



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

April 22, 2002
NOC-AE-02001307
10CFR50.71

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
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South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Fire Hazards Analysis Report, Amendment 14

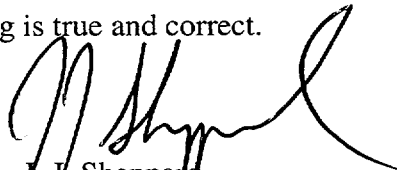
Pursuant to 10CFR50.71, STP Nuclear Operating Company submits Amendment 14 to the South Texas Project Fire Hazards Analysis Report (FHAR) as Attachment 2. Attachment 1 includes a summary of changes in FHAR Amendment 14 that were made under the provisions of 10CFR50.59 or in accordance with the guidance of NEI 98-03 and NEI 96-07.

Copies of the Fire Hazards Analysis Report, Amendment 14 are provided in accordance with the distribution requirements of 10CFR50.4 (b) (1). A copy of this transmittal is attached to each Fire Hazards Analysis Report, Amendment 14.

If you should have any questions on this submittal, please contact Mr. S.M. Head at (361) 972-7136 or me at (361) 972-8757.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 4/22/02.


J. J. Sheppard
Vice President
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MKJ

Attachment 1: Fire Hazards Analysis Report Summary of Changes Made Under the Provisions of 10CFR50.59 or in accordance with the Guidance of NEI 96-07 and NEI 98-03

Attachment 2: Fire Hazards Analysis Report, Amendment 14

A006

cc:

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Note: The above copies distributed without Attachments except as noted by the asterisk.

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STP Final Hazards Analysis Report – Amendment 14)

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CN-2599

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ATTACHMENT 1

Attachment 1

Fire Hazards Analysis Report Summary of Changes Made Under the Provisions of 10CFR50.59 or in accordance with the Guidance of NEI 96-07 and NEI 98-03

Chapter 2, "Safe Shutdown Assessment"

1. Removed 150-ton chillers from safe shutdown equipment list.
[Table 2-2] (CN-2599)

Chapter 3, "Fire Hazards Analysis"

1. Clarified note to state the use of maximum permitted load (MPL) as described in calculation. [3.1.2] (CN-2598) {NEI 96-07}
2. Revised the document number for safe shutdown cable listings in all Fire Zone Tables. (CN-2598) {NEI 96-07}
3. Revised wording to remove the word "all" and replace with "some". [G.4] (CN-2598) {NEI 96-07}

Chapter 4, "Comparison APCSB 9.5-1 Appendix A and 10CFR50 Appendix R"

1. Incorporated information regarding the Human Interface Module. (CN-2205)
[Table 4.2]

ATTACHMENT 2

TABLE 2-2
SAFE SHUTDOWN EQUIPMENT LIST
(Note 2)

Fire Area	Room Number	System	Equipment Tag Number	Elec/Proc. Train (Note 1)	Equipment Description	Function	Current Amendment Number
02Z128	067	CC	3R201NPA101A	A / A	CCW Pump 1A	CCW Support	3
02Z128	067	HM	3V101VAH001	A / A	CCW Pump 1A Supplementary Cooler	HVAC Support	3
02Z128	067	HM	3V101VAH019	A / A	Essential Chiller Area AHU-Train A	HVAC Support	6
02Z128	067	CH	3V111VCH004	A / A	EAB Essential Chiller #4	HVAC Support	6
02Z128	067	CH	3V111ZLP620	A / A	HVAC Chiller Panel #1	HVAC Support	7
02Z128	067	CH	3V111ZLP623	A / A	HVAC Chiller Panel #1	HVAC Support	7
02Z128	067	CH	3V111VPA004	A / A	Essential Chilled Water Pump Train A	HVAC Support	3
03Z031	201	HE	3V111VFN031	B / B	Elect. Penet. Area HVAC Emerg. Fan	HVAC Support	3
03Z031	201	HE	3V111VAH005	B / B	Pen. Space HVAC Emerg. AHU	HVAC Support	7
03Z031	201	PF	N1PFEMC01B5	N / *	480 VAC Non Vital MCC 1B5	Electrical Distribution	6
03Z031	201	PN	N1PNERR113	N / *	Auxiliary Relay Rack 113	Electrical Distribution	6
03Z031	201	PN	N1PNERR115	N / *	Auxiliary Relay Rack 115	Electrical Distribution	6
03Z038		HE	A1HEFV9673	A / A	Control Room Exhaust Isolation Damper	HVAC Support	
03Z038		HE	A1HEFV9674	B / B	Control Room Exhaust Isolation Damper	HVAC Support	
03Z038		HE	A1HEFY9673	A / A	Solenoid for FV9673	HVAC Support	
03Z038		HE	A1HEFY9674	B / B	Solenoid for FV9674	HVAC Support	
03Z038		HE	A1HESC9673	A / A	Limit Switch for FV9673	HVAC Support	
03Z038		HE	A1HESC9674	B / B	Limit Switch for FV9674	HVAC Support	
03Z039	206	HE	3V111VAH008	B / B	Control Room Envelope AHU 11B & Supply Fan	HVAC Support	7
03Z039	206	HE	B1HEFY9697	B / B	Control Room Return Air Control Damper (FV-9697)	HVAC Support	6

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TABLE 2-2

SAFE SHUTDOWN EQUIPMENT LIST
(Note 2)

Fire Area	Room Number	System	Equipment Tag Number	Elec/Proc. Train (Note 1)	Equipment Description	Function	Current Amendment Number
27Z127	048	CV	2R171XCV0102	* / *	Isol. Valve for PCV0135	RCS Letdown	7
27Z127	048	CV	2R171XCV0103	* / *	Isol. Valve for PCV0135	RCS Letdown	7
27Z127	226	CV	2R171TCV0193	* / *	CVCS Flow Valve to RHT	RCS Letdown	7
27Z127	079	CV	2R171TCV0225	* / *	PDP Recirc. Manual Valve	RCS Charging	8
27Z127	079	CV	2R171TCV0255	* / *	Loop Charging Bypass Valve	RCS Charging	8
27Z127	079A	CV	A1CV-FCV-0205	A / *	Charging Flow Control Vlv.	RCS Boration	3
27Z127	079A	CV	A1CV-FY-0205	A / *	Charging Flow Control (FCV-205) Sol. Vlv.	RCS Boration	3
27Z127	079A	CV	A1CV-MOV-8377B	A / *	Chg. Pmp. 1B Isol. Vlv.	RCS Boration	3
27Z127	079B	CV	C1CV-MOV-8348 (Deleted)		-	-	7
27Z127	079B	CV	C1CV-MOV-8377A	C / *	Chg. Pmp. 1A Isol. Vlv.	RCS Boration	3
27Z127	050	CV	2R171-XCV-0170	* / *	Excess and Seal Letdown Return to VCT Isolation Valve	RCS Letdown	4
27Z127	050	CV	2R171-XCV-0171	* / *	Excess and Seal Letdown Return to Charging Pump Suction	RCS Letdown	4
27Z127	050	CV	2R171-XCV-0693	* / *	Excess and Seal Letdown Return to VCT Isolation Valve	RCS Letdown	6
27Z127	046	CV	N1CVPCV0135	* / *	Outlet of Letdown HX	RCS Letdown	5
27Z127	046	CV	N1CVPY3164	N / *	I to P for PCV0135	RCS Letdown	5
27Z127	037	CV	2R171NPD101A	N / *	PDCP Suction Stabilizer	RCS Boration	7
27Z127	046	CC	N1CC-TV-4494	* / *	CCW Outlet from Letdown HX 1A	CCW Support	5
27Z127	046	CC	N1CC-TY-4494	* / *	Cntrlr. for TV4494	CCW Support	5
27Z127	079C	CV	C1CVHCV0218	C / *	Seal Injection ISO Vlv	RCS Charging	5
27Z127	079C	CV	C1CVHY3171A	C / *	Solenoid for C1CVHCV0218	RCS Charging	5
27Z127	079A	CV	2R171XCV0254A	* / *	Loop Charging Isolation Valve	RCS Charging	8
27Z139	067F	CC	3R201NPA101C	C / C	CCW Pump 1C	CCW Support	3
27Z139	067F	HM	3V101VAH003	C / C	CCW Pump 1C Supplementary Cooler	HVAC Support	3
27Z139	067F	HM	3V101VAH021	C / C	Essential Chiller Area AHU	HVAC Support	3

