PSE&G Public Service Electric and Gas Company

80 Park Plaza, Newark, NJ 07101 / 201 430-8217 MAILING ADDRESS / P.O. Box 570, Newark, NJ 07101

Robert L. Mittl General Manager
Nuclear Assurance and Regulation

September 13, 1984

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, MD 20814

Attention: Mr. Albert Schwencer, Chief
Licensing Branch 2
Division of Licensing

Gentlemen:

HOPE CREEK GENERATING STATION
DOCKET NO. 50-354
FIRE PROTECTION

Enclosed for your review is revised FSAR Appendix 9A and FSAR Table 9A-1 and Tables 9A-11 through 9A-252 for the HCGS.

These revisions will be incorporated into FSAR Amendment 8. Should you have any questions in this regard, please contact us.

Very truly yours,

R Mittl

Attachment: HCGS FSAR Appendix 9A, Table 9A-1, Tables 9A-11 through 9A-252

C D. W. Wagner
USNRC Licensing Project Manager

W. H. Bateman
USNRC Senior Resident Inspector

INSERT attached pages 1 through 33

RHR) is used to fill up the reactor until the steam lines are flooded. With one or more SRVs open, water flows out the relief valve and back to the suppression pool. RHR suppression pool cooling mode cools the suppression pool as before. This mode is only used when a fire adversely affects the RHR shutdown cooling mode from both divisions.

9A.6.0 EXEMPTION REQUESTS

Per the provisions of 10 CFR 50, Appendix R and Generic Letter 81-12, HCGS requests exemption from the requirements of Appendix R, Section III.G for the following fire areas: reactor building; lower control equipment room area, encompassing the following fire zones, 5302, 5303 and 5316; main control room area, encompassing the following fire zones, 5502 through 5514, 5520, 5521, 5522, 5523 and 5525; upper control equipment room area, fire zone 5605; HVAC equipment room area, fire zone 5620; HVAC equipment room area, fire zone 5704; and the intake structure area. An exemption from Section III.G.2 requirements is requested for: reactor building area, HVAC area 5704, and the intake structure area. An exemption from Section III.G.3 requirements is requested for: main control room area, upper and lower control equipment room areas, and HVAC equipment room areas 5620 and 5704. The exemption request is based on specific fire hazard analysis and effects on safe shutdown discussed below. The reactor building would be segmented into smaller fire areas which separate redundant safe shutdown divisions were it not for the specific deviations discussed below concerning the fire zone boundaries. Refer to the Fire Hazard Analysis Tabulation sheets of specific fire zones for additional information.

9A.6.1 Non-U.L. Rated Pressure Tight Doors and Panels in 3-Hour Fire Barriers

9A.6.1.a The doors in the following 3-hour fire barriers are pressure tight doors not qualified as 3-hour fire barriers by UL: Between HPCI room 4111 and RCIC room 4110; between SACS room 4309 and SACS room 4307; between the auxiliary building cable tray room 3314 and the reactor building MCC room 4310; between core spray room 4118 and 4101; between CRD room 4328 and the equipment airlock; the torus compartment doors zone 4102; and the main steam tunnel room 4316.

These doors have been fabricated in accordance with Underwriters Laboratories (UL) approved procedures for 3-hour-fire-rated doors. Certificates from the manufacturer are on file that

verify the construction of the doors. They are not labeled because modifications necessary to satisfy pressure loadings are not incorporated into UL procedures. Pressure tight doors are required for overriding safety considerations to assure propet building venting following a high pressure pipe rupture or to contain flooding following a pipe break. Ionization detectors, water hose and portable extinguishers are provided in rooms adjacent to these doors.

Figure 9A-18 shows the outline of the pressure tight door used on HCGS. They are similar to doors accepted by the NRC staff as providing an equivalent level of fire protection to labeled fire doors. The equivalent fire loading in all areas adjacent to the PT doors is less than 30 minutes, except for 34 minutes in the auxiliary building cable tray room (3314). This latter room, however, is separated from the reactor building by two pressure tight doors in series, with an airlock between. See the appropriate fire drawings, Figure 9.5-3, or equipment location drawings, Figure 1.2-18.

9A.6.1.b The equipment access panels in the 3-hour fire barrier between SACS rooms 4309 and 4307 is a pressure tight panel and is not qualified as a 3-hour fire barrier by UL. The panel is fabricated out of heavy gage steel. The outline of the panel is shown on Figure 9A-17. Adjacent to the panel, on both sides, are areas of greater than 20 feet of clear space without combustibles. The panel is 10' x 22', and does not extent up to the ceiling. The 6 feet between the top of the panel and the ceiling is a reinforced concrete 3-hour-rated fire barrier. This 6-foot section is a hot gas barrier and retards the effects of the fire from affecting the redundant division. Fire loading on either side of the barrier is low; 16 minutes and 8 minutes in 4309 and 4307, respectively. The pressure tight (leak tight) panel is required for overriding safety considerations of flood protection. Ionization type detectors, water hose and portable extinguishers cover both areas.

The combination of clear space, gas trap, low fire loading, detection and fire brigade action assures that one train of equipment necessary to achieve hot shutdown will be free from damage. Any additional modifications to upgrade the access panel would not enhance fire protection safety above that provided by the existing configuration.

9A.6.2 Alternate Shutdown Without Fixed Suppression

9A.6.2.a Auxiliary building control equipment room 5302 contains both divisions of control panels and cable. Figure 9A-19 shows the equipment layout of this room. Alternative shutdown capability via the remote shutdown panel is provided for a fire in this zone. The RSP controls can achieve and maintain hot and subsequent cold shutdown independently from the fire or effects of the fire in zone 5302.

Fire zone 5302 could contain a maximum of 31,368 lbs of cable insulation for a total burning time of 21 minutes. There are no power cables in this zone. The cables are fire retardant qualified per IEEE-383. Zone 5302 in combination with the corridor 5303 define a fire area surrounded by 3-hour fire barriers (walls, ceiling, floor, openings, etc). Both ionization and photoelectric detection are provided for this area. This room is accessible for manual firefighting; the cable trays are above the rows of panels. Suppression can be by water hose, CO_2 hose and/or portable extinguishers. Addition of a fixed suppression system covering the cable tray areas can be detrimental to the solid state logic and may compound a safe shutdown from the main control room (requiring use of the RSP) and therefore result in a decrease in plant safety.

The alternate shutdown capability provides assurance that one train of equipment necessary to achieve hot and subsequent cold shutdown is free of fire damage. The concentration of cable provides only 21 minutes of burning time in an area surrounded by 3 hour fire barriers. Therefore, the addition of a fixed fire suppression system required by III.G.3 will not enhance fire protection safety above that provided by the existing configuration.

9A.6.2.b Auxiliary Building Main Control Room (MCR), fire zone 5509 and 5510, contain both safe shutdown divisions of panels, control cable and instrumentation cable. This area is continuously manned. The safe shutdown cable is not exposed, but is contained below the MCR panels. Transient combustibles are administratively controlled. Alternate shutdown capabilities are provided at the Remote Shutdown Panel. The RSP controls can achieve and maintain hot and subsequent cold shutdown independently from a postulated fire or effects of a fire in the MCR (5510). The MCR is defined by 1-hour and 3-hour fire barrier walls and 3-hour fire barrier floor and ceiling. The in situ combustibles are limited to paper and similar transient materials.

The equivalent burn time is less than 1 minute. The MCR has ionization detection. Detectors are also located in the main console and vertical boards 10C650, 10C651, respectively. Suppression can be handled by portable extinguishers, water hose and/or CO_2 hose.

The alternate shutdown capability provides assurance that one train of equipment necessary to achieve hot and subsequent cold shutdown is free of fire damage. There is not a large quantity of combustibles and the area is continually staffed. Therefore, the addition of a fixed fire suppression system required by III.G.3 will not enhance fire protection safety above that provided by the existing configuration.

9A.6.2.c Auxiliary Building Diesel Area, elevation 163'-6", fire zone 5605, is a 1E panel room which contains logic cabinets for the main control room. Figure 9A-20 shows the equipment layout of this room. Both divisions of redundant logic and instrumentation are in panels therein. The panels have less than 20 feet of separation between redundant divisions. All cable are bottom entry. There are no in situ or transient combustibles in this zone. Transient combustibles are administratively controlled.

Alternate shutdown capabilities are provided at the RSP. The RSP controls can achieve and maintain hot and subsequent cold shutdown independently from a postulated fire or effects of a fire in fire zone 5605. This fire zone is completely defined by 3-hour fire barrier walls, floor and ceiling. Both ionization and photoelectric type detection cover this area. Suppression can be handled by portable extinguishers and/or water hose. Addition of a fixed suppression system covering the panels can be detrimental to the solid state logic and may compound a safe shutdown from the main control room (requiring use of the RSP) and therefore result in a decrease in plant safety.

The alternate shutdown capability provides assurance that one train of equipment necessary to achieve hot and subsequent cold shutdown is free of fire damage. There are no combustibles in this area to burn. Therefore, the addition of a fixed fire suppression system required by III.G.3 will not enhance fire protection safety above that provided by the existing configuration.

9A.6.2.d Diesel area, elevation 163'-6", fire zone 5620, contains both divisions of air handling units for the equipment on elevation 163'-6" and their associated control panels (AVH408,

BVH408, AC486 and BC486). The only 1E equipment required for safe shutdown located on elevation 163'-6" are the switchgear room unit coolers (zones 5606 and 5629) and the 1E panels in zone 5605. The switchgear room unit coolers do not rely on AVH408 or BVH408 for cooling. Loss of the MCR 1E panel room is backed up by use of the remote shutdown panel. See deviation 9A.6.2.c.

The air handling units are approximately 14 feet apart and are metal construction. The in situ combustibles are contained in two Division II cable trays. These could contain a maximum of 2257 lbs of insulation or less than 3 minutes of equivalent burn time. Both ionization and photoelectric detection is used in this area and suppression can be by water hose or portable extinguishers. Since the congestion is negligible, the addition of a fixed suppression system will not enhance fire fighting capability.

Assumed loss of both air handling units due to a transient fire will not have an immediate effect on safe shutdown logic or instrumentation in the MCR. If the 1E panel logic is eventually affected by high ambient temperatures, the unaffected instrumentation and/or controls on the RSP can be utilized.

The RSP provides assurance that one train of equipment necessary to achieve hot and subsequent cold shutdown is free of fire damage. There are very few combustibles in this area. Therefore, separation of the equipment or addition of a fixed fire suppression system will not enhance fire protection safety above that provided by the existing configuration.

9A.6.2.e Diesel area, fire zone 5704, elevation 178', contains redundant divisions of safe shutdown equipment. The following redundant safe shutdown equipment are located at elevation 178': All 4 D-G HVAC control panels (C483), both Control Equipment Room air handling units (VH407), and both Control Area chilled water units (chiller K403 and pump P414). See fire drawing Figure 9.5-7 and/or equipment location drawing Figure 1.2-39.

The Air Handling Units AVH407 and BVH407 are enclosed in metal casings, are connected by both HVAC supply and return duct, and are physically separated by 6 ft. Loss of these VH407 units would cause a loss of air conditioning to the Control Room HVAC rooms 5602 and 5630, electrical access area 5501, control equipment mezz. 5403, control equipment room 5302, cable spread room 5202, battery and equipment rooms 5105, 5128, 5102, 5103, 5104, 5126, and corridors 5525, 5404, 5303.

The Diesel Generator HVAC panels provide control and instrumentation for the D-G air handling units at elevation 77' of the diesel area. There is 20 feet of separation between the divisionalized DG HVAC panels B&DC483 and A&CC483 and their associated conduit with no intervening combustibles.

The chillers (K403) supply chilled water to the air handling units in room 5620, the Technical Support Center (TSC) air handling unit and the Remote Shutdown Panel (RSP) room air handling unit. There is 4 ft between chiller skids.

Fire zone 5704 is a very large room, 9300 ft^2, with very low congestion. The maximum in situ cable loading could be 2580 lbs in a metal covered, non-1E, cable tray with an equivalent fire burn time of 1.0 minute. The area is monitored by both ionization and photoelectric detection. Suppression can be by water hose or portable extinguishers. All walls, floor or ceiling are either 3-hour fire barriers or adjacent to the outside. All cable are routed in conduit, except for the small section of non-1E cable tray as stated above. There are no other combustibles on this floor. Transient combustibles are administratively controlled to limit access to this area. There are no maintenance activities which involve more than small quanties of hand held grease or oil lubrication in this area. There are no oil bath lubrication systems which would require transit of oil changes at this elevation.

Conservative assumptions were used in analyzing the effects of a postulated fire on safe shutdown and/or radioactive release.

1) Transient combustibles of sufficient quanity is temporarily stationed there which when ignited could affect equipment on this floor.

2) No fire watch.

3) Off-site power lost or available, whichever is worse.

4) High outside ambient air temperature.

5) Conservative, computer generated, heat transfer calculations.

6) Solid state electronics fail (includes spurious actuation) at their qualification limit of 104°F room temperature.

Based on this, the following summarizes the effects of loss of certain combinations of equipment (based on their proximity to each other).

If a fire disabled both air handling units' power cable, temperature would start to rise and may eventually affect the control equipment room panels. No effect on cabling or use of batteries is postulated since the cable is not temperature sensitive and the batteries will cease to be required after the Diesel Generators start (assuming LOP). The heat load into 5630 is very small and therefore loss of Control Room HVAC is not postulated. Control and instrumentation from the remote shutdown panel will be available to aid the main control room operators. Loss of RSP air handling unit is not postulated since its motor is cooled by itself.

If a fire took out both chillers, it may affect equipment on elevation 163'-6" due to a lack of chilled water to VH408. Depending on seasonal temperatures, this may eventually heat up the 1E panel room (5605), and eventually affect the solid state logic used for main control room instrumentation. Remote Shutdown Panel instrumentation and controls would not be affected for more than 24 hours. This is based on a calculation which assumed total loss of HVAC to the Remote Shutdown Panel room. Since, in this scenario, air flow to the RSP room would not be interrupted, then the actual time limit to reach the qualification limit of 104°F will be longer. This is more than ample time for a safe orderly shutdown. Control Room habitability will not be affected during this period.

A transient fire which affects D-G HVAC Division I panels will eventually affect operation of Division I diesel generators. The same fire is not postulated to affect the Division II panels and subsequently Division II diesel generators since the panels and associated cable are greater than 20 feet apart.

If a fire affected both air handling units and both chillers, the effect would be no different than loss of both chillers as described above.

If the fire were to effect the A&C Diesel Generator HVAC panels and both chiller units, the effect would be the same as loss of both chillers, as described above, except that loss of the RSP HVAC (on the A diesel) is also postulated.

Loss of both air handling units and the Division II D-G HVAC panels would only be a concern on high ambient temperature days. This concern would be for the long-term heat up of the Control Equipment room at elevation 102 and the possible effect on the solid state electronics therein. Major Division I equipment can be controlled from the switchgear room for use in long-term shutdown outside the main control room if this scenario were to come about.

A fire in this area would be of limited severity and duration and the dual detection system provides an early warning system. The probability is very low that an exposure fire of sufficient magnitude to damage redundant safe shutdown divisions could occur prior to response of the fire brigade. The installation of a fixed fire suppression system will not significantly enhance the safe shutdown capability.

9A.6.3 Separation of Redundant Division by Non U.L. Rated Barriers

9A.6.3.a The torus compartment contains both divisions of safe shutdown cable. Rooms on the Southern half of the reactor building elevations 54&77 contain Division II safe shutdown cable and equipment. Rooms on the Northern half of the reactor building elevations 54&77 contain Division I safe shutdown cable and equipment. The penetration sealing through the 3-foot thick wall are 3-hour fire rated; however, the blowout panels, HVAC duct and pressure tight doors are not U.L. fire rated and the ceiling beams are not fireproofed.

The torus compartment consists of a cylindrical room covering elevation 54' to 100' plus four pipeways connected by grating at elevation 102'. The HVAC duct for supply and exhaust to the torus compartment and connecting pipeway fire areas have redundant pressure tight isolation dampers controlled by redundant pipe break detection temperature elements in their respective fire areas. The duct section which includes the dampers and penetration are made of steel pipe. The torus compartment duct penetrations are located as follows: The 26 inch diameter supply penetrates from room 4201 at elevation 95 feet; the 26 inch diameter return penetrates to room 4215 at elevation 86 1/2 feet. The equivalent fire load in 4201 and 4215 is 34 minutes and 31 minutes, respectively. The ceiling is at 99'-9". The elevation 102' pipeway duct penetrations are located below elevation 125.5'. The duct is 12 inch and 14 inch diameter supply with 12 inch diameter return. The equivalent fire load ranges from 37 minutes to 11 minutes. There is ionization detection and water hose or portable extinguishers in all areas which contain the isolation dampers. This pipe ducting, redundant pressure tight isolation dampers and redundant actuation temperature elements required for overriding safety reasons provide a level of fire stop equivalent to the technical requirements of Appendix R.

The four pipeways and the main torus compartment have pressure tight doors the justification for these is given in exemption 9A.6.1.a.

There are pressure relieving blowout panels on the west side of the torus room. These panels are required for overriding safety reasons to protect the RHR, HPCI and RCIC rooms from overpressure due to pipe break. Outline of the 1/4" thick, steel, blowout panels are shown in Figures 9A-15 and 9A-16. These panels are set to relieve at 1/4 psid. There are no redundant safe shutdown cable in the torus compartment which can be reached by a 20-foot diameter fire in either the RHR, HPCI or RCIC rooms. If a fire were to affect both the HPCI and RCIC cabling or valves inside the torus compartment, shutdown method 3 or 4 using ADS and RHR could be used. The panels only open with the higher pressure in the pump room. The blowout panels will fully close (to less than 0.125 inch gap) after the pressure differential decreases to zero. The fire load in the RHR (Div. I), HPCI, RCIC and RHR (Div. II) rooms with blowout panels in them is 28, 20, 9 and 22 minutes, respectively. Ionization detectors are located in these rooms. Water hose or portable extinguishers can be used in these rooms and inside the torus compartment to suppress the fire.

The ceiling above the torus compartment is rated and sealed as a 3-hour fire barrier; however, the exposed beams are not fire-proofed. The fire loading in the torus compartment, fire zone 4102, is very low and zero transient combustibles are expected. Refer to the justification in Section 9A.6.4.a. The overall fire load is less than three minutes.

Because of the wide separation, high ceilings, low in situ fire loading and early fire detection system there is a low probability that an exposure fire can damage redundant safe shutdown equipment prior to the response of the fire brigade.

9A.6.3.b Passageway 4207 separates Division I in 4211/4209 from Division II in 4205. The north wall is 12 inches thick reinforced concrete and has 3-hour fire barrier sealant in the penetrations. Two HVAC ducts penetrate the wall without fire dampers and the door is a pressure tight door, as stated in 9A.6.1.a. This creates a non-U.L. rated fire barrier. Refer to Figure 9.5-2.

The redundant safe shutdown cable is greater than 150 feet apart. Ionization detection is provided and water hose or portable

extinguishers are available for suppression. The equivalent fire load is 16 min (16,850 lb), 64 min (3,300 lbs) and 19 min (7000 lbs) for fire zones 4209/4211, 4207 and 4205, respectively. The 38 x 26 inch duct and the 32 x 16 inch duct penetrate the wall at 87 and 91 foot elevation, respectively. The ceiling is at elevation 100', therefore, there will be a hot gas trap above the duct of greater than seven feet.

This combination of wide separation, low in situ fire loading, gas trap and sealed penetrations in one wall, second unrated wall, and early warning fire detection throughout, provides a low probability that an exposure fire can damage redundant safe shutdown equipment prior to the response of the fire brigade.

9A.6.3.c Elevation 77 of the reactor building, fire zone 4218, contains Division I safe shutdown cable. Fire zone 4201 contains Division II safe shutdown cable. These zones are separated by a 12 inch thick reinforced concrete wall with pipe, conduit and cable tray penetrations sealed for 3-hour fire barriers. The penetrations include a hollow metal core door and two HVAC duct which do not provide a 3-hour fire barrier. There are greater than 30 feet of horizontal distance without intervening combustibles or fire hazards in zone 4201. There are greater than 120 feet horizontal distance plus the wall between the redundant 1E divisions. There are 13,506 lbs (34 min) of combustibles in 4201 and 10,251 lbs (20 min) of combustibles in 4218. Both rooms contain ionization detection, and water hose and portable extinguishers are available for suppression.

The wall penetrations are sealed, therefore, the wall acts like a heat trap. Since the fire loading is low and the distance between 1E cable is great, the existing wall, door and HVAC duct will provide an adequate fire stop. The wall allows time for operator action to safely shut down and time for fire brigade action to suppress the fire before it spreads to the redundant division. Therefore, at least one train of equipment necessary to achieve hot shutdown from the main control room will be free of fire damage. Any additional modifications will not enhance fire protection safety above that provided by the existing condition.

9A.6.3.d Equipment airlock 4323 separates Division I in 4309, 4326 and 4328 from Division II in 4307, 4322 and 4303. The wall adjacent to 4309, 4326 and 4328 has been sealed as a 3-hour fire barrier. However this wall also contains a pressure tight door, as described in 9A.6.1.a, two HVAC ducts without fire damper and a pressure tight equipment access panel. This creates a non-U.L.

rated fire barrier in certain places. Refer to the fire drawing Figure 9.5-3.

The redundant safe shutdown cable are approximately 70 feet apart through two walls and a normally empty equipment airlock. The equivalent fire loading is low, less than 23 min in each room. The equipment airlock is used mostly during shutdown; however, a small amount of combustibles may pass through this zone during routine maintenance. Ionization detection is provided over these areas. Water hose and portable extinguishers are available for suppression.

Because of the wide separation, sealed wall, unrated wall, low in situ fire loading, clear space and early fire detection system, there is low probability that an exposure fire can damage redundant safe shutdown equipment prior to response of the fire brigade. The existing fire protection provided for this area provides a level of safety equivalent to the technical requirements of Section III.G.

9A.6.3.e The ceiling slab at elevation 77', above the RCIC pump room (4110) and RCIC electrical room (4108), has been rated and sealed as a 3-hour fire barrier for the purpose of separating divisionalized fire areas per generic letter 83-33. However, the exposed structural steel beams supporting this slab have not been fireproofed. The Division I safe shutdown cable located in the fire area above 4110 and 4108 are 80 feet away. The equivalent fire load of 4110 and 4108 is 9 and 28 minutes, respectively. Failure of the ceiling/floor slab would not affect redundant safe shutdown equipment. Additional consideration was given to the fact that the commodities already installed and supported from the beams above 4108 and 4110 do not allow space for proper installation of fire proofing material. Since the fire loading is low, separation is large and failure of the beams would not be detrimental, fire proofing the exposed beams would not enchance safety above that already provided.

