of high demand and ensures continued supply in the event of adverse weather conditions. These procedures ensure sufficient diesel fuel oil inventory is available on site so that the diesel can operate continually for seven days. The procedures will be developed in accordance with the milestone and processes described in <a href="#">Section 13.5</a> .
	<hr/> Replace the third paragraph with the following.
<b>VCS COL 9.5.4-2-A</b>	The material for the underground piping portion of the fuel oil transfer system is carbon steel. A corrosion protection system is provided for internal and external surfaces of piping systems. The buried section of the piping is provided with waterproof protected coating and an impressed current type cathodic protection to control external corrosion.

---

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9.5.4.6 **COL Information**

**STD COL 9.5.4-1-A** 9.5.4-1-A **Fuel Oil Capacity**

This COL item is addressed in [Section 9.5.4.2](#).

**VCS COL 9.5.4-2-A** 9.5.4-2-A **Protection of Underground Piping**

This COL item is addressed in [Section 9.5.4.2](#).

---

9.5.5 **Diesel Generator Jacket Cooling Water System**

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

9.5.6 **Diesel Generator Starting Air System**

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

9.5.7 **Diesel Generator Lubrication System**

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

9.5.8 **Diesel Generator Combustion Air Intake and Exhaust System**

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.

**VCS SUP 9.5.1-1**

**Table 9.5-201  
Codes and Standards**

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<b>American Society of Mechanical Engineers (ASME)</b>	
Boiler and Pressure Vessel Code	Section IX, Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators

---

<b>Applicable Building Codes</b>	
International Building Code - 2000	

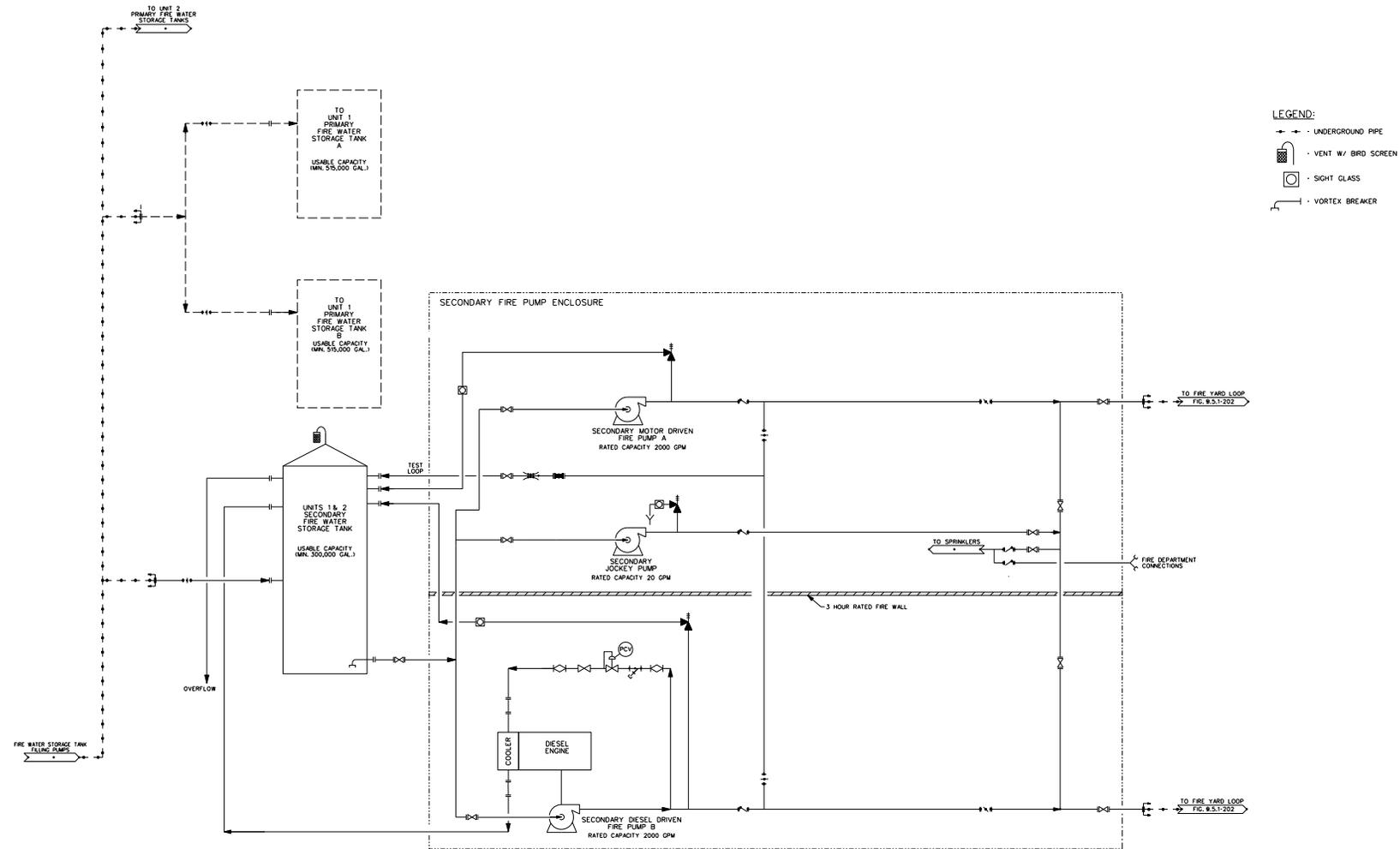
---

<b>National Fire Protection Association (NFPA)</b>	
NFPA 25	Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
NFPA 50A	Standard for Gaseous Hydrogen Systems at Consumer Sites, Edition 1999
NFPA 55	Standard for Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks

---

<b>Environmental Protection Agency (EPA)</b>	
Environmental Protection Agency (EPA)	EPA Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; Final Rule (40 CFR Parts 60, 85 et al)

---



VCS COL 9.5.1-4-A

Figure 9.5-201 Fire Protection System



## Appendix 9A Fire Hazards Analysis

This [section](#) of DCD is incorporated by reference with the following departures and/or supplements.

### Contents

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**VCS CDI** Replace "9A.4.9 Service Water/Water Treatment Building" with "9A.4.9 PSW Cooling Tower/Pump House."

**VCS CDI** Replace "9A.5.9 Service Water/Water Treatment Building" with "9A.5.9 PSW Cooling Tower/Pump House."

Add the following two new subsection titles in their respective section Table of Contents:

- 9A.4.10 Water Treatment Building"
- 9A.5.10 Water Treatment Building"

---

### List of Figures

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**VCS CDI** Replace "Figure 9A.2-33 Site Fire Protection Zone ESBWR DCD Plot Plan" with: "Figure 9A.2-33R Victoria County Station, Units 1 and 2, Site Fire Protection Zone - Plot Plan"

---

#### 9A.1 Introduction

In the first sentence of the first paragraph replace:

- 
- VCS CDI**
- "Pump House" with "Cooling Basin Intake Structure"
  - "Guard House" with "Plant Entry Building"
  - "Hot Machine Shop" and "Cold Machine Shop" with "Hot and Cold Machine Shops"
  - "Service Water/Water Treatment Building" with "PSW Cooling Tower/Pump House, Water Treatment Building"
- 

#### 9A.2.1 Codes and Standards

Add 2nd paragraph as follows:

---

**VCS SUP 9A.2-1** The codes and standards that are applicable to the design of the site-specific portions of the yard are listed in [Table 9.5-201](#). Tables [Tables 1.9-202](#), [1.9-203](#), and [1.9-204](#) identify the relevant editions for each applicable code and standard. These codes and standards also

---

apply to the operational aspects of the fire detection and suppression systems.

---

**9A.2.2 Fire Area Separation and Fire Equipment Drawings**

---

Add at the end of the second paragraph the following:

---

**VCS SUP 9A.2-2**

Additional site specific details about the fire protection system are provided in [Figures 9.5-201](#) and [9.5-202](#).

---

**9A.3.1 Review Data**

---

In the second paragraph replace:

---

**VCS CDI**

- "Pump House" with "Cooling Basin Intake Structure"
  - "Guard House" with "Plant Entry Building"
  - "Hot Machine Shop" and "Cold Machine Shop" with "Hot and Cold Machine Shops"
  - "Service Water/Water Treatment Building" with "PSW Cooling Tower/Pump House, Water Treatment Building"
- 

**9A.4.7 Yard**

---

Replace the first paragraph with the following:

---

**VCS COL 9A.7-1-A**

The Yard includes all portions of the plant site external to the Reactor Building, Fuel Building, Control Building, Turbine Building, Radwaste Building, and Electrical Building. The fire zone drawings for Water Treatment Building, PSW Cooling Tower/Pump House, Cooling Basin Intake Structure and Site Fire Protection Zones - Plot Plan are provided in [Figures 9A.2-201](#) through [9.1.2-203](#) and [Figure 9A.2-33R](#), respectively. The fire zone drawings for other site specific structures of the yard will be provided during the detailed design not less than six months prior to fuel load.

---

Replace the second paragraph with the following:

---

**VCS COL 9A.7-2-A**

A detailed fire hazards analysis of the yard area that is outside the scope of the certified design can not be completed until cable routing is performed during final design. This information will be provided six months prior to fuel load.

---

---

9A.4.9 **Service Water/Water Treatment Building**

---

**VCS CDI**

Replace the title with "PSW Cooling Tower/Pump House"

In the first sentence of the first paragraph, replace "Service Water/Water Treatment Building (SF/WT)" with "PSW Cooling Tower/ Pump House."

Replace "SF/WT" with "PSW Cooling Tower/ Pump House" in the second sentence of the first paragraph and in the second and third paragraphs.

Replace "Service Water" with "Plant Service Water" in the third sentence of the first paragraph.

Replace the first sentence of the second paragraph beginning with "The SF/WT is a non-seismic structure,..." with "PSW Cooling Tower/ Pump House is a non-seismic structure attached to the Cooling Towers."

9A.4.10 **Water Treatment Building**

The Water Treatment Building does not contain any system or function that could affect the operation or shutdown of the reactor, nor does it contain any significant hazards. The Water Treatment Building does not contain any safety-related or safe shutdown components, and as such, a fire in this building does not affect any of the four divisions used to bring the reactor to hot standby and then cold shutdown conditions.