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TABLE 2-2

SAFE SHUTDOWN EQUIPMENT LIST
(Note 2)

Fire Area	Room Number	System	Equipment Tag Number	Elec/Proc. Train (Note 1)	Equipment Description	Function	Current Amendment Number
27Z142	106	CC	B1CC-MOV-0644	B / B	CCW HX 1B Bypass Vlv.	CCW Support	3
27Z142	106	CC	B1CC-MOV-0645	B / B	CCW HX 1B Disch. Vlv.	CCW Support	3
27Z142	106	CC	C1CC-MOV-0646	C / C	CCW HX 1C Bypass Valve	CCW Support	3
27Z142	106	CC	C1CC-MOV-0647	C / C	CCW HX 1C Disch. Valve	CCW Support	3
29Z140	067E	CC	3R201NPA101B	B / B	CCW Pump 1B	CCW Support	3
29Z140	067E	HM	3V101VAH002	B / B	CCW Pump 1B Supplementary Cooler	HVAC Support	3
29Z140	067E	HM	3V101VAH020	B / B	Essential Chiller Area AHU	HVAC Support	3
29Z140	067E	CH	3V111VCH005	B / B	Essential Chiller Train B	HVAC Support	3
29Z140	067E	CH	3V111VPA005	B / B	Essential Chilled Water Pump Train B	HVAC Support	3
29Z140	067E	CH	3V111ZLP621	B / B	HVAC Chiller Panel #2	HVAC Support	7
29Z140	067E	CH	3V111ZLP624	B / B	HVAC Chiller Panel #2	HVAC Support	7
31Z047	302	PN	3E121ETCB01 (Deleted)		-	-	6
31Z047	302	PN	3E121ETCB02 (Deleted)		-	-	6
31Z047	302	PN	3E121ETCB03 (Deleted)		-	-	6
31Z047	302	PN	3E121ETCB04 (Deleted)		-	-	6
31Z047	302	PN	3E121ETCB05 (Deleted)		-	-	6
32Z122	324B	CC	3R201NTS101A	* / *	CCW Surge Tank	CCW Support	3
35Z310	305	HF	9V121VAH001 (Deleted)		-	-	6
35Z310	305	AP	9Z541ZLP665 (Deleted)		-	-	6
35Z310	305	AP	9Z541ZLP666 (Deleted)		-	-	6

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3.0 FIRE HAZARDS ANALYSIS

3.1 INTRODUCTION

This section contains the Fire Hazards Analysis (FHA) and the details that form the basis for it. The FHA, in the form of a narrative and table, is the data base supporting the conclusion that applicable requirements of Appendix R have been met. This data is presented on a building basis, with each fire area within the building being discussed. Where appropriate, the fire areas are further divided into fire zones and a table provided for each zone. Fire zone locations and descriptions are summarized in Table 3.1-1.

Fire area drawings, depicting the items noted in the discussion as well as the physical plant layout, are included at the end of Chapter 3.0.

It should be noted that although the analysis is written in terms of Unit 1, both Units 1 and 2 are essentially identical and therefore the analysis is applicable to both. The Unit 2 design differences will be evaluated.

3.1.1 Methodology

The methodology used in performing this FHA for STP is discussed in Section 1.6 of this report.

3.1.2 Fire Area and Zone Tables

The description of fire areas and fire zones is done in terms of the items defined below:

- Equipment - Equipment required for safe shutdown is listed in Table 2-2, the Safe Shutdown Equipment List, which includes the area in which the equipment is located.
- Circuits - A reference as to where a listing of the safe-shutdown circuits in the fire area or zone is to be found.
- Combustibles - In-situ and potential transient combustibles are considered for the fire loading in the fire area or zone. For transient combustibles, this is an estimate which is not to be used for Fire Protection Program limitations. The combustible loading of a fire zone is considered negligible when it is calculated to be less than 5 minutes in duration.

NOTE: The combustible load values shown are based on: a) actual cable loading as tabulated in Plant Data Management System (PDMS), b) permanent plant fire loading of the area, c) a specified amount of transient fire load as allowed by administration limits; and are bounded by the construction of the fire barrier. This value is used

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in the combustible calculation as maximum permitted load (MPL).

- Detection. Type of fire detection system(s) in the fire area or zone. A summary of detection-zone locations and descriptions is presented in Table 3.1-2.
- Suppression Type of fire suppression system(s) applicable to the fire area or zone.
- Radioactive/
Toxic Material Existence of any radioactive or toxic material in the fire area or zone. When no quantities of toxic material is given, the toxic material is PVC in negligible quantities.
- Communications Identifies whether or not emergency communication is located in the room.
- Emergency
Lightning Identifies whether or not emergency lighting (in the form of 8-hour battery packs) is located in the room.
- Redundant Safe -
Shutdown Assessment Identifies the conclusions derived from the Appendix R, Section III.G evaluation.

3.1.3 Spurious Actuation, Common Power Source and Common Enclosure

3.1.3.1 Spurious Actuation

The consequences of spurious operation of equipment have been mitigated by protection of cables or by manual compensating operator action. These operator actions include verification of the equipment status, de-energizing electrical equipment and manually repositioning valves. Specifics of the mitigation provided are listed in report no. 5A019MFP001 titled "Post Fire Operator Actions and Equipment Protection Requirements".

3.1.3.2 Common Power Source

During the Appendix R, Section III.G evaluation, potential associated circuits (using common power supplies) that may affect safe shutdown were identified. Where the breakers or fuses of these circuits do not coordinate these circuits are listed in document 5E019EL002 "Safe Shutdown Circuit Listing" as associated circuits of concern (category ASC). Where coordination is required in a specific fire area, the coordination in that fire area has been analyzed. Where coordination does not exist in the specific fire area, the appropriate cables are protected.

The STP evaluation of multiple high impedance cable failures concluded that in no case could simultaneous multiple high impedance faults cause loss of power to any circuit not directly affected by the fire.

FIRE ZONE TABLE 1-1

FIRE AREA NO. 1 FIRE ZONE Z032

RELAY CABINET AREA OF CONTROL ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 4,110 ft²)

Detection: Ionization

Suppression: Automatic Total Flooding Halon System
Hand-Held Carbon Dioxide
Hand-Held Pressurized Water
Hose Cabinet Outside Zone: HC-4
Hose Reel Outside Zone: HR-6

Rad/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y

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FIRE ZONE TABLE 2-1

FIRE AREA NO. 2 FIRE ZONE Z001

CHANNEL II DISTRIBUTION ROOM

See Table 2-2 for Safe Shutdown List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 584 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-1 and HC-3

Hand-held Carbon Dioxide

Rad/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 2-2

FIRE AREA NO. 2 FIRE ZONE Z002

CHANNEL II BATTERY ROOM

SEE TABLE 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 442 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-1

Hand-held Carbon Dioxide

Rad/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 2-3

FIRE AREA NO. 2 FIRE ZONE Z003

CHANNEL I DISTRIBUTION ROOM

See Table 2-2 for Safe Shutdown List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 533 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-1

Hand-held Carbon Dioxide

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

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FIRE ZONE TABLE 2-4

FIRE AREA NO. 2 FIRE ZONE Z004

ESF SWITCHGEAR ROOM, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 3397 ft²)

DETECTION: Ionization

Suppression: Manual Hose Cabinets Outside Zone: HC-7 and HC-3
Hand-Held Carbon Dioxide
Manually actuated, dry pipe, close head, special hazard
Sprinkler System for cable trays

Rad/Toxic Material: N/N

Communications: Y

Emergency Lighting: Y

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FIRE ZONE TABLE 2-5

FIRE AREA NO. 2 FIRE ZONE Z005

HVAC EQUIPMENT ROOM, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles *

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 1276 ft²)

Detection: Ionization for Area

Thermal for Charcoal Filter

Suppression: Hose Cabinet Outside Zone: HC-12

Hand-held Carbon Dioxide

Deluge System for Charcoal Filter

HVAC EQUIPMENT ROOM, TRAIN A

Rad/Toxic Material: Y/N

Communications: N

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit

** Fire zone Z005 includes the Control Room Cleanup Unit (Charcoal Filter).

This Cleanup Unit has been assigned the fire detection zone Z086.