9A.6.3.f The ceiling/floor slab at elevation 102', between fire zones 4201 and 4301, has been rated and sealed as a 3-hour fire barrier for the purpose of separating divisionalized fire areas, per generic letter 83-33. The exposed structural steel beams supporting this slab have not been fire proofed. Zone 4201 is a Division II fire area. Zone 4301, although it contains a large amount of Division II cable above 4201, is a Division I fire area; the Division II cable in this area can be lost and still safely shut down using Division II safe shutdown equipment. The redundant Division I safe shutdown cable, from that located in

4201, is at the northern most wall of 4310 (there is no wall separating 4301 from 4310). Thus, the separation between fire zones is 60 feet at the closest location and 130 feet between the redundant safe shutdown divisions (Div II at elev. 77' and Div I at elev 102'). Failure of the ceiling/floor slab would not affect redundant safe shutdown equipment. The equivalent fire load of 4201 is 34 minutes, the majority of which is located at the MCC which is not directly under the rated ceiling area. Additional consideration was given to the fact that the commodities already installed and supported from the beams do not allow space for proper installation of fire proofing material.

Since the fire loading is low, separation is large, failure of the beams would not be detrimental and an early fire detection system is installed in these areas, there is a low probability that an exposure fire can damage redundant safe shutdown equipment prior to the response of the fire brigade.

9A.6.3.g The slab at elevation 102', between fire zones 4209 and 4307, has been rated and sealed as a 3-hour fire barrier for the purpose of separating divisionalized fire areas, per generic letter 83-33. The exposed structural steel beams supporting this slab have not been fire proofed. The Division I safe shutdown cable, located in zone 4211, is 80 feet away horizontally from the ceiling supporting zone 4307. (Fire zone 4211 is adjacent to fire zone 4209 without separating wall). Fire zone 4307 contains Division II Safety Auxiliary Cooling system pumps and heat exchangers. The equivalent fire load in 4209 is 16 minutes. The slab is constructed of reinforced concrete, 30 inches thick. Since the fire load is low, there is wide separation between divisions, the floor slab is thick, the slab does not directly separate redundant safe shutdown divisions and the ionization detectors provide an early fire detection system, there is a low probability that an exposure fire can damage redundant safe shutdown equipment prior to the response of the fire brigade. Additional consideration was also given to the fact that the commodities already installed and supported from the beams in this area do not allow space for proper installation of fire proofing material.

9A.6.4 Separation of Redundant Divisions by Distance

9A.6.4.a The torus compartment, zone 4102, is a cylindrical room with an OD of 82.5 feet and ID of 35.5 feet. It is 46 feet high and contains the suppression pool torus. The torus has a mean diameter of 56.3 feet, its centerline is at 72.3 feet, and it sits 3 feet off the floor. The room also contains pipe, valves

and four channels of 1E cable trays. Refer to FSAR Figures 9.5-1 & 9.5-2.

RHR A&B, CS, HPCI and RCIC cable are routed through this room. The redundant 1E channels are widely separated, however, with a very low overall in situ congestion. At the closest point, redundant division cable trays are greater than 30 feet apart with no intervening combustibles. There are no transient or storage of combustibles in this area. There is very little usable space for storage. Access is via one of the locked doors at elevation 77 feet, a catwalk and stairs. The torus compartment is a high radiation area and thus limited access is allowed. This reduces the availability for using this area for storage.

The cables are fire retardant per IEEE-383 and the majority are located below elevation 72 feet. The high ceiling virtually eliminates the possibility of heat flux affecting redundant cable. The cables are concentrated as follows: Channel C, 1955 lbs, @NNE; Channel A, 1190 lbs, @ENE and 1445 lbs, @WNW; Channel B, 3683 lbs, @ESE; and Channel D, 1275 lbs, @SSE. The equivalent fire load is less than 3 minutes.

Appendix R, Section III.G.2 accepts an automatic suppression system with greater than 20 feet of separation without intervening combustibles plus detection for this situation. HCGS has heat actuated detectors in the trays to detect a challenge to the 1E cable. Water hose stations and portable extinguishers are provided for suppression in the torus compartment.

The high ceilings and physical horizontal separation limit propagation or heat damage to one channel of one division. Therefore, at least one train of equipment necessary to achieve cold shutdown will be free from damage. The level of safety provided in the torus compartment is equivalent to the technical requirements of Section III.G. Additional modifications required to meet III.G.2 will not enhance fire protection safety above that provided by the existing configuration.

9A.6.4.b Elevation 102' of the Reactor Building contains 7 fire zones with redundant safe shutdown cable. Fire zones 4326, 4328 and 4331 contain Division I safe shutdown cable tray. Fire zones 4317, 4320 & 4322 contain Division II safe shutdown cable tray. These areas are separated from each other by room 4315. All seven five zones form one fire area. Refer to fire drawing Figure 9.5-3.

Zone 4315 provides an effective fire barrier separating the different division areas. Zone 4315 is approximately 60 feet long without any intervening combustibles. It has a low ceiling at elevation 119'-4-1/2" versus the high ceiling of the adjacent rooms, 4317 & 4331, at 129'-6". This tends to create a gas trap which precludes hot gases from a fire which might affect one division from affecting the other division as well. Channels C & D are greater than 100 feet apart. Channels A & B, which contain the majority of the safe shutdown cable, are separated by greater than 280 feet around the circumference. The combustibles in this fire area are made up mostly of cable insulation. Fire zone 4331 contains 7773 lbs of insulation (20 minutes), fire zone 4328 contain 8,859 lbs of insulation (22 min.), fire zone 4326 contains 3564 lbs of insulation (23 min.) plus a small amount of assumed wood CRD crates, fire zone 4315 contains zero combustibles, fire zone 4317 contains 3189 lbs of insulation (10 min.), fire zone 4320 contains 3630 lbs of insulation (11 min.) and fire zone 4322 contains 6,266 lbs of insulation (17 min.). Each fire zone has ionization type detectors and water hose and portable extinguishers can be used for suppresion.

Appendix R accepts a 3-hour fire barrier or automatic suppression plus detection over areas containing redundant divisions. The physical configuration of distance between divisions, clear space and heat trap (low ceiling in 4315) creates a fire barrier between redundant divisions. This, in combination with the low fire loading of in situ and transient combustibles plus fire retardant cable per IEEE-383 and detection, provides an effective alternative to Appendix R, Section III.G requirements. The existing configuration ensures that at least one train of equipment necessary to achieve hot and cold shutdown from the main control room will be free of fire damage. Additional modifications would not enhance fire protection safety above that provided by the existing condition.

9A.6.4.c Intake area, elevation 114, contains all four Service Water pump intake traveling screen motors (S501) and both supply fans (V558) for the traveling screen motor area. Refer to Figures 9.5-11, 9.5-12, 1.2-41 Section A-A and 1.2-40. Failure of this equipment does not have an immediate impact on the service water pumps' ability to supply cooling water. All the cable for power, instrumentation and control are routed in conduit and there are no other combustibles in this area. The floor grating will not contain a liquid (flammable or otherwise) and the motors are 5 HP. Access is by ladder, which tends to preclude use of the area for storage. Suppression is by water hose or portable extinguishers. Both ionization and photoelectric detection is provided.

Because of the greater than 25 feet between redundant travelling water screen motors, zero in situ fire loading, and early fire detection system, there is a low probability that an exposure fire can damage redundant safe shutdown equipment prior to response of the fire brigade. Even if all the travelling water screen motors failed, there is an additional low probability that, because of the intake structure location, high debris load will be present to sufficiently plug the screens and affect the ability of the both divisions of service water pumps to deliver the required cooling water flow. Therefore the existing fire protection program for this area provides a level of safety equivalent to the technical requirements of Section II.G.

9A.7.0 WALKDOWN VERIFICATION

A walkdown will be performed by personnel knowledgeable in fire protection and nuclear safety after a significant portion of the HCGS plant features and equipment have been completed. The purpose of this walkdown will be to verify compliance to Appendix R commitments and make necessary enhancements. We expect this walkdown to take place in the year preceding initial fuel loading.

INSERT

9A.6.0 Fire Areas and Exemption Requests

Fire areas for the purposes of comparing HCGS to 10CFR50 Appendix R requirements are defined below. Deviations are noted from the definition of fire area given in generic Letter 83-33. Since HCGS was requested to identify and justify any deviations from Appendix R, where HCGS fire protection program deviates an exemption is requested below. The exemption request is based on specific fire hazard analysis and effects on safe shutdown discussed with each deviation. Additional information for specific fire zones (architectural rooms) within the fire area can be found in the Fire Hazard Analysis Tabulation Sheets, Figures 9A-3 through 9A-252. Refer also to the Fire Protection and Detection Plan drawings for different plant elevations, Figures 9.5-1 through 9.5-12. The information and analysis performed on specific fire zones were combined to create the fire areas under discussion.

The plant is broken down into the following general fire areas, which are further defined in the sections indicated:

a. Turbine Building, 9A.6.1
b. Auxiliary Building, Radwaste Area, 9A.6.2
c. Electrical Access Area Division I, 9A.6.4
d. Electrical Access Area Division II, 9A.6.3
e. Auxiliary Building Control and Diesel Areas, 9A.6.5
f. Reactor Building Drywell, 9A.6.6
g. Reactor Building elevation 132 and above, 9A.6.7
h. Reactor Building Division I, 9A.6.8
i. Reactor Building Division II, 9A.6.9
j. Reactor Building Torus room, 9A.6.10
k. Reactor Building Main Steam Tunnel, 9A.6.11
l. Technical Support Center, 9A.6.12
m. Remote Shutdown Panel Room, 9A.6.13
n. Service Water Intake Division I, 9A.6.14
o. Service Water Intake Division II, 9A.6.15
p. Traveling Screen Motor Room, 9A.6.16
q. Miscellaneous Areas, 9A.6.17

9A.6.1 Turbine Building

The entire turbine building from elevation 54 ft-0 in. to the roof, including the Administrative Facility and the turbine side of the steam tunnel, is one fire area. The architectural room numbers for rooms in this fire area are 1XXX, 1XX, 2XX and unoccupied space. There are no safe shutdown equipment or cable in this fire area. The turbine building fire area is defined by a rated wall adjacent to the auxiliary building and 2-hour and unrated exterior walls elsewhere. The stairwells are part of this fire area.

9A.6.2 Radwaste Area

The radwaste area from elevation 54 ft to the roof, excluding several electrical access areas defined in 9A.6.3 and the remote shutdown panel room defined in 9A.6.13, forms one fire area. The architectural room numbers for rooms in this fire area are 3XXX and 5619. There is safe shutdown cable in rooms 3605, 5619, 3442, 3444, and 3414 of this fire area. This area is defined by fire barriers except as follows:

a. The boundary walls between the Electrical Access Area Division II fire area and this fire area varies from unrated, 1 hour and 2 hour ratings. These walls do not separate redundant safe shutdown equipment.

b. The wall separating Electrical Access Area Division I at elevation 137 from this fire area is not rated.

c. Exterior walls or ceiling are not rated.

9A.6.2.1 Exemption Requests

a. An exemption from Appendix R Section III.G.2 is requested for the two safe shutdown divisions which are separated by a 2 hour fire barrier. Elevation 124, rooms 3442, 3444, and 3414 contains Division II safe shutdown instrument distribution panel cable for SACS, Diesel Generators, 120 Vac, 125 Vdc, 250 Vdc, etc. The electrical access area Division I fire area, room 5501, contains Division I safe shutdown cable for the redundant systems. These two areas are separated by the unrated east wall of 5501 and a two hour fire rated ceiling above elevation 124 of the radwaste building. The radwaste building fire area is partially covered by an automatic sprinkler system. Elevation 137 of the radwaste fire area contains an automatic wet sprinkler throughout most of that elevation and covers the area adjacent to the unrated 3 foot thick wall separating these fire areas. Refer to Figures 9.5-4 and 9.5-5. The cable at elevation 124 is in conduit.

   Based on the two hour fire barrier, coverage by wet sprinklers adjacent to the boundary, and physical distance between safe shutdown divisions, the existing separation provides an equivalent level of safety in excess of the technical requirements of III.G.2.

b. This fire area contains two separate channels of cable in conduit. Channel C at elevation 153 and channel B & D at elevation 124. Since these two areas are two floors apart there are 4 hours of equivalent fire barriers between them. Therefore, no exemption is requested.

9A.6.3 Electrical Access Area Division II

Several corridors between the auxiliary building and reactor building are used as cable access. The corridors carrying the Division II electrical cable are lumped into the electrical access Division II fire area. This fire area is made up of the following architectural rooms covering several floors. Refer to Figures 9.5-1, 2, 3, 4, and 5.

Elevation 54; 3110, 3110-1, and 5106
Elevation 77; 3204 and 5207
Elevation 102; 3301, 3302, 3303, 3304, 3314, 3342, and 5301
Elevation 124; 3425 and 5401
Elevation 130; 5423

Partial coverage by automatic suppression systems are provided in this area over cable concentrations in 3204, 5207, 3425, and 5401. This area is defined by fire barriers except as follows:

a. The boundary walls between the radwaste fire area and this fire area range from unrated, 1-hour, and 2-hour fire barriers. These walls do not separate safe shutdown equipment.

b. The ceiling above room 5423 is an unrated exterior ceiling and does not separate safe shutdown equipment.

c. The south wall of room 5423 is an unrated exterior wall and does not separate safe shutdown equipment.

d. The reactor building personnel access door and equipment access doors between 3314 and 4301 are pressure tight doors not qualified as a 3-hour fire barrier by UL. This wall separates redundant electrical divisions.

e. Two electrical bus ducts penetrate the 3-hour fire barrier between 5301 and 5339 without a fire stop. This wall separates redundant safe shutdown cable.

f. The west wall of 5106 is an unrated exterior wall below grade.

g. The stairwells are separate fire areas surrounded by 2-hour fire barriers.

9A.6.3.1 Exemption Requests

a. An exemption from Appendix R, Section III.G.2 is requested for the non-UL rated pressure tight doors between 3314 and 4301. The doors involved are a single pressure tight personnel access door, which is in series with a second

pressure tight door, and the adjacent double wide pressure tight doors used for equipment access. They are located at approximately colums Md and 22 on Figure 9.5-3.

These doors, and other doors like them on HCGS have been fabricated in accordance with Underwriters Laboratories (UL) approved procedures for 3-hour-fire-rated doors. Certificates from the manufacturer are on file that verify the construction of the doors. They are not labeled because modifications necessary to satisfy pressure loadings are not incorporated into UL procedures. Pressure tight doors are required for overriding safety considerations to assure proper building venting. Ionization detectors, and a water hose are provided in the reactor building. Ionization and photoelectric detectors and a water hose are provided in the electrical corridor.

Figure 9A-18 shows the outline of the pressure tight door used on HCGS. It is similar to doors accepted by the NRC staff as providing an equivalent level of fire protection to labeled fire doors.

The equivalent fire loading for the radwaste building corridor is 38 minutes and for the reactor building corridor is 42 minutes. The reactor building fire zone contains an automatic sprinkler system in the area adjacent to the above pressure tight doors.

b. An exemption from Appendix R, Section III.G.2, is requested for the two electrical bus ducts penetrating the three hour fire barrier between zones 5301 and 5339. Fire zone 5339 contains an automatic sprinkler system and therefore will prevent the spread of fire between the fire areas without the need for a fire stop inside the bus duct.

c. This fire area contains partial coverage by automatic water suppression systems in areas of high cable concentrations. Since this area does not utilize Appendix R, Section III.G.2.b, c or III.G.3 to justify safe shutdown, no exemption for partial coverage is requested.

9A.6.4 Eletrical Access Area Division I

The following architecture rooms (fire zones) combine to form one fire area covering several floors. Refer to Figures 9.5-2, 3, 4 and 5.

Elevation 77, electrical access 5237,
Elevation 102, electrical access 5339,
Elevation 124, electrical vault in 5401 connecting 5339 below to 5501 above.
Elevation 130, electrical access and diesel intake 5450 (west of 5423)
Elevation 137, corridor 5501.

This fire area contains Division I safe shutdown cable and is completely defined by fire barriers as defined in NRC Generic Letter 83-33 except as noted below.

a. The east boundary between 5501 and the radwaste fire area (zone 3504) is not rated.

b. The ceiling above 5450 is an unrated exterior ceiling and does not separate safe shutdown equipment.

c. The south wall of zone 5450 is an unrated exterior wall and does not separate safe shutdown equipment.

d. Two electrical bus ducts penetrate the 3-hour fire barrier between 5339 and 5301 without a fire stop. This wall separates redundant safe shutdown cable.

e. The west wall of 5450 is an unrated exterior wall and does not separate safe shutdown equipment.

f. The west wall of 5237 is an unrated exterior wall below grade.

g. The stairwells are separate fire areas surrounded by 2-hour fire barriers.

9A.6.4.1 Exemption Requests

a. An exemption from Appendix R, Section III.G.2 has been requested in 9A.6.3.4b for the two electrical bus ducts penetrating the 3-hour fire barrier between zones 5339 and 5301.

b. This fire area contains partial coverage by automatic water suppression systems in areas of high cable concentrations. Since Appendix R, Section III.G.2.b, c or III.G.3 are not used to justify safe shutdown in this fire area, no exemption for partial coverage is requested.

c. An exemption from Appendix R, Section III.G.2 was requested in 9A.6.2.1.a for the unrated east boundary of 5501 which separates redundant divisions

9A.6.5 Auxiliary Building, Control and Diesel Fire Areas

The remainder of the auxiliary building control and diesel area are fire areas as defined by rated fire barriers or outside walls on Figures 9.5-1 through 9.5-7 unless noted below. Most fire areas are a single room. Each fire area is defined by rated barriers as defined in NRC Generic Letter 83-33 except for barriers which

border the building exterior. All stairwells and elevator shafts are fire areas from top to bottom. The electrical and HVAC chases are one fire area, such as, 5531 connects to 5405, 5323, 5203, 5419 and 5331. This is typical for 5531, 5532, 5533, 5534, and HVAC chase 5535.

9A.6.5.1 Exemption Requests

a. An exemption from Appendix R, Section III.G.3 requirement for a fixed fire suppression system is requested for the control equipment room (CER) fire area, room 5302.

   Auxiliary building control equipment room 5302 contains both divisions of control panels and cable. Figure 9A-19 shows the equipment layout of this room. Alternative shutdown capability via the remote shutdown panel is provided for a fire in this area. The RSP controls can achieve and maintain hot and subsequent cold shutdown independently from the fire or effects of the fire in area 5302.

   Fire area 5302 could contain a maximum of 31,368 lbs of cable insulation for a total burning time of 21 minutes. There are no power cables in this fire area. The cables are fire retardant qualified per IEEE-383. Area 5302 in combination with the corridor 5303 define a combined fire area surrounded by 3-hour fire barriers (walls, ceiling, floor, openings, etc.). Both ionization and photoelectric detection are provided for these areas. The CER is accessible for manual firefighting; the cable trays are above the rows of panels. Suppression can be by water hose, CO_2 hose and/or portable extinguishers. Addition of a fixed suppression system covering the cable tray areas can be detrimental to the solid state logic and may compound a safe shutdown from the main control room (requiring use of the RSP) and therefore result in a decrease in plant safety.

   The alternate shutdown capability provides assurance that one train of equipment necessary to achieve hot and subsequent cold shutdown is free of fire damage. Since the fire load is low and accessible for manual suppression, the addition of a fixed fire suppression system required by III.G.3 will not enhance fire protection safety above that provided by the existing configuration.

b. An exemption from Appendix R, Section III.G.3 requirement for a fixed suppression system is requested for the Main Control Room fire area. This fire area encompasses rooms 5509, 5510, and 5511, the watch engineers room, main control room and ready room respectively.

Auxiliary Building Main Control Room (MCR) fire area contains both safe shutdown divisions of panels, control cable and instrumentation cable. This area is continuously manned. The safe shutdown cable is not exposed, but is contained below the MCR panels. Transient combustibles are administratively controlled. Alternate shutdown capabilities are provided in the Remote Shutdown Panel. The RSP controls can achieve and maintain hot and subsequent cold shutdown independently from a postulated fire or effects of a fire in the MCR. The MCR fire area is defined by 1-hour and 3-hour fire barrier walls and 3-hour fire barrier floor and ceiling. The in situ combustibles are limited to paper and similar transient materials. The equivalent burn time is less than 1 minute. The MCR has ionization detection. Detectors are also located in the main console and vertical boards 10C650, 10C651, respectively. Suppression can be handled by portable extinguishers and/or water hose.

The alternate shutdown capability provides assurance that one train of equipment necessary to achieve hot and subsequent cold shutdown is free of fire damage. There is not a large quantity of combustibles and the area is continually staffed. Therefore, the addition of a fixed fire suppression system required by III.G.3 will not enhance fire protection safety above that provided by the existing configuration.

c. An exmption from the requirements of Appendix R, Section III.G.3 for a fixed suppression is requested for the 1E panel room fire area. This fire area is at elevation 163 ft-6 in. of the auxiliary building diesel area and encompasses room 5605 only.

The 1E panel room contains logic cabinets for the main control room. Figure 9A-20 shows the equipment layout of this room. Both divisions of redundant logic and instrumentation are in panels therein. The panels have less than 20 feet of separation between redundant divisions. All cable are bottom entry. There are no in situ or transient combustibles in this area. Transient combustibles are administratively controlled.

Alternate shutdown capabilities are provided in the RSP. The RSP controls can achieve and maintain hot and subsequent cold shutdown independently from a postulated fire or effects of a fire in fire area 5605. This fire area is defined by 3-hour fire barrier walls, floor and ceiling, and an unrated exterior wall. Both ionization and photoelectric type detection cover this area. Suppression can be handled by portable extinguishers and/or water hose. Addition of a fixed suppression system covering the panels can be

detrimental to the solid state logic and may compound a safe shutdown from the main control room (requiring use of the RSP) and therefore result in a decrease in plant safety.

The alternate shutdown capability provides assurance that one train of equipment necessary to achieve hot and subsequent cold shutdown is free of fire damage. There are no combustibles in this area. Therefore, the addition of a fixed fire suppression system required by III.G.3 will not enhance fire protection safety above that provided by the existing configuration.

d. An exemption from the requirements of Appendix R, Section III.G.3 for a fixed suppression system or Section III.G.2 for separation plus suppression is requested for the HVAC equipment room fire area. This area, room 5620, is at elevation 163 ft-6 in. of the auxiliary building diesel area and encompasses room 5620 only. This fire area is defined by 3-hour fire barrier walls, floor and ceiling and an unrated exterior wall.