Fire detection is provided throughout the Water Treatment Building with the use of Class A supervised product-of-combustion detection systems. Alarms, both trouble and fire, report to the Main Control Room.

ABC dry chemical portable fire extinguishers are provided on the operating floor of the facility. The extinguishers are located at or near hose stations and alarm pull boxes and as otherwise deemed necessary.

To prevent damage from inadvertent operation, or the unlikely rupture of the fire suppression piping system, the following design features are included:

- Location of the manual suppression systems within stairwells and outside of rooms containing electrical components to avoid spray water damage to electrical components;
- Provision of adequately sized floor drains, curbs, equipment bases, and flood containment boundaries to handle the suppression flow;
- Provisions for curbs around open hatches.

---

**9A.5 Fire Protection Analyses by Room or Fire Zone**

---

**VCS SUP 9A.5-1**

In the third paragraph, add after "7, 8, 9 = Other Bldgs" the following:

---

7 = Unit 1 Other Bldgs

8 = Plant Common Other Bldgs

9 = Unit 2 Other Bldgs

---

**9A.5.7 Yard**

---

Replace the second sentence with the following:

---

**VCS COL 9A.7-2-A**

A detailed fire hazards analysis of the yard area that is outside the scope of the certified design can not be completed until cable routing is performed during final design. This information will be provided six months prior to fuel load.

---

**9A.5.8 Service Building**

---

Replace the second sentence with the following:

---

**VCS COL 9A.7-2-A**

A detailed fire hazards analysis of the yard area that is outside the scope of the certified design, which includes the Service Building, can not be completed until cable routing is performed during final design. This information will be provided six months prior to fuel load.

---

**9A.5.9 Service Water/Water Treatment Building**

---

Replace this section with the following.

---

**VCS COL 9A.7-2-A**

**9A.5.9 PSW Cooling Tower/ Pump House**

The PSW Cooling Tower/ Pump House is protected in accordance with applicable codes. The PSW Cooling Tower/Pump House contains service water equipment which has RTNSS functions. A detailed fire hazards analysis of the yard area that is outside the scope of the certified design, which includes the PSW Cooling Tower/ Pump House, can not be completed until cable routing is performed during final design. This information will be provided six months prior to fuel load.

The preliminary fire zones in the PSW Cooling Tower/ Pump House are shown in [Figure 9.1.2-202](#).

---

<b>VCS COL 9A.7-2-A</b>	<p><b>9A.5.10 Water Treatment Building</b></p> <p>The Water Treatment Building is protected in accordance with applicable NFPA Codes. The Water Treatment Building is site specific. A detailed fire hazards analysis of the yard area that is outside the scope of the certified design, which includes the Water Treatment Building, can not be completed until cable routing is performed during final design. This information will be provided six months prior to fuel load. The preliminary fire zones in the Water Treatment Building are shown in <a href="#">Figure 9A.2-201</a>.</p>
-------------------------	---

**9A.7 COL Information**

<b>VCS COL 9A.7-1-A</b>	<p><b>9A.7-1-A Yard Fire Zone Drawings</b></p> <p>This COL item is addressed in Section 9A.4.7.</p>
<b>VCS COL 9A.7-2-A</b>	<p><b>9A.7-2-A FHA for Site-Specific Areas</b></p> <p>This COL item is addressed in <a href="#">Subsections 9A.4.7</a>, <a href="#">9A.5.7</a>, <a href="#">9A.5.8</a>, <a href="#">9A.5.9</a>, and <a href="#">9A.5.10</a>.</p>

**Table 9A.2-1R Fire Protection Codes and Standards**

<b>VCS SUP 9A.2-3</b>	Add IEEE 979 "Guide for Substation Fire Protection".
-----------------------	--

**VCS COL 9A.7-2-A Table 9A.5-7 Revisions**

Add Fire Area F9159	(Page 9A-8)
Replace Fire Area F5169 with F7169	(Page 9A-9)
Add Fire Area F9169	(Page 9A-10)
Replace Fire Area F4201 with F7202	(Page 9A-11)
Add Fire Area F9202	(Page 9A-12)
Replace Fire Area F4251 with F7251	(Page 9A-13)
Replace Fire Area F4252 with F7252	(Page 9A-14)
Replace Fire Area F4261 with F726	(Page 9A-15)
Replace Fire Area F4262 with F726	(Page 9A-16)
Add Fire Area F9251	(Page 9A-17)
Add Fire Area F9252	(Page 9A-18)
Add Fire Area F9261	(Page 9A-19)
Add Fire Area F9262	(Page 9A-20)
Replace Fire Area F4271 with F7271	(Page 9A-21)
Replace Fire Area F4272 with F7272	(Page 9A-22)
Replace Fire Area F4273 with F7273	(Page 9A-23)
Add Fire Area F9271	(Page 9A-24)
Add Fire Area F9272	(Page 9A-25)
Add Fire Area F9273	(Page 9A-26)

Replace Fire Area F4274 with F7274	(Page 9A-27)
Add Fire Area F9274	(Page 9A-28)
Replace Fire Area F5157 with F7157	(Page 9A-29)
Replace Fire Area F5167 with F7167	(Page 9A-30)
Add Fire Area F9157	(Page 9A-31)
Add Fire Area F9167	(Page 9A-32)
Replace Fire Area F5158 with F7158	(Page 9A-33)
Replace Fire Area F5168 with F7168	(Page 9A-34)
Add Fire Area F9158	(Page 9A-35)
Add Fire Area F9168	(Page 9A-36)
Add Fire Area F7151	(Page 9A-37)
Add Fire Area F9151	(Page 9A-38)
Add Fire Area F7152	(Page 9A-39)
Add Fire Area F9152	(Page 9A-40)
Add Fire Area F7153	(Page 9A-41)
Add Fire Area F9153	(Page 9A-42)
Add Fire Area F7104	(Page 9A-43)
Add Fire Area F7105	(Page 9A-44)
Add Fire Area F9104	(Page 9A-45)
Add Fire Area F9105	(Page 9A-46)
Add Fire Area F7161	(Page 9A-47)
Add Fire Area F9161	(Page 9A-48)
Add Fire Area F7162	(Page 9A-49)
Add Fire Area F9162	(Page 9A-50)
Add Fire Area F7163	(Page 9A-51)
Add Fire Area F9163	(Page 9A-52)
Replace Fire Area F7700 with F7700R	(Page 9A-53)
Add Fire Area F9700	(Page 9A-54)
Replace Fire Area F7800 with F7800R	(Page 9A-55)
Add Fire Area F9800	(Page 9A-56)
Add Fire Area F8181a	(Page 9A-57)
Add Fire Area F8181b	(Page 9A-58)
Replace Fire Area F4202 with F8182	(Page 9A-59)
Add Fire Area F8183	(Page 9A-60)
Add Fire Area F8184a	(Page 9A-61)
Add Fire Area F8184b	(Page 9A-62)
Add Fire Area F8105	(Page 9A-63)
Replace Fire Area F7150a with F8150a	(Page 9A-64)
Replace Fire Area F7150b with F8150b	(Page 9A-65)
Replace Fire Area F8250 with F7250	(Page 9A-66)
Replace Fire Area F8260 with F7260	(Page 9A-67)
Add Fire Area F9250	(Page 9A-68)
Add Fire Area F9260	(Page 9A-69)
Add Fire Area F8171	(Page 9A-70)
Add Fire Area F7171	(Page 9A-71)
Add Fire Area F9171	(Page 9A-72)
Replace Fire Area F7180 with F8180	(Page 9A-73)
Replace Fire Area F7200 with F8200	(Page 9A-74)
Add Fire area F8101	(Page 9A-75)
Add Fire area F8102	(Page 9A-76)

Add Fire area F8103	(Page 9A-77)
Add Fire area F8104	(Page 9A-78)
Replace Fire Area F7400 with F8400	(Page 9A-79)
Replace Fire Area F7500 with F8500	(Page 9A-80)
Replace Fire Area F7600 with F8600	(Page 9A-81)
Replace Fire Area F7900 with F8900	(Page 9A-82)
Replace Fire Area F9101 with F7101	(Page 9A-83)
Replace Fire Area F9150 with F7150	(Page 9A-84)
Replace Fire Area F9160 with F7160	(Page 9A-85)
Replace Fire Area F9201 with F7201	(Page 9A-86)
Add Fire Area F9101	(Page 9A-87)
Add Fire Area F9150	(Page 9A-88)
Add Fire Area F9160	(Page 9A-89)
Add Fire Area F9201	(Page 9A-90)
Delete Fire Area F7100	
Delete Fire Area F7300	

VCS COL 9A.7-2-A

**Table 9A.5-7R (Sheet 1 of 84)**  
**Yard**

Fire Area: F7159		Description: Fuel Oil Storage Tank A – Unit 1				
Building: Diesel Tanks		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 11, 24, 30, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Spot heat inside tank	Manual pulls	Foam Injection – manual release ABC Portable Extinguishers	Foam Hose Stations Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train A onsite power and related equipment and no safety-related equipment; all safety divisions and redundant train B onsite power and related equipment are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		Access all around				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 2 of 84)**  
**Yard**

Fire Area: F9159		Description: Fuel Oil Storage Tank A – Unit 2				
Building: Diesel Tanks		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 11, 24, 30, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Spot heat inside tank	Manual pulls	Foam Injection – manual release ABC Portable Extinguishers	Foam Hose Stations Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train B onsite power and related equipment and no safety related equipment; all safety divisions and redundant train A onsite power and related equipment are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:	None					
Radiological release:	None, no radiological materials present					
Life safety:	To be determined during detailed design					
Manual firefighting:	Access all around					
Property loss:	To be determined during detailed design					