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FIRE ZONE TABLE 2-6
FIRE AREA NO. 2 FIRE ZONE Z006

ELECTRICAL PENETRATION AREA, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 5190 ft²)

Detection: Ionization

Suppression: Hose Reel inside Zone: HR-5

Hand-held carbon dioxide

Automatic wet pipe sprinkler system at ceiling level.

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

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FIRE ZONE TABLE 2-7

FIRE AREA NO. 2 FIRE ZONE Z010

POWER CABLE VAULT, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List.

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 7455 ft²)

Detection: Ionization

Suppression: Automatic Sprinklers, at Ceiling Level

Hose Reels Inside Zone: HR-1 and HR-9

Hand-held Dry Chemical

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

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FIRE ZONE TABLE 2-8

FIRE AREA NO. 2 FIRE ZONE Z013

EQUIPMENT ROOM, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 485 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-9

Hose Cabinet Outside Zone: HC-12

Hand-held Carbon Dioxide

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

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FIRE ZONE TABLE 2-9

FIRE AREA NO. 2 FIRE ZONE Z016

CORRIDOR AT ELEVATION 10'

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 2868 ft²)

Detection: Ionization

Suppression: Hose Reels Outside Zone: HR-9 and HR-5

Hose Cabinets Inside Zone: HC-1, HC-3, HC-7, and HC-12

Hand-held Carbon Dioxide

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

CN-2598

FIRE ZONE TABLE 2-11

FIRE AREA NO. 2 FIRE ZONE Z027

ELECTRICAL CHASE, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List.

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 162 ft²)

Detection: Ionization

Suppression: Hose Reel outside Zone: HR-10
 Hand-held carbon dioxide
 Automatic wet pipe sprinkler system at ceiling level.

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 2-13

FIRE AREA NO. 2 FIRE ZONE Z029

EMERGENCY SWITCHGEAR AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits*

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 0

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-27
Hand-held Carbon Dioxide

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 2-14

FIRE AREA NO. 2 FIRE ZONE Z030

NONRADIOACTIVE PIPE CHASE

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles *

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 0

Detection: None

Suppression: Hose Cabinet Outside Zone: HC-12
Hand-held Carbon Dioxide

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: N

* All electrical cables in this fire zone are installed in conduit.

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FIRE ZONE TABLE 2-16

FIRE AREA NO. 2 FIRE ZONE Z084

CHANNEL I BATTERY ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles *

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 515 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-1
Hand-held Carbon Dioxide

Rad/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 2-17

FIRE AREA NO. 2 FIRE ZONE Z111ELECTRICAL CHASE, TRAIN A

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 147 ft²)

Detection: Ionization

Suppression: Hose Cabinet outside Zone: HC-19
Automatic wet pipe sprinkler system at ceiling level.

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 2-18

FIRE AREA NO. 2 FIRE ZONE Z128

CCW PUMP & CHILLER, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 1860 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-15
Hose Cabinet Outside Zone: HC-16
Hand-held Dry Chemical

Rad/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

The minimum and maximum separation distances between the A via and the C Train vias in the overhead is approximately 43' and 78' respectively. The intervening potential combustibles include the suspended ceiling and cables within cable trays. The ceiling material is noncombustible, and some trays contain covers, minimizing the potential of a fire spreading from cable tray to cable tray. Additionally, administrative controls exist which prevent the storage of permanent or transient combustibles in this zone. Periodic surveillances verify the area is free of other combustible material. Since Zone 03Z147 is protected by automatic suppression and detection systems above and below the suspended ceiling, and the subject trays are always more than 20' apart, with negligible intervening combustibles, it can be reasonably concluded that a fire in the area of 03Z147 affecting the C train cable trays will not affect the subject A train cable tray and vice versa.

FIRE ZONE TABLE 3-1

FIRE AREA NO. 3 FIRE ZONE Z031

ELECTRICAL PENETRATION AREA, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 5194 ft²)

Detection: Ionization

Suppression: Hose Reel Inside Zone: HR-6
Hand-Held Carbon Dioxide
Automatic Wet Pipe Sprinkler at ceiling level

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 3-2

FIRE AREA NO. 3 FIRE ZONE Z036

CORRIDOR & OFFICES, ELEVATION 35'

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None.	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 2951 ft²)

Detection: Ionization (detectors are located below suspended ceilings)

Suppression: Hose Cabinets Inside Zone: HC-4, HC-8, HC-10, and HC-13
Hand-Held Carbon Dioxide

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

CN-2598

FIRE ZONE TABLE 3-4

FIRE AREA NO. 3 FIRE ZONE Z039

HVAC EQUIPMENT ROOM, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles *

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 967 ft²)

Detection: Ionization for area

Thermal for charcoal filters

Suppression: Deluge System for Charcoal Filters
Hose Cabinets Outside Zone: HC-10 and HC-13
Hand-Held C

Communications:

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 3-5

FIRE AREA NO. 3 FIRE ZONE Z042

ESF SWITCHGEAR ROOM, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 3471 ft²)

Detection: Ionization

Suppression: Hose Cabinets outside Zone: HC-8, HC-4 and HC-13

Hose Reel outside Zone: HR-40

Hand-held carbon dioxide

Manually actuated dry pipe, closed head, special hazard sprinkler system.

Rad/Toxic Material: N/N

Communications: Y

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 3-6

FIRE AREA NO. 3 FIRE ZONE Z043

CHANNEL III BATTERY & DISTRIBUTION ROOMS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 841 ft²)

Detection: Ionization

Suppression: Hose Reels Inside Zone: HR-40 and HR-39
Hose Cabinet Inside Zone: HC-2
Hand-Held Carbon Dioxide

Rad/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

CN-2598

STP FHAR

FIRE ZONE TABLE 3-7

FIRE AREA NO. 3 FIRE ZONE Z045*

PLANT COMPUTER ROOM, SUB-FLOOR AREA & ASSOCIATED BATTERY ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1911 ft²)

Detection: Ionization detectors are located above and below suspended ceiling and below the raised access floor

Suppression: Automatic Halon System, (Solely for property protection)
Hose Cabinet Outside Zone: HC-4
Hand-Held Carbon Dioxide

Rad/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y

* Includes Detection Zone Z009 in sub-floor area of computer room

CN-2598

STP FHAR

FIRE ZONE TABLE 3-8

FIRE AREA NO. 3 FIRE ZONE Z115

RADWASTE CONTROL & COUNTING ROOMS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

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Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1466 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone:
Hose Cabinet Inside Zone: HR-21
Hand-Held Carbon Dioxide

Rad/Toxic Material: Y/Y

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 3-9

FIRE AREA NO. 3 FIRE ZONE Z116

NONRADIOACTIVE PIPING PENETRATION AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 4241 ft²)

Detection: Ionization

Suppression: Hose Reels inside Zone: HR-21 and HR-23
Hand-Held dry chemical
Automatic sprinkler system at ceiling level.

Rad/Toxic Material: N/Y

Communication: Y

Emergency Lighting: Y

FIRE ZONE TABLE 3-11

FIRE AREA NO. 3 FIRE ZONE Z119

VOLUME CONTROL TANK & VALVE ROOMS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles *

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft²(Area: 626 ft²)

Detection: None

Suppression: Hose Reel Outside Zone: HR-32
Hose Cabinet Outside Zone: HC-18
Hand-held Dry Chemical

Rad/Toxic Material: Y/N

Communications: N

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 3-12

FIRE AREA NO. 3 FIRE ZONE Z130

SERVICE AREAS & BRS RECYCLE HOLDUP TANKS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 10,389 ft²)

SERVICE AREAS & BRS RECYCLE HOLDUP TANKS

Detection: Ionization: areas other than Charcoal Filter
Thermal: Charcoal Filter

Suppression: Automatic wet pipe sprinkler system: Laundry Room
(solely for property protection)
Deluge System: Charcoal Filter for Sample Room and Radio. Chem. Lab (Solely for property protection)
Hose Reel outside Zone: HR-23
Hose Reels inside Zone: HR-17, HR-31, and HR-32
Hose Cabinets inside Zone: HC-29 and HC-18
Hand-held dry chemical extinguisher

Rad/Toxic Material: Y/Y

Communications: Y (Located in hallways only)

Emergency Lighting: Y (Located in hallways only)

CN-2598

FIRE ZONE TABLE 3-14

FIRE AREA NO. 3 FIRE ZONE Z147

LOCKER ROOMS & CLOTHING ISSUE

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles Below Suspended Ceiling

See Calculation MC-5800 for listing of combustibles.