This area contains both divisions of air handling units for the equipment on elevation 163 ft-6 in. and their associated control panels (AVH408, BVH408, AC486 and BC486). The only 1E equipment required for safe shutdown located on elevation 163 ft-6 in. are the switchgear room unit coolers (rooms 5606 and 5629) and the 1E panels in room 5605. The switchgear room unit coolers do not rely on AVH408 or BVH408 for cooling. Loss of the 1E panel room is backed up by use of the remote shutdown panel. See deviation 9A.6.5.1.c.

The air handling units are approximately 14 feet apart and are metal construction. The in situ combustibles are contained in two Division II cable trays. These could contain a maximum of 2257 lbs of insulation or less than 3 minutes of equivalent burn time. Both ionization and photoelectric detection is used in this area and suppression can be by water hose or portable extinguishers. The congestion is negligible, therefore, the addition of a fixed suppression system will not enhance fire fighting capabilities.

If loss of both air handling units is assumed due to a transient fire in this area, it will not have an immediate effect on safe shutdown logic or instrumentation in the 1E panel room. If the 1E panel logic is eventually affected by high ambient temperatures, the unaffected instrumentation and/or controls on the RSP can be utilized.

The RSP provides assurance that one train of equipment necessary to achieve hot and subsequent cold shutdown is free of fire damage. There are very few combustibles in this area. Therefore, separation of the equipment or addition of a fixed fire suppression system will not enhance fire protection safety above that provided by the existing configuration.

e. An exemption from the requirements of Appendix R, Section III.G.2 for separation plus suppression and Section III.G.3 for fixed suppression is requested for the diesel area HVAC equipment room fire area at elevation 178 ft-0 in. This fire area encompasses rooms 5703 and 5704. This fire area is defined by a 3-hour fire barrier wall, floor and ceiling and unrated exterior walls. Refer to Figure 9.5-7.

The Air Handling Units AVH407 and BVH407 are enclosed in metal casing, are connected by both HVAC supply and return duct, and are physically separated by 6 ft. Loss of these VH407 units would cause a loss of air conditioning to the Control Room HVAC rooms 5602 and 5630, electrical access area 5501, control equipment mezz. 5403, control equipment room 5302, cable spread room 5202, battery and equipment rooms 5105, 5128, 5102, 5103, 5104, 5126, and corridors 5525, 5404, 5303.

The Diesel Generator HVAC panels provide control and instrumentation for the D-G air handling units at elevation 77 ft of the diesel area. There is 20 ft of separation between the divisionalized DG HVAC panels B&DC483 and A&CC483 and their associated conduit with no intervening combustibles.

The chillers (K403) supply chilled water to the air handling units in room 5620, the Technical Support Center (TSC) air handling unit and the Remote Shutdown Panel (RSP) room air handling unit. There is 4 ft between chiller skids.

Fire area 5703/5704 is a very large room, 8300 ft^2, with very low congestion. The maximum in situ cable loading could be 2580 lbs in a metal covered, non-1E, cable tray with an equivalent fire burn time of 1.0 minute. The area is monitored by both ionization and photoelectric detection. Suppression can be by water hose or portable extinguishers. All walls, floor or ceiling are either 3-hour fire barriers or adjacent to the outside. All cables are routed in conduit, except for the small section of non-1E cable tray as stated above. There are no other combustibles on this floor. Transient combustibles are administratively controlled to limit access

to this area. There are no maintenance activities which involve more than small quantities of hand held grease or oil lubrication in this area. There are no oil bath lubrication systems which would require transit of oil changes at this elevation.

Consevative assumptions were used in analyzing the effects of a postulated fire on safe shutdown and/or radioactive release.

1. Transient combustibles of sufficient quantity are temporarily stationed there which when ignited could affect equipment on this floor.

2. No fire watch.

3. Off-site power lost or available, whichever is worse.

4. High outside ambient air temperature.

5. Conservative, computer generated, heat transfer calculations.

6. Solid state electronics fail (includes spurious actuation at their qualification limit of 104°F room temperature.

Based on this, the following summarizes the effects of loss of certain combinations of equipment (based on their proximity to each other).

If a fire disabled both air handling units' power cable, temperature would start to rise and may eventually affect the control equipment room panels. No effect on cabling or use of batteries is postulated since the cable is not temperature sensitive and the batteries Load will become zero after the Diesel Generators start (assuming LOP). The heat load into 5630 is very small and therefore loss of Control Room HVAC is not postulated. Control and instrumentation from the remote shutdown panel will be available to aid the main control room operators. Loss of RSP air handling unit is not postulated since its motor is cooled by itself.

If a fire took out both chillers, it may affect equipment on elevation 163 ft-6 in. due to a lack of chilled water to VH408. Depending on seasonal temperatures, this may eventually heat up the 1E panel room (5605), and eventually affect the solid state logic used for main control room instrumentation. Remote Shutdown Panel instrumentation and controls would not be affected for more than 24 hours.

This is based on a calculation which assumed total loss of HVAC to the Remote Shutdown Panel room. Since, in this scenario, air flow to the RSP room would not be interrupted, then the actual time limit to reach the qualification limit of 104°F will be longer. This is more than ample time for a safe orderly shutdown. Control Room habitability will not be affected during this period.

A transient fire which affects D-G HVAC Division I panels will eventually affect operation of Division I diesel generators. The same fire is not postulated to affect the Division II panels and subsequently Division II diesel generators since the panels and associated cable are greater than 20 feet apart.

If a fire affected both air handling units and both chillers, the effect would be no different than loss of both chillers as described above.

If the fire were to affect the A&C Diesel Generator HVAC panels and both chiller units, the effect would be the same as loss of both cillers, as described above, except that loss of the RSP HVAC (on the A diesel) is also postulated.

Loss of both air handling units and the Division II D-G HVAC panels would only be a concern on high ambient temperature days. This concern would be for the long-term heat up of the Control Equipment room at elevation 102 and the possible effect on the solid state electronics therein. Major Division I equipment can be controlled from the switchgear room for use in long-term shutdown outside the main control room if this scenario were to come about.

A fire in this area would be of limited severity and duration and the dual detection system provides an early warning system. The probability is very low that an exposure fire of sufficient magnitude to damage redundant safe shutdown divisions could occur prior to response of the fire brigade. The installation of a fixed fire suppression system will not significantly enhance the safe shutdown capability.

9A.6.6 Reactor Building Drywell

The drywell and wetwell together form one fire area. The boundaries of this fire area are defined by the drywell wall and the torus and connecting piping. These walls are not rated by UL as a fire barrier. The drywell boundary is sealed, however, to maintain the primary pressure boundry in case of accidents. Since the drywell is inerted, a fire in the drywell is not postulated. No exemptions in this area are requested.

9A.6.7 Reactor Building Elevation 132 and Above

The reactor building, all rooms at elevation 132 and above, are considered as one fire area, except the stairwells. This fire area is defined by the drywell wall on the inside, the unrated exterior wall and floor, the 3-hour technical support center wall, the 3-hour steam tunnel boundaries and the stairwell/elevator 2-hour boundaries. The fire area extends from elevation 132 to the unrated ceiling/dome above elevation 201. The architecture room numbers are 44XX through 47XX except for the Technical Support Center defined in Section 9A.6.12, and the pipe chases 4402, 4409, and 4505 which are part of the torus compartment fire area.

The equipment or cable in this fire area are not needed for safe shutdown. The unrated floor of this fire area does touch two redundant fire areas at elevation 102. It also touches the torus compartment fire area unrated pipeway and steam vent at elevation 132 and 145.

9A.6.7.1 Exemption Request

a. An exemption from Appendix R. Section III.G.2 has been requested for the lack of 3-hour fire barrier between this fire area and the torus compartment fire area, reactor building Division I fire area, and the reactor building Division II fire area in paragraphs 9A.6.9.1.m, 9A.6.10.1.f, 9A.6.10.1.g, and 9A.6.11.1.b.

9A.6.8 Reactor Building Division I

The northern half of the reactor building, elevations 54, 77, and 102, contains Division I safe shutdown equipment and cable. Refer to Figures 9.5-1, 9.5-2, 9.5-3. This fire area contains the following architecture rooms:

Elevation 54; 4111, 4112, 4113, 4114, 4115, 4116 , 4117 & 4118
Elevation 77; 4209, 4210, 4211, 4212, 4213, 4214, 4215, 4216, 4218, & 4219.
Elevation 102; 4301, 4309, 4310, 4311, 4313, 4315(separates fire areas without a wall), 4326, 4328, 4330, 4331, 4332 & 4333.

The elevator and stairwells are separate fire areas and are not part of this fire area. This reactor building Division I fire area is defined by fire barriers except as noted below. This fire area contains partial coverage by automatic suppression systems in fire areas 4201 and 4301 over high cable concentration areas.

a. The equipment and personnel access doors betweem rooms 4301 and 3314 are not UL labeled.

b. The equipment access panel between SACS room 4309 and the equipment airlock 4323 is not UL labeled.

c. The equipment access panel between SACS room 4309 and and 4307 is not UL labeled. This wall separates redundant divisions.

d. The door between SACS rooms 4309 and 4307 is not UL labeled.

e. The HVAC duct penetrating the 3-hour barrier between 4309 and 4323 does not contain a fire damper.

f. The door between 4328 and 4323 is not UL labeled.

g. The HVAC duct penetrating the 3-hour barrier between 4326 and 4323 is not UL labeled.

h. The barrier surrounding 4327 and 4329 contains HVAC duct supply and return which does not have UL qualified fire dampers and non-UL rated doors.

i. The door between 4331 and the steam tunnel 4316 is not UL labeled.

j. Corridor 4215 separates Division I and II fire areas without a fire barrier.

k. The 3-hour rated floor slab at elevation 102 is supported by steel which has not been fireproofed.

l. The door between 4218 and the torus area 4117/4102 is not UL labeled.

m. The fire barrier between 4218 and 4201 contains an unrated door and HVAC ducts without fire dampers.

n. The fire barrier between 4209 and 4207 contains two HVAC ducts without fire dampers and a non-UL rated door.

o. The HVAC duct isolation dampers between 4215 and 4102 are not UL labeled.

p. The door between 4118 and 4101 is not UL rated.

q. The pressure blowout panel between 4113 and 4102 is not UL rated.

r. The pressure blowout panel between 4111 and 4102 is not UL rated.

s. The door between 4111 and 4110 is not UL rated.

t. The west boundary is an exterior wall.

u. The 3-hour floor slab at elevation 77 ft is supported by steel which is not fireproofed.

v. The upper boundary (ceiling) between elevation 102 and elevation 132 and above fire area is not a fire rated barrier.

9A.6.8.1 Exemption Request

a. An exemption from Appendix R, Section III.G.2 is requested for the non-UL rated pressure tight doors which bound this fire area. These doors are between rooms: 4111 and 4110, 4118 and 4101, 4209 and 4207, 4218 and 4217, 4309 and 4307, 4301 and 3314, 4328 and 4323, 4331 and 4316, 4328 and 4329, and 4328 and 4327. Refer to the exemption requested in 9A.6.3.1.a for a discussion of the type of doors used for pressure tightness on HCGS. The equivalent fire loading for fire zones adjacent to the doors are given in Table 9A-1. The equivalent fire load is less than 30 minutes in most rooms adjacent to the doors.

b. An exemption from Appendix R, Section III.G.2 requirements is requested for the equipment access panel between safety auxiliary cooling system rooms, 4307 and 4309. This panel is a pressure tight panel and is not qualified as a 3-hour fire barrier by UL. The panel is fabricated out of heavy gage steel. The outline of the panel is shown on Figure 9A-17. Adjacent to the panel, on both sides, are areas of greater than 20 feet of clear space without combustibles. The panel is 10" x 22", and does not extend up to the ceiling. The 6 feet between the top of the panel and the ceiling is a reinforced concrete 3-hour-rated fire barrier. This 6-foot section is a hot gas barrier and retards the effects of the fire from affecting the redundant division. Fire loading on either side of the barrier is low; 16 minutes and 8 minutes in 4309 and 4307, respectively. The pressure tight (leak tight) panel is required for overriding safety considerations of flood protection. Ionization type detectors, water hose and portable extinguishers cover both areas.

The combination of clear space, gas trap, low fire loading, detection and fire brigade action assures that one train of equipment necessary to achieve hot shutdown will be free from damage. Any additional modifications to upgrade the access panel would not enhance fire protection safety above that provided by the existing configuration.

c. An exemption from Appendix R, Section III.G.2 is requested for the unrated equipment access panel and for the HVAC duct without fire damper in the 3-hour fire barrier between the SACS room, 4309, and the equipment airlock, 4323. Refer to fire drawing Figure 9.5-3.

The redundant safe shutdown cable are approximately 70 feet apart through two walls and a normally empty equipment airlock. The equivalent fire loading is low, less than 17 min. in each room. The equipment airlock is used mostly during shutdown; however, a small amount of combustibles may pass throguh this zone during routine maintenance. Ionization detection is provided over these area. Water hose and portable extinguishers are available for suppression.

Because of the wide separation, both rated and unrated wall, low in situ fire loading, clear space and early fire detection system, there is low probability that an exposure fire can damage redundant safe shutdown equipment prior to response of the fire brigade. The existing fire protection provided for this area provides a level of safety equivalent to the technical requirements of Section III.G.2.

d. An exemption from Appendix R, Section III.G.2 is requested for the HVAC duct without fire damper in the 3-hour fire barrier between zones 4326 and 4323, the equipment airlock. This exemption is identical with 9A.6.8.1.c. This is the same duct which penetrates from 4309 to 4323 than from 4323 to 4326. This duct is a supply duct from the reactor building ventilation system and is not required for safe shutdown. The equivalent fire loading is less than 23 minutes in 4326. Ionization detection is provided over both areas. Water hose and portable extinguishers are available for suppression.

e. An exemption from Appendix R, Section III.G.2, is requested for the HVAC supply and return duct to the pipeways (part of the torus compartment fire area) zones 4327 and 4329, which do not contain UL rated fire dampers. The HVAC duct is made from 12 and 14 inch diameter steel pipe with two series valves serving as redundant pressure tight isolation dampers. The isolation dampers are controlled by redundant pipe break detection temperature elements in the pipeways. The pipeway duct penetrations are located below 125.5 feet elevation. The equivalent fire load is less than 22 minutes. There is ionization detection and water hoses or portable extinguishers are used for suppression. This pipe ducting, redundnat pressure tight isolation dampers and redundant actuation temperature elements required for overriding safety reasons provide a level of fire stop equivalent to the technical requirements of Appendix R.

f. An exemption from Appendix R, Section III.G.2 is requested for corridor 4315 which separates redundant division cable, and fire areas, without a fire barrier wall. Fire zones 4326, 4328, and 4331 contain Division I safe shutdown cable tray. These areas are separated from each other by room 4315. Refer to fire drawing Figure 9.5-3.

Fire zones 4317, 4320 and 4322 contain Division II safe shutdown cable trays.

Zone 4315 provides an effective fire barrier separating the different divisions and fire areas. Zone 4315 is approximately 60 feet long without any intervening combustibles. It has a low ceiling at elevation 119'-4-1/2" versus the high ceiling of the adjacent rooms, 4317 and 4331, at 129'-6". This tends to create a gas trap which precludes hot gases from a fire which might affect one division from affecting the other division as well. Channels C and D are greater than 100 feet apart. Channels A & B, which contain the majority of the safe shutdown cable, are separated by greater than 280 feet around the circumference. The combustibles in this fire area are mostly made up of cable insulation. Fire zone 4331 contains 7773 lbs of insulation (20 minutes), fire zone 4328 contains 8,859 lbs of insulation (22 minutes), fire zone 4326 contains 3564 lbs of insulation (23 minutes) plus a small amount of assumed wood CRD crates, fire zone 4315 contains zero combustibles, fire zone 4317 contains 3189 lbs of insulation (10 minutes), fire zone 4320 contains 3630 lbs of insulation (11 minutes) and fire zone 4322 contains 6,266 lbs of insulation (17 minutes). Each fire area has ionization type detectors and water hose and portable extinguishers can be used for suppression.

Appendix R accepts a 3-hour fire barrier or automatic suppression plus detection over areas containing redundant divisions. The physical configuration of distance between divisions, clear space and heat trap (low ceiling in 4315) creates a fire barrier between redundant divisions. This, in combination with the low fire loading of in situ and transient combustibles plus fire retardant cable per IEEE-383 and detection, provides an effective alternative to Appendix R, Section III.G requirements. The equipment necessary to achieve hot and cold shutdown from the main control room will be free of fire damage. Additional modifications would not enhance fire protection safety above that provided by the existing condition.

g. An exemption from Appendix R, Section III G.2.a, is requested for the lack of fireproofing of structural stell supporting 3 hour fire barrier slabs in the reactor building. An analysis of beam temperatures due to a fire in situ and transit combustables is performed for each zone of the reactor building. The calculations are performed by Professional Loss Control, Inc., using a methodolody, computer program and acceptance criteria reviewed on the Limerich Generating Station docket. Results of this analysis are used to identify the extent of fireproofing, cable trays covers or additional suppression systems necessary to protect the support steel from overheating.

The extent of this fire area which fall into the above category are: (Refer to Figures 9.5-1,2,&3)

1. The ceiling above the torus compartment, zone 4102 and below 4315, 4326, 4328, 4330, 4331 and 4332;

2. The slab above 4201 and below 4301;

3. The slab above 4209 and below 4307;

4. The slab above 4108 and 4110 and below 4209 and 4210.

Of these, the area below item 2 is partially covered by an automatic water suppression system.

h. An exemption from Appendix R, Section III.G.2 is requested for the HVAC ducts without fire dampers and unrated door in the fire barrier between zone 4218 and 4201.

Elevation 77 of the reactor building, fire zone 4218, is part of the Division I fire area and contains Division I safe shutdown cable. Fire zone 4201 contains Division II safe shutdown cable. These zones are separated by a 12 inch thick reinforced concrete wall with pipe, conduit and cable tray penetrations sealed for 3-hour fire barriers. The penetrations include a hollow metal core door and two HVAC duct which do not provide a 3-hour fire barrier. There are greater than 30 feet of horizontal distance without intervening combustibles or fire hazards in zone 4201. The Division II 1E cable, located at the south

h. Cont'd.

end of 4301, is covered by an automatic water suppression system because of a cable concentration. There are greater than 120 feet horizontal distance plus the wall between the redundant 1E divisions. There are 13,506 lbs (34 minutes) of combustibles in 4201, and 10,251 lbs (20 minutes) of combustibles in 4218. Both rooms contain ionization detection and, in addition to the auto suppression, water hose and portable extinguisners are available for suppression.

The wall penetrations are sealed, therefore, the wall acts like a heat trap. Since the fire loading is low, partial auto suppression is provided, and the distance between 1E cable is great, the existing wall, door and HVAC duct will provide an adequate fire stop. The wall allows time for operator action to safely shutdown and time for fire brigade action to suppress the fire. The auto suppression system protects the closest Divison II 1E cable. Therefore, at least one train of equipment necessary to achieve hot shutdown from the main control room will be free of fire damage. Any additional modifications will not enhance fire protection safety above that provided by the existing condition.

i. An exemption from Appendix R, Section III.G.2 is requested for the twc HVAC ducts without fire dampers which penetrate the fire barrier between zone 4209, in the Division I fire area, and 4207. The wall is 12 inches thick reinforced concrete and has 3-hour fire barrier sealant in the penetrations. Zone 4207 is a passageway which does not contain any 1E cable. Refer to Figure 9.5-2.

Division I cable is located at the far North end of the RACS heat exchanger area in passage 4213. Division II cable is located in the Motor Control Center Area, 4205. Therefore, the redundant safe shutdown cable is greater than 150 feet apart through the fire barrier containing these HVAC duct and through another unrated wall.

i. Cont'd.

Ionization detection is provided and water hose or portable extinguishers are available for suppression. The equivalent fire load is 16 minutes (16,850 lbs), 64 minutes (3,300 lbs) and 19 minutes (7000 lbs) for fire zones 4209/4211/4213, 4207 and 4205, respectively. The 38 x 26 inch duct and the 32 x 16 inch duct penetrate the wall at 87 and 91 foot elevation, respectively. The ceiling is at elevation 100', therefore, there will be a hot gas trap above the duct of greater than seven feet.

This combination of wide separation, low in situ fire loading, gas trap and sealed penetrations in one wall, a second unrated wall, and early warning fire detection throughout, provides a low probability that an exposure fire can damage redundant safe shutdown equipment prior to the response of the fire brigade.

j. An exemption from Appendix R, Section III.G.2, is requested for the non-UL rated isolation damper in the HVAC duct penetrating the fire barrier between MCC area 4215, part of the Division I fire area, and the torus room fire area, 4102. This reactor building ventilation system return duct is steel pipe with redundant pressure tight isolation valves of the same configuration as discussed in 9A.6.8.1.e. The 26 inch pipe penetrates at elevation 86.5 feet. This provides a gas trap of greater than 12 ft. Ionization detection cover 4215 and water hose or portable extinguishers are available for suppression. The equivalent fire load is 31 minutes in 4215. This pipe ducting, redundant pressure tight isolation dampers and redundant actuation temperature elements required for overriding safety reasons, provide a level of fire stop equivalent to the technical requirements of Appendix R.

k. An exemption from Appendix R, Section III.G.2 is requested for the pressure relieving blowout panels between the RHR room 4113, the HPCI pump room 4111, and the torus fire area 4102. Zones 4113 and 4111 are part of this Division I fire area. The barrier between these rooms is otherwise rated as a 3-hour fire barrier.

k. Cont'd.

These panels are required for overriding safety reasons to protect the RHR and HPCI rooms from overpressure due to pipe break. Outline of the 1/4 inch thick steel blowout panels are shown on Figure 9A-16. These panels are set to relieve at 1/4 psid. There are no redundant safe shutdown cables in the torus compartment which can be reached by a 20-foot diameter fire in either the RHR or HPCI rooms. Even if a fire were to affect both the HPCI and RCIC cabling or valves inside the torus compartment, shutdown method 3 or 4 using ADS and RHR could be used. The panels only open with the higher pressure in the pump room. The blowout panels will fully close (to less than 0.125 inch gap) after the pressure differential decreases to zero. The fire load in the RHR and HPCI, rooms with blowout panels in them is 28 and 20 minutes, respectively. Ionization detectors are located in these rooms. Water hose or portable extinguishers can be used in these rooms and inside the torus compartment to suppress the fire.