**Table 9A.5-7R (Sheet 3 of 84)**  
**Yard**

Fire Area: F7169		Description: Fuel Oil Storage Tank B – Unit 1		Building code occupancy classification: U		
Building: Diesel Tanks		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 11, 24, 30, 72, 804		Electrical classification: N/A		
Fire Zone Dwg: 9A.2-33R		Surrounded by fire barriers rated at: N/A		safety-related divisional equipment or cables: N/A		
		Except:		nonsafety-related redundant trains or equipment or cables: N/A		
Consisting of the Following Rooms:			Fire Detection		Fire Suppression	
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Spot heat inside tank	Manual pulls	Foam Injection – manual release ABC Portable Extinguishers	Foam Hose Stations Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train B onsite power and related equipment and no safety related equipment; all safety divisions and redundant train A onsite power and related equipment are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		Access all around				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 4 of 84)**  
**Yard**

Fire Area: F9169		Description: Fuel Oil Storage Tank B – Unit 2				
Building: Diesel Tanks		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 11, 24, 30, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Spot heat inside tank	Manual pulls	Foam Injection – manual release ABC Portable Extinguishers	Foam Hose Stations Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train B onsite power and related equipment and no safety related equipment; all safety divisions and redundant train A onsite power and related equipment are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		Access all around				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 5 of 84)**  
**Yard**

Fire Area: F7202		Description: Dirty/Clean Lube Oil Storage – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 11,13, 15, 24, 30, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U per IBC 312.1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except: N/A				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Lube Oil Storage	191,000 L Class IIIB lubricating oil	Water flow alarm	Lube Oil system instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot foam deluge 12.2 L/min per m <sup>2</sup> ABC Portable extinguishers	Yard Hydrant
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe-shutdown divisional equipment; all safety divisions and both redundant train A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None; restoration required before LO outage				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 6 of 84)**  
**Yard**

Fire Area: F9202		Description: Dirty/Clean Lube Oil Storage – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 11, 13, 15, 24, 30, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U per IBC 312.1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except: N/A				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Lube Oil Storage	191,000 L Class IIIB lubricating oil	Water flow alarm	Lube Oil system instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot foam deluge 12.2 L/min per m <sup>2</sup> Portable extinguishers	Yard Hydrant
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe-shutdown divisional equipment; all safety divisions and both redundant train A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None; restoration required before LO outage				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 7 of 84)**  
**Yard**

Fire Area: F7251		Description: A Feedpump ASD Transformer – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection		Fire Suppression	
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	ASD A transformer	LATER	Transformer instrumentation integrated into the NFPA 72 fire alarm system	LATER	CO <sub>2</sub> and ABC Portable Extinguishers	Hydrants
		< 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None (turbine operates at 100% w/ 3 FW pumps)				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 8 of 84)**  
**Yard**

Fire Area: F7252		Description: C Feedpump ASD Transformer – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	ASD C transformer	LATER	Transformer instrumentation integrated into the NFPA 72 fire alarm system	LATER	CO <sub>2</sub> and ABC Portable Extinguishers	Hydrants
		< 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None (turbine operates at 100% w/ 3 FW pumps)				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 9 of 84)**  
**Yard**

Fire Area: F7261		Description: B Feedpump ASD Transformer – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	ASD B transformer	LATER	Transformer instrumentation integrated into the NFPA 72 fire alarm system	LATER	CO <sub>2</sub> and ABC Portable Extinguishers	Hydrants
		< 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None (turbine operates at 100% w/ 3 FW pumps)				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 10 of 84)**  
**Yard**

Fire Area: F7262		Description: D Feedpump ASD Transformer – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	ASD D transformer	LATER	Transformer instrumentation integrated into the NFPA 72 fire alarm system	LATER	CO <sub>2</sub> and ABC Portable Extinguishers	Hydrants
		< 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None (turbine operates at 100% w/ 3 FW pumps)				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 11 of 84)  
 Yard**

Fire Area: F9251		Description: A Feedpump ASD Transformer – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	ASD A transformer	LATER	Transformer instrumentation integrated into the NFPA 72 fire alarm system	LATER	CO <sub>2</sub> and ABC Portable Extinguishers	Hydrants
		< 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None (turbine operates at 100% w/ 3 FW pumps)				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 12 of 84)**  
**Yard**

Fire Area: F9252		Description: C Feedpump ASD Transformer – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	ASD C transformer	LATER	Transformer instrumentation integrated into the NFPA 72 fire alarm system	LATER	CO <sub>2</sub> and ABC Portable Extinguishers	Hydrants
		< 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None (turbine operates at 100% w/ 3 FW pumps)				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 13 of 84)**  
**Yard**

Fire Area: F9261		Description: B Feedpump ASD Transformer – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection		Fire Suppression	
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	ASD B transformer	LATER	Transformer instrumentation integrated into the NFPA 72 fire alarm system	LATER	CO <sub>2</sub> and ABC Portable Extinguishers	Hydrants
		< 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None (turbine operates at 100% w/ 3 FW pumps)				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 14 of 84)  
 Yard**

Fire Area: F9262		Description: D Feedpump ASD Transformer – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	ASD D transformer	LATER	Transformer instrumentation integrated into the NFPA 72 fire alarm system	LATER	CO <sub>2</sub> and ABC Portable Extinguishers	Hydrants
		< 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None (turbine operates at 100% w/ 3 FW pumps)				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 15 of 84)**  
**Yard**

Fire Area: F7271		Description: Phase A Main Transformer – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Main transformer A	>18,900 L Class IIIA insulating mineral oil (~625 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Turbine trip; outage required to replace MT w/ ST				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 16 of 84)**  
**Yard**

Fire Area: F7272		Description: Phase B Main Transformer – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Main transformer B	>18,900 L Class IIIA insulating mineral oil (~625 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Turbine trip; outage required to replace MT w/ ST				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 17 of 84)**  
**Yard**

Fire Area: F7273		Description: Phase C Main Transformer – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Main transformer C	>18,900 L Class IIIA insulating mineral oil (~625 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Turbine trip; outage required to replace MT w/ ST				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		To be determined during detailed design				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 18 of 84)  
 Yard**

Fire Area: F9271		Description: Phase A Main Transformer – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Main transformer A	>18,900 L Class IIIA insulating mineral oil (~625 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Turbine trip; outage required to replace MT w/ ST				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		To be determined during detailed design				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 19 of 84)**  
**Yard**

Fire Area: F9272		Description: Phase B Main Transformer – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Main transformer B	>18,900 L Class IIIA insulating mineral oil (~625 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Turbine trip; outage required to replace MT w/ ST				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		To be determined during detailed design				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 20 of 84)  
 Yard**

Fire Area: F9273		Description: Phase C Main Transformer – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Main transformer C	>18,900 L Class IIIA insulating mineral oil (~625 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Turbine trip; outage required to replace MT w/ ST				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		To be determined during detailed design				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 21 of 84)  
 Yard**

Fire Area: F7274		Description: Spare Main Transformer – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours (only on East side)				
		Except: N/A				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Spare Main Transformer	None (transformer maintained dry) (~625 MVA)	None	None	ABC fire extinguishers	Hydrants
		Negligible	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via all sides except East				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 22 of 84)**  
**Yard**

Fire Area: F9274		Description: Spare Main Transformer – Unit 2								
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 804, IEEE 979								
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification:		U						
		Electrical classification:		N/A						
		safety-related divisional equipment or cables:		N/A						
		nonsafety-related redundant trains or equipment or cables:		N/A						
		Surrounded by fire barriers rated at:		3 hours (only on East side)						
		Except:		N/A						
Consisting of the Following Rooms:			Fire Detection		Fire Suppression					
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup				
4650	To be determined during detailed design	None (transformer maintained dry) (~625 MVA)	None	None	ABC fire extinguishers	Hydrants				
Assuming operation of fire suppression systems, effect of fire upon:		<table border="1"> <tr> <td>Negligible</td> <td>Anticipated combustible load, MJ/m<sup>2</sup></td> </tr> <tr> <td>N/A</td> <td>Non-sprinkled combustible load limit, MJ/m<sup>2</sup></td> </tr> </table>		Negligible	Anticipated combustible load, MJ/m <sup>2</sup>	N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>	Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.		
Negligible	Anticipated combustible load, MJ/m <sup>2</sup>									
N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>									
Plant operation:		None								
Radiological release:		None, no radiological materials present								
Life safety:		N/A								
Manual firefighting:		Access via all sides except East								
Moderate		Moderate								

**Table 9A.5-7R (Sheet 23 of 84)**  
**Yard**

Fire Area: F7157		Description: Reserve Auxiliary Transformer A – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Reserve auxiliary transformer A	>18,900 L Class IIIA insulating mineral oil (~105 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train A offsite power and related equipment and no safety-related equipment; all safety divisions, train A onsite power and related equipment, and redundant train B equipment are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 24 of 84)**  
**Yard**

Fire Area: F7167		Description: Reserve Auxiliary Transformer B – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Reserve auxiliary transformer B	>18,900 L Class IIIA insulating mineral oil (~105 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train B offsite power and related equipment and no safety-related equipment; all safety divisions, train B onsite power and related equipment, and redundant train A equipment are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 25 of 84)**  
**Yard**

Fire Area: F9157		Description: Reserve Auxiliary Transformer A – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Reserve auxiliary transformer A	>18,900 L Class IIIA insulating mineral oil (~105 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train A offsite power and related equipment and no safety-related equipment; all safety divisions, train A onsite power and related equipment, and redundant train B equipment are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 26 of 84)**  
**Yard**

Fire Area: F9167		Description: Reserve Auxiliary Transformer B – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Reserve auxiliary transformer B	>18,900 L Class IIIA insulating mineral oil (~105 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train B offsite power and related equipment and no safety-related equipment; all safety divisions, train B onsite power and related equipment, and redundant train A equipment are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 27 of 84)**  
**Yard**

Fire Area: F7158		Description: Unit Auxiliary Transformer A – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Unit auxiliary transformer A	>18,900 L Class IIIA insulating mineral oil (~105 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train A offsite power and related equipment and no safety-related equipment; all safety divisions, train A onsite power and related equipment, and redundant train B equipment are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 28 of 84)**  
**Yard**

Fire Area: F7168		Description: Unit Auxiliary Transformer B – Unit 1				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Unit auxiliary transformer B	>18,900 L Class IIIA insulating mineral oil (~105 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train B offsite power and related equipment and no safety-related equipment; all safety divisions, train B onsite power and related equipment, and redundant train A equipment are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 29 of 84)  
 Yard**