Combustible Load Below Susp. Ceiling: 80,000 Btu/ft²
(Area: 8,642 ft²)

Combustibles Above Suspended Ceiling

See Calculation MC-5800 for listing of combustibles.

Combustible Load Above Susp. Ceiling: 120,000 Btu/ft²
(Area: 8,066 ft²)

Detection: Ionization Above and Below Suspended Ceiling
Line-type Above Susp. Ceiling

Suppression: Wet Pipe Sprinkler System Below Suspended Ceiling
Wet Pipe Sprinkler Coverage Above Suspended Ceiling
Hose Cabinets and Reels Outside Zone: HC-18, HR-17 and HR-32
Hose Cabinets and Reels Inside Zone: HC-20, and HC-23
Hand-held Dry Chemicals

Rad/Toxic Material: Y/Y

Communications: Y (located in hallways only)

Emergency Lighting: Y (located in hallways only)

FIRE ZONE TABLE 4-1

FIRE AREA NO. 4 FIRE ZONE Z046

ELECTRICAL PENETRATION AREA, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 5303 ft²)

Detection: Ionization

Suppression: Hose Cabinet outside Zone: HC-6
Hose Reel inside Zone: HR-7
Hand-Held carbon dioxide
Automatic wet pipe sprinkler system at ceiling level.

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 4-2

FIRE AREA NO. 4 FIRE ZONE Z049

HVAC EQUIPMENT ROOM, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles *

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 1058 ft²)

Detection: Ionization for Area
Thermal for Charcoal Filters

Suppression: Hand-Held Carbon Dioxide
Deluge System for Charcoal Filter

HVAC EQUIPMENT ROOM, TRAIN C

Radioactive/Toxic Material: Y/N

Communications: Y

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 4-3

FIRE AREA NO. 4 FIRE ZONE Z050

CORRIDOR, OFFICES, CAS BATTERY ROOM AND ELECTRICAL EQUIPMENT

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 3424 ft²)

Detection: Ionization

Suppression: Hose Reels Outside Zone: HR-11 and HR-7
Hose Cabinets Inside Zone: HC-5, HC-6 and HC-9
Automatic Wet Pipe Sprinkler at ceiling level cover area(s) of concentrated cabling only)

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 4-4

FIRE AREA NO. 4 FIRE ZONE Z052

ESF SWITCHGEAR ROOM, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

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Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 3524 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-5 and HC-9
Hand-Held Carbon Dioxide
Manually operated, dry pipe, closed head, special hazard Sprinkler System for cable trays

Radioactive/Toxic Material: N/N

Communications: Y

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 4-5

FIRE AREA NO. 4 FIRE ZONE Z053

CHANNEL IV BATTERY AND DISTRIBUTION ROOMS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 1030 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-5 and HC-6
Hand-Held Carbon Dioxide

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

CN-2598

FIRE ZONE TABLE 4-6

FIRE AREA NO. 4 FIRE ZONE Z054

MOTOR GENERATOR ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 639 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-5
Hand-Held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 4-8

FIRE AREA NO. 4 FIRE ZONE Z056

CONTROL ROD DRIVE ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 1103 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-6
Hand-Held Carbon Dioxide

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 5-1

FIRE AREA NO. 5 FIRE ZONE Z014

STAIRWELL NO. 1 AND ELEVATOR NO. 4

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 251 ft²)

Detection: Ionization (Elevator equipment room only)

Suppression: Hose Reels Outside Zone: HR-9, HR-10, HR-11 and HR-38
Hose Cabinets Outside Zone: HC-12, HC-27, HC-10 and HC-13
Hand-held Carbon Dioxide and Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

*All electrical cable in this fire zone is installed in conduit.

STP FHAR

FIRE ZONE TABLE 6-5

FIRE AREA NO. 6 FIRE ZONE Z085

HVAC EQUIPMENT

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 1968 ft²)

Detection: Ionization

Suppression: Hose Reel Inside Zone: HR-38

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

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STP FHAR

FIRE ZONE TABLE 6-6

FIRE AREA NO. 6 FIRE ZONE Z097

HVAC EQUIPMENT

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 1995 ft²)

Detection: None

Suppression: None

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 7-1

FIRE AREA NO. 7 FIRE ZONE Z071

AUXILIARY SHUTDOWN AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 950 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-12
Hand-Held Carbon Dioxide

Radioactive/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y

FIRE ZONE TABLE 8-1

FIRE AREA NO. 8 FIRE ZONE Z072

QDPS ROOM, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles *

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 214 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-7 and HC-12
Hand-held Carbon Dioxide

Radioactive/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 9-1

FIRE AREA NO. 9 FIRE ZONE Z073

QDPS ROOM, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles *

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/FT² (Area: 171 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-7 and HC-12
Hand-held Carbon Dioxide

Radioactive/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 18-1

FIRE AREA NO. 18 FIRE ZONE Z020

ELECTRICAL CHASE, TRAIN A

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 75 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-12, HC-13, and HC-9
Hand-held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 20-1

FIRE AREA NO. 20 FIRE ZONE Z129

NONRADIOACTIVE PIPE CHASE

See Table 2-2 for Safe Shutdown Equipment List

NONRADIOACTIVE PIPE CHASE

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 2336 ft²)

Detection: Ionization

Suppression: Hose Reels and Cabinets outside Zone: HR-16, HC-19, & HC-17 Hand-held dry chemical
Automatic wet pipe sprinkler system at ceiling level.

Radioactive/Toxic Material: N/N

Communications: Y

Emergency Lighting: Y

CN-2598

STP FHAR

FIRE ZONE TABLE 22-2

FIRE AREA NO. 22 FIRE ZONE Z132

MCC ROOM, 480 VOLT

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 1113 ft²)

Detection: Ionization

Suppression: Hose Reels Outside Zone: HR-15 and HR-19
Hand-Held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

CN-2598

FIRE ZONE TABLE 22-3

FIRE AREA NO. 22 FIRE ZONE Z133

PIPE PENETRATION ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 5553 ft²)

Detection: Ionization

Suppression: Automatic Sprinkler System at ceiling level
Hose Reel Inside Zone: HR-19
Hand-Held Dry Chemical

Radioactive/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y

FIRE ZONE TABLE 24-1

FIRE AREA NO. 24 FIRE ZONE Z102

CORRIDOR AND NONRADIOACTIVE PIPE CHASE

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 4814 ft²)

Detection: Ionization

Suppression: Wet pipe sprinkler system (partial coverage 1 area)
Hose Cabinets and Reels Inside Zone: HC-30, HR-15, HR-30
Hand-Held Dry Chemical

Radioactive/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y (Room/Corridor 067B only)

Area wide automatic fire suppression has not been provided for the following reasons:

1. A single safe-shutdown path per Appendix R requirements will be available following a fire in this zone.
2. Manual operator action can be taken to mitigate the consequences of SOE.
3. Detection system and manual fire suppression equipment are provided in this zone.
4. The concentrated cable area in this zone is provided with wet pipe sprinkler system.
5. Other areas are easily accessible for manual fire fighting.
6. The fire detection will provide alarm and indication locally and in the control room for implementing immediate Fire Brigade response.
7. IEEE 383 cables and R.G. 1.75 separation criteria were utilized in cable layout design.