Based on the high ceiling of the torus compartment, 99 ft-9 inches and the separation of redundant cable, a fire in the RHR or HPCI room will not affect safe shutdown using the redundant Divison II.

l. The boundary between the reactor building Division I fire area and the elevation 132 and above fire area is an unrated reinforced concrete slab at elevation 132. Refer to Section 9A.6.7. The upper elevation fire area also touches the Division II fire area via an unrated slab at elevation 132 and touches the torus compartment fire area via an unrated wall to the pipeway at elevaiton 132. Therefore, an exemption is requested from Appendix R, Seciton III.G.2 for the unrated barriers between redundant fire areas. These unrated barriers will have no effect on safe shutdown because of a fire.

9A.6.9 Reactor Building Division II

The southern half of the reactor building, elevations 54, 77 and 102, contain Division II safe shutdown equipment and cable. This fire area contains the following architectural rooms:

Elevation 54; 4101, 4103, 4104, 4105, 4106, 4107, 4108, 4109 and 4110.

Elevation 77; 4201, 4202, 4203, 4205, 4206, 4207 and 4209.

Elevation 102; 4303, 4304, 4305, 4307, 4315 (both Division I and II fire areas) 4317, 4318, 4320, 4322, 4323 and 4324.

The elevator and stairwells are separate fire areas and are not part of this fire area. This reactor building Division II fire area is defined by fire barriers except as noted below.

a. The equipment access panel between SACS Room 4309 and the equipment airlock 4323 is not UL labeled.

b. The equipment access panel between SACS rooms 4309 and 4307 is not UL labeled. This wall separates redundant divisions.

c. The door between SACS rooms 4309 and 4307 is not UL labeled.

d. The HVAC duct penetrating the 3 hour barrier between 4309 and 4323 does not contain a fire damper.

e. The door between 4328 and 4323 is not UL labeled.

f. The HVAC duct penetrating the 3-hour barrier between 4326 and 4323 is not UL labeled.

g. The barrier surrounding 4319 and 4321 contains HVAC duct supplies which do not have UL qualified fire dampers and contain non-UL rated doors.

h. Corridor 4315 separates Division I and II fire areas without a fire barrier.

i. The 3-hour rated floor slab at elevation 102 is supported by steel which has not been fireproofed.

j. The door between 4205 and the torus area 4104/4102 is not UL labeled.

k. The fire barrier between 4218 and 4201 contains an unrated door and HVAC ducts without fire dampers.

l. The fire barrier between 4209 and 4207 contains two HVAC ducts without fire dampers and a non-UL rated door.

m. The HVAC duct isolation dampers between 4201 and 4102 are not UL labeled.

n. The door between 4118 and 4101 is not UL rated.

o. The pressure blowout panel between 4109 and 4102 is not UL rated.

p. The pressure blowout panel between 4110 and 4102 is not UL rated.

q. The pressure tight door between 4110 and 4111 is not UL rated.

r. The 3-hour rated floor slab at elevation 77 is not supported by steel which is fireproofed.

s. The upper boundary (ceiling) between this fire area and the fire area at elevation 132 is not a rated fire boundary.

t. The West and South fire area boundary is an unrated exterior wall.

9A.6.9.1 Exemption Requests

a. An exemption from Appendix R, Section III.G.2 has already been requested in 9A.6.8.1.a, for several non-UL rated pressure tight doors which bound this fire area. These doors are between rooms: 4110 and 4111, 4101 and 4118, 4207 and 4209, 4307 and 4309. In addition, an exemption from Appendix R, Section III.G.2 is requested for the remaining pressure tight doors bounding this fire area. These doors are between rooms 4328 and 4323, 4319 and 4320, 4321 and 4320, 4205 and 4204/4102. The justification for these doors is as presented in Section 9A.6.8.1.a.

b. An exemption from Appendix R, Section III.G.2 has been requested in 9.A.6.8.1.b. for the equipment access panel between SACS rooms 4307 and 4309.

c. An exemption from Appendix R, Section III.G.2 has been requested in 9A.6.8.1.c for the unrated equipment access panel and for the HVAC duct without fire damper in the 3-hour fire barrier between SACS room, 4309, and the equipment airlock 4323.

d. An exemption from Appendix R, Section III.G.2 has been requested in 9A.6.8.1.d for the HVAC duct without fire damper in the 3-hour fire barrier between zones 4326 and 4323, the equipment airlock.

e. An exemption from Appendix R, Section III.G.2, is requested for the HVAC supply duct to the pipeways, zones 4319 and 4321, which do not contain UL rated fire dampers. These two supply pipes are identical with those discussed in 9A.6.8.1.e and 9A.6.8.1.j. The duct is 14 inch diameter steel pipe with two series valves serving as redundant pressure tight isolation dampers. The pipe and valve configuration, temperature control, elevations, detection and suppression are the same as discussed in 9A.6.8.1.e.

e. (Cont'd)

The equivalent fire load is less than 12 minutes in 4320 and 17 minutes in 4322. There is no fire load in the pipeways. This configuration provides a level of fire stop equivalent to the technical requirements of Appendix R.

f. An exemption from Appendix R. Section II.G.2 has been req sted in 9A.6.8.1.f for the corridor 4315 which separates redundant division cable, and fire areas, without a fire barrier wall.

g. An exemption from Appendix R, Section III.G.2.a, has been requested in 9A.6.8.1.g. for the lack of fireproofing of structural steel supporting 3-hour fire barrier slabs in the reactor building. In addition to the areas listed in 9A.6.8.1.g. as 2, 3, and 4, the following areas in this fire area fall into this category: The ceiling above the torus compartment, Zone 4102 and below 4315, 4317, 4318, 4320, 4322, 4323, and 4324. An exemption from Appendix R, Section III.G.2.a. is requested for the lack of fireproofing of structural steel in the areas listed above. The analysis committed to in 9A.6.8.1.g will cover this area also.

h. An exemption from Appendix R, Section III.G.2, has been requested in 9A.6.8.1.h. for the HVAC duct without fire dampers and unrated door in the fire barrier between zones 4201 and 4218.

i. An exemption from Appendix R, Section III.G.2 has been requested in 9A.6.8.1.i for the two ducts without fire dampers which penetrate the fire barrier between zone 4207 in the Division II fire area and 4209.

j. An exemption from Appendix R, Section III.G.2, is requested for the non-UL rated isolation dampers for the HVAC duct penetrating the fire barrier between corridor 4201, part of the Division II fire area, and the torus room fire area 4102. This reactor building ventilation system supply duct is steel pipe with redundant pressure tight isolation valves of the same configuration discussed in 9A.6.8.1.e. The 26 inch pipe penetrates at elevation 95 feet. An automatic water

j. (Cont'd)

suppression system covers the cable concentration and this duct and dampers (pipe and valves). Ionization detection provides early detection and in addition to the auto suppression, water hose and portable extinguisher are available. This pipe ducting, redundant pressure tight isolation dampers (valves), redundant actuation temperature elements and auto suppression, provide a level of fire stop equivalent to the technical requirements of Appendix R.

k. An exemption from Appendix R, Section III.G.2, is requested for the pressure relieving blowout panels between the RHR room 4109, the RCIC pump-room 4110 and the torus fire area 4102. Zones 4109 and 4110 are part of this Division II fire area. The barrier between these rooms is otherwise rated as 3-hour fire barrier.

These panels, are required for overriding safety reasons to protect the RHR and RCIC rooms from overpressure due to pipe break. An outline of the 1/4 inch thick steel blowout panel is shown in Figures 9A-15 and 9A-16. These panels are set to relieve at 1/4 psid. There are no redundant safe shutdown cable in the torus compartment which can be reached by a 20-foot diameter fire in either the RHR or RCIC rooms. Even if a fire were to affect both the HPCI and RCIC cabling or valves inside the torus compartment, shutdown method 3 or 4 using ADS and RHR could be used. The panels only open with the higher pressure in the pump room. The blowout panels will fully close (to less than 0.125 inch gap) after the pressure differential decreases to zero. The fire load in the RHR and RCIC rooms with blowout panels in them is 9 and 22 minutes, respectively. Ionization detectors are located in these rooms. Water hose or portable extinguishers can be used in these rooms and inside the torus compartment to suppress the fire.

Based on the high ceiling of the torus compartment, 99 feet-9 inches, and the separation of redundant cable, a fire in the RHR or RCIC room will not affect safe shutdown using the redundant Division II equipment.

l. The boundary between the reactor building Division II fire area and the elevation 132 and above fire area is an unrated reinforced concrete slab at elevation 132. Refer to 9A.6.7. The upper elevation fire area also touches the Division I fire area via an unrated slab at elevation 132 and it touches the torus compartment fire area via an unrated wall to the pipeway at elevation 132. Therefore, an exemption was requested in 9A.6.8.1.1. from Appendix R, Section III, G.2 for the unrated barriers between redundant fire areas. These unrated barriers will have no effect on safe shutdown because of a fire.

m. An exemption from Appendix R, Section III.G.2, is requested for the unrated wall separating the airlock 4323 from the steam vent, part of the torus room fire area. The steam vent is completely empty and is open to the torus room below. The equipment airlock is normally empty. There are no penetrations through the 24 inch reinforced concrete wall. Therefore, this barrier is the same as a rated 3-hour fire barrier.

9A.6.10 Reactor Building Torus Room

The BWR Mark I containment torus is contained in a cylindrical room. This room, its vestibules and connecting pipeways and steam vent, is the torus room fire area. The architectur room numbers are 4102, 4204, 4217, 4319, 4321, 4327, 4329, 4402, 4409 and 4505. Refer to Figures 9.5-1, 2,3,4 & 5. The torus room and connecting rooms are designed as a pressure tight compartment. Blowout panels in the RHR, HPCI, and RCIC rooms relieve pressure to the torus compartment in the event of a high pressure line break in one of these rooms. The torus compartment in turn has blowout panels to relieve pressure to the outside to prevent overpressurization of the torus compartment. This fire area is defined by fire barriers except as noted below:

a. Four (4) non-fire rated blowout panels are provided in the rated fire barrier between the torus area 4102, and the RHR, HPCI, RCIC and RHR pump rooms.

b. The torus room access doors are non-UL rated pressure tight doors between 4204 and 4205 and between 4217 and 4218.

c. The reactor building ventilation ducts do not contain UL rated fire dampers. Penetrations are between 4102 and 4201, and between 4201 and 4215.

d. The doors to pipeways 4319, 4321, 4327 and 4329 are non-UL rated pressure tight doors.

e. The HVAC penetrations to 4319, 4321, 4327 and 4329 do not contain UL rated fire dampers.

f. The steam vent walls are not rated between the steam vent and the equipment airlock 4323.

g. The steel supporting the 3-hour fire barrier above the torus compartment is not fireproofed.

h. The barrier surrounding the pipeway 4402 at elevation 132, and 4505 at elevation 145, is unrated. This include pressure tight doors, HVAC ducts and pipe penetrations.

i. The steam vent walls are not rated at elevation 132, 145 and 163 feet-6 in. This includes the steam blowout panels between the steam vent and outside atmosphere.

j. The ceiling above the steam vent and pipeway 4505 are not rated fire barriers.

9A.6.10.1 Exemption Request

a. An exemption from Appendix R, Section III.G.2 was requested for the pressure blowout panels between the RHR, HPCI, RCIC and RHR pump rooms. Refer to Sections 9A.6.8.1.k and 9A.6.9.1.k.

b. An exemption from Appendix R, Section III.G.2 was requested for the non-UL rated pressure tight doors which bound this fire area below elevation 132. An exemption was requested for the door between 4204 and 4205 in Sectionn 9A.6.9.1.a. An exemption was requested for the doors between 4217 and 4218, 4319 and 4320, and 4321 and 4322 in Section 9A.6.8.1.a. The remainder of the doors are pressure tight type in non-UL rated walls rooms, between 4402 and 4401, 4409 and 4408 and between 4505 and 4504. Refer to Figures 9.5-4 and 9.5-5. The justification for these doors being treated as fire barriers is given in Section 9A.6.3.1.a. An exemption will be requested below for the non-UL rated walls in toto including the doors.

c. An exemption from Appendix R, Section III.G.2, was requested for the reactor building ventilation ducts with non-UL rated dampers. These ducts are pressure tight pipe with dual isolation valves for dampers. The exemptions are requested in Sections 9A.6.8.1.e, 9A.6.8.1.j, 9A.6.9.1.e, and 9A.6.9.1.j. Additional HVAC duct of the same type penetrate the barrier into the pipe ways 4402 and 4505. An exemption will be requested below for the non-UL rated walls in toto, including the HVAC penetrations.

d. An exemption from Appendix R, Section III.G.2 was requested for the non-UL rated fire barrier between the steam vent and the Division II fire area, in Section 9A.6.9.1.m.

e. An exemption from Appendix R, Section III.G.2 was requested for the lack of fireproofing of structural steel above the torus compartment in Sesctions 9A.6.8.1.g and 9A.6.9.1.g.

f. An exemption from Appendix R, Section III.G.2 is requested for the unrated walls and penetrations separating the torus room fire area pipe way from the elevation 132 and above fire area. The walls involved surrounded rooms 4402, at elevation 132, and 4505, at elevation 145. These walls are minimum 24 inch thick reinforced concrete. The HVAC is piping with isolation valves the same as in Section 9A.6.8.1.e. The doors are pressure tight doors, the same as in Section 9A.6.8.1.a and 9A.6.3.1.a. All penetrations are sealed to maintain the pressure boundary of the torus compartment. The walls do not directly separate safe shutdown equipment or cable since there are no safe shutdown equipment or cable at elevation 132 and 145. However, indirectly, through the unrated slab at 132, both divisions of shutdown cable could be reached. This is not a credible event however. Ionization detection is located outside the torus fire area. Fire hose is used for suppression. This combination of pressure tight barriers, low fire loading, early warning fire detection and fire brigade action assures that one train of equipment necessary to achieve hot shutdown will be free from damage.

g. An exemption from Appendix R, Section III. G.2, is requested for the unrated fire barrier between the torus room fire area steam vent and the elevation 132 and above fire area. The walls, penetrations and doors are those surrounding room 4409 on elevation 132 and corresponding wall at elevation 145 and 162. This wall is 24 inches thick, reinforced concrete, which is the equivalent to a 3-hour fire barrier wall. The penetrations are sealed to maintain the pressure boundary of the torus compartment. The door is a pressure type door as discussed in Section 9A.6.8.1.a and 9A.6.3.1.a. The walls do not directly separate safe shutdown equipment or cable since there are no safe shutdown equipment or cable in the elevation 132 and above fire area. However, indirectly, through the unrated slab at 132, both divisions of shutdown cable could be reached. This is not a credible event.

Ionization detection is located in the elevation 132 and above fire area. Fire hose is used for suppression. This combination of pressure tight barrier, low fire loading, early warning fire detection and fire brigade action assures that one train of equipment necessary to achieve hot shutdown will be free from damage.

h. An exemption from Appendix R Section III.G.2 is requested for the torus room fire area, room 4102, which contains both divisions of safe shutdown cable. The torus room 4102, is a cylindrical room with an OD of 82.5 feet and ID of 35.5 feet. It is 46 feet high and contains the suppression pool torus. The torus has a mean diameter of 56.3 feet, its centerline is at 72.3 feet, and it sits 3 feet off the floor. The room also contains pipe, valves and four channels of 1E cable trays. Refer to FSAR Figures 9.5-1 and 9.5-2.

RHR A&B, CS, HPCI, and RCIC cable are routed through this room. The redundant 1E channels are widely separated, however, with a very low overall in situ congestion. At the closest point, redundant division cable trays are greater than 30 feet apart with no intervening combustibles. There are no transient or storage of combustibles in this area. There is very little usable space for storage. Access is via one of the locked doors at elevation 77 feet, a catwalk and stairs. The torus compartment is a high radiation area and thus only limited access is allowed. This reduces the availability for using this area for storage.

The cables are fire retardant per IEEE-383 and the majority are located below elevation 72 feet. The high ceiling virtually eliminates the possibility of heat flux affecting redundant cable. The cables are concentrated as follows: Channel C, 1955 lbs, @NNE; Channel A, 1190 lbs, @ENE and 1445 lbs, @WNW; Channel B, 3683 lbs, @ESE; and Channel D, 1275 lbs, @SSE. The equivalent fire load is less than 3 minutes.

Appendix R, Section III.G.2 accepts an automatic suppression system with greater than 20 feet of separation without intervening combustibles plus detection for this situation. HCGS has heat actuated detectors in the horizontal trays to detect a challenge to the 1E cable. Water hose stations are provided for supression in the torus compartment.

The high ceilings and physical horizontal separation limit propagation or heat damage to one channel of one division. Therefore, at least one train of equipment necessary to achieve cold shutdown will be free from damage. The level of safety provided in the torus compartment is equivalent to the technical requirements of Section III.G. Additional modifications required to meet III.G.2 will not enhance fire protection safety above that provided by the existing configuration.

9A.6.11 Reactor Building Main Steam Tunnel

The main steam tunnel fire area consists of the steam tunnel room 4316 up to the ventilation barrier at the boundary of the reactor bulding. The remainder of the steam tunnel and vent stacks is part of the turbine building fire area. The steam tunnel is designed for pressure tightness. The emergency vent stack contains blowout panels to the outside and provides overpressure protection of the main steam tunnel in the case of a high pressure line break. There are no combustibles in this area and because of high radiation, detectors are not qualified for this area. Therefore only the redundant pipe break detection temperature elements are used to annunciate abnormalities in this area. Refer to Figures 9.5-3 and 9.

This fire area is defined by 3-hour fire barriers except as noted below. There are no combustibles in this fire area.

a. The steam tunnel fire barrier support steel is not fireproofed.

b. The door at elevation 102 and at 132 are not UL rated fire doors.

c. The ventilation barrier between the reactor building and turbine building portions of the steam tunnel is a pressure relieving panel and is not a rated fire barrier.

d. The south wall adjacent to the outside is not a rated fire barrier.

9A.6.11.1 Exemption Requests

a. An exemption from Appendix R Section III.G.2 is requested for the lack of fireproofing on steam tunnel fire area support steel. An analysis for beam capability during a fire is being performed on the steel in this area. Refer to Section 9A.6.8.1.g for a complete discussion.

b. An exemption from Appendix R, Section III.G.2, was requested for the pressure tight door at elevation 102. Refer to Section 9A.6.8.1.a. An exemption from Appendix R, Section III.G.2 is requested for the pressure tight door at elevation 132. Refer to the exemption requested in 9A.6.3.1.a for a complete discussion of the door type and justification.

c. The ventilation barrier and the outside walls do not separate redundant divisions, therefore no exemption is requested.

9A.6.12 Technical Support Center

The technical support center fire area is defined by the following architecture room numbers:

Elevation 132; 4415, 4416, 4418, 4419, 4420
Elevation 145, 4514, 4515, 4516

The two stairwells and vestibules are a part of the fire area.

There are no safe shutdown cable or equipment in the technical support center fire area. The fire area is bounded by 3-hour fire barrier walls ceiling and floor. However, the floor slab at elevation 132 is not supported by steel which has been fireproofed. The TSC functionally is part of the auxiliary building although it is built on top of the reactor building.

9A.6.12.1 Exemption Request

a. The floor slab does not separate redundant safe shutdown divisions. The failure of the floor slab would only affect one safe shutdown division in the reactor building Division I fire area below. Therefore, no exemption is requested for the lack of fireproofing. However, an analysis is being performed as noted in Section 9A.6.8.1.g. The results of this analysis may be used for the basis of future actions in this area.

9A.6.13 Remote Shutdown Panel Room

The remote shutdown panel room, 3576, is a fire area. This fire area is defined by 3-hour barriers on all sides and 2-hour on the floor and ceiling. The Division I and II cable in this area does not meet Section II.G.2 separation. Shutdown can be accomplished using Division I safe shutdown equipment controlled from the main control room. The MCR separation from the RSP room meets Section III.G.2.a requirements. Therefore, no exemption is requested.

9A.6.14 Service Water Intake Division I

The service water intake structure Division I fire area contains the Unit I, Division I service water pumps and auxiliaries. This fire area consists of the following architecture room number:

Elevation 79 feet 8 inches; 107
Elevation 87 feet 8 inches; 112
Elevation 93 feet 0 inches; 203, 204
Elevation 107 feet 0 inches; panel area
Elevation 122 feet 0 inches; 304, 305, 306

This fire area is defined by fire barriers except for barriers adjacent to the exterior, which are designed as flood and soil pressure barriers, and the barrier adjacent to the traveling screen motor fire area.

9A.G.14.1 Exemption Request

a. An exemption from Appendix R, Section IIIG.2 is requested in 9A.6.16.1.a for the unrated wall between fire areas.

9A.6.15 Service Water Intake Division II

The service water intake structure Division II fire area contains the unit 1, Division II service water pumps and auxiliaries. This fire area consists of the following architectural room numbers

elevation 79 ft - 8 inches; 110
elevation 87 ft - 8 inches; 114
elevation 93 ft - 0 inches; 207, 208
elevation 107 ft - 0 inches; panel area
elevation 122 ft - 0 inches; 310, 311, 312

This fire area is defined by fire barries except for barries adjacent to the exterior which are designed for flood and soil pressure barries.

9A.6.15.1 Exemption Request

a. An exemption from Appendix R, Section III.G.2, has been requested for the unrated wall between fire areas in 9A.6.16.1.a.

9A.6.16 Traveling Screen Motor Room

The traveling screen motor room fire area is made up of the intake structure traveling screen motor room. This area is defined by exterior walls and unrated wall between this fire area and adjacent Division I, II and miscellaneous fire areas. See Figures 9.5-11 and 9.5-12, elevation 114.

9A.6.16.1 Exemption Request

a. An exemption from Appendix R, Section III.G.2, is requested for the traveling screen motor area. This area elevation 114, contains all four Service Water pump intake traveling screen motors (S501) and both supply fans (V558) for the traveling screen motor areas. This area also separates the Division I fire area from the Division II fire area without a rated fire barrier. Refer to Figures 9.5-11, 9.5-12, 1.2-14 Section A-A and 1.2-40.

Failure of this equipment does not have an immediate impact on the service water pumps' ability to supply cooling water. All the cable for power, instrumentation and control are routed in conduit and there are no other combustibles in this area. The floor grating will not contain a liquid (flammable or otherwise) and the motors are 5 HP. Access is by ladder, which tends to preclude use of the area for storage. Suppression is by portable extinguishers. Both ionization and photoelectric detection is provided.