Fire Area: F9158		Description: Unit Auxiliary Transformer A – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U			Electrical classification: N/A	
		safety-related divisional equipment or cables: N/A			nonsafety-related redundant trains or equipment or cables: N/A	
		Surrounded by fire barriers rated at: 3 hours			Except: basemat (not rated); North side (open); top (open)	
Consisting of the Following Rooms:			Fire Detection		Fire Suppression	
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Unit auxiliary transformer A	>18,900 L Class IIIA insulating mineral oil (~105 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train A offsite power and related equipment and no safety-related equipment; all safety divisions, train A onsite power and related equipment, and redundant train B equipment are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 30 of 84)**  
**Yard**

Fire Area: F9168		Description: Unit Auxiliary Transformer B – Unit 2				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 15, 24, 72, 804, IEEE 979				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: U				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: basemat (not rated); North side (open); top (open)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	Unit auxiliary transformer B	>18,900 L Class IIIA insulating mineral oil (~105 MVA)	Dry-pilot heat around transformer	Transformer instrumentation integrated into the NFPA 72 fire alarm system	Dry-pilot deluge 10.2 L/min per m <sup>2</sup> on all surfaces	Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects only redundant train B offsite power and related equipment and no safety-related equipment; all safety divisions, train B onsite power and related equipment, and redundant train A equipment are operable.	
		N/A	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		N/A				
Manual firefighting:		Access via open North side				
Property loss:		Significant				

**Table 9A.5-7R (Sheet 31 of 84)  
 Yard**

Fire Area: F7151		Description: Pump Room Train A – Unit 1				
Building: Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 804				
Fire Zone Dwg: 9A.2-202		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: A				
		Surrounded by fire barriers rated at: 3 hours (between Train A and Train B)				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Lube oil and/or grease, Cable insulation	Manual pulls (at EXITs)	None	ABC Fire Extinguishers	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; All safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 32 of 84)  
 Yard**

Fire Area:		F9151	Description:		Pump Room Train A – Unit 2	
Building:		Plant Service Water / Cooling Water Pump House	Applicable Codes:		IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804	
Fire Zone Dwg:		9A.2-202	Building code occupancy classification:		F-1	
			Electrical classification:		N/A	
			safety-related divisional equipment or cables:		N/A	
			nonsafety-related redundant trains or equipment or cables:		A	
			Surrounded by fire barriers rated at:		3 hours (between Train A and Train B)	
		Except:				
Consisting of the Following Rooms:			Fire Detection		Fire Suppression	
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Lube oil and/or grease, Cable insulation	Manual pulls (at EXITs)	None	ABC Fire Extinguishers	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; All safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 33 of 84)  
Yard**

Fire Area: F7152		Description: Electrical Room Train A – Unit 1				
Building: Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804				
Fire Zone Dwg: 9A.2-202		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: A				
		Surrounded by fire barriers rated at: 3 hours (between Train A and Train B) and 1 hour on the other sides per IBC table 302.3.2				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Electrical equipment	Smoke	Manual pulls (at EXITs)	Pre-action sprinkler LATER L/min per m <sup>2</sup>	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 34 of 84)  
 Yard**

Fire Area: F9152		Description: Electrical Room Train A – Unit 2				
Building: Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804				
Fire Zone Dwg: 9A.2-202		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: A				
		Surrounded by fire barriers rated at: 3 hours (between Train A and Train B) and 1 hour on the other sides per IBC table 302.3.2				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Electrical equipment	Smoke	Manual pulls (at EXITs)	Pre-action sprinkler LATER L/min per m2	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:	To be determined during detailed design					
Radiological release:	None, no radiological materials present					
Life safety:	To be determined during detailed design					
Manual firefighting:	To be determined during detailed design					
Property loss:	To be determined during detailed design					

**Table 9A.5-7R (Sheet 35 of 84)  
 Yard**

Fire Area:		F7153	Description:		Cooling Tower Train A – Unit 1	
Building:		Near the Plant Service Water / Cooling Water Pump House	Applicable Codes:		IBC; Reg Guide 1.189; NFPA 10, 24, 72, 214, 804	
Fire Zone Dwg:		9A.2-202	Building code occupancy classification:		U	
			Electrical classification:		N/A	
			safety-related divisional equipment or cables:		N/A	
			nonsafety-related redundant trains or equipment or cables:		A	
			Surrounded by fire barriers rated at:		3 hours (between Train A and Train B) if determined to be required during detailed design	
Except:						
Consisting of the Following Rooms:			Fire Detection		Fire Suppression	
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Fill material, drift eliminators and PVC pipe	Later	Later	Later	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown:  Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 36 of 84)  
 Yard**

Fire Area: F9153		Description: Cooling Tower Train A – Unit 2				
Near the Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 214, 804				
Building: 9A.2-202		Building code occupancy classification: U				
Fire Zone Dwg: 9A.2-202		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: A				
		3 hours (between Train A and Train B) if determined to be required during detailed design				
		Surrounded by fire barriers rated at: Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Fill material, drift eliminators and PVC pipe	Later	Later	Later	Yard Hydrants
Assuming operation of fire suppression systems, effect of fire upon:		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown:	
Plant operation: To be determined during detailed design		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>		Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
Radiological release: None, no radiological materials present						
Life safety: To be determined during detailed design						
Manual firefighting: To be determined during detailed design						
Property loss: To be determined during detailed design						

**Table 9A.5-7R (Sheet 37 of 84)  
 Yard**

Fire Area: F7104		Description: Chemical Mixing Area – Unit 1				
Building: Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804				
Fire Zone Dwg: 9A.2-202		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 1 hour wall				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Combustible/ Corrosive/Toxic Chemicals	Water flow alarm	Manual pulls (at EXITs)	Wet-pipe sprinkler LATER L/min per m2	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 38 of 84)  
 Yard**

Fire Area: F7105		Description: Chemical Storage and Transfer Building – Unit 1				
Near the Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804				
Building: 9A.2-33R		Building code occupancy classification: F-1				
Fire Zone Dwg: 9A.2-33R		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 1 hour wall				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Combustible/ Corrosive/Toxic Chemicals	Water flow alarm	Manual pulls (at EXITs)	Wet-pipe sprinkler LATER L/min per m2	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 39 of 84)**  
**Yard**

Fire Area: F9104		Description: Chemical Mixing Area – Unit 2				
Building: Near Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804				
Fire Zone Dwg: 9A.2-202		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 1 hour wall				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Combustible/ Corrosive/Toxic Chemicals	Water flow alarm	Manual pulls (at EXITs)	Wet-pipe sprinkler LATER L/min per m2	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 40 of 84)  
 Yard**

Fire Area: F9105		Description: Chemical Storage and Transfer Building – Unit 2				
Near Plant Service Water / Cooling		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804				
Building: Water Pump House						
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 1 hour				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Combustible/ Corrosive/Toxic Chemicals	Water flow alarm	Manual pulls (at EXITs)	Wet-pipe sprinkler LATER L/min per m2	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 41 of 84)  
 Yard**

Fire Area: F7161		Description: Pump Room Train B – Unit 1				
Building: Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 804				
Fire Zone Dwg: 9A.2-202		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		Surrounded by fire barriers rated at: 3 hours (between Train A and Train B)				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Lube oil and/or grease, Cable Insulation	Manual pulls (at EXITs)	None	ABC Fire Extinguishers	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; All safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 42 of 84)  
 Yard**

Fire Area: F9161		Description: Pump Room Train B - Unit 2				
Plant Service Water / Cooling		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 804				
Building: Water Pump House						
Fire Zone Dwg: 9A.2-202		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		Surrounded by fire barriers rated at: 3 hours (between Train A and Train B)				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Lube oil and/or grease, Cable Insulation	Manual pulls (at EXITs)	None	ABC Fire Extinguishers	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; All safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 43 of 84)  
 Yard**

Fire Area: F7162		Description: Electrical Room Train B – Unit 1				
Building: Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804				
Fire Zone Dwg: 9A.2-202		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		Surrounded by fire barriers rated at: 3 hours (between Train A and Train B) and 1 hour on the other sides per IBC table 302.3.2				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation	Smoke	Manual pulls (at EXITs)	Pre-action sprinkler LATER L/min per m2	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 44 of 84)  
 Yard**

Fire Area: F9162		Description: Electrical Room Train B – Unit 2				
Building: Plant Service Water / Cooling Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804				
Fire Zone Dwg: 9A.2-202		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		Surrounded by fire barriers rated at: 3 hours (between Train A and Train B) and 1 hour on the other sides per IBC table 302.3.2				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation	Smoke	Manual pulls (at EXITs)	Pre-action sprinkler LATER L/min per m2	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 45 of 84)  
 Yard**

Fire Area: F7163		Description: Cooling Tower Train B – Unit 1				
Near the Plant Service Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 214, 804				
Building: Pump House		Building code occupancy classification: U				
Fire Zone Dwg: 9A.2-202		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		3 hours (between Train A and Train B) if determined to be required during detailed design				
		Surrounded by fire barriers rated at: Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Fill material, drift eliminators and PVC pipe	Later	Later	Later	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 46 of 84)  
 Yard**

Fire Area: F9163		Description: Cooling Tower Train B – Unit 2				
Near the Plant Service Water Pump House		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 214, 804				
Building: Pump House		Building code occupancy classification: U				
Fire Zone Dwg: 9A.2-202		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		3 hours (between Train A and Train B) if determined to be required during detailed design				
		Surrounded by fire barriers rated at: Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Fill material, drift eliminators and PVC pipe	LATER	LATER	LATER	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown:	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>		Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect redundant train A and B nonsafety-related equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 47 of 84)  
 Yard**

Fire Area: F7700R		Description: Service Building - Unit 1				
Building: Service Building		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 90A, 101, 804, 28 CFR 36				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: B				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: to be determined during detailed design				
		Except: to be determined during detailed design				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	LATER	LATER	LATER
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown:	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>		Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 48 of 84)  
 Yard**

Fire Area: F9700		Description: Service Building - Unit 2				
Building: Service		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 90A, 101, 804, 28 CFR 36				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: B				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: to be determined during detailed design				
		Except: to be determined during detailed design				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	LATER	LATER	LATER
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both redundant trains A and B are operable.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 49 of 84)  
 Yard**