STP FHAR

FIRE ZONE TABLE 25-1

FIRE AREA NO. 25 FIRE ZONE Z124

CVCS CENTRIFUGAL CHARGING PUMP 1B AND VALVE ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 20,000 Btu/ft² (Area: 456 ft²)

Detection: Ionization

Suppression: Hose Reels Outside Zone: HR-15 and HR-30

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit.

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FIRE ZONE TABLE 26-1

FIRE AREA NO. 26 FIRE ZONE Z123

CVCS CENTRIFUGAL CHARGING PUMP 1A AND VALVE ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 20,000 Btu/ft² (Area: 486 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-16
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

* All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 27-1

FIRE AREA NO. 27 FIRE ZONE Z108

BORIC ACID TANK AND PUMP ROOMS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles *

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 1,041 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-16
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: Y (Room 018 only)

Emergency Lighting: Y

* All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 27-2

FIRE AREA NO. 27 FIRE ZONE Z109

ELECTRICAL CHASE, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List.

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 200 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-17 and HC-19
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 27-3

FIRE AREA NO. 27 FIRE ZONE Z127

CVCS EQUIPMENT ROOMS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 3,698 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-16 and HC-28

Radioactive/Toxic Material: N/N

Communications: N

CVCS EQUIPMENT ROOMS

Emergency Lighting: N

* All electrical cables in this fire zone are installed in conduit.

NOTE 1: Powered by TSC Diesel

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STP FHAR

FIRE ZONE TABLE 27-4

FIRE AREA NO. 27 FIRE ZONE Z138

CORRIDOR AND PIPE AND HVAC CHASE

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 2,650 ft²)

Detection: Ionization

Suppression: Hose Cabinets Inside Zone: HC-16 and HC-28
Hand-held Dry Chemical
Automatic Wet Pipe Sprinkler at Ceiling Level (over area(s) of concentrated cabling only).

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

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STP FHAR

FIRE ZONE TABLE 27-5

FIRE AREA NO. 27 FIRE ZONE Z139

CCW PUMP AND CHILLER, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 2,930 ft²)

Detection: Ionization

Suppression: Hose Reels and Cabinets Outside Zone: HR-15 and HC-16
Hand-held Dry Chemical
Automatic Wet Pipe Sprinkler at Ceiling Level over Concentrated
Cabling Only.

Radioactive/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y

Automatic fire suppression has not been provided for the following reasons:

1. A single safe-shutdown path per Appendix R requirements will be available following a fire in this zone.
2. Detection system and manual fire suppression equipment are provided in this zone.
3. All areas of this zone are easily accessible for manual fire fighting.
4. The fire detection will provide alarm and indication locally and in the control room for implementing immediate Fire Brigade response.
5. IEEE 383 cables and R.G. 1.75 separation criteria were utilized in cable layout design.

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FIRE ZONE TABLE 27-7

FIRE AREA NO. 27 FIRE ZONE Z142

CCW HEAT EXCHANGERS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 5,082 ft²)

Detection: Ionization

Suppression: Hose Cabinets Inside Zone: HC-17 and HC-19
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: Y

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 29-1

FIRE AREA NO. 29 FIRE ZONE Z140

CCW PUMP AND CHILLER, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 1496 ft²)

Detection: Ionization

Suppression: Hose Cabinets and Reels Outside Zone: HC-16 and HR-15
Hand-held Dry Chemical

Radioactive/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y

CN-2598

STP FHAR

FIRE ZONE TABLE 30-1

FIRE AREA NO. 30 FIRE ZONE Z144

MEAB STAIRWELL NO. 2 AND ELEVATOR FOYER

See Table 2-2 for Safe Shutdown Equipment List.

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 120,000 Btu/ft² (Area: 476 ft²)

Detection: Ionization

Suppression: Hose Reels and Cabinets outside Zone: HR-17
Hand-held dry chemical
Automatic wet pipe sprinkler system at ceiling level.

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

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FIRE ZONE TABLE 31-1

FIRE AREA NO. 31 FIRE ZONE Z047

CABLE SPREADING/POWER CABLE AREA AND CABLING AREA, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 5,945 ft²)

Detection: Ionization

Suppression: Automatic Sprinkler at Ceiling Level
Hose Reel Outside Area: HR-7 (For Room 301 B Only)
Hose Reels Inside Area: HR-3 and HR-11

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 32-1

FIRE AREA NO. 32 FIRE ZONE Z103

REACTOR MAKEUP WATER AND LASR STORAGE TANK AND PUMP ROOMS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles:*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 2640 ft²)

Detection: Ionization

Suppression: Hose Reel Inside Zone: HR-36
Hand-Held Dry Chemical

Radioactive/Toxic Material: Y/N

Communications: N

Emergency Lighting: N

*All electrical cables in this fire zone are installed in conduit.

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FIRE ZONE TABLE 32-2

FIRE AREA NO. 32 FIRE ZONE Z104

REFUELING WATER STORAGE TANK ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 3614 ft²)

Detection: Ionization

Suppression: Hose Reel Inside Zone: HR-36 and HR-23
Hand-Held Dry Chemical

Radioactive/Toxic Material: Y/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 32-4

FIRE AREA NO. 32 FIRE ZONE Z114

RADIOACTIVE AND NONRADIOACTIVE PIPE CHASES

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles:*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 17,676 ft²)

Detection: Ionization

Suppression: Hose Reel Inside Zone: HR-22
Hose Cabinet Inside Zone: HC-31
Hand-Held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 32-6

FIRE AREA NO. 32 FIRE ZONE Z122

HVAC INTAKE AND HOT MACHINE SHOP

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 14,927 ft²)

Detection: Ionization

Suppression: Hose Reels inside Zone: HR-13, HR-18, HR-14, and HR-33
Hose Reel outside Zone: HR-24
Hand-held dry chemical and Hand-held carbon dioxide outside Zone
Automatic wet pipe sprinkler system over concentrated cabling.

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

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FIRE ZONE TABLE 32-7

FIRE AREA NO. 32 FIRE ZONE Z126

480 V NON-ESF SWITCHGEAR

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 1,376 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-13
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 32-8

FIRE AREA NO. 32 FIRE ZONE Z131

FILTER AND DEMINERALIZER AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles:*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 8,355 ft²)

Detection: None

Suppression: Hose Reel Outside Zone: HR-32 and HR-33
Hose Reel Inside Zone: HR-34 and HR-35
Hand-Held Dry Chemical

Radioactive/Toxic Material: Y/Y

Communications: N

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.
(Unit 2 Only)

FIRE ZONE TABLE 32-9

FIRE AREA NO. 32 FIRE ZONE Z134

NON RADIOACTIVE PIPE CHASE

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 2622 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-20
Hose Reel Inside Zone: HR-16
Hand-held Dry Chemical
Automatic wet pipe sprinkler system over concentrated cabling.

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 32-10

FIRE AREA NO. 32 FIRE ZONE Z135

RADIOACTIVE PIPE PENETRATION AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles:*

See Calculation MC-5800 for listing of Combustibles.

Combustible Load: 0

Detection: Ionization

Suppression: Hose Reel Inside Zone: HR-20, HR-22
Hose Reel Outside Zone: HR-16
Hand-Held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: Y

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 32-11

FIRE AREA NO. 32 FIRE ZONE Z145

PERSONNEL ACCESS TO CONTAINMENT

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 3624 ft²)

Detection: Ionization

Suppression: Automatic Sprinkler System at ceiling level over concentrated cabling (i.e. partial coverage)

Hose Reel Outside Zone: HR-25

Hose Reel Inside Zone: HR-24

Hand-held Carbon Dioxide and Dry Chemical extinguishers

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

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FIRE ZONE TABLE 32-12

FIRE AREA NO. 32 FIRE ZONE Z146

HVAC OUTSIDE EXHAUST EQUIPMENT

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 7053 ft²)

Detection: Ionization

Suppression: Hose Reels Inside Zone: HR-25, HR-26, HR-27, HR-28, and HR-29
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 33-1

FIRE AREA NO. 33 FIRE ZONE Z018

CABLING AREA TRAIN B

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	N	N	N

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 2921 ft²)