Because of the greater than 25 feet between redundant traveling water screen motors, zero in situ fire loading, and early fire detection system, there is a low probability that an exposure fire can damage redundant safe shutdown equipment prior to response of the fire brigade. Even if all the traveling water screen motors failed, there is a additional low probability that, because of the intake structure location, high debris load will be present to sufficiently plug the screens and affect the ability of the both divisions of service water pumps to deliver the required cooling water flow. Therefore the existing fire protection program for this area provides a level of safety equivalent to the technical requirements of Section II.G

9A.6.17 Miscellaneous Areas

The remaining intake structure areas are unoccupied areas. Similar fire areas are formed by the unoccupied areas as was formed by the Division I and II fire area in 9A.6.13 and 9A.6.14. These areas do not contain any safe shutdown equipment or cable. The other miscellaneous buildings throughout the site each form thier own fire area, except the fire water pump house. The fire water pump house is separated into two fire areas. There are no safe shutdown equipment or cable in these areas.

TABLE 9A-1

FIRE HAZARD ANALYSIS SUMMARY

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
Auxiliary Building Radwaste Area									
054-0	3101	Waste surge tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3102	Waste surge pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3103	Floor drain sample tank rm	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3104	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3105	Floor drain sample tank rm	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3107	Waste sample tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3108	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3109	Waste sample tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3110	See 5106							
054-0	3112	Sump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3113	Waste collector tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
054-0	3114	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3115	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3116	Waste collector tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~ c	None. No safe shutdown equip or cable in zone.
054-0	3117	Tank vent filter unit room	NA	Charcoal	162 lb	3500	Heat act IN FILTER UNIT	Auto water spray H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3118	Concentrated waste tank room	NA	None	None	None	None	H_2O hose Port ext c	None. No safe shutdown equip or cable in zone.
054-0	3119	Concentrated waste tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~ c	None. No safe shutdown equip or cable in zone.
054-0	3120	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3121	Pump room	NA	None	None	None	None	H_2O hose ~~Port ext~~ c	None. No safe shutdown equip or cable in zone.
054-0	3122	Waste neutralizer tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~ c	None. No safe shutdown equip or cable in zone.
054-0	3123	Waste neutralizer tank room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3124	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3125	Work area	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
054-0	3126	Work area	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3127, 3111, 3106	Corridors	NA	Cable insul	9,444 lb	18,000	Ionizat Photo-el None in 3106	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
054-0	3128	Pump room	NA	None	None	None	None SKT	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3129	Cleanup phase separator room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3130	Cleanup phase separator room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3131	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3132	Spent resin tank room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3133	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3134	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3135	Waste sludge phase separator room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3136	Floor drain collector tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3137	Floor drain collector tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
054-0	3138	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3139	Detergent drain filter room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3140	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3141	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3142	Detergent drain tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3143	Sump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3144, 3154	Corridors	NA	Cable insul	12,970 lb	21,500	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
054-0	3145	R/W ~~regeneration vessel room~~ Resin Holding Tank Rm	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3146	R/W regeneration vessel room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3147	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3148	Decon solution concentrated waste tank room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3149	Condensate return unit room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
058-0	3150	Chemical waste tank rm	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
058-0	3151	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3152	HSV equip room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3153	Tank vent filter unit rm	NA	Charcoal	162 lb	4000	Heat act in filter unit	Auto water spray in filter H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3155	Charcoal filter tank area	NA	Charcoal	193,200 lb	2.37×10^4	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3156	HVAC room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3157	Corridor	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3158	HVAC room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3159	Valve gallery	NA	~~None~~ ASPHALT IN PIPE	~~None~~ 90 lb	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
058-0	3159-1	Charcoal filter tank area	NA	Charcoal ASPHALT IN PIPE	128,800 330 lb	1.58×10^4 NONE	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
058-0	3160	Refrigeration area	NA	~~None~~ ASPHALT IN PIPE	~~None~~ 310 lb	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
054-0	3160-1	Valve gallery	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone
054-0	3160-2	Guard bed filter area	NA	Charcoal	200 lb	2300	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3160-3	Cooler condenser area	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3160-4	HEPA filter area	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
075-0	3160-5	Charcoal regeneration mezzanine	NA	~~None~~ ASPHALT IN PIPE	~~None~~ 320 lb	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip
054-0	3161	HVAC room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3163	Hatchway area	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3166 3166-2 Analysis 3166-3	Tank vent panel area Panel in	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	3167	Primary recomb room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone
067-3	3167-1	Primary recomb valve maintenance area	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
054-0	3168	Primary recomb room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
067-3	3168-1	Primary recomb valve maintenance area	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
058-0	3169, 3162	Corridors	NA	Cable insul	17,355 lb	17,500	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
	~~3169~~			ASPHALT IN PIPE	270 lb	NONE			
058-0	3170	Sumps & pumps room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3171	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3172	Waste evaporator condenser room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
058-0	3173	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3174	Waste evaporator condenser room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
058-0	3175	Decontam solution concentrator room	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
058-0	3176	Decontam solution pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	3177	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
082-0 ~~098-6~~	3178	Valve area	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
082-0 ~~098-6~~	3179	Unoccupied space ~~Valve area~~	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
075-0	3180	Pipeway	NA	~~None~~ ASPHALT IN PIPE	~~None~~ 260 lb	None	None	None ~~H_2O hose~~ ~~Port ext~~	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
082-0	3181	Offgas holdup pipe area	NA	None	None	None	None	None H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
082-0	3182	unoccupied space ~~Offgas holdup pipe area~~	NA	None	None	None	None	None H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
082-0	3183	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
075-0	3184	Vestibule	NA	Cable insul	1516 lb	72,900	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
069-0	3185	Pipeway	NA	None	None	None	None	None H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
066-0	3186	Pipeway	NA	None	None	None	None	None H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
075-0	3187	Pipeway	NA	None	None	None	None	None H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
075-0	3188	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
075-0	3189	Pipeway	NA	None	None	None	None	None H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
065-0	3190	Pipeway	NA	None	None	None	None	None H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
068-6	3191	Recycle & concentrated waste pumps room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
068-6	3192	Waste evaporator room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
069-2	3193	Heating element room	NA	None	None	None	None	~~H_2O hose~~[Q] Port ext	None. No safe shutdown equip or cable in zone.
068-6	3194	Waste evaporator room	NA	None	None	None	None	~~H_2O hose~~[Q] Port ext	None. No safe shutdown equip or cable in zone.
069-2	3195	Heating element room	NA	None	None	None	None	~~H_2O hose~~[R] Port ext	None. No safe shutdown equip or cable in zone.
068-6	3196	Recycle & concentrated waste pumps room	NA	None	None	None	None	~~H_2O hose~~[Q] Port ext	None. No safe shutdown equip or cable in zone.
075-0	3197	Radwaste regenerator system control panel room	NA	None	None	None	None	~~H_2O hose~~[Q] Port ext	None. No safe shutdown equip or cable in zone.
082-0	3198	Vial sampler area	NA	None	None	None	None	H_2O hose Port ext[Q]	None. No safe shutdown equip or cable in zone.
082-0	3199	Unoccupied space ~~Vial sampler area~~	NA	None	None	None	None	H_2O hose ~~Port ext~~[Q]	None. No safe shutdown equip or cable in zone.
087-0	3201	Cable tray area	NA	Cable insul	42,11[illegible]	21,500	Ionizat Photo-el	H_2O hose Port ext CO_2 hose	None. No safe shutdown equip or cable in zone.
087-0	3202	Store room	NA	Cable insul	1459 lb	3000	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
087-0	3203	Corridor	NA	None	None	None	None	H_2O hose Port ext[Q]	None. No safe shutdown equip or cable in zone.
077-0	3204	See 5207							

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
087-0	3205	Battery room	NA	Battery case, covers	120 lb	20,000	Ionizat	~~H_2O hose~~ Port ext CO_2 hose	None. No safe shutdown equip or cable in zone.
087-0	3206	Emergency shower area	NA	None	None	None	None	~~H_2O hose~~ Port ext	None. No safe shutdown equip or cable in zone.
087-0	3207	Battery charger room	NA	None	None	None	Ionizat	H_2O hose Port ext CO_2 hose	None. No safe shutdown equip or cable in zone.
087-0	3208	Cable tray area	NA	Cable insul	40,420 lb	42,500	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
087-0	3209	Corridor	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
087-0	3210	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
087-0	3211	Cable tray area	NA	Cable insul	36,411 lb	27,500	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
077-0	3215	Electrical access area	NA	None	None	None	Ionizat Photo-el	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
087-0	3216	Foyer	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
087-0	3217	Elevator machine room	NA	Lube oil Transient lube oil	3 gal. 3 gal.	1000	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
087-0	3218	Hatchway area	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
087-0	3219	Cable tray area	NA	Cable insul	46,063 lb	81,500	Ionizat Photo-el	H_2O hose Port ext CO_2 hose	None. No safe shutdown equip or cable in zone.
087-0	3220	Oil intercepter room	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
087-0	3221	Cable tray area	NA	Cable insul	5535 lb	28,700	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
087-0	3222	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3301	Vestibule	NA	Cable insul	4583 lb	68,900	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3302	Corridor	Yes	Cable insul	7325 lb	46,600	Ionizat Photo-el	H_2O hose Port ext	None. Redundant Div.I cable and with III.G.2.a separation would be used for safe shutdown.
102-0	3303	Men's toilet	Yes	Cable insul	1991 lb	38,400	Ionizat Photo-el	H_2O hose Port ext	None. Redundant Div.I cable with III.G.2.a separation would be used for safe shutdown.
102-0	3304	Janitor's room	Yes	Cable insul Paper	474 lb 500 lb	65,000 45,000	Ionizat Photo-el	H_2O hose Port ext	None. Redundant Div.I cable with III.G.2.a separation would be used for safe shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	3305	Unrestricted machine shop	NA	None	None	None	Ionizat Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3306	Connecting corridor	NA	None	None	None	~~None~~ Ionizat Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3307	Maintenance office	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
110-8	3308	Storeroom	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3309	Restricted machine shop	NA	Cable insul	1451 lb	2,000	Ionizat Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3310	Office	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3311, 3312	Decontamination room & Foyer	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
102-0	3313	Lobby	NA	None	None	None	~~None~~ Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3314	See 5301							

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	3315	Passageway	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3316	Tank area	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3317	Fuel pool filter room	NA	None	None	None	None	None	None. No safe shutdown equip or cable in zone.
102-0	3318	Fuel pool filter room	NA	None	None	None	None	None	None. No safe shutdown equip or cable in zone.
102-0	3319	Fuel pool filter room	NA	None	None	None	None	None	None. No safe shutdown equip or cable in zone.
102-0	3320	Floor drain filter room	NA	None	None	None	None	None	None. No safe shutdown equip or cable in zone.
102-0	3321	Floor drain demineralizer room	NA	None	None	None	None	None	None. No safe shutdown equip or cable in zone.
102-0	3322	Waste demineralizer room	NA	None	None	None	None	None	None. No safe shutdown equip or cable in zone.
102-0	3323	Waste filter room	NA	None	None	None	None	None	None. No safe shutdown equip or cable in zone.
102-0	3324	Fuel pool filter holding pumps room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3325	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3326	Pump room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	3328, 3329	Corridor and Electrical equipment area	NA	Cable insul	7934 lb	26,900	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
102-0	3330	Equipment decontamination room	NA	Cable insul	213 lb	1000	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3331	Electrical penetration room	NA	Cable insul	4811 lb	28,000	Ionizat Photo-el	H_2O hose Port ext CO_2 hose	None. No safe shutdown equip or cable in zone.
102-0	3332, 3327	Drop area & Corridor	NA	Cable insul	6140 lb	16,600	Ionizat Photo-el	CO_2 hose H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
102-0	3335, 3340	Corridor & Equipment access area	NA	Cable insul	6851 lb	17,000	Photo-el Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
102-0	3336	Electrical access area	NA	Cable insul	4675 lb	15,000	Photo-el Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3342	Hot water heater room	Yes	Cable insul	3119 lb	69000	~~Ionizat~~ Photo-el	H_2O hose Port ext	None. Redundant Div I equip and cable with III.G.2.a separation would be used for safe shutdown.
102-0	3343	Radwaste control room	NA	Cable insul	14,831 lb	35,000	Ionizat	H_2O hose Port ext CO_2 hose	None. No safe shutdown equip or cable in zone.
102-0	3344	Dry radwaste storage area	NA	Cable insul	6375 lb	28,000	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	3346	Corridor	NA	~~None~~ [a] ASPHALT IN PIPE	~~None~~ [a] 20 lb	None	Photo-el Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3347	Drum capper & seamer swipe sta. & conveyor area	NA	~~None~~ [a] ASPHALT IN OPEN DRUMS	~~None~~ [a] 2760 lb	~~None~~ [a] 105,000	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3348	Radwaste loading area	NA	~~None~~ [a] ASPHALT IN SEALED DRUMS	~~None~~ [a] 2760 lb	None	None	Auto-preaction sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3349	Drum turntable area	NA	~~None~~ [a] ASPHALT IN OPEN DRUMS	~~None~~ [a] 2760 lb	~~None~~ [a] 259,000	~~Ionizat~~ [a] Photo-el	Auto-~~wet~~ ~~preaction~~ [a] sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3350	Drum turntable area	NA	~~None~~ [a] ASPHALT IN OPEN DRUMS	~~None~~ [a] 2760 lb	~~None~~ [a] 294,000	~~Ionizat~~ [a] Photo-el	Auto-~~wet~~ ~~preaction~~ sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3351	Storage area	NA	Cable insul 2460 lb		15,000	Photo-el ~~Ionizat~~ [a]	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3356	Asphalt metering pump & instrumentation area	NA	Cable insul 9102 lb (ASPHALT IN PIPE)	(300 lb)	41,000	Photo-el ~~Ionizat~~ [a]	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	3357	Extruder evaporator room	NA	~~None~[2]~~ ASPHALT IN PIPE	~~None~[2]~~ 190 lb	None	~~Ionizat~[2]~~ Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3358	Extruder manifold area	NA	~~None~[2]~~ ASPHALT IN PIPE	~~None~[2]~~ 10 lb	None	~~Ionizat~[2]~~ Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3359	Extruder evaporator room	NA	~~None~[2]~~ ASPHALT IN PIPE	~~None~[2]~~ 10 lb	None	~~Ionizat~[2]~~ Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3360	Centrifuge feed tank recirc pump room	NA	None	None	None	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3361	Centrifuge feed tank room	NA	None	None	None	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3362	Cryst bottoms pump room	NA	None	None	None	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3363	Cryst instr rack area	NA	Cable insul 615 lb		25,000	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3364	Cryst. condensate skid area	NA	Cable insul 615 lb		12,800	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	3365	Cryst recirc pump sample skid area	NA	Cable insul	615 lb	8,500	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3366	Cryst bottoms tank room	NA	None	None	None	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	3367	Cryst recirc pump room	NA	Cable insul	492 lb	11,700	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
111-0	3368	Drum mezzanine	NA	None	None	None	~~Ioniz~~ None ~~Photo-el~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
112-0	3369	~~Pump~~ Drum mezzanine	NA	None	None	None	~~None~~ Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3401	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3402, 3405	Uncontrolled outage trade labor locker area & Corridor	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
124-0	3403	Clean issue room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3404	Electrical tray room	NA	Cable insul	2069 lb	58,400	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3406, 3407, & 3408	Uncontrolled toilet, Showers Drying area	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
124-0	3810, 3811, 3812	Showers, Dring area & Uncontrolled toilet	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
124-0	3813, 3809	Uncontrolled maint locker area & Corridor	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
124-0	3814	Clean issue room	Yes	None	None	None	Ionizat	H_2O hose Port ext	None. Redundant Div I cable with III.G.2.a separation would be used for safe shutdown.
124-0	3815 & 3838, 3816, 3837	Showers, Drying area & Disrobe area	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
124-0	3818, 3819	Technicians' & Supervisors' offices	NA	Paper	100 lb	800	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
124-0	3820	Calibration & Repair shop	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3821	Controlled hot chemical lab	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3823	Counting machine room	NA	none	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3823A	Corridor	NA	None	None	None	Ionizat	H_2O hose Port ext	Same as above
124-0	3824	Chemistry storage room	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3825	See 5801							

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
124-0	3426	~~Electrical access area~~ (Unoccupied space	NA	None	None	None	~~Ionizat Photo-el~~	~~H_2O hose Port ext~~	None. No safe shutdown equip or cable in zone.
124-0	3427	Clean chemical lab	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3429	Technical nuclear shop	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3430	Controlled laundry storage room	NA	Clothing, towels, etc	5600 lb	38,000	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3431	Wet & dry laundry room	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3432	Auxiliary panel room	NA	Cable insul	6367 lb	34,200	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3433	Vestibule	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3435	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3436, 3439	Controlled corridor & Passageway	NA	Cable insul	2244 lb	13,000	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
124-0	3438	Controlled access area	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
124-0	3440	Passageway	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3441, 3445, 3448, 3451	Decontamination area Access control area, Controlled corridor and Monitor area	NA	Cable insul	1942 lb	7,600	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
124-0	3442	Equipment removal area	Yes	None	None	None	Ionizat Photo-el	H_2O hose ~~Port ext~~	None. Redundant Div I cable with III.G.2.a separation would be used for safe shutdown.
124-0	3443, 3444	Controlled corridor & Controlled locker area	Yes	Cable insul	1392 lb	10,300	Ionizat	H_2O hose Port ext	None. Redundant Div I cable with III.G.2.a separation would be used for safe shutdown.
124-0	3446	Controlled toilet	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3447	Respirators, cannisters, & valve room	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3449	Auxiliary panel room	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
124-0	3450	~~Passageway~~ Unassigned	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	3452, 3457, 3461 thru 3467	Centrifuge, Incinerator & Filter Area	NA	None	None	None	Photo-el	H_2O hose Port ext Auto wet sprinkler sys?	None. So safe shutdown equip or cable in zones.
124-0	3458 3459 3460	Heater, Cooler Rooms	NA	None	None	None	Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3501, 3502	Information area & Vestibule	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3503	Storage room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3504	Uncontrolled corridor	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3505	Vestibule	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3506, 3508	Uncontrolled laundry room & Towel storage/issue area	Yes	Transient clothing	100 lb	1000	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. Redundant Div II cable has III.G.2.a separation and would be used for safe shutdown.
124-0	3455	FILLED DRUM STORAGE AREA		ASPHALT IN SEALED DRUMS/WASTE	33,360 lb	NONE	Heat det	Auto pre-action sprinkler	None. No safe shutdown equip or cable in zone.
124-0	3456	FILLED DRUM STORAGE AREA		ASPHALT IN SEALED DRUMS	73,800 lb	NONE	Heat det	Auto pre-action sprinkler	None. No safe shutdown equip or cable in zone.

Amendment 4

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
137-0	3507	Janitor's room	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3509, 3521	Disrobe area & Clean clothing issue room	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3510	Emerg clothing room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3512, 3522	Controlled corridors	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3513	Personnel toilet	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3514, 3515	Uncontrolled locker rooms & Corridor	NA	None	None	None	Ionizat	Auto-wet sprinker sys H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3516, 3517	Drying area & Personnel showers	NA	None	None	None	None	~~Auto-wet sprinkler sys~~ H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3518	Electrical tray room	NA	Cable insul	2125 lb	177,000	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard		Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
				Material	Quantity				
137-0	3519	Uncontrolled locker room	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3520	Controlled locker area	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3523	Disrobe area	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3524	Supervisors' controlled lockers	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3525	Supervisors' uncontrolled lockers	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3526, 3527, 3528	Shower room, Drying area & Toilet room	NA	None	None	None	None	Auto-wet sprinkler sys in 3528 H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3529	Entry room	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3530	Toilet room	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
137-0	3531, 3532	Dosimetry lab area & Health physics office	NA	Paper	100 lb	3000	Ionizat	Auto-wet sprinkler sys H_2O hose Port text	None. No safe shutdown equip or cable in zones.
137-0	3533	Access control area	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3534	Central monitors area	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3535	Decontamination area	NA	None	None	None	Ionizat ~~None~~	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3536 3537, & 3538	Disrobe area, Drying area Shower area	NA	None	None	None	None	~~Auto-wet sprinkler sys~~ H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3539, 3580	Controlled corridors	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3581	Clean clothing issue room	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3582	Controlled corridor	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
137-0	3543	Controlled corridor	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3544	Controlled corridor	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3545	Telephone equip room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3546	Conference room	NA	Paper	100 lb	2000	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3547	Auxiliary decontamination area	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3548, 3549, 3550	Disrobe area, Shower room and Drying area	NA	None	None	None	None	~~Auto-wet sprinkler sys~~ H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3551, 3558	Controlled corridors	NA	Cable insul	2936 lb	38,200	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3552	Toilet room	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3553	Janitor's room	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
137-0	3555	Controlled laundry rm	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3556	Auxiliary controlled locker room	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3557	Auxiliary uncontrolled locker room	NA	None	None	None	Ionizat	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3558	Toilet room	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3559, 3560	Drying area & Shower room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3561	Entry	NA	None	None	None	None	~~Auto-wet sprinkler sys~~ H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3562	Uncontrolled instrument shop	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3564	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3565	Standard room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
137-0	3566	Storage room	NA	Paper	400 lbs	22,200	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3567	Reproduction room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3568	Performance dept office	NA	Paper	300 lb	2000	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3569	Office area	NA	Paper	300 lb	2000	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3570, 3572	Corridors	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	3571	Controlled instrument shop	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3576	Remote shutdown facility Panel C-399 with Div I & Div II safe shutdown instrumentation and controls. Div I cable (Div II bottom entry)	Yes	Cable insul Paper	1278 lb 200 lb	17,800	Ionizat	H_2O hose Port ext CO_2 hose	None. Redundant Div I cable and controls in the main control rm with III.G.2.a separation would be used for shutdown.
137-0	3578	Disrobe area	NA	None	None	None	None	Auto-wet sprinkler sys H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
137-0	3579	Vestibule	NA	None	None	None	~~Ionizat[e]~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3580	HVAC filter room	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	3581	Vent stack	NA	None	None	None	None	~~H_2O hose[e] Port ext[e]~~	None. No safe shutdown equip or cable in zone.
137-0	3582	Access area	NA	None	None	None	Photo-el	Auto-wet sprinkler sys H_2O hose Port ext[e]	None. No safe shutdown equip or cable in zone.
137-0	3583	Entrain't separator room	NA	None	None	None	Photo-el	H_2O hose ~~Port ext[e]~~	None. No safe shutdown equip or cable in zone.
137-0	3584	Vapor body room	NA	None	None	None	Photo-el	H_2O hose ~~Port ext[e]~~	None. No safe shutdown equip or cable in zone.
153-3	3601, 3602	Reactor building ventilation equip rm	NA	Cable insul	11,075 lb	10,700	Ionizat Photo-el	H_2O hose ~~CO_2 hose[e]~~ Port ext	None. No safe shutdown equip or cable in zones.
153-3	3603	Reactor building ventilation equip rm	NA	Cable insul	8389 lb	11,100	Ionizat Photo-el	H_2O hose CO_2 hose Port ext	None. No safe shutdown equip or cable in zone.
155-3	3604, 3607, 3608	Corridors	NA	None	None	None	Ionizat Photo-el None in 3607	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
155-3	3605	H&V equip area	NA	Cable insul	468 lb	1690	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
155-3	3606	Radwaste exh system equip rm	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
155-3	3609	H&V equip area	NA	Cable insul	850 lb	640	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
153-0	3613	TSC Mechanical Room	NA	Charcoal	1450 lb	26,900	Ionizat Heat det in filter unit	Auto water spray in filter unit. H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
Reactor Building									
058-0	4101	Torus water cleanup pump rm	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	4102	Torus compartment Div I valves - HPCI, RHR Div I cable Div II valves - RCIC, RHR Div II cable	No	Cable insul	9588 lb	4000	Heat Actuated	~~Port ext~~ H_2O hose	None. See 9A.6.0
058-0	4103	Vestibule	NA	None	None	None	Ionizat ~~None~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	4104	Core spray pump rm Div II cable	Yes	Cable insul Lube oil Transient lube oil	7522 lb 15 gal. 15 gal.	47,400	Ionizat	H_2O hose Port ext	None. Redundant Div I cable would be used for safe shutdown.
058-0	4105	Core spray pump rm Div II cable	Yes	Cable insul Lube oil Transient lube oil	2879 lb 15 gal. 15 gal.	22,200	Ionizat	H_2O hose Port ext	None. Redundant Div I cable would be used for safe shutdown.
058-0	4106	CRW/DRW pumps and sump rm	NA	Cable insul Charcoal filter	1275 lb 99 lb	~~9200~~ 11,100	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
058-0	4107	RHR pump room Div II RHR pump 1DP202 Div II jockey pump 1DP228 Div II unit clr 1HVH210 1DVH210 Div II rack 10C069-RHR, ADS Div II cable	Yes	Cable insul Lube oil Transient lube oil	4900 lb 39 gal. 39 gal.	22,500	Ionizat	H_2O hose Port ext	None. Redundant Div I equip and cable would be used for safe shutdown.
172-6	3703	Vent Stack enclosure	NA	None	None	None	None	None	None. Amendment 4