Fire Area: F7800R		Description: Auxiliary Boiler – Unit 1				
Building: Auxiliary Boiler		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy Classification:	to be determined during detailed design			
		Electrical classification:	to be determined during detailed design			
		safety-related divisional equipment or cables:	N/A			
		nonsafety-related redundant trains or equipment or cables:	N/A			
		Surrounded by fire barriers rated at:	to be determined during detailed design			
		Except:	to be determined during detailed design			
Consisting of the Following Rooms:			Fire Detection			
			Fire Suppression			
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Class IIIB lubricants; Fuel Oil Cable insulation Electrical equipment	Area wide spot heat	Manual pulls (at EXITs)None	ABC fire extinguishers	Yard Hydrants
		<700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None; restoration required before outage				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 50 of 84)  
 Yard**

Fire Area: F9800		Description: Auxiliary Boiler - Unit 2				
Building: Auxiliary Boiler		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy Classification:	to be determined during detailed design			
		Electrical classification:	to be determined during detailed design			
		safety-related divisional equipment or cables:	N/A			
		nonsafety-related redundant trains or equipment or cables:	N/A			
		Surrounded by fire barriers rated at:	to be determined during detailed design			
		Except:	to be determined during detailed design			
Consisting of the Following Rooms:			Fire Detection			
			Fire Suppression			
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Class IIIB lubricants, Fuel oil, cable insulation, electrical equipment	Area wide spot heat	Manual pulls (at EXITs)None	ABC fire extinguishers	Yard Hydrants
		<700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None; restoration required before outage				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 51 of 84)**  
**Yard**

Fire Area: F8181a		Description: Nitrogen Storage Area				
Building: Yard (Unit 1)		Applicable Codes: IBC; Reg Guide 1.189; NFPA 24, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: LATER				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	None	Yard Hydrants	None
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 52 of 84)  
 Yard**

Fire Area: F8181b		Description: Nitrogen Storage Area				
Building: Yard (Unit 2)		Applicable Codes: IBC; Reg Guide 1.189; NFPA 24, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: LATER				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	None	Yard Hydrants	None
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:	To be determined during detailed design					
Radiological release:	None, no radiological materials present					
Life safety:	To be determined during detailed design					
Manual firefighting:	To be determined during detailed design					
Property loss:	To be determined during detailed design					

**Table 9A.5-7R (Sheet 53 of 84)**  
**Yard**

Fire Area: F8182		Description: Hydrogen Storage Area				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: LATER				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	LATER	ABC fire extinguishers	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 54 of 84)**  
**Yard**

Fire Area: F8183		Description: Oxygen Storage Area				
Building: Yard		Applicable Codes: IBC; Reg Guide 1.189; NFPA 24, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: LATER				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	LATER	ABC fire extinguishers	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 55 of 84)**  
**Yard**

Fire Area: F8184a		Description: CO <sub>2</sub> Storage Area				
Building: Yard (Unit 1)		Applicable Codes: IBC; Reg Guide 1.189; NFPA 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: LATER				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	None	ABC fire extinguishers	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 56 of 84)**  
**Yard**

Fire Area: F8184b		Description: CO <sub>2</sub> Storage Area				
Building: Yard (Unit 2)		Applicable Codes: IBC; Reg Guide 1.189; NFPA 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: LATER				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	None	ABC fire extinguishers	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 57 of 84)**  
**Yard**

Fire Area: F8105		Description: Chemical Storage Area				
Near the Cooling Basin Intake Structure						
Building: Fire Zone Dwg: 9A.2-33R		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 72, 804				
		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Combustible/ Corrosive/Toxic Chemicals	Water flow alarm	Manual pulls (at EXITs)	Wet-pipe sprinkler LATER L/min per m2	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 58 of 84)  
 Yard**

Fire Area: F8150a		Description: Secondary Diesel Driven Fire Pump				
Building: Secondary Fire Pump Enclosure		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 20, 24, 30, 37, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hour fire wall common with F7150b				
		Except: Exterior walls (non-rated), roof (non-rated)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Class II fuel Class III lubricants Cable insulation	Water flow alarm	Manual pull	Wet-pipe sprinkler LATER L/min per m <sup>2</sup> over entire area	Hydrants
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area results in loss of only the non-seismic diesel-driven fire pump; remaining three (two non-seismic motor driven and one diesel-driven Seismic Category I) fire pumps are unaffected by the fire and are operable. All safe shutdown equipment and both A and B on-site power sources are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		Access via exterior door				
Property loss:		Minor				

**Table 9A.5-7R (Sheet 59 of 84)  
 Yard**

Fire Area: F8150b		Description: Secondary Motor-Driven Fire Pump				
Building: Secondary Fire Pump Enclosure		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 20, 24, 30, 37, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hour fire wall common with F7150a				
		Except: Exterior walls (non-rated), roof (non-rated)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Area-wide ionization	Manual pull	CO <sub>2</sub> fire extinguisher	Hydrants
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area results in loss of only the non-seismic motor-driven fire pump; remaining three (one non-seismic diesel-driven, one non-seismic motor driven, and one diesel-driven Seismic Category I) fire pumps are unaffected by the fire and are operable. All safe shutdown equipment and both A and B onsite power sources are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		Access via exterior door				
Property loss:		Minor				

**Table 9A.5-7R (Sheet 60 of 84)  
 Yard**

Fire Area: F7250		Description: Primary Electric Fire Pump A – Unit 1				
Building: Primary Fire Pump Enclosure		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 20, 24, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: A				
		Surrounded by fire barriers rated at: 3 hour fire wall common with F7260				
		Except: Exterior walls (non-rated), roof (non-rated)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Class IIIB lubricants Cable insulation	Area-wide ionization	Manual pull	CO <sub>2</sub> fire extinguisher	Yard Hydrant
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area results in loss of only the motor-driven fire pump; remaining three two diesel-driven fire pumps (Seismic Category I and non-seismic), non-seismic motor driven pump, and all safe shutdown equipment are unaffected by the fire and are operable. Both A and B onsite power sources are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits Exits meet NFPA 101				
Manual firefighting:		Access via door				
Property loss:		Minor				

**Table 9A.5-7R (Sheet 61 of 84)  
 Yard**

Fire Area: F7260		Description: Primary Diesel Fire Pump B– Unit 1				
Building: Primary Fire Pump Enclosure		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 20, 24, 30, 37, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1 per IBC 307.9.5				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		Surrounded by fire barriers rated at: 3 hour fire wall common with F7250				
		Except: Exterior walls (non-rated), roof (non-rated)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	<2500 L Class II fuel, Class IIIB lubricants Cable insulation	Suppression flowswitch	Manual pull	Wet-pipe sprinkler 12.2 L/min per m <sup>2</sup> over entire area	Yard Hydrant
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown:  Complete burnout of all equipment and cables within this fire area results in loss of only Seismic Category I diesel-driven fire pump; remaining three (two diesel-driven and one non-seismic diesel-driven), fire pumps, and all safe shutdown equipment are unaffected by the fire and are operable. Both A and B onsite power sources are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits Exits meet NFPA 101				
Manual firefighting:		Access via door				
Property loss:		Minor				

**Table 9A.5-7R (Sheet 62 of 84)  
 Yard**

Fire Area: F9250		Description: Primary Electric Fire Pump A – Unit 2				
Building: Primary Fire Pump Enclosure		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 20, 24, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: A				
		Surrounded by fire barriers rated at: 3 hours (between F9250 and F9260)				
		Except: Exterior walls (non-rated), roof (non-rated)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Class IIIB lubricants Cable insulation	Area-wide ionization	Manual pull	CO <sub>2</sub> fire extinguisher	Hydrant
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area results in loss of only the motor-driven fire pump; remaining three two diesel-driven fire pumps (Seismic Category I and non-seismic), non-seismic motor driven pump, and all safe shutdown equipment are unaffected by the fire and are operable. Both A and B on-site power sources are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits EXITs meet NFPA 101				
Manual firefighting:		Access via door				
Property loss:		Minor				

**Table 9A.5-7R (Sheet 63 of 84)  
 Yard**

Fire Area: F9260		Description: Primary Diesel Fire Pump B – Unit 2				
Building: Primary Fire Pump Enclosure		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 20, 24, 30, 37, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1 per IBC 07.9.5				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		Surrounded by fire barriers rated at: 3 hours (between F9250 and F9260)				
		Except: Exterior walls (non-rated), roof (non-rated)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	<2500 L Class II fuel Class IIIB lubricants Cable insulation	Suppression flowshitch	Manual pull	Wet-pipe sprinkler 12.2 L/min per m <sup>2</sup> over entire area	Yard Hydrant
		>700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area results in loss of only Seismic Category 1 diesel-driven fire pump; remaining three (two diesel-driven and one non-seismic diesel-driven), fire pumps, and all safe shutdown equipment are unaffected by the fire and are operable. Both A and B onsite power sources are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits EXITs meet NFPA 101				
Manual firefighting:		Access via door				
Property loss:		Minor				

**Table 9A.5-7R (Sheet 64 of 84)  
 Yard**

Fire Area: F8171		Description: Cooling Basin Intake Area - elevation 102 ft (Unit 1 and Unit 2)				
Building: Cooling Basin Intake Structure		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 804				
Fire Zone Dwg: 9A.2-203 Sheet 1 of 2		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
Surrounded by fire barriers rated at:		To be determined during detailed design				
Except:		To be determined during detailed design				
Consisting of the Following Rooms:			Fire Detection		Fire Suppression	
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Electrical equipment	Manual pulls (at EXITs)	None	CO <sub>2</sub> and ABC Portable Extinguishers	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 65 of 84)  
 Yard**

Fire Area: F7171		Description: Unit 1 Cooling Basin Intake Area - elevations 50 & 57 ft				
Building: Cooling Basin Intake Structure		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 804				
Fire Zone Dwg: 9A.2-203 Sheets 1 and 2		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: To be determined during detailed design				
		Except: To be determined during detailed design				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Electrical equipment	Manual pulls (at EXITs)	None	CO <sub>2</sub> and ABC Portable Extinguishers	Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 66 of 84)  
 Yard**