Detection: Ionization

Suppression: Wet Pipe Sprinkler System (Partial Coverage)
Hose Cabinet Outside Zone: HC-4
Hand-Held Carbon Dioxide
Hose Reels in Zone: HR39 and HR40

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 34-1

FIRE AREA NO. 34 FIRE ZONE Z060

CABLING AREA, TRAIN C

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 2921 ft²)

Detection: Ionization

Suppression: Wet Pipe Sprinkler System (Partial Coverage)
Hose Reel Inside Zone: HR-8
Hand-held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

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FIRE ZONE TABLE 64-1

FIRE AREA NO. 64 FIRE ZONE Z026

CABLE SPREADING ROOM, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 7204 ft²)

Detection: Ionization

Suppression: Automatic Sprinklers at Ceiling Level
Hose Reels HR-2 and HR-10,
Hand-Held Carbon Dioxide

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 65-1

FIRE AREA NO. 65 FIRE ZONE Z057

CABLE SPREAD/POWER CABLE AREA, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 5484 ft²)

Detection: Ionization

Suppression: Automatic Sprinklers at Ceiling Level
Hose Reels Inside Zone: HR-4 and HR-12
Hand-Held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

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FIRE ZONE TABLE 66-1

FIRE AREA NO. 66 FIRE ZONE Z025CABLING AREA, TRAIN A

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 2836 ft²)

Detection: Ionization

Suppression: Hose Reel inside Zone HR-37
Hand-Held carbon dioxide
Automatic wet pipe sprinkler system at ceiling level.

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 67-1

FIRE AREA NO. 67 FIRE ZONE Z058

TSC OPERATIONS, RECORDS STORAGE, AND MISCELLANEOUS AREAS

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 3698 ft²)

Detection: Ionization

Suppression: Hose Cabinets Inside Zone: HC-11 and HC-15
Hand-Held Dry Chemical
Automatic Wet Pipe System at Ceiling Level

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: N

STP FHAR

FIRE ZONE TABLE 68-1

FIRE AREA NO. 68 FIRE ZONE Z011

ELECTRICAL CHASE, TRAIN B

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 240,000 Btu/ft² (Area: 84 ft²)

Detection: Ionization

Suppression: Hose Reels Outside Zone: HR-1, HR-3, and HR-4
Hand-held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 69-1

FIRE AREA NO. 69 FIRE ZONE Z008

ELECTRICAL CHASE, TRAIN C

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 240,000 Btu/ft² (Area: 82 ft²)

Detection: Ionization

Suppression: Hose Reels Outside Zone: HR-5 and HR-6
Hand-Held Carbon Dioxide
Automatic Wet Pipe Sprinkler System at Ceiling Level

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 70-1

FIRE AREA NO. 70 FIRE ZONE Z023

ELECTRICAL CHASE, BOP

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 885,000 Btu/ft² (Area: 76 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-12, HC-13, and HC-9
Hand-Held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 70-2

FIRE AREA NO. 70 FIRE ZONE Z068

ELECTRICAL CHASE, TRAIN C

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 350,000 Btu/ft² (Area: 76 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-12, HC-10, and HC-9
Hand-Held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 71-1

FIRE AREA NO. 71 FIRE ZONE Z007

ELECTRICAL CHASE, TRAIN B

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 53 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-5
Hand-Held Carbon Dioxide
Automatic Wet Pipe Sprinkler System at Ceiling Level

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 72-1

FIRE AREA NO. 72 FIRE ZONE Z024

ELECTRICAL CHASE, TRAIN B

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 52 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-3
Hand-Held Carbon Dioxide

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 73-1

FIRE AREA NO. 73 FIRE ZONE Z070

ELECTRICAL CHASE, TRAIN B

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 350,000 Btu/ft² (Area: 75 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-9 and HC-13
Hand-Held Carbon Dioxide

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 74-1

FIRE AREA NO. 74 FIRE ZONE Z012

ELECTRICAL CHASE, TRAIN C

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 240,000 Btu/ft² (Area: 90 ft²)

Detection: Ionization

Suppression: Hose Reels Outside Zone: HR-1, HR-3, HR-4, and HR-12
Hand-Held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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STP FHAR

FIRE ZONE TABLE 75-1

FIRE AREA NO. 75 FIRE ZONE Z112

ELECTRICAL CHASE, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 240,000 Btu/ft² (Area: 775 ft²)

Detection: Ionization

Suppression: Hose Reels outside Zone: HC-18, HR-21, and HR-16
Hand-held dry chemical extinguisher
Automatic wet pipe sprinkler system at ceiling level.

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 76-1

FIRE AREA NO. 76 FIRE ZONE Z017

QDPS, ROOM TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 (Area: 214 ft²)

Detection: Ionization

Suppression: Hose Cabinets Outside Zone: HC-12 and HC-7
Hand-held Carbon Dioxide

Rad/Toxic Material: N/Y

Communications: Y

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 77-1

FIRE AREA NO. 77 FIRE ZONE Z093

HVAC AND ELECTRICAL ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft² (Area 4,200 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-31
Hand-held Dry Chemical
Deluge System (charcoal filter) (solely for property protection)

Rad/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

CN-2598

STP FHAR

FIRE ZONE TABLE 77-2

FIRE AREA NO. 77 FIRE ZONE Z096

MECHANICAL ELECTRICAL AUXILIARY BUILDING ROOF

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft² (Area 14,884 ft²)

Detection: None

Suppression: Hose Cabinets Outside Zone: HC-31
Hand-held Dry Chemical

Rad/Toxic Material: N/N

Communications: N

CN-2598

FIRE ZONE TABLE 35-1

FIRE AREA NO. 35 FIRE ZONE Z301

FHB ELEVATOR NO. 6

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 124 ft²)

Detection: Ionization

Suppression: Hose Cabinet Outside Zone: HC-9
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

* All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 35-6

FIRE AREA NO. 35 FIRE ZONE Z310

FUEL TRANSFER AND LOADING AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft²* (Area: 14,265 ft²)

Detection: Optical Detectors

Suppression: Hose Cabinets Inside Zone: HC-4, HC-7, HC-8, and HC-9
Hose Reels Inside Zone: HR-3 and HR-5
Hose Reel Outside Zone: HR-4
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

Note 1: Powered by TSC diesel

* During Refueling

FIRE ZONE TABLE 35-7

FIRE AREA NO. 35 FIRE ZONE Z311

SPENT FUEL POOL AUXILIARY AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 3,000 ft²)

Detection: Ionization

Suppression: Hose Cabinet Inside Zone: HC-6
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 36-1

FIRE AREA NO. 36 FIRE ZONE Z500

DIESEL GENERATOR NO. 13 TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 2,800 ft²)

Detection: Spot-Type Thermal

Suppression: Preaction Sprinklers
Hose Reels Outside Zone: HR-5, HR-6
Hand-Held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: Y

Emergency Lighting: Y

CN-2598

FIRE ZONE TABLE 37-1

FIRE AREA NO. 37 FIRE ZONE Z501

DIESEL GENERATOR NO. 12, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 2,800 ft²)

Detection: Spot-type Thermal

Suppression: Preaction Sprinklers
Hose Reels Outside Zone: HR-3 and HR-4
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: Y

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 38-1

FIRE AREA NO. 38 FIRE ZONE Z502

DIESEL GENERATOR NO. 11, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 192,000 Btu/ft² (Area: 2,800 ft²)

Detection: Spot-type Thermal

Suppression: Preaction Sprinklers
Hose Reel Outside Zone: HR-1 and HR-2
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: Y

Emergency Lighting: Y

CN-2598

STP FHAR

FIRE ZONE TABLE 42-1

FIRE AREA NO. 42 FIRE ZONE Z506

DIESEL GENERATOR STAIRWELL, TRAIN C

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 190 ft²)

Detection: Ionization

Suppression: Hose Reel Inside Zone: HR-6
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

CN-2598

FIRE ZONE TABLE 43-1

FIRE AREA NO. 43 FIRE ZONE Z507DIESEL GENERATOR STAIRWELL, TRAIN B

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 190 ft²)

Detection: Ionization

Suppression: Hose Reel Inside Zone: HR-4
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

CN-2598

FIRE ZONE TABLE 44-1

FIRE AREA NO. 44 FIRE ZONE Z508DIESEL GENERATOR STAIRWELL, TRAIN A

<u>Equipment</u>	<u>Safe Shutdown</u>	<u>Safety Related</u>	<u>Train</u>
None	None	None	None

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 190 ft²)

Detection: Ionization

Suppression: Hose Reel Inside Zone: HR-2
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

FIRE ZONE TABLE 45-1

FIRE AREA NO. 45 FIRE ZONE Z509

HVAC FAN/ENTRY, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 0

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-6
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 46-1

FIRE AREA NO. 46 FIRE ZONE Z510

HVAC FAN/ENTRY, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 0

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-4
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 47-1

FIRE AREA NO. 47 FIRE ZONE Z511

HVAC FAN/ENTRY, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 0

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-2
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 48-1

FIRE AREA NO. 48 FIRE ZONE Z403

AUXILIARY FEEDWATER PUMP, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023
“Appendix R Evaluation.”