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
054-0	4112	HPCI elect equip rm Div I MCC 10D251-HPCI Div I rack 10C018-RHR, ADS Div I cable	Yes	Cable insul	8646 lb	36,000	Ionizat	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown.
059-0 077-0	4113, 4214	RHR pump and HX rm Div I RHR pump 1AP202 Div I RHR HX 1AE205 Div I valves - RHR Div I unit clr 1AVH210, 1BVH210 Div I cable - RHR	Yes	Cable insul Lube oil Transient lube oil	5913 lb 39 gal. 39 gal.	37,700	Ionizat	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown.
054-0	4114	RHR pump rm Div I RHR pump 1CP202 Div I jockey pump 1CP228 Div I rack 10C055 - RHR Div I unit clr 1CVH210 1GVH210 Div I valves - RHR Div I cable - RHR	Yes	Cable insul Lube oil Transient lube oil	4292 lb 39 gal. 39 gal.	19,900	Ionizat	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown.
054-0	4115	CRW/DRW pumps and sump rm Div I cable - HPCI	Yes	Cable insul Charcoal Filter	1360 lb 99 lbs	~~9,900~~ 11,800	None	H_2O hose Port ext	None. Redundant Div II cable would be used for safe shutdown.
054-0	4116	Core spray pump rm	Yes	Cable insul Lube oil Transient lube oil	5890 lb 15 gal. 15 gal.	33,900	Ionizat	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown.
054-0	4117	Vestibule	NA	None	None	None	~~None~~ Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	4118	Core spray pump rm Div I cable	Yes	Cable insul Lube oil Transient lube oil	3892 lb 15 gal. 15 gal.	26,900	Ionizat	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
077-0	4201	Motor control center area Div II MCC 10B242 Div II cable	No	Cable insul	13,506 lb	45,400	Ionizat Heat det	H_2O hose Port ext Auto preaction sprinkler sys	None. Redundant. Div I equip and cable would be used for safe shutdown. See Section 9A.6.0.
077-0	4202	CRD pumps area Div II control panels: 10C066 RHR 10C026 Rx level and press Div II cable	Yes	Cable insul Lube oil Transient lube oil	12410 lb 3 gal. 3 gal.	47,700	Ionizat	H_2O hose Port ext	None. Redundant Div I equip and cable would be used for safe shutdown.
077-0	4203	Corridor Div II control rack: 10C027 Rx level and press Div I and II cable	Yes	Cable insul	4371 lb	31,700	Ionizat	H_2O hose Port ext	None. Redundant Div I equip and cable would be used for safe shutdown.
077-0	4204	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
077-0	4205	Elect equip rm Div II cable - RHR Div I cable - HPCI	Yes	Cable insul	6978 lb	25,400	Ionizat	H_2O hose Port ext	None. Redundant Div I equip and cable would be used for safe shutdown.
077-0	4206	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
077-0	4207	Passageway	No	Cable insul	3258 lb	85,700	STET ~~Ionizat~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone. See Section 9A.6.0 for deviation description.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	4301, 4310	Corridor and Elect equip area Div I MCC 10B232 for SACS, SSWS, HPCI, RHR Div I & II cable	Yes	Cable insul	36,258 lb	56,200	Ionizat Heat det	H_2O hose Port ext Auto preaction sprinkler sys in 4301	None. Redundant Div II equip and cable would be used for safe shutdown.
102-0	4303	Motor control center area Div II MCC 10B222 for SACS, SSWS, RCIC, RHR Div II cable	Yes	Cable insul	32,274 lb	70,000	Ionizat	H_2O hose Port ext	None. Redundant Div I equip and cable would be used for safe shutdown.
102-0	4304, 4305	Personnel airlocks	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
102-0	4307	SACS HX and pump rm-Div II Div II SACS pumps 1BP210 1DP210 Div II SACS HX 1B1E201 1B2E201 Div II control panels 1BC201 1DC201 Div II valves-SACS and SSWS Div II unit coolers 1BVH214 1DVH214 Div I & II cable - SACS	No	Cable insul Lube oil Transient lube oil	9584 lb 4 gal. 4 gal.	10,900	Ionizat	H_2O hose Port ext	None. Redundant Div I equip and cable would be used for safe shutdown. See Section 9A.6.0 for description of deviations (PT door and access panel).
102-0	4309	SACS HX and pump rm-Div I Div I SACS pumps 1AP210 1CP210 Div I SACS HX 1A1E201 1A2E201 Div I control panels 1AC201 1CC201 Div I valves-SACS and SSWS Div I unit clrs 1AVH214 1BVH214 Div I & II cable - SACS	No	Cable insul Lube oil Transient lube oil	27,692 4 gal. 4 gal.	21,800	Ionizat	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown. See Section 9A.6.0 for description of deviations (PT door and access panel).
102-0	4311	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont')

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	4313	Personnel airlock	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	4315	Corridor	No	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown cable or equip in zone See Section 9A.6.0. This zone separates redundant divisions.
102-0	4316	Steam tunnel	No	None	None	None	None	H_2O hose Port ext	None. Redundant Div I equip and cable would be used for safe shutdown. See section 9A.6.0 for unrated PT door.
102-0	4317	CRD master control area Div II cable - RHR, RCIC MSRVs & SACS	No	Cable insul	11,885 lb	50,800	Ionizat	H_2O hose Port ext	None. Redundant Div I cable would be used for safe shutdown. See Section 9A.6.0 for deviation request. CRD control is fail safe.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	4318	Neutron monitoring system area Div II cable - RHR, RCIC, MSRVs & SACS	Yes	Cable insul	4965 lb	49,700	Ionizat	H_2O hose Port ext	None. Redundant Div I cable would be used for safe shutdown.
099-9	4319	RCIC pipe chase	No	None	None	None	None	H_2O hose ~~Port ext~~	None. Redundant Div I equip and cable would be used for safe shutdown.
102-0	4320	CRD hydraulic control area Div II cable	No	Cable insul	3630 lb	14,800	Ionizat	H_2O hose Port ext	None. Redundant Div I cable would be used for safe shutdown. CRD is fail safe. See Section 9A.6.0 for deviation request.
099-9	4321	Pipe chase Div II RHR valves	No	None	None	None	None	H_2O hose ~~Port ext~~	None. Redundant Div I equip and cable would be used for safe shutdown.
102-0	4322	Personnel and equip access area Div II cable	No	Cable insul	6266 lb	22,500	Ionizat	H_2O hose Port ext	None. Redundant Div I cable would be used safe shutdown. See Section 9A.6.0 for deviation.
102-0	4323	Equip airlock	NA	New fuel wood crates	55,000 lb	163,000	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	4324	Personnel airlock	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	4326	CRD removal and repair area Div I cable	No	Cable insul Transient wood	3564 lb 500 lb	30,300	Ionizat	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown. See Section 9A.6.0 for deviation description.
102-0	4327	HPCI pipe chase Div I HPCI valve	No	None	None	None	None	H_2O hose ~~Port ext~~	None. Redundant Div II equip and cable would be used for safe shutdown.
102-0	4328	CRD hydraulic control area Div I cable	No	Cable insul	8859 lb	29,900	Ionizat	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown. CRD is fail safe. See Section 9A.6.0 for deviation description.
102-0	4329	North pipe chase Div I RHR valves	No	None	None	None	None	H_2O hose ~~Port ext~~	None. Redundant Div II valves would be used for safe shutdown.
102-0	4330	Drywell access area	Yes	Cable insul	1986 lb	39,700	Ionizat	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown.
102-0	4331	Personnel and equip access area Div I cable	No	Cable insul	7773 lb	26,800	Ionizat	H_2 hose Port ext	None. See Section 9A.6.0 for deviation description.
102-0	4332	Washdown area	NA	Cable insul	1190 lb	44,100	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	4333	CRD storage area	Yes	Cable insul	3081 lb	95,700	~~Ionizat~~ SIET	H_2O hose Port ext	None. Redundant Div II equip and cable would be used for safe shutdown.
119-6	4334	Elevator machine room	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
132-0	4401	Electrical equip area	NA	Cable insul	8422 lb	13,300	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
132-0	4402	Pipe chase	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
132-0	4403	Reactor water cleanup recirc pump rm	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
132-0	4404	Corridor	NA	Cable insul	5631 lb	28,200	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
132-0	4405	RWCU recirc pump rm	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
132-0	4406	RWCU backwash transfer pump rm	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
132-0	4407	RWCU backwash receiving tank rm	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
132-0	4408	Equip removal area	NA	Cable insul	12,134 lb	18,500	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
132-0	4409	Steam vent	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
132-0	4410, 4411	FRVS recirc units area FRVS recirc fans 1AV213 and 1CV213 FRVS recirc filters 1AVH213 and 1CVH213	NA	Cable insul Charcoal	34,398 lb 15,000 lb	69,900 in filter unit	Heat act Ionizat	Preaction water spray (in filter unit) H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
132-0	4412	Containment instr gas compressor rm	NA	Cable insul Lube oil Transient lube oil	1108 lb 1 gal. 1 gal.	18,500	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
132-0	4413	Containment instr gas compressor rm	NA	Lube oil Transient lube oil	1 gal. 1 gal.	1,000	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
132-0	4415, 4416, 4417	Technical support center	NA	Paper	500 lb	1800	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
145-0	4501	Elect equip area	NA	Cable insul	12,812 lb	36,800	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
145-0	4502	RWCU filter demin holding pump rm	NA	Cable insul	256 lb	6400	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
145-0	4503	RWCU filter demin holding pump rm	NA	Cable insul	142 lb	3,600	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
145-0	4504	Passageway	NA	Cable insul	9997 lb	18,300	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
145-0	4505	Pipe chase	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
132-0	4418 4419	TSC Computer Rooms	NA	Paper	200 16	38,100	Ionizat Photo-el	Port ext	None. No safe shutdown equip or cable in zone. Amendment 4

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
145-0	4506	RWCU heat exchanger rm	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
145-0	4508	Corridor	NA	Cable insul	10,581 lb	20,300	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
145-0	4509	Pipe chase	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
145-0	4510	Personnel airlock	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
145-0	4511	FRVS vent unit rm FRVS vent filter 1AVH206 FRVS vent fan 1AV206	NA	Charcoal	2250 lb	69,400	Heat act in filter unit	Preaction water spray (in filter unit) H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
145-0	4512	FRVS vent unit rm FRVS vent filter 1BVH206 FRVS vent fan 1BV206	NA	Charcoal	2250 lb	58,400	Heat act in filter unit	Preaction water spray sys (in filter unit). H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
145-0	4513	Sample station rm	NA	Cable insul	634 lb	10,000	Ionizat ~~None~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
145-0	4514, 4515, 4516, 4517	Technical support center	NA	Paper	500 lb	1800	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
145-0	4518	Main steam tunnel HVAC equipment room	NA	None	None	None	Ionizat ~~None~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
162-0 178-~~6~~	4601, 4618	Corridor and Platform area	NA	Cable insul	3822 lb	18,000	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
162-0	4602 4604	Post-LOCA recombiner area	NA	Cable insul	11,837 lb	23,500	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
162-0	4603	Containment prepurge cleanup rm	NA	Charcoal	750 lb	12,500	Heat act in filter unit	H_2O hose Port ext Preaction water spray (in filter unit)	None. No safe shutdown equip or cable in zone.
162-0	4605, 4608	Equipment area and corridor	NA	Cable insul	5953 lb	9,800	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
162-0	4606	Standby liquid control area	NA	Cable insul	3485 lb	26,300	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
162-0	4607	Fuel pool water suction area	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
162-0	4609	Gamma scan electronic rm	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
162-0	4613	Gamma scan detector area	NA	None	None	None	None	H_2O hose ~~Port ext~~	None. No safe shutdown equip or cable in zone.
162-0	4614	FRVS recirc unit rm E FRVS recirc filter 1EVH213 FRVS recirc fan 1EV213	NA	Cable insul Charcoal	3842 lb 7500 lb	55,000	Ionizat Heat act in filter unit	Preaction water spray sys (inside filter unit) H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
162-0	4615	FRVS recirc unit rm D FRVS recirc filter 1DVH213 FRVS recirc fan 1DV213	NA	Cable insul Charcoal	1271 lb 7500 lb	48,100	Ionizat Heat act in filter unit	Preaction water spray sys (inside filter unit) H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
178-6	4616	FRVS recirc unit rm F FRVS filter 1FVH213 FRVS recirc recirc fan 1FV213	NA	Cable insul Charcoal	7636 lb 7500 lb	54,400	Ionizat heat act in filter unit	Preaction water spray sys (inside filter unit) H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
178-6	4617	FRVS recirc unit rm B FRVS recirc fan 1BV213 FRVS recirc filter 1BVH213	NA	Cable insul Charcoal	5683 lb 7500 lb	53,900	Ionizat Heat act in filter unit	Preaction water spray sys (inside filter unit) H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
176-0	4619	Electrical access area	NA	None	None	None	None	~~H_2O hose~~ ~~Port ext~~	None. No safe shutdown equip or cable in zone.
162-0	4620, 4621	RWCU filter/demin vessel rooms	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
172-6	4624	Isolation valve room	NA	None	None	None	None	~~H_2O hose~~ ~~Port ext~~	None. No safe shutdown equip or cable in zone.
162-0	4625	Fuel pool cooling pump rm Fuel pool cooling pump 1AP211	NA	None	None	None	~~Ionizat None~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
162-0	4626	Fuel pool cooling pump rm Fuel pool cooling pump 1BP211	NA	None	None	None	~~Ionizat None~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
162-0	4627	Fuel pool heat exch rm Fuel pool heat exch 1AE202	NA	None	None	None	~~Ionizat None~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
162-0	4628	Fuel pool heat exch rm Fuel pool heat exch 1BE202	NA	None	None	None	~~None~~ Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
218-6	4701	Elevator mach rm	NA	Lube oil Transient lube oil	3 gal. 3 gal.	6000	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
228-6	4702	Polar crane entry platform	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
201-0	4703	Reactor basin	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
201-0	4705, 4707	RPV head washdown area & Cask washdown area	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
201-0	4706, 4708, 4709, 4710	Laydown areas, New fuel storage and work areas	NA	Transient wood	2000 lb	<1000	Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
Auxiliary Building Control & Diesel Generator Area									
054-0	5101	Vestibule	NA	Cable insul	566 lb	49,300	None	CO_2 hose H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	5102	Elect equip rm, non-1E	NA	Cable insul	35,460 lb	42,400	Photo-el Ionizat	CO_2 hose H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	5103	125 V dc equip rm, non-1E	NA	Cable insul	4282 lb	47,700	Photo-el Ionizat	CO_2 hose H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
054-0	5104	HPCI battery rm HPCI 250-V dc batt Div I conduit	Yes	Batt case	152 lb	5500	Photo-el Ionizat	CO_2 hose H_2O hose Port ext	None. Redundant Div II equip and cable with III.G.2.a separation would be used for safe shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
054-0	5105	RPS MG set rm Div I cable	Yes	Cable insul	1275 lb	13,900	Photo-el Ionizat	~~CO_2 hose~~ [2] H_2O hose Port ext	None. Redundant Div II cable and equip with III.G.2.a separation would be for safe shutdown.
054-0	5106, 3110	Controlled storage area & Corridor Div II cable	Yes	Cable insul	22,202 lb	15,200	Ionizat Photo-el	H_2O hose CO_2 hose Port ext	None. Redundant Div I cable with III.G.2.a separation would be used for safe shutdown.
054-0	5107	Diesel fuel oil storage Tanks and pumps 1GT403, 1HT403 1GP401, 1HP401 Div II conduit	Yes	Fuel oil number 2	53,000 gal.	7.1×10^6	Photo-el Infra-red ~~HAD~~ [3] Heat det	CO_2 tot flood H_2O hose Port ext Manual deluge	None. Redundant Div I equip and cable has III.G.2.a separation and would be used for safe shutdown.
054-0	5108	Diesel fuel oil storage Tanks and pumps 1CT403, 1DT403, 1CP401, 1DP401 Div II conduit	Yes	Fuel oil number 2	53,000 gal.	7.1×10^6	Photo-el Infra-red ~~HAD~~ [3] Heat det	CO_2 tot flood H_2O hose Port ext Manual deluge	None. Redundant Div I equip and cable has III.G.2.a separation and would be used for safe. shutdown.
054-0	5109	Diesel fuel oil storage Tanks and pumps 1ET403, 1FT403, 1EP401, 1FP401 Div I conduit	Yes	Fuel oil number 2	53,000 gal.	7.1×10^6	Photo-el Infra-red ~~HAD~~ [3] Heat det	CO_2 tot flood H_2O hose Port ext Manual deluge	None. Redundant Div II equip and cable has III.G.2.a separation and would be used for safe shutdown.
054-0	5110	Diesel fuel oil storage Tanks and pump 1AT403, 1BT403, 1AP401, 1BP401 Div I conduit	Yes	Fuel oil number 2	53,000 gal.	7.1×10^6	Photo-el Infra-red ~~HAD~~ [3] Heat det	CO_2 tot flood H_2O hose Port ext Manual deluge	None. Redundant Div II equip and cable has III.G.2.a separation and would be used for safe shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
077-0	5202	Cable spread room Div I & II cable	Yes	Cable insul	182,087 lb	158,000	Photo-el Ionizat ~~HAD~~ [1]	Preaction sprinkler ~~CO_2 hose~~ [c] H_2O hose Port ext	None. Remote shutdown locations have III.G.2.a separation and will be used for safe shutdown.
077-0	5203	Elect chase Div II cable	Yes	Cable insul	2018 lb	120,000	Ionizat Photo-el (in 5531) Heat det	~~CO_2 hose~~ [c] H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div I cable has III.G.2.a separation and would be used for safe shutdown.
077-0	5204	Elect chase Div II cable	Yes	Cable insul	1535 lb	91,400	Ionizat Photo-el (in 5532) Heat det	~~CO_2 hose~~ [c] H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div I cable has III.G.2.a separation and would be used for safe shutdown.
077-0	5205	Elect chase Div I cable	Yes	Cable insul	1535 lb	91,400	Ionizat Photo-el (in 5533) Heat det	~~CO_2 hose~~ [c] H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div II cable has III.G.2.a separation and would be used for safe shutdown.
077-0	5206	Elect chase Div I cable	Yes	Cable insul	1535 lb	91,400	Ionizat Photo-el (in 5534) Heat det	~~CO_2 hose~~ [c] H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div II cable has III.G.2.a separation and would be used for safe shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
077-0	5237 ~~5207~~ West	Electrical access area Div I cable	Yes	Cable insul	28,147 lb	47,300	Ionizat Photo-el Heat act	CO_2 hose H_2O hose ~~Port ext~~ Auto pre-action sprinkler	None. Redundant Div II cable has III.G.2.a separation and will be used for safe shutdown.
077-0	5207, ~~5208~~ 3208	Electrical access area (wing) Div II cable	Yes	Cable insul	58,100 lb	67,600	Ionizat Photo-el Heat act	H_2O hose CO_2 hose Port ext Auto pre-action sprinkler	None. Redundant Div I cable has III.G.2.a separation and will be used for safe shutdown.
077-0	5208	Diesel gen HVAC rm Diesel gen coolers - Div II 1HV812, 1DV812, 1HVE812, 1DVE812	Yes	None	None	None	Photo-el Ionizat	H_2O hose Port ext	None. Redundant Div I equip has III.G.2.a separation and would be used for safe shutdown.
077-0	5209	Diesel gen HVAC rm Diesel gen coolers - Div II 1FV812, 1BV812, 1FVE812, 1BVE812	Yes	None	None	None	Photo-el Ionizat	H_2O hose Port ext	None. Redundant Div I equip has III.G.2.a separation and would be used for safe shutdown.
077-0	5210	Diesel gen HVAC rm Diesel gen coolers - Div I 1GV812, 1CV812, 1GVE812, 1CVE812	Yes	None	None	None	Photo-el Ionizat	H_2O hose Port ext	None. Redundant Div II equip has III.G.2.a separation and would be used for safe shutdown.
077-0	5211	Diesel gen HVAC rm Diesel gen coolers - Div I 1EV812, 1AV812, 1EVE812, 1AVE812	Yes	None	None	None	Photo-el Ionizat	H_2O hose Port ext	None. Redundant Div II equip has III.G.2.a separation and would be used for shutdown.
077-0	5215, 5217	Access area & Corridor	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.

move to pg 48

Amendment 4

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
077-0	5216	Electrical chase	NA	Cable insul	2416 lb	378,000	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
077-0	5233	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	~~5301~~ ~~5337~~ 5339	Electrical access area Div I cable	Yes	Cable insul	29,153 lb	43,700	Ionizat Photo-el Heat act	CO_2 hose H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div II cable has III.G.2.a separation and would be used for safe shut-down.
102-0	5301, ~~5337~~ 3318	Electrical access area Div II cable (wing)	Yes	Cable insul	25,661 lb	50,500	Ionizat Photo-el	H_2O hose CO_2 hose Port ext	None. Redundant Div I cable has III.G.2.a separation and would be used for safe shut-down.
102-0	5302	Control equipment rm Div I and II cable and panels	No	Cable insul	31,368 lb	28,700	Ionizat Photo-el	CO_2 hose H_2O hose Port ext	None. Safe shutdown would be accomplished from the remote shutdown facility which has III.G.2.a separation. See Section 9A.6.0 for deviation description.
102-0	5303, 5316	Corridor and Vestibule	NA	None	None	None	None	CO_2 hose H_2O hose Port ext	None. No safe shutdown equip or cable in zones.