Fire Area: F9171		Description: Unit 2 Cooling Basin Intake Area - elevations 50 & 57 ft				
Building: Cooling Basin Intake Structure		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 24, 72, 804				
Fire Zone Dwg: 9A.2-203 Sheet 1 of 2		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
Surrounded by fire barriers rated at:		To be determined during detailed design				
Except:		To be determined during detailed design				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Electrical equipment	Manual pulls (at EXITs)	None	LATER	Hose racks/ Yard Hydrants
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 67 of 84)  
 Yard**

Fire Area: F8180		Description: Plant Entry Building				
Building: Plant Entry Building and Protected Area fence		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: B				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	None	LATER	Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 68 of 84)  
 Yard**

Fire Area: F8200		Description: Hot Machine Shop and Storage				
Building: Hot and Cold Machine Shop		Applicable Codes: IBC; Reg Guide 1.189; NFPA 14, 72, 804				
Fire Zone Dwg: 9A.2- 33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Flammable Solvents Oil	Water flow alarm Manual pulls (at EXITs)	None	ABC Portable Extinguishers	Hose Racks
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 69 of 84)  
 Yard**

Fire Area: F8101		Description: General Area				
Building: Water Treatment Building		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 14, 72, 804				
Fire Zone Dwg: 9A.2-201		Building code occupancy classification: H-4				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Plastic Filter Membranes Combustible/ Corrosive/Toxic Chemicals	Water flow alarm Smoke detection	Manual pulls (at EXITs)	Wet-Pipe sprinkler LATER L/min per m2	Hose racks/ Hydrant
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect nonsafety-related equipment including equipment which could be used for make-up to IC/PCCS pools and spent fuel pool if 7 days post accident; all safety divisions and both onsite and offsite power supplies are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None, but may affect makeup water chemistry				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 70 of 84)  
 Yard**

Fire Area: F8102		Description: Electrical Room				
Building: Water Treatment Building		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 14, 72, 804				
Fire Zone Dwg: 9A.2-201		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 1 hour per IBC table 302.3.2				
		Except: Outside walls				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Electrical Equipment	Smoke	Manual pulls (at EXITs)	Pre-action sprinkler LATER L/min per m2	Hose Racks ABC Portable Extinguishers
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect nonsafety-related equipment including equipment which could be used for makeup to IC/PCCS pools and spent fuel pool 7 days post accident; all safety divisions and both onsite and offsite power supplies are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None, but may affect makeup water chemistry				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 71 of 84)  
 Yard**

Fire Area: F8103		Description: Control Room				
Building: Water Treatment Building		Applicable codes: IBC; Reg Guide 1.189; NFPA 10, 13, 14, 72, 75, 804				
Fire Zone Dwg: 9A.2-201		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 1 hour per IBC table 302.3.2				
		Except: Outside walls				
Consisting of the following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Electrical Equipment	Smoke	Manual pulls (at EXITs)	Pre-action sprinkler LATER L/min per m2	Hose Racks ABC Portable Extinguishers
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment, but could affect nonsafety-related equipment including equipment which could be used for makeup to IC/PCCS pools and spent fuel pool 7 days post accident; all safety divisions and both onsite and offsite power supplies are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None, but may affect makeup water chemistry				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 72 of 84)  
 Yard**

Fire Area: F8104		Description: Lab				
Building: Water Treatment Building		Applicable codes: IBC; Reg Guide 1.189; NFPA 10, 13, 14, 72, 804				
Fire Zone Dwg: 9A.2-201		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 1 hour per IBC table 302.3.2				
		Except: Outside walls				
Consisting of the following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Cable insulation Electrical Equipment	Smoke	Manual pulls (at EXITs)	Pre-action sprinkler LATER L/min per m2	Hose Racks ABC Portable Extinguishers
		> 700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies are unaffected by fire and are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None, but may affect makeup water chemistry				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 73 of 84)  
 Yard**

Fire Area: F8400		Description: Cold Machine Shop				
Building: Hot and Cold Machine Shop		Applicable Codes: IBC; Reg. Guide 1.189; NFPA 14, 72, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	Flammable Solvents Oil	Manual pulls (at EXITs)	None	ABC Portable Fire Extinguishers	Hose Racks Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment; all safety divisions and both onsite and offsite power supplies A and B are unaffected by fire and are operable.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:	To be determined during detailed design					
Radiological release:	None, no radiological materials present					
Life safety:	To be determined during detailed design					
Manual firefighting:	To be determined during detailed design					
Property loss:	To be determined during detailed design					

**Table 9A.5-7R (Sheet 74 of 84)  
 Yard**

Fire Area: F8500		Description: Warehouse Building				
Building: Warehouse		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: S-2				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: to be determined during detailed design				
		Except: to be determined during detailed design				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	None	LATER	Hose Racks Hydrant
Assuming operation of fire suppression systems, effect of fire upon:		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 75 of 84)  
 Yard**

Fire Area: F8600		Description: Training Center				
Building: Training Center		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 72, 101, 804, 28CFR36				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: B				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: to be determined during detailed design				
		Except: to be determined during detailed design				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	None	CO <sub>2</sub> portable fire extinguishers ABC portable fire extinguishers	Hose Racks Yard Hydrants
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 76 of 84)  
 Yard**

Fire Area: F8900		Description: Administration Building				
Building: Administration		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 24, 72, 101, 804; 28 CFR 36				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: B				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: N/A				
		Except:				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
To be determined during detailed design	To be determined during detailed design	LATER	Manual pulls (at EXITs)	None	ABC fire extinguishers	Hose Racks Yard Hydrant
		LATER	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safety-related or safe shutdown divisional equipment.	
		LATER	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		To be determined during detailed design				
Radiological release:		None, no radiological materials present				
Life safety:		To be determined during detailed design				
Manual firefighting:		To be determined during detailed design				
Property loss:		To be determined during detailed design				

**Table 9A.5-7R (Sheet 77 of 84)  
 Yard**

Fire Area: F7101		Description: Uncontrolled access – Unit 1				
Building: Tunnel – Unit 1		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 14, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: Basemat (non-rated)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
-2000	To be determined during detailed design	Cable insulation Class IIB lubricants Class A combustibles Transient combustibles	Area-wide ionization	Manual pulls (at EXITs)	ABC Portable Fire Extinguishers	Hose racks
		<700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safe shutdown equipment or circuits; all safety-related equipment and both redundant trains A and B are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Non; will impede access into RB, CB, and EB				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits to EXIT meet NFPA 101				
Manual firefighting:		Access via stairwells				
Property loss:		Minor				

**Table 9A.5-7R (Sheet 78 of 84)  
 Yard**

Fire Area: F7150		Description: Cable Tunnel A – Unit 1				
Building: Tunnel – Unit 1		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 14, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: N/A				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
1300	To be determined during detailed design	Cable insulation	Area-wide ionization	Later	ABC Portable Fire Extinguishers	Hose racks (in nearby stairwells)
		>1400	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area results in loss of only redundant train A onsite power source and related equipment; all safety divisions and train B onsite power source and related equipment are unaffected by fire and are operable.	
		1400	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits to EXIT meet NFPA 101				
Manual firefighting:		Access via stairwells				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 79 of 84)  
 Yard**

Fire Area: F7160		Description: Cable Tunnel B – Unit 1				
Building: Tunnel – Unit 1		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 14, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		Surrounded by fire barriers rated at: 3 hours				
		Except: N/A				
Consisting of the Following Rooms:			Fire Detection		Fire Suppression	
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
1300	To be determined during detailed design	Cable insulation	Area-wide ionization	Later	ABC Portable Fire Extinguishers	Hose racks (in nearby stairwells)
		>1400	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area results in loss of only redundant train A onsite power source and related equipment; all safety divisions and train B onsite power source and related equipment are unaffected by fire and are operable.	
		1400	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits to EXIT meet NFPA 101				
Manual firefighting:		Access via stairwells				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 80 of 84)  
 Yard**

Fire Area: F7201		Description: Controlled access - Unit 1				
Building: Tunnel - Unit 1		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 14, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R				Building code occupancy classification:	F-1	
				Electrical classification:	N/A	
				safety-related divisional equipment or cables:	N/A	
				nonsafety-related redundant trains or equipment or cables:	N/A	
		Surrounded by fire barriers rated at:		3 hours		
		Except:		Basement mat (non-rated); elevator doors (1.5hr rated)		
Consisting of the Following Rooms:			Fire Detection		Fire Suppression	
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	To be determined during detailed design	Cable insulation Class IIIB lubricants Class A combustibles Transient combustibles	Area-wide ionization	Later	ABC Portable Fire Extinguishers	Hose racks
		<700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safe shutdown equipment or circuits; all safety-related equipment and both redundant trains A and B are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Non; will impede access into RB and FB				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits to EXIT meet NFPA 101s				
Manual firefighting:		Access via stairwells				
Property loss:		Minor				

**Table 9A.5-7R (Sheet 81 of 84)  
 Yard**

Fire Area: F9101		Description: Uncontrolled access – Unit 2				
Building: Tunnel – Unit 2		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 14, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: Basemat (non-rated)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
-2000	To be determined during detailed design	Cable insulation Class IIIB lubricants Class A combustibles Transient combustibles	Area-wide ionization	Manual pulls (at EXITs)	ABC fire extinguishers	Hose racks
		<700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safe shutdown equipment or circuits; all safety-related equipment and both redundant trains A and B are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Non; will impede access into RB, CB, and EB				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits to EXIT meet NFPA 101				
Manual firefighting:		Access via stairwells				
Property loss:		Minor				