CN-2598

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 439 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-2
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 48-2

FIRE AREA NO. 48 FIRE ZONE Z406

MAIN STEAM & FEEDWATER PENETRATION AREA, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023
"Appendix R Evaluation."

CN-2598

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 673 ft²)

Detection: Smoke

Suppression: Hose Reel Inside Zone: HR-6
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communication: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 49-1

FIRE AREA NO. 49 FIRE ZONE Z402

AUXILIARY FEEDWATER PUMP, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023
“Appendix R Evaluation.”

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 416 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-2
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communication: N

Emergency Lighting: Y

CN-2598

STP FHAR

FIRE ZONE TABLE 49-2

FIRE AREA NO. 49 FIRE ZONE Z407

MAIN STEAM & FEEDWATER PENETRATION AREA, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023
“Appendix R Evaluation.”

CN-2598

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 650 ft²)

Detection: Smoke

Suppression: Hose Reel Inside Zone: HR-5
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communication: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 50-1

FIRE AREA NO. 50 FIRE ZONE Z401

AUXILIARY FEEDWATER PUMP, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023
“Appendix R Evaluation.”

CN-2598

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 416 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-1
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communication: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 50-2

FIRE AREA NO. 50 FIRE ZONE Z408

MAIN STEAM AND FEEDWATER PENETRATION AREA, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023
“Appendix R Evaluation.”

CN-2598

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 650 ft²)

Detection: Smoke

Suppression: Hose Reel Inside Zone: HR-4
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communication: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 51-1

FIRE AREA NO. 51 FIRE ZONE Z400

TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP, TRAIN D

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023
“Appendix R Evaluation.”

CN-2598

Combustibles*

See Calculation MC-5800 for list of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 439 ft²)

Detection: Ionization

Suppression: Hose Reel Outside Zone: HR-1
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communication: N

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 51-2

FIRE AREA NO. 51 FIRE ZONE Z405

STEAM GENERATOR RECIRCULATING PUMP ROOM

See Table 2-2 for Safe Shutdown Equipment List

CIRCUITS

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023
“Appendix R Evaluation.”

CN-2598

Combustibles*

See Calculation MC-5800 for list of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 1170 ft²)

Detection: Ionization

Suppression: Hose Reels Inside Zone: HR-1, HR-2
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communication: N

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 51-3

FIRE AREA NO. 51 FIRE ZONE Z409

MAIN STEAM AND FEEDWATER PENETRATION AREA, TRAIN D

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023
“Appendix R Evaluation.”

CN-2598

Combustibles*

See Calculation MC-5800 for list of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 673 ft²)

Detection: Smoke

Suppression: Hose Reel Inside Zone: HR-3
Hand-held Dry Chemical

Radioactive/Toxic Material: N/N

Communication: N

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 53-1

FIRE AREA NO. 53 FIRE ZONE Z600

ESSENTIAL COOLING WATER (ECW) PUMP ROOM, TRAIN A (Unit 1)

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 20,000 Btu/ft² (Area: 834 ft²)

Detection: Thermal, spot-type

Suppression: Hand-Held Carbon Dioxide
Yard Fire Hydrant

Radioactive/Toxic Material: N/Y

*All electrical cables in this fire zone are installed in conduit.

STP FHAR

FIRE ZONE TABLE 54-1

FIRE AREA NO. 54 FIRE ZONE Z601

ESSENTIAL COOLING WATER (ECW) PUMP ROOM, TRAIN B (Unit 1)

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 20,000 Btu/ft² (Area: 834 ft²)

Detection: Thermal, spot-type

Suppression: Hand-Held Carbon Dioxide
Yard Fire Hydrant

Radioactive/Toxic Material: N/Y

*All electrical cables in this fire zone are installed in conduit.

CN-2598

FIRE ZONE TABLE 55-1

FIRE AREA NO. 55 FIRE ZONE Z602

ESSENTIAL COOLING WATER (ECW) PUMP ROOM, TRAIN C (Unit 1)

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 20,000 Btu/ft² (Area: 834 ft²)

Detection: Thermal, spot-type

Suppression: Hand-Held Carbon Dioxide
Yard Fire Hydrant

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

*All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 56-1

FIRE AREA NO. 56 FIRE ZONE Z603

ESSENTIAL COOLING WATER (ECW) PUMP ROOM, TRAIN C (Unit 2)

SEE TABLE 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 20,000 Btu/ft² (Area: 834 ft²)

Detection: Thermal, spot-type

Suppression: Hand-Held Carbon Dioxide
Yard Fire Hydrant

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 57-1

FIRE AREA NO. 57 FIRE ZONE Z604

ESSENTIAL COOLING WATER (ECW) PUMP ROOM, TRAIN B (Unit 2)

SEE TABLE 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 20,000 Btu/ft² (Area: 834 ft²)

Detection: Thermal, spot-type

Suppression: Hand-Held Carbon Dioxide
Yard Fire Hydrant

Radioactive/Toxic Material: N/Y

Communication: N

Emergency Lighting: Y

STP FHAR

FIRE ZONE TABLE 58-1

FIRE AREA NO. 58 FIRE ZONE Z605

ESSENTIAL COOLING WATER (ECW) PUMP ROOM, TRAIN A (Unit 2)

SEE TABLE 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

CN-2598

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 20,000 Btu/ft² (Area: 834 ft²)

Detection: Thermal, spot-type

Suppression: Hand-Held Carbon Dioxide
Yard Fire Hydrant

Radioactive/Toxic Material: N/Y

Communications: N

STP FHAR

FIRE ZONE TABLE 63-1

FIRE AREA NO. 63 FIRE ZONE Z201

ELEVATOR NO. 3

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 77 ft²)

Detection: None

Suppression: Hose Cabinets Outside Zone: HC-3, HC-13, and HC-17

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

CN-2598

FIRE ZONE TABLE 63-2

FIRE AREA NO. 63 FIRE ZONE Z202

CENTRAL REACTOR AREA (UPPER)

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 13,629 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Hose Cabinets Inside Zone: HC-23, HC-24, HC-25, and HC-26

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-4

FIRE AREA NO. 63 FIRE ZONE Z204

NW PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1814 ft²)

Detection: Line-Type Thermal (Cable Tray)
Thermistor (Carbon Filter)

Suppression: Hose Cabinets Inside Zone: HC-19
Deluge System (Charcoal Filter) (solely for property protection)

Radioactive/Toxic Material: Y/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-5

FIRE AREA NO. 63 FIRE ZONE Z205

NE PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 2061 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Hose Cabinet Inside Zone: HC-20

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-6

FIRE AREA NO. 63 FIRE ZONE Z206

SE PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1613 ft²)

Detection: Line-Type Thermal (Cable Tray)
Thermistor (Carbon Filter)

Suppression: Hose Cabinet Inside Zone: HC-21
Deluge System (Charcoal Filter) (solely for property protection)

Radioactive/Toxic Material: Y/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-7

FIRE AREA NO. 63 FIRE ZONE Z207

SW PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1802 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Special Hazard Spray System
Hose Cabinet Inside Zone: HC-18

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

STP FHAR

FIRE ZONE TABLE 63-8

FIRE AREA NO. 63 FIRE ZONE Z208

NW PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1814 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Special Hazard Spray System
Hose Cabinet Inside Zone: HC-15