INSERT from page 47 077-0 5337

move to after 5336, ~~page~~ page 51

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cabl	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	5304	Diesel generator rm Div II diesel generator 1DG400 and auxiliaries Div II cable	Yes	Cable insul Lube oil Diesel fuel number 2 Transient (lube oil)	2528 lb 1250 gal. 550 gal. 55 gal.	197,000	Infra-red Photo-el Heat act	CO_2 tot flood CO_2 hose H_2O hose Port ext	None. Redundant Div I SDGs which have III.G.2.a separation would be used for safe shutdown.
102-0	5305	Diesel generator rm Div II diesel gen 1BG400 and auxiliaries Div II cable	Yes	Cable insul Lube oil Diesel fuel number 2 Transient (lube oil)	2528 lb 1250 gal. 550 gal. 55 gal.	197,000	Infra-red Photo-el Heat act	CO_2 tot flood CO_2 hose H_2O hose Port ext	None. Redundant Div I SDGs which have III.G.2.a separation would be used for safe shutdown.
102-0	5306	Diesel generator rm Div I diesel gen 1CG400 and auxiliaries Div I cable	Yes	Cable insul Lube oil Diesel fuel number 2 Transient (lube oil)	2609 lb 1250 gal. 550 gal. 55 gal	198,000	Infra-red Photo-el Heat act	CO_2 tot flood CO_2 hose H_2O hose Port ext	None. Redundant Div II SDGs which have have III.G.2.a separation would be used for safe shutdown
102-0	5307	Diesel generator rm Div I diesel gen 1AG400 and auxiliaries Div I cable	Yes	Cable insul Lube oil Diesel fuel number 2 Transient (lube oil)	2609 lb 1250 gal. 550 gal. 55 gal	198,000	Infra-red Photo-el Heat act	CO_2 tot flood CO_2 hose H_2O hose Port ext	None. Redundant Div II SDGs which have III.G.2.a separation would be used for safe shutdown.
102-0	5306, 5315	Corridors	NA	Cable insul	1615 lb	4600	Photo-el Ionizat	~~CO_2 Hose~~ H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	5323	Elect cable chase Div II cable	Yes	Cable insul	2122 lb	147,000	Ionizat Photo-el (in 5531) Heat act	CO_2 hose H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div I cable has III.G.2.a separation and would be used for shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	5324	Elect cable chase Div II cable	Yes	Cable insul	2122 lb	147,000	Ionizat Photo-el (in 5532) Heat act	CO_2 hose H_2O hose Port ext Auto pre-actin Sprinkler	None. Redundant Div I cable has III.G.2.a separation and would be used for shutdown.
102-0	5325	Elect cable chase Div I cable	Yes	Cable insul	2122 lb	147,000	Ionizat Photo-el (In 5533) Heat act	CO_2 hose H_2O hose Port ext Auto pre-actin Sprinkler	None. Redundant Div II cable has III.G.2.a separation and would be used for shutdown.
102-0	5326	Elect cable chase Div I cable	Yes	Cable insul	2122 lb	147,000	Ionizat Photo-el (in 5534) Heat act	CO_2 hose H_2O hose Port ext Auto pre-actin Sprinkler	None. Redundant Div II cable has III.G.2.a separation and would be used for shutdown.
102-0	5331	Elect cable chase Div II cable	Yes	Cable insul	312 lb	52,000	Ionizat Photo-el (in 5531) Heat act	~~CO_2 hose~~ H_2O hose Port ext Auto pre-actin Sprinkler	None. Redundant Div I cable has III.G.2.a separation and would be used for shutdown.
102-0	5332	Elect cable chase Div II cable	Yes	Cable insul	312 lb	52,000	Ionizat Photo-el (in 5532) Heat act	~~CO_2 hose~~ H_2O hose Port ext Auto pre-actin Sprinkler	None. Redundant Div I cable has III.G.2.a separation and would be used for shutdown.
102-0	5333	Elect cable chase Div I cable	Yes	Cable insul	312 lb	52,000	Ionizat Photo-el (in 5533) Heat act	~~CO_2 hose~~ H_2O hose Port ext Auto pre-actin Sprinkler	None. Redundant Div II cable has III.G.2.a separation and would be used for shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
102-0	5338	Elect cable chase Div I cable	Yes	Cable insul	312 lb	52,000	Ionizat Photo-el (in 5538) Heat act	~~CO_2 hose~~ [a] H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div II cable has III.G.2.a separation and would be used for shutdown.
102-0	5335	Vestibule	NA	None	None	None	None	CO_2 Hose H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
102-0	5336	Electrical raceway	NA	Cable insul	922 lb	144,000	None	~~CO_2 Hose~~ [a] H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
124-0	5339 5401, 3825	Elect access area Div II cable	Yes	Cable insul	33,849 lb	55,800	Ionizat Photo-el (in 5401) Heat act	CO_2 hose H_2O hose ~~Port ext~~ WET Auto pre-action sprinkler	None. Redundant Div I cable has III.G.2.a separation and would be used for safe shutdown.
124-0	5402	Vestibule	NA	None	None	None	None	CO_2 hose H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
117-6	5403	Control equip rm mezz Div I and II cable ~~and panels~~ [a]	Yes	Cable insul	95,195 lb	106,000	Ionizat Photo-el Heat act	Auto CO_2 total flood H_2O hose ~~CO_2 hose~~ [a] Port ext Manual deluge sys	None. Shutdown can be accomplished from the remote shutdown facility which has III.G.2.a separation.
124-0	5404	Corridor	NA	Cable insul	568 lb	6100	None	CO_2 hose H_2O hose Port ext	None. No safe shutdown cable or equip in zone.
124-0	5405	Elect chase Div II cable	Yes	Cable insul	1061 lb	68,900	Ionizat Photo-el (in 5531) Heat act	CO_2 hose H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div I caable has III.G.2.a separation and would be used for safe shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
124-0	5806	Elect chase Div II cable	Yes	Cable insul	1061 lb	68,900	Ionizat Photo-el (in 5532) Heat act	CO_2 hose H_2O hose Port ext Auto pre-action sprinkler	None. Pedundant Div I cable has III.G.2.a separation and would be used for safe shutdown.
124-0	5807	Elect chase Div I cable	Yes	Cable insul	1061 lb	68,900	Ionizat Photo-el (in 5533) Heat act	CO_2 hose H_2O hose Port ext auto. pre-action sprinkler	None. Pedundant Div II cable has III.G.2.a separation and would be used for safe shutdown.
124-0	5808	Elect chase Div I cable	Yes	Cable insul	1061 lb	68,900	Ionizat Photo-el (in 5538) Heat act	CO_2 hose H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div II cable has III.G.2.a separation and would be used for shutdown.
130-0	5809	Corridor	NA	None	None	None	Ionizat Photo-el	H_2O hose CO_2 hose Port ext	None. No safe shutdown equip or cable in zone.
130-0	5810, 5811	Class 1E swgr rm - Div II Div II 4.16 kV swgr 10A404 Div II 480 V unit substns 10B440, 10B480 Div II MCC 10B441, 10B481 Div II 125-V dc load ctr 10D480 Div II 125-V dc dist pnl 1DD417 Div II diesel control pnl 1DD423 Div II gen control pnl 1DD422 Div II diesel gen sequencer Div II cable	Yes	Cable insul	10,204 lb	29,100	Ionizat Photo-el	CO_2 hose H_2O hose Port ext	None. Redundant Div I equip and cable with III.G.2.a separation would be used for shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
130-0	5412, 5413	Class 1E swgr rm - Div II Div II 4.16-kV swgr 10A402 Div II 480-V unit substns 10B420, 10B460 Div II MCC 10B421, 10B461 Div II 125-V dc load ctr 10D420 Div II 125-V dc dist pnl 1BD417 Div II diesel control pnl 10B423 Div II gen control pnl 1BD422 Div II diesel gen sequencer Div II cable	Yes	Cable insul	10,204 lb	29,100	Ionizat Photo-el	CO_2 hose H_2O hose Port ext	None. Redundant Div I equip and cable with III.G.2.a separation would be used for shutdown.
130-0	5414, 5415	Class 1E swgr rm Div I Div I 4.16-kV swgr 10A403 Div I unit substn 10B430 10B470 Div I MCC 10B431, 10B471 Div I 125-V dc load ctr 10D430 Div I 125-V dc dist pnl 1CD417 Div I diesel control pnl 1CD423 Div I diesel gen cntrl pnl 1CD422 Div I diesel gen load sequencer Div I cable	Yes	Cable insul	10,204 lb	29,100	Ionizat Photo-el	CO_2 hose H_2O hose Port ext	None. Redundant Div II equip and cable with III.G.2.a separation would be used for shutdown.
130-0	5416, 5417	Class 1E swgr rm - Div I Div I 4.16-kV swgr 10A401 Div I unit substn 10B410 10B450 Div I MCC 10B411, 10B451 Div I 125-V dc load ctr 10D410 Div I 125-V dc dist pnl 1AD417 Div I diesel cntrl pnl 1AD423 Div I diesel gen cntrl pnl 1AD422 Div I diesel gen load sequencer Div I cable	Yes	Cable insul	10,204 lb	29,100	Ionizat Photo-el	CO_2 hose H_2O hose Port ext	None. Redundant Div II equip and cable with III.G.2.a separation would be used for shutdown.
130-0	5418	Corridor	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext ~~CO_2 hose~~	None. No safe shutdown equip or cable in zone.
130-0	5419	Elect chase Div II cable	Yes	Cable insul	1704 lb	203,000	Ionizat Photo-el (in 5531) Heat det	H_2O hose Port ext Auto pre-action Sprinkler	None. Redundant Div I cable with III.G.2.a separation would be used for shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
130-0	5420	Elect chase Div II cable	Yes	Cable insul	1704 lb	203,000	Ionizat Photo-el (in 5532) Heat act	H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div I cable with III.G.2.a separation would be used for shutdown.
130-0	5421	Elect chase Div I cable	Yes	Cable insul	1704 lb	203,000	Ionizat Photo-el (in 5533) Heat act	H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div II cable with III.G.2.a separation would be used for shutdown.
130-0	5422	Elect chase Div I cable	Yes	Cable insul	1704 lb	203,000	Ionizat Photo-el (in 5534) Heat act	H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div II cable with III.G.2.a separation would be used for shutdown.
130-0	5423 ~~East~~	Diesel combust air intake rm Filter 1DF413 1BF413 Div II cable	Yes	Cable insul	11,410 lb	63,400	Photo-el	H_2O hose Port ext	None. Redundant Div I cable and equip has III.G.2.a separation and would be used for safe shutdown.
130-0	5450 ~~5423~~ ~~west~~	Diesel combust air intake rm Filter 1CF413 1AF413 Div I cable	Yes	Cable insul	2542 lb	12700	Photo-el	H_2O hose Port ext	None. Redundant Div II cable and equip has III.G.2.a separation and will be used for safe shutdown.
128-0	5447	Class 1E INVERTER rm ~~PRVS panel room~~ 1BC285 1DC285 Div II conduit	Yes	None	None	None	Ionizat	H_2O hose CO_2 hose Port ext	None. Redundant Div I equip and cable has III.G.2.a separation and would be used for safe shutdown.

INSERT on page 55

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
124-0	5448	Class 1E inverter rm 1BD481 1DD481 Div II cable	Yes	Cable insul	508 lb	6,000	Ionizat Photo-el	H_2O hose CO_2 hose Port ext	None. Redundant Div I equip and cable has III.G.2.a separation.
117-6	5449	Elect raceway	NA	Cable insul	851 lb	133,000	None	Manual Deluge ~~CO_2 hose~~ H_2O hose Port ext	None. No safe shutdown cable in zone.
→ INSERT FROM PAGE 54									
137-0	5501	Elect access area Instr pwr supply 1AD481 1CD481 PA system pwr supply 10D496 RSP room HVAC 1VH316 DIV II	Yes	Cable insul	8207 lb	29,300	Ionizat Photo-el	CO_2 hose H_2O hose Port ext	None, Redundant Div II cables with III.G.2.a separation would be used for shutdown.
137-0	5502	Corridor	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5503	Instr viewing rm	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5504	Mens' toilet	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5505	Unassigned ~~Kitchen~~	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
~~137-0~~	~~5506~~	~~Pantry~~	~~NA~~	~~None~~	~~None~~	~~None~~	~~None~~	~~H_2O hose Port ext~~	~~None. No safe shutdown equip or cable in zone.~~
137-0	5507	Womens' toilet	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
137-0	5508	Storage rm	NA	Paper	750 lb	57,100	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5509	Shift supv rm	NA	Paper	Insignif	Insignif	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5510	Main control room 10C650 main vert board 10C651 unit operators console Div I and II panels	No	Paper Transient paper	300 lb 100 lb	1200	Ionizat	~~CO_2 hose~~[a] H_2O hose Port ext	The safe shutdown redundant controls and cabling does not meet the III.G.2.a separation, therefore alternate shutdown from the remote shutdown facility and remote equipment operating locations is provided. The remote shutdown facility and cabling has III.G.2.a separation from the main control room. Fixed suppression not provided. See Section 9A.6.0.
137-0	5511	Ready room	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5512	Corridor	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5513	Elevator lobby	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
137-0	5514	Janitor	NA	Paper	100 lb	16,000	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5515	Computer room	NA	Paper Transient paper	300 lb 100 lb	3800	Ionizat	H_2O hose Port ext	None. This equipment is not required for safe shutdown.
137-0	5520	Storage rm	NA	Paper	1300 lb	77,000	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5521, 5522	Corridors	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
137-0	5523	Training/conf rm	NA	Paper	200 lb	6000	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
137-0	5525	Corridor Div II cable	Yes	Cable insul	426 lb	4500	None	CO_2O hose H_2O hose Port ext	None. Redundant Div I cable with III.G.2.a separation would be used for shutdown. See 5510.
150-0	5531	Elect cable chase Div II cable	Yes	Cable insul	23,110 lb	136,000	Ionizat Photo-el Heat act	~~CO_2 hose~~ H_2O hose Port ext Auto preaction sprinkler	None. Redundant Div I cable with III.g.2.a separation would be used for shutdown.
150-0	5532	Elect cable chase Div II cable	Yes	Cable insul	23,110 lb	136,000	Ionizat Photo-el Heat act	~~CO_2 hose~~ H_2O hose Port ext Auto preaction sprinkler	None. Redundant Div I cable with III.G.2.a separation would be used for shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
150-0	5533	Elect cable chase Div I cable	Yes	Cable insul	23,110 lb	136,000	Ionizat Photo-el Heat act	CO_2 hose H_2O hose Port ext Auto pre-action sprinkler	None Redundant Div II cable with III.G.2.a separation would be used for shutdown.
150-0	5534	Elect cable chase Div I cable	Yes	Cable insul	23,110 lb	136,000	Ionizat Photo-el Heat act	CO_2 hose H_2O hose Port ext Auto pre-action sprinkler	None. Redundant Div II cable with III.G.2.a separation would be used for shutdown.
150-0	5535	Heating & ventilation chase	NA	~~Cable~~ insul	~~None~~ 8448	~~None~~ 64,580	~~None~~ Heat act	~~None~~ Not accessible Auto pre-action sprinkler	None. No safe shutdown equip or cable in zone.
146-0	5536	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
146-0	5537	Corridor	NA	Cable insul	595 lb	3900	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
146-0	5538	Battery charger rm Fuse trans sw box 1DD412 Battery chargers 1DD413 1DD414 Battery monitors 1DD415 Division II cable	Yes	Cable insul	2553 lb	37,500	Ionizat Photo-el	H_2O hose Port ext	None. Redundant Div I equip and cable with III.G.2.a separation would be used for shutdown.
146-0	55[redacted]	[redacted]ery rm [redacted]ery racks 1DD411 [redacted]ion II cable	Yes	Batt case	325 lb	21,100	Ionizat	H_2O hose Port ext	None. Redundant Div I equip and cable with III.G.2.a separation would be used for shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
150-0	5546	Corridor	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
155-3	5601	Vestibule	NA	None	None	None	None	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
155-3	5602	HVAC equip rm Control rm wtr chiller 1AK400 Control rm chilled wtr pump 1AP400 Control rm A/C unit 1AVH403	Yes	Cable insul	7658 lb	10,800	Ionizat Photo-el Heat act in 1AVH400	H_2O hose (water spray) Port ext auto ~~deluge~~ in 1AVH400 CO_2 hose	None. Redundant Div II equip and cable with III.G.2.a separation would be used for shutdown.
163-6	5608, 5611	Corridors	NA	Cable insul	12,240 lb	32,800	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zones.
163-6	5605	Control equip rm Division I and II Class 1E logic cabinets 1AC655 1CC655 1BC655 1DC655	No	Cable insul	4335 lb	2800	Ionizat Photo-el	H_2O hose Port ext	None. Safe shutdown would be accomplished using the remote shutdown facility and local equipment operating areas. No fixed suppression. See Section 9A.6.0.
163-6	5606	HVAC equip rm - Div II Switchgear rm cooler 1BVH401 1DVH401 Diesel battery rm exh fan 1BV406 1DV406	Yes	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. Redundant Div I equip and cable has III.G.2.a separation and would be used shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
163-6	5607	Class 1E inverter rm Div II Power supply 1DD482 125-V dc swgr 10D446 125-V dc batt chgr 10D444 125-V dc fuse transfer switch box 1DD448	Yes	Cable insul	705 lb	13,400	~~Ionizat~~ Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5608	Corridor	NA	None	None	None	None ~~Ionizat~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5609	Battery rm - Div II Battery rack 1DD447	Yes	Batt case	312 lb	22,900	~~Ionizat~~ Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5610	Corridor	NA	None	None	None	Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5612	Corridor	NA	Cable insul	142 lb	2100	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5613	Class 1E inverter rm - Div I power supply 120-V ac 1CD482 125-V dc swgr 10D436 125-V dc batt chgr 1CD444	NA	Cable insul	776 lb	15,000	Photo-el ~~Ionizat~~	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5614	Class 1E battery rm Battery rack 125-V dc 1CD447	NA	Batt case	312 lb	22,900	Photo-el Ionizat	H_2O hose Port ext	None. No safe shutdown equip and cable in zone.
163-6	5615	Class 1E inverter rm 120-V ac power supply 1BD482	NA	Cable insul	352 lb	10,400	Photo-el Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5616	Class 1E inverter rm 120-V ac power supply 1AD482	NA	Cable insul	352 lb	9,500	Photo-el Ionizat	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
163-6	5617	Electrical access area Div II cable	Yes	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. Redundant Div I cable has III.G.2.a separation and would be used for safe shutdown.
163-6	5618	Corridor	NA	None	None	None	Ionizat	H_2O hose Port ext	None. Redundant Div cable with III.G.2.a separation would be used for safe shutdown.
153-3	5619	TSC Electrical room	NA	Cable insul	850 lb	14,800	Ionizat ~~Photo-el~~[c]	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5620	HVAC equip rm Class 1E panel rm supply 1AVH408 1BVH408 Control panel 1EC485	No	Cable insul	2257 lb	3400	Ionizat Photo-el	H_2O hose Port ext	None. Remote shutdown facilities can be used. No fixed suppression. See Section 9A.6.0
163-6	5621	Inverter rm	NA	Cable insul	141 lb	3000	~~Ionizat~~[c] Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5622	Inverter rm	NA	Cable insul	352 lb	4500	~~Ionizat~~[c] Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5623	Inverter rm	NA	Cable insul	310 lb	6,000	~~Ionizat~~[c] Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5624	Inverter rm, non-Class 1E	NA	Cable insul	634 lb	5,400	~~Ionizat~~[c] Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
163-6	5625	Corridor	NA	None	None	None	Ionizat Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5626	Battery rm	NA	Batt case	1220 lb	40,000	~~Ionizat~~[c] Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5627	Battery rm	NA	Batt case	1220 lb	40,000	~~Ionizat~~[c] Photo-el	H_2O hose Port ext	None. No safe shutdown equip or cable in zone
163-6	5628	Inverter rm non-Class 1E	NA	Cable insul	1058 lb	8,400	Ionizat ~~Photo-el~~[c]	H_2O hose Port ext	None. No safe shutdown equip or cable in zone.
163-6	5629	HVAC equip rm - Div I Switchgear rm coolers 1AVH401 1CVH401 Diesel battery rm exh fans 1AVH406 1CVH406	Yes	Cable irsul	423 lb	1700	Ionizat Photo-el	H_2O hose Port ext	None. Redundant Div II equip and cable has III.G.2.a separation and would be used for shutdown.
155-3	5630	HVAC equip rm Control rm wtr chiller 1BK400 Control rm chil wtr pmp 1BP400 Control rm A/C unit 1BVH403 Control rm emerg filter 1BVH400	Yes	Cable insul	2550 lb	5800	Ionizat Photo-el Heat act in 1BVH400	H_2O hose Port ext Auto water spray inside charcoal filter unit 1BVH400	None. Redundant Div I equip and cable with III.G.2.a separation would be used for shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
178-0	5704 5703	Diesel area HVAC rm Div I & II DG HVAC pnls 1AC483 1CC483 1BC483 1DC483 Div I & II control area chilled wtr 1AK403 1AP419 1BK403 1BP419 Div I & II control equip rm 1AVH407 1BVH407	No	Cable insul	2508 lb	1300	Ionizat Photo-el	H_2O hose Port ext	None. See Section 9A.6.0 for deviation description. Very low combustibles allows safe shutdown from MCR. RSF can be used if MCR affected by loss of HVAC to equip rooms.
Station Service Water Intake Structure									
79-8	107	~~Panel area~~ Pump room Div I valves & cable	Yes	None	None	None	None	H_2O hose Port ext	None. Redundant Div II equip and cable has III.G.2.a separation and would be used for safe shutdown.
079-8	110	~~Panel area~~ Pump room Div II valves & cable	Yes	None	None	None	None	H_2O hose Port ext	None. Redundant Div I equip and cable has III.G.2.a separation and would be used for safe shutdown.
093-0	203	Intake struct elect equip rm Div I MCC 10B553 10B573	Yes	Cable insul	1430 lb	42,300	Photo-el	H_2O hose Port ext	None. Redundant Div II service water equip and cable with III.G.2.a separation would be used for shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
093-0	204	Intake struct Div I pump rm Div I service water pumps 1AP502 1CP502 Div I service water strainers 1AF509 1CF509 Div I service water valves and instrumentation Div I panels 1AC581 1CC581 Div I cable - SSW	Yes	Cable insul Lube oil transient (lube oil)	3750 lb 56 gal 28 gal	34,800	Ionizat Photo-el Heat det	Auto pre-action sprinkler H_2O hose Port ext	None. Redundant Div II service water equip and cable with III.G.2.a separation would be used for shutdown.
093-0	207	Intake struct elect equip rm Div II MCC 10B563 10B583	Yes	Cable insul	1830 lb	42,300	Photo-el	H_2O hose Port ext	None. Redundant Div I service water equip and cable with III.G.2.a separation would be used for shutdown.
093-0	208	Intake struct Div II pump rm Div II service water pumps 1BP502 1DP502 Div II service water strainers 1BF509 1DF509 Div II valves and instr Div II panels 1BC581 1DC581 Div II cable - SSW	Yes	Cable insul Lube oil Transient (lube oil)	4450 lb 56 gal 28 gal	38,700	Ionizat Photo-el Heat det	Auto pre-action sprinkler H_2O hose Port ext	None. Redundant Div I service water equip and cable with III.G.2.a separation would be used for shutdown.
107-0		Travelling screen panel room Panels 1BC516 & 1DC516 Div II cable	Yes	None	NOne	None	Photo-el Ionizat	Port ext H_2O hose	None. Redundant Div I equip and cable with III.G.2.a separation would be used for safe shutdown.