**Table 9A.5-7R (Sheet 82 of 84)  
 Yard**

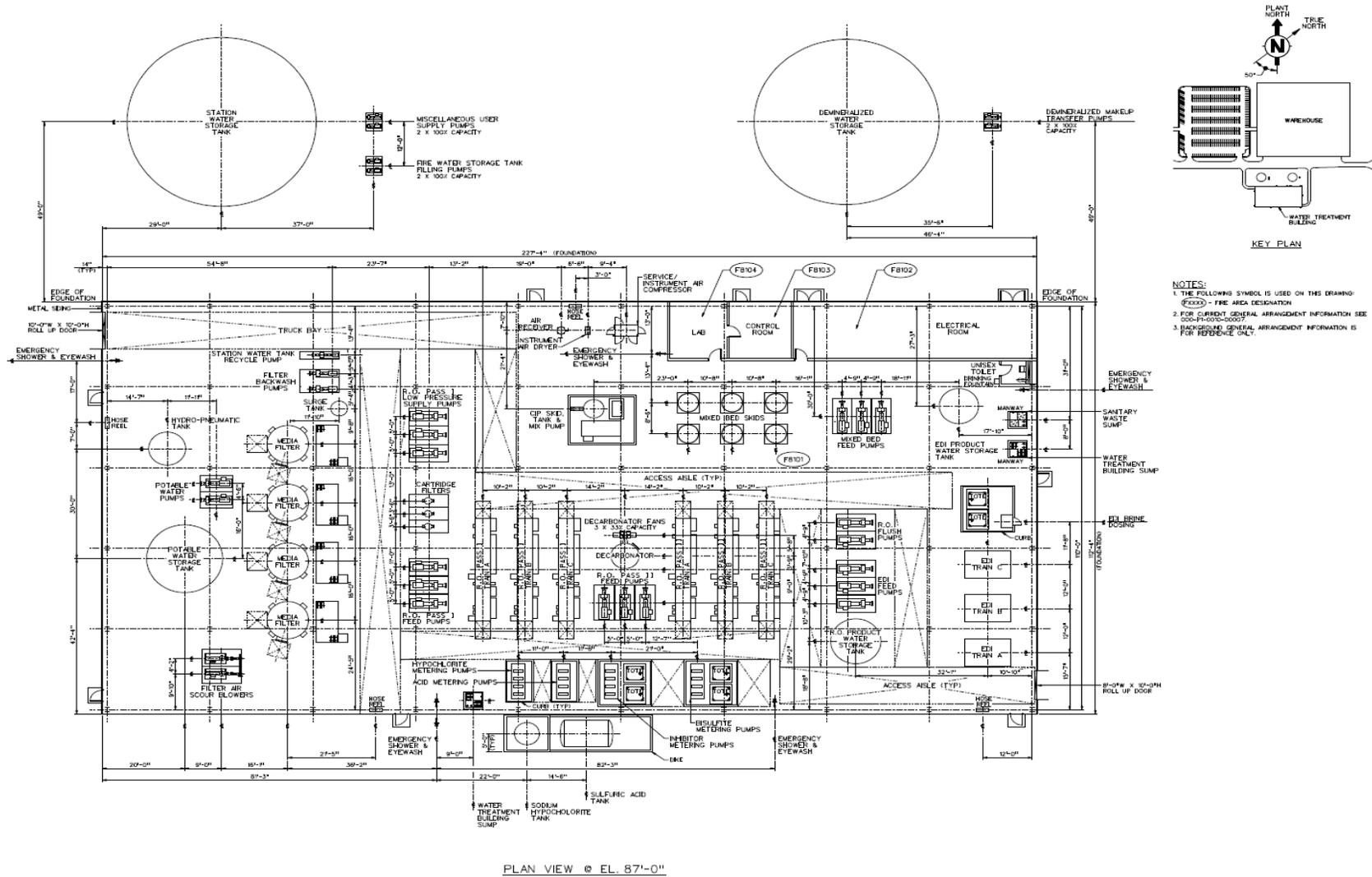
Fire Area: F9150		Description: Cable Tunnel A – Unit 2				
Building: Tunnel – Unit 2		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 14, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: N/A				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
1300	To be determined during detailed design	Cable insulation	Area-wide ionization	Later	ABC Portable Fire Extinguishers	Hose racks (in nearby stairwells)
		>1400	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area results in loss of only redundant train A onsite power source and related equipment; all safety divisions and train B onsite power source and related equipment are unaffected by fire and are operable.	
		1400	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits to EXIT meet NFPA 101				
Manual firefighting:		Access via stairwells				
Property loss:		Moderate				

**Table 9A.5-7R (Sheet 83 of 84)  
 Yard**

Fire Area: F9160		Description: Cable Tunnel B – Unit 2				
Building: Tunnel – Unit 2		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 13, 14, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: B				
		Surrounded by fire barriers rated at: 3 hours				
		Except: N/A				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
1300	To be determined during detailed design	Cable insulation	Area-wide ionization	Later	ABC Portable Fire Extinguishers	Hose racks (in nearby stairwells)
		>1400	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area results in loss of only redundant train A onsite power source and related equipment; all safety divisions and train B onsite power source and related equipment are unaffected by fire and are operable.	
		1400	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		None				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits to EXIT meet NFPA 101				
Manual firefighting:		Access via stairwells				
Property loss:		Moderate				

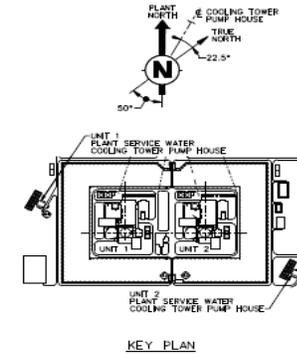
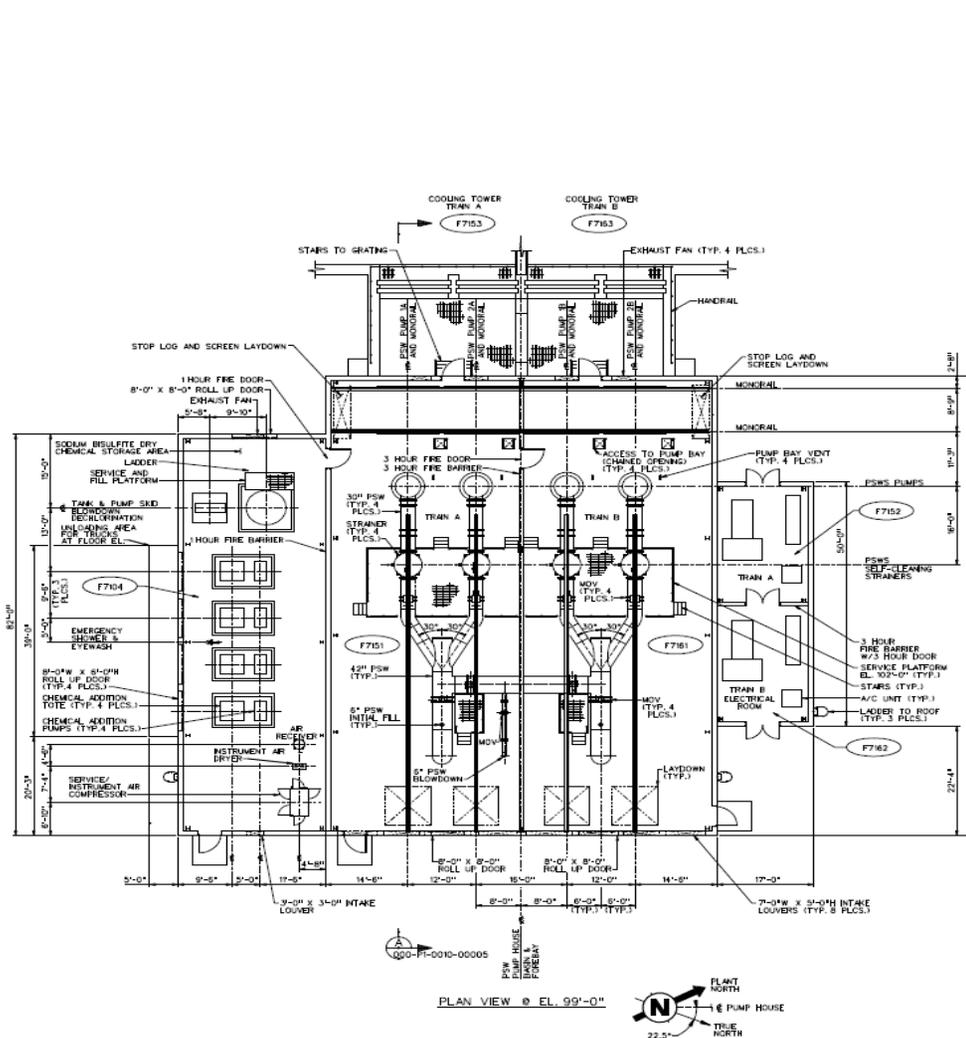
**Table 9A.5-7R (Sheet 84 of 84)  
 Yard**

Fire Area: F9201		Description: Controlled access - Unit 2				
Building: Tunnel - Unit 2		Applicable Codes: IBC; Reg Guide 1.189; NFPA 10, 14, 72, 101, 804				
Fire Zone Dwg: 9A.2-33R		Building code occupancy classification: F-1				
		Electrical classification: N/A				
		safety-related divisional equipment or cables: N/A				
		nonsafety-related redundant trains or equipment or cables: N/A				
		Surrounded by fire barriers rated at: 3 hours				
		Except: Basemat (non-rated); elevator doors (1.5 hr rated)				
Consisting of the Following Rooms:			Fire Detection	Fire Suppression		
EL	Room #	Potential Combustibles	Primary	Backup	Primary	Backup
4650	To be determined during detailed design	Cable insulation Class IIIB lubricants Class A combustibles Transient combustibles	Area-wide ionization	Manual pulls (at EXITs)	ABC fire extinguishers	Hose racks
		<700	Anticipated combustible load, MJ/m <sup>2</sup>		Assuming all fire suppression systems inoperable, effect of design basis fire on safe shutdown: Complete burnout of all equipment and cables within this fire area affects no safe shutdown equipment or circuits; all safety-related equipment and both redundant trains A and B are operable.	
		700	Non-sprinkled combustible load limit, MJ/m <sup>2</sup>			
Assuming operation of fire suppression systems, effect of fire upon:						
Plant operation:		Non; will impede access into RB, CB, and EB				
Radiological release:		None, no radiological materials present				
Life safety:		Travel distance limits to EXIT meet NFPA 101s				
Manual firefighting:		Access via stairwells				
Property loss:		Minor				