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

CN-2598

FIRE ZONE TABLE 63-9

FIRE AREA NO. 63 FIRE ZONE Z209

NE PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1869 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Special Hazard Spray System
Hose Cabinet Inside Zone: HC-16

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-10

FIRE AREA NO. 63 FIRE ZONE Z210

SE PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1761 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Special Hazard Spray System
Hose Cabinet Inside Zone: HC-17

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-11

FIRE AREA NO. 63 FIRE ZONE Z211

SW PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1877 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Hose Cabinet Inside Zone: HC-14

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

STP FHAR

FIRE ZONE TABLE 63-12

FIRE AREA NO. 63 FIRE ZONE Z212

NW PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 2110 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Hose Cabinet Inside Zone: HC-10

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 63-13

FIRE AREA NO. 63 FIRE ZONE Z213

NE PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 2110 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Hose Cabinet Inside Zone: HC-11

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-14

FIRE AREA NO. 63 FIRE ZONE Z214

SE PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 2,049 ft²)

Detection: Line-Type Thermal (Cable Tray)

Suppression: Hose Cabinet Inside Zone: HC-13

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 63-15

FIRE AREA NO. 63 FIRE ZONE Z215

SW PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1,995 ft²)

Detection: None.

Suppression: Hose Cabinet Inside Zone: HC-4

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 63-16

FIRE AREA NO. 63 FIRE ZONE Z216

NW PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 1,973 ft²)

Detection: None.

Suppression: Hose Cabinets Inside Zone: HC-1 and HC-5

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-17

FIRE AREA NO. 63 FIRE ZONE Z217

SE PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 2,056 ft²)

Detection: None.

Suppression: Hose Cabinet Outside Zone: HC-5
Hose Cabinet Inside Zone: HC-2

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-18

FIRE AREA NO. 63 FIRE ZONE Z218

SE PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

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Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 160,000 Btu/ft² (Area: 2,047 ft²)

Detection: None.

Suppression: Hose Cabinets Inside Zone: HC-3 and HC-7

Radioactive/Toxic Material: Y/Y

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 63-19

FIRE AREA NO. 63 FIRE ZONE Z219

CENTRAL REACTOR AREA (LOWER)

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 7,181 ft²)

Detection: None.

Suppression: Hose Cabinets Outside Zone: HC-1 and HC-4

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 63-20

FIRE AREA NO. 63 FIRE ZONE Z220

STEAM GENERATOR 1D

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 918 ft²)

Detection: Stop-Type Thermal
(RC Pumps)

Suppression: Hose Cabinet Outside Zone: HC-9

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

FIRE ZONE TABLE 63-21

FIRE AREA NO. 63 FIRE ZONE Z221

STEAM GENERATOR 1A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 918 ft²)

Detection: Stop-Type Thermal
(RC Pumps)

Suppression: Hose Cabinet Inside Zone: HC-9

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 63-22

FIRE AREA NO. 63 FIRE ZONE Z222

STEAM GENERATOR 1B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 918 ft²)

Detection: Stop-Type Thermal
(RC Pumps)

Suppression: Hose Cabinets Outside Zone: HC-11 and HC-12

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 63-23

FIRE AREA NO. 63 FIRE ZONE Z223

STEAM GENERATOR 1C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 80,000 Btu/ft² (Area: 918 ft²)

Detection: Stop-Type Thermal
(RC Pumps)

Suppression: Hose Cabinet Inside Zone: HC-12

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 63-24

FIRE AREA NO. 63 FIRE ZONE Z224

PRESSURIZER ENCLOSURE

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for listing of combustibles.

Combustible Load: 40,000 Btu/Ft² (Area: 279 ft²)

Detection: None

Suppression: Hose Cabinet Outside Zone: HC-23 and HC-26

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

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FIRE ZONE TABLE 63-25

FIRE AREA NO. 63 FIRE ZONE Z225

SE PERIPHERAL AREA

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for list of combustibles.

Combustible Load: 0

Detection: None

Suppression: Hose Cabinet Outside Zone: HC-13

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

*All electrical cables in this fire zone are installed in conduit.

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FIRE ZONE TABLE 63-26

FIRE AREA NO. 63 FIRE ZONE Z226

RHR CUBICLE, TRAIN A

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for list of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 187 ft²)

Detection: None

Suppression: Hose Cabinet Inside Zone: HC-15

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

*All electrical cables in this fire zone are installed in conduit.

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FIRE ZONE TABLE 63-27

FIRE AREA NO. 63 FIRE ZONE Z227

RHR CUBICLE, TRAIN B

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for list of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 187 ft²)

Detection: None

Suppression: Hose Cabinets Outside Zone: HC-15 and HC-16

Radioactive/Toxic Material: N/Y

Communications: N

Emergency Lighting: N

*All electrical cables in this fire zone are installed in conduit.

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FIRE ZONE TABLE 63-28

FIRE AREA NO. 63 FIRE ZONE Z228

RHR CUBICLE, TRAIN C

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for list of combustibles.

Combustible Load: 40,000 Btu/ft² (Area: 265 ft²)

Detection: None

Suppression: Hose Cabinet Outside Zone: HC-17

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

*All electrical cables in this fire zone are installed in conduit.

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FIRE ZONE TABLE 63-29

FIRE AREA NO. 63 FIRE ZONE Z229

REGENERATIVE HEAT EXCHANGER ENCLOSURE

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles*

See Calculation MC-5800 for list of combustibles.

Combustible Load: 0

Detection: None

Suppression: Hose Cabinet Outside Zone: HC-16

Radioactive/Toxic Material: N/N

Communications: N

Emergency Lighting: N

*All electrical cables in this fire zone are installed in conduit.

FIRE ZONE TABLE 78-1

FIRE AREA NO. 78 FIRE ZONE Z703

BOP DIESEL GENERATOR ROOM

See Table 2-2 for Safe Shutdown Equipment List

Circuits

A listing of safe shutdown cables routed through this zone is contained in Calculation no. 5A011MC6023 "Appendix R Evaluation."

Combustibles

See Calculation MC-5800 for list of combustibles.

Combustible Load: 192,000 Btu/Ft² (Area: 576 ft²)

Detection: Thermal spot-type

Suppression: Hose Reel Outside Zone: HR-P-17
Hand Held Dry Chemical
Hand Held Carbon Dioxide

Radioactive/Toxic Material: N/N

Communications: (LATER)

4.2 COMPARISON TO APPENDIX A OF CPCSB 9.5-1

APPENDIX A OF APCSB 9.5-1

STP POSITION

E. Fire Detection and Suppression

E.1. Fire Detection

- E.1.a. Fire detection systems should as a minimum comply with NFPA 72D, "Standard for the Installation, Maintenance and Use Proprietary Protective Signaling Systems."

- E.1.b. Fire detection systems should give audible and visual alarm and annunciation in the control room. Local audible alarms should also sound at the location of the fire.

E. Fire Detection and Suppression

E.1. Fire Detection

- E.1.a. Detection systems are provided for areas of safety related buildings that contain or present a fire exposure to safe shutdown systems. In some areas of the plant, detectors were not installed due to the presence of high radiation levels, low combustible loadings, etc. These areas can be organized into nine groups. The groups and basis for deciding that plant safety is not enhanced by their addition are listed in table 4.2
2. The fire detectors are located in accordance with NFPA 72-E, 1978. These detection systems comply with the requirements as defined in NFPA 72 D, 1975, except for: 1) The connection wiring between each local addressable module associated with either a "spot" thermal detector or manually activated station. This is not considered to be a significant deviation since each local addressable module is located inside a common enclosure with either the "spot" thermal detector or manually activated station, utilizing connections less than 12" in length. For further details describing this deviation, see FHAR section 3.10.4.
- E.1.b. Fire alarm bells and systems trouble alarm horns provide audible alarms at the local control panels that provide the fire protection system control for each fire hazard. These local control panels are normally located in the vicinity of the fire hazards that they protect. Fire protection alarms are annunciated in the control room, with an audible tone and visually displayed on a display screen located within the control room.

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