VCS COL 9A.7-1-A

**Figure 9A.2-201 Fire Protection Zones — Water Treatment Building**

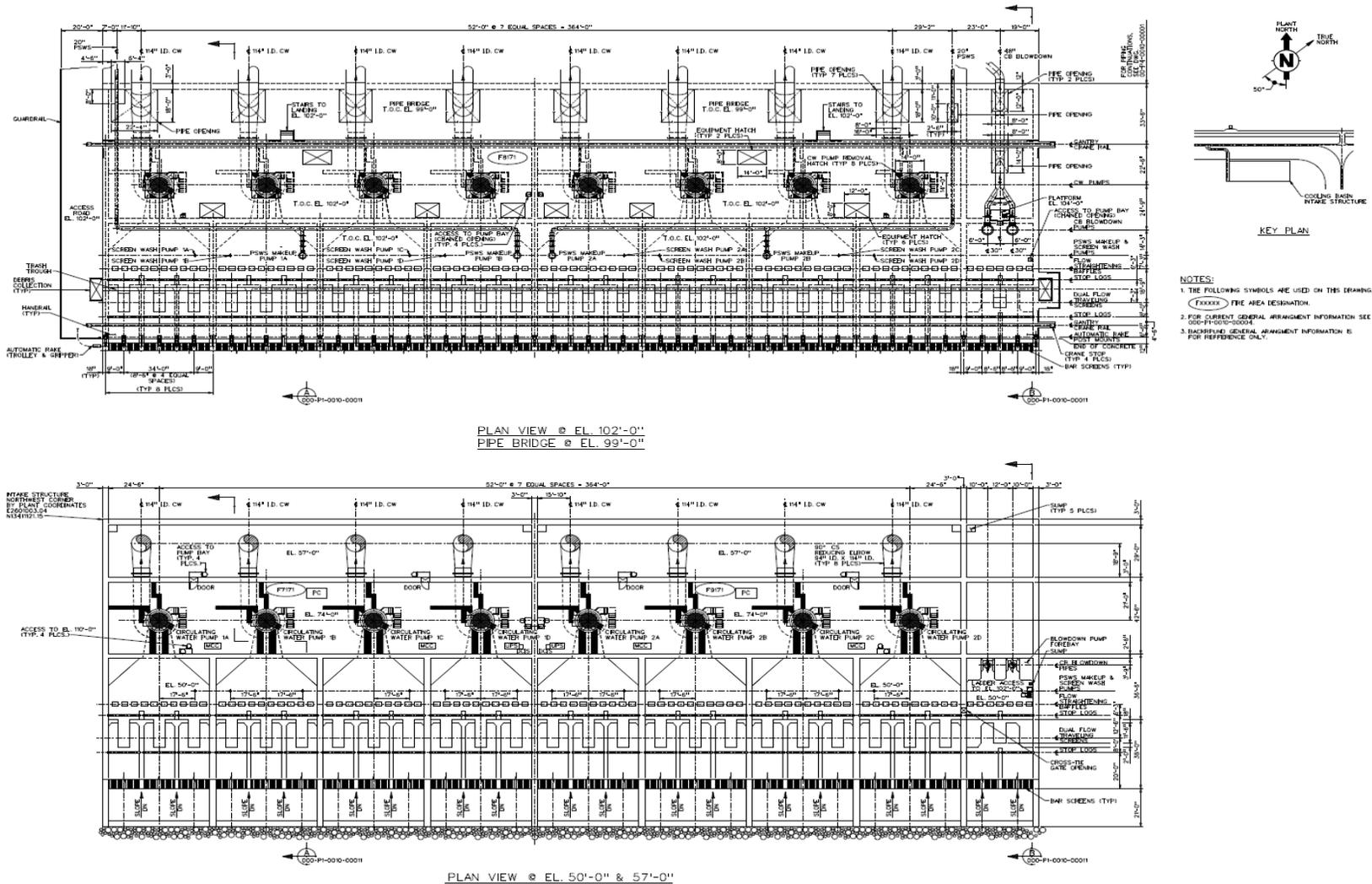


- NOTES:
1. THIS DRAWING IS TYPICAL FOR UNIT 1 AND UNIT 2.
  2. THE FOLLOWING SYMBOLS ARE USED ON THIS DRAWING.
  3. FOR CURRENT GENERAL ARRANGEMENT INFORMATION SEE 000-P-0010-0004.
  4. BACKGROUND GENERAL ARRANGEMENT INFORMATION IS FOR REFERENCE ONLY.
  5. CORRESPONDING FIRE ZONE NUMBERS.

UNIT 1	UNIT 2
F711	F811
F712	F812
F713	F813
F714	F814
F715	F815
F716	F816
F717	F817
F718	F818

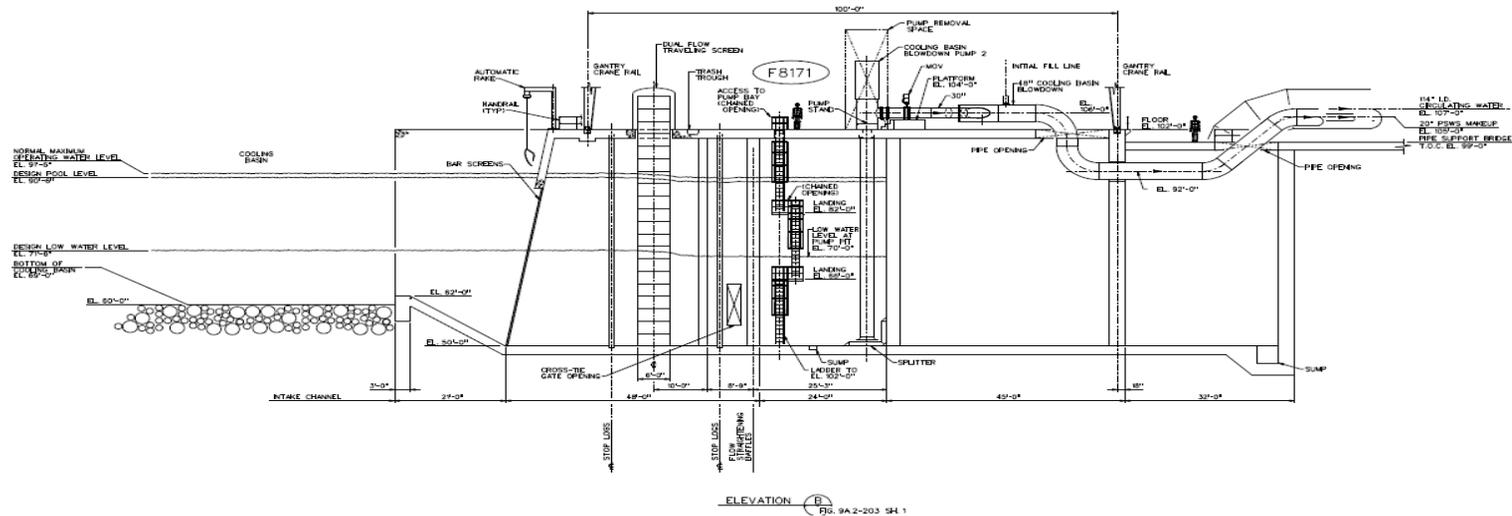
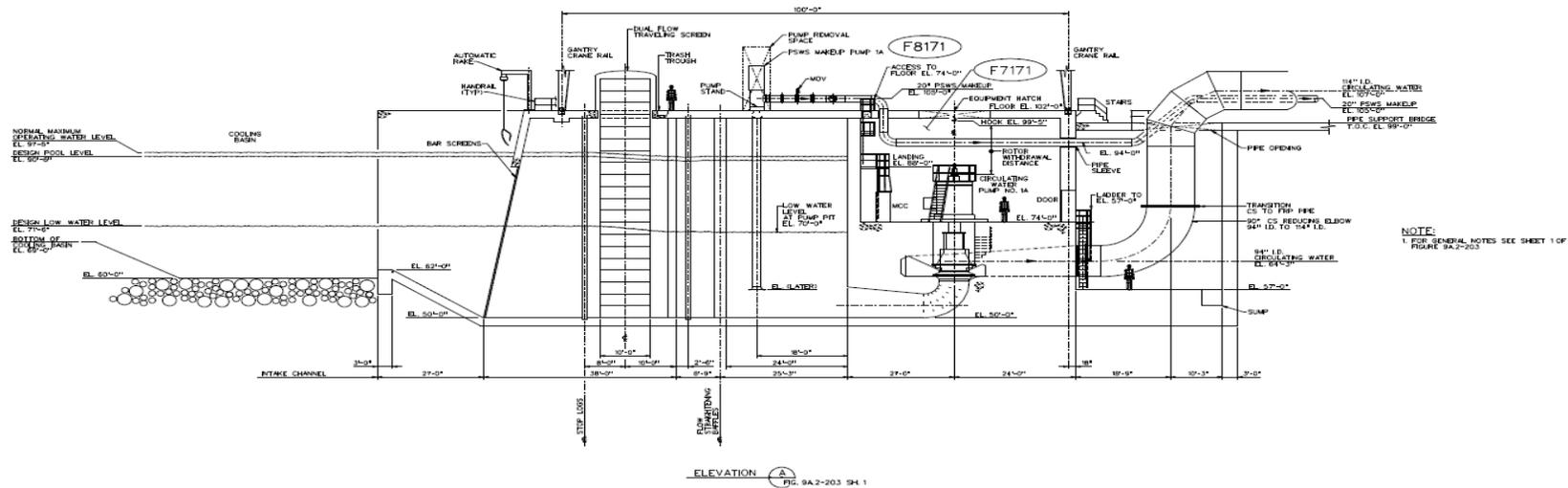
VCS COL 9A.7-1-A

Figure 9.1.2-202 Fire Protection Zones — Plant Service Water Cooling Tower/Pump House



VCS COL 9A.7-1-A

Figure 9.1.2-203 (Sheet 1 of 2) Fire Protection Zones — Cooling Basin Intake Structure



VCS COL 9A.7-1-A

Figure 9A.2-203 (Sheet 2 of 2) Fire Protection Zones — Cooling Basin Intake Structure



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## **Appendix 9B Summary of Analysis Supporting Fire Protection Design Requirements**

This [section](#) of the referenced DCD is incorporated by reference with no departures or supplements.