TABLE 9A-1 (cont)

Elev ft-in.	Zone	Fire Zone Description and Safe Shutdown Equip and Cable	App R Compl	Hazard Material	Hazard Quantity	Fire Load Btu/ft²	Detection	Suppression	Effects of Fire On Safe Shutdown
107-0	Div I	Travelling screen panel room Panels 1AC516 & 1CC516	Yes	None	None	None	~~Ionizat~~ Photo-el ~~Heat~~	Port ext H_2O hose	None. Redundant Div II equip and cable with III.G.2.a separation would be used for safe shutdown.
114-0		Travelling screen motor area	No	None	None	None	Ionizat Photo-el	Port ext ~~H_2O hose~~	None. See exemption request in Section 9A.6.0.
122-0	0305, 0306	Intake structure Div I ventilation equip Div I intake fans 1AV503 1CV503 Div I exhaust fans 1AV504 1CV504	Yes	None	None	None	~~None~~ Photo-el in 306	H_2O hose Port ext	None. Redundant Div II service water equip and cable which has III.G.2.a separation would be used for shutdown.
122-0	0311, 0312	Intake structure Div II ventilation equip Div II intake fans 1BV503 1DV503 Div II exhaust fans 1BV504 1DV504	Yes	None	None	None	~~None~~ Photo-el in 312	H_2O hose Port ext	None. Redundant Div I service water equip and cable with III.G.2 separation would be used for shutdown.

ROOM: Torus Compartment

FIRE ZONE 4102 BLDG. Reactor ELEV. 54 to 101

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I & II	Valves for HPCI(I), RHR, CS, RCIC(II)
I & II	Cable Tray and Conduit for above valves; RHR, CS, HPCI(I), RCIC(II), Instrumentation and Control; and Suppression Pool temperature monitoring
II	RHR shutdown cooling valves HV-F015A&B (return) and HV-F008 (Suction)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Cable trays are located approximately in the NE, SE, and NW quadrants of this zone (refer to electrical drawings). There are large spaces without in situ combustibles between redundant divisions in the north and south sections. Analyzing the Division II conduit in the predominantly Division I northern half, there are no spurious actuations which could prevent safe shutdown using Division I. However, loss of RHR valve HV-F008 will cause loss of RHR shutdown cooling mode. The valve can be opened by hand when needed, or the alternate shutdown mode, utilizing Core Spray and Main Steam Relief valves, can be used. There are four blowout panels on the west side of 4102. A 20-ft diameter fire caused by a fire in 4109 (RHR "B"), 4113 (RHR "A"), 4111 (HPCI) or 4110 (RCIC) or an exposure fire in the torus area adjacent to the blowout panels, has been analyzed. The fire will not jeopardize more than one safe shutdown division. A transient fire of approximately 22-ft diameter could possibly render HPCI and RCIC inoperable, however. If this were to occur, Channel B & D ADS and Division I & II Core Spray are more than 120-ft away from the HPCI and RCIC blowout panels and, in conjuction with Division I or II RHR suppression pool cooling, can be used to achieve cold shutdown. There are no in situ combustibles between the HPCI and the RCIC conduit. There are no normal transient combustibles in this zone.

Analysis of the "Division II" southern half of 4102 shows none of the Division I conduit/cable are required for safe shutdown. Division I equipment and cable can be used for safe shutdown from the MCR.

DEVIATION REQUEST: Automatic suppression system

FIRE DETECTION TYPE:

Heat actuated
(in cable tray only)

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

~~Portable extinguishers~~ [A]
Four H_2O Hose Reels

CONSTRUCTION: FIRE RATING:

Walls: 3 hour

North

East

South

West

Floor: Unrated (basemat)

Ceiling: 3 hour(see below)

Doors and Hatches: Unrated (see below)

The ceiling is open to pipe chases on el 102. The access doors are 3-hour pressure tight without UL label. The HVAC duct has 2 PT dampers without fire damper. Blowout panels are discussed in EFFECTS OF FIRE. Ceiling steel is not fireproofed.

Reference Drawings:

Elec. Drawings - E-1511, E-1512, E-1541, E-1542, E-1571, E-1572, E-1521, E-1552, E-1581, and E-1582-1

Fire Drawings - Figures 9.5-1, 9.5-2, and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	9,548 lbs	3.0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 11,860 ft^2 (average floor to ceiling)	TOTAL	3.0 min.

ROOM: Vestibule

FIRE ZONE 4103 BLDG. Reactor ELEV. 54

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~None~~ Ionization

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1DHR200

Portable extinguishers

CONSTRUCTION:

Walls:

North

East

South

West

Floor:

Ceiling:

Doors and Hatches:

FIRE RATING:

Unrated, except stairwell enclosure

Unrated (basemat)

Unrated

Unrated, except for stairwell door

Reference Drawings:

Elec. Drawings - E-1531

Fire Drawings - Fig. 9.5-1 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Vestibule

1/84

FIRE ZONE 4117 BLDG. Reactor ELEV. 54

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~None~~
Ionization

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1CHR200

Portable ext.

CONSTRUCTION: FIRE RATING:

Walls: See Figure 9.5-1

North

East

South

West

Floor: Unrated (basemat)

Ceiling: Unrated

Doors and Hatches: Unrated, except for stairwell door

Reference Drawings:

Elec. Drawings - E-1511

Fire Drawings - Fig. 9.5-1 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Motor Control Center Area

FIRE ZONE 4201 BLDG. Reactor ELEV. 77

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Channel D cable for: power feeders to MCC, SSW, SACS, Reactor Wtr Cleanup, Core Spray, RHR, Control Area Chilled Water systems
II	Channel B cable for: SSW, SACS, RCIC, RHR, and CS systems

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I equipment will be used for safe shutdown. Automatic suppression required by III.G.2.b is not provided. See writeup for zone 4218. There is 30 feet of clear horizontal space and more than 120 feet of horizontal distance between redundant divisions, plus a 12-inch thick wall, door, etc., in between zones 4201 and 4218 . There are no redundant safe shutdown cabling in the area below 4201 unrated floor. See zone 4102 for unrated torus compartment wall.

The north wall contains a hollow metal core door and two HVAC ducts without fire dampers. The walls' other penetrations are sealed for a 3-hour fire barrier. Since there is a large distance between safe shutdown divisions plus the clear space, upgrading the door and HVAC is not needed to assure at least one safe shutdown division is free of fire damage.

DEVIATION REQUEST: Automatic suppression system

FIRE DETECTION TYPE:

Ionization
Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1HHR200, 1GHR200

Portable extinguishers

Auto preaction sprinkler system (partial coverage)

CONSTRUCTION:	FIRE RATING:
Walls:	See Fire Drawings
North	
East	
South	
West	
Floor:	Unrated
Ceiling:	3 hour
Doors and Hatches:	Unrated

PT door between 4201 and 4202 (same division) North wall contains door and HVAC which is unrated. West wall contains HVAC duct with PT dampers, no fire damper.

Reference Drawings:

Elec. Drawings - E-1522, E-1532

Fire Drawings - Fig. 9.5-2 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	13,506 lbs	34.0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 1469 ft^2	TOTAL	34 min.

ROOM: Corridor and Elect. Equip. Area

FIRE ZONE 4301 and 4310 BLDG. Reactor ELEV. 102

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Channel C cable for: SACS C pump, Heat Exchanger Valves; RHR C Pump Motor Cooling; RHR Unit Cooler C and G valves; Core Spray Unit Cooler C and G valves and Channel C dist. panel; SSW valves for 1A2E201 SACS Hx; HPCI, Primary Containment Inst Gas Iso valves; Suppression Pool level inst.; RHR pump C; Control Area Chilled Water valves to AVH214 and BVH214 SACS Unit Coolers.
I	Channel C MCC 10B232
I	Channel A cable for Recirc Pump Trip
II	Channel D cable for: SACS Valves to Cont Inst Gas Compressor; RCIC; RHR Valves for LPCI Injection, Shutdown Cooling Return, and Head Spray; Main Steam Relief Valves (ADS) PSV F013 A, B, C, D, and E.
II	Channel B cable for recirc. pump trip.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Shutdown will be accomplished using ADS (Channel B) and Division II equipment. The following equipment is still available for shutdown: SACS pump A, B, and D; SACS Hx A, B, and D; ADS accumulator volume inside containment for all 14 valves; all 14 safety relief valves; unit coolers and SACS water for RHR and CS A, B, and D pumps; Control Area chilled water for SACS room cooling units CVH214 and DVH214; RHR LPCI mode for A and B RHR system; Reactor Vessel Instrumentation, Div. II; Diesel Generators A, B, C and D. Shutdown cooling in RHR B is hindered by assumed failure of shutdown cooling return valve HV-F015B; however, the LCPI injection line (valve HV-F017B) or HV-F105B can be manually opened in the reactor building, or Division I, Channel A, shutdown cooling is available, with the support equipment cooled by Division II SACS, SSW, etc.

There is greater than 120-feet separating Channel C and D. Spurious actuations have been considered and none will prevent the reactor from being placed in a safe shutdown mode.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization
Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1ZHR200 and 1LHR200

Portable Extinguishers

Auto preaction Sprinkler in 4301

CONSTRUCTION: FIRE RATING:

Walls:

North	3 hour
East	3 hour
South	3 hour to 4303
West	3 hour to 4315
Floor:	3 hour above 4201
Ceiling:	Unrated, except for 3 hour rated steam tunnel floor Section

Doors and Hatches:

Unrated Pressure tight door to airlock 4313
Unrated floor hatches; does not separate redundant divisions.

Reference Drawings:

Elec. Drawings - E-1533, E-1563 and E-1522 and E-1512

Fire Drawings - Fig. 9.5-3 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	36,258 lbs	42.1
b. Lube oil		
c. Other		
d. Transient		
AREA = 3226 ft^2	TOTAL	42 min.

ROOM: Steam Tunnel

FIRE ZONE 4316 BLDG. Reactor ELEV. 102

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Channel Z (RPS) outboard Main Steam Isolation Valves. Channel B RCIC return to Feedwater Valve HV-F013

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I equipment will be used for safe shutdown.

Pressure tight doors ~~is~~ are required to protect reactor building from pressurization due to high energy line rupture in the steam tunnel.

The unrated steel blowout panel is justified based on the requirement for steam overpressure relief, and also does not separate redundant safe shutdown divisions.

Redundant temperature elements are installed to detect pipe break and will ~~actuate~~ alarm on high temperature.

DEVIATION REQUEST: Pressure tight door

FIRE DETECTION TYPE:

None

FIRE SUPPRESSION TYPE:

H_2O hose 1AHR201

~~Portable extinguishers~~ R

EMERG. LIGHTS:

Yes

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	# unrated (ventilation barrier)
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	Unrated

Doors ~~on Elevation 102 is~~ are pressure tight.

Blowout panel between reactor and turbine building is not UL rated

Reference Drawings:

Elec. Drawings - E-1523

Fire Drawings - Fig. 9.5-3 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: RCIC Pipe Chase

FIRE ZONE 4319 BLDG. Reactor ELEV. 99'-9"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	RCIC valve HV-F008 and leak detection instrumentation

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I equipment will be used for safe shutdown.

Floor is open to Torus area, 4102, below.
Pressure tight door does not separate redundant divisions.

There are no safe shutdown cabling or equipment located in rooms adjacent to 4319 unrated walls or ceiling.

DEVIATION REQUEST: Automatic Suppression System

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1MHR200

~~Portable extinguishers~~ 0

CONSTRUCTION: FIRE RATING:

Walls: 3 hour*

North

East

South

West

Floor: Open (grating)

Ceiling: Unrated

Doors and Hatches: Unrated pressure tight door

*HVAC contains double pressure tight isolation dampers without fire damper

Reference Drawings:

Elec. Drawings - E-1563

Fire Drawings - Fig. 9.5-3 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Pipe Chase

1/84

FIRE ZONE 4321 BLDG. Reactor ELEV. 99'-9"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Valves: RHR, BC-HV-F015B, BC-HV-F017D, BC-HV-F017B; Core Spray BE-HV-F005B and RACS, ED-HV-2553, ED-HV-2555. Channel B and D conduit for above valves.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I equipment will be used for safe shutdown. Floor is open to torus area 4102. There are no redundant safe shutdown equipment in rooms adjacent to 4321 unrated walls or ceiling.

DEVIATION REQUEST: Automatic Suppression System

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1NHR200
~~Portable Extinguishers~~ e

CONSTRUCTION: FIRE RATING:

Walls: 3 hour*

North

East

South

West

Floor: Open (grating)

Ceiling: Unrated

Doors and Hatches: Unrated

Door is pressure tight
*HVAC duct containa double pressure tight isolation dampers without fire damper

Reference Drawings:

Elec. Drawings - E-1563

Fire Drawings - Figures 9.5-3 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: HPCI Pipe Chase

FIRE ZONE 4327 BLDG. Reactor ELEV. 102

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Valves: HPCI, FD-HV-F003, Division I Conduit for: HPCI valve above, RHR, Core Spray, leak detection, and SACS.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II equipment will be used for safe shutdown. Floor is open to torus area 4102. No redundant safe shutdown cable or equipment in rooms adjacent to unrated walls or ceiling.

DEVIATION REQUEST: Automatic Suppression System

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1PHR200, 1AHR201
~~Portable Extinguishers~~

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour*
North	
East	
South	
West	
Floor:	Open (grating)
Ceiling:	Unrated
Doors and Hatches:	Unrated

Door is pressure tight
*HVAC duct contains double pressure tight isolation dampers in lieu of fire damper

Reference Drawings:

Elec. Drawings - E-1543

Fire Drawings - Figures 9.5-3 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Pipe Chase

FIRE ZONE 4329 BLDG. Reactor ELEV. 102

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Channel A Valves: RHR, HV-F016A, HV-F017A, HV-F021A; Core Spray, HV-F005A, HV-F004A; Primary Containment Instrumentation Gas, HV-5172 A; HPCI, HV-F006.
	Channel C Valves: RHR, HV-F017C, Primary Containment Instrumentation Gas, HV-5126A
I	Channel A & C conduit/cable for above valves
II	Channel D Valves: RHR, HV-F008 and HV-F015A

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II equipment will be used for safe shutdown. The redundant RHR and Primary Containment Instrument gas isolation valves are located in 4321 pipe chase, which has more than adequate horizontal separation plus walls. RHR valve HV-F008 is required for shutdown cooling; however, since BC-HV-F009 cabling is not located in this zone, manual operation of F008 would allow shutdown cooling to be established. In addition, alternate shutdown using core spray injection and MSRV return to suppression pool can be set up in Division II from the MCR. See also zone 4102.

DEVIATION REQUEST: Automatic Suppression System

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1AHR201
~~Portable Extinguishers~~

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour*
North	
East	
South	
West	
Floor:	Open (grating)
Ceiling:	Unrated
Doors and Hatches:	Unrated

Pressure tight door,
Floor is open to torus area 4102,
*HVAC contains double pressure tight isolation dampers in lieu of fire dampers.

Reference Drawings:

Elec. Drawings - E-1543

Fire Drawings - Figures 9.5-3 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Pipe Chase

FIRE ZONE 4402 BLDG. Reactor ELEV. 132

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE
II	Conduit for RHR valves HV-F016B and HV-F021B (Containment spray).

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division II cable in this zone is not required for safe shutdown. Spurious operation of the containment spray valves due to a fire in this zone will not prevent safe shutdown. Redundant Division I equipment would be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1YHR200
~~Portable Extinguisher~~ e

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated (partial grating)

Ceiling: Unrated (grating)

Doors and Hatches:

Doors - Unrated
Hatches - None

Reference Drawings:

Elec. Drawings - E-1554-1 and 1564-1

Fire Drawings - Figures 9.5-4 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: RWCU Backwash Receiving Tank Room

FIRE ZONE 4407 BLDG. Reactor ELEV. 132

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1QHR200
~~Portable Extinguisher~~ e

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1554-1 and 1564-1

Fire Drawings - Figures 9.5-4 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: FRVS Recirculation Unit Area

FIRE ZONE 4410 & 4411 BLDG. Reactor ELEV. 132 & 145

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Channel A & C conduit and cable tray for SACS (LT-2508A & C, water for FRVS, water for fuel pool cooling, water for containment instrument gas compressors) and for RHR (PT-N094 A, C, E, & G)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division I cable in this zone is not required for safe shutdown. Spurious operation of equipment due to a fire in this zone would not affect safe shutdown. Propagation of a fire in this zone through the unrated walls, floor, or ceiling would not jeopardize more than one safe shutdown division.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization
Heat actuated
(in filter unit)

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

Preaction water spray (in charcoal filter only)
H_2O hoses 1QHR200 and 1RHR200
Portable Extinguisher

CONSTRUCTION:	FIRE RATING:
Walls:	
North	All walls are unrated, except for the 3-hour rated wall adjacent to the TSC (zone 4415)
East	
South	
West	
Floor:	Unrated
Ceiling:	Unrated
Doors and Hatches:	
None	

Reference Drawings:

Elec. Drawings - E-1514-1, 1515-1, 1524-1, 1525-1, 1544-1, 1545-1, 1554-1, 1555-1, 1574-1, and 1575-1

Fire Drawings - Figures 9.5-4 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	34,394 lbs	22.9
b. Lube oil		0
c. Other (charcoal)	15,000 lbs	29.5
d. Transient		0
AREA = 5,638 ft^2	TOTAL	52 min.

ROOM: Technical Support Center

FIRE ZONE 4415, 4416, & 4417 BLDG. Reactor ELEV. 132

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
	None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization
Photo-el

FIRE SUPPRESSION TYPE:

H_2O hose 1HHR401
Portable Extinguisher

EMERG. LIGHTS:

No

CONSTRUCTION: FIRE RATING:

Walls: 3 hour

North

East

South

West

Floor: 3 hour

Ceiling: 3 hour

Doors and Hatches:

Doors - 3 hour
Hatches - None

Reference Drawings:

Elec. Drawings - E-1514-1

Fire Drawings - Figures 9.5-4 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other (paper)	500 lbs	1.4
d. Transient		0
AREA = 2,218 ft2	TOTAL	1.4 min.

ROOM: RWCU Heat Exchanger Room

FIRE ZONE 4506 BLDG. Reactor ELEV. 145

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

None

FIRE SUPPRESSION TYPE:

H_2O hose 1THR200
~~Portable extinguishers~~

EMERG. LIGHTS:

No

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

Doors - Unrated
Hatches - None

Reference Drawings:

Elec. Drawings - E-1555-1, 1565-1, 1585-1, and 1595-1

Fire Drawings - Figures 9.5-5 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Pipe Chase

FIRE ZONE 4509 | BLDG. Reactor | ELEV. 145

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

H_2O hose 1SHR200
~~Portable extinguisher~~

CONSTRUCTION: | FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1555-1 and 1585-1

Fire Drawings - Figures 9.5-5 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: FRVS Vent Unit Room

FIRE ZONE 4511 BLDG. Reactor ELEV. 145

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

Heat actuated
(in filter unit)

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

Preaction water spray
(in charcoal filter only)
H_2O hose 1BHR201
Portable extinguisher

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

DEVIATION REQUEST: None

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated, except for main steam tunnel roof portion.

Ceiling: Unrated

Doors and Hatches:

Doors - Unrated
Hatches - None

Reference Drawings:

Elec. Drawings - E-1525-1

Fire Drawings - Figures 9.5-5 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other (charcoal)	2,250 lbs	52
d. Transient		0
AREA = 480 ft2	TOTAL	52 min.

ROOM: FRVS Vent Unit Room

FIRE ZONE 4512 BLDG. Reactor ELEV. 145

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

Heat actuated (in filter unit)

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

Preaction water spray (in charcoal filter only)
H_2O hose 1BHR201
Portable extinguisher

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

DEVIATION REQUEST: None

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

Doors - Unrated
Hatches - None

Reference Drawings:

Elec. Drawings - E-1525-1 and 1555-1

Fire Drawings - Figures 9.5-5 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other (charcoal)	2,250 lbs	43.8
d. Transient		0
AREA = 570 ft^2	TOTAL	44 min.

ROOM: Sample Station Room

FIRE ZONE 4513 BLDG. Reactor ELEV. 145

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone. Propagation of a fire in this zone to the adjacent fire zones would not jeopardize more than one safe shutdown division.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~None~~ Ionization

FIRE SUPPRESSION TYPE:

H_2O hose 1THR200
Portable extinguisher

EMERG. LIGHTS:

Yes

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: None

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1525-1 and 1535-1

Fire Drawings - Figures 9.5-5 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	634 lbs	7.5
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 318 ft^2	TOTAL	8 min.

ROOM: Main Steam Tunnel HVAC Equipment Room

FIRE ZONE 4518 BLDG. Reactor ELEV. 145

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~None~~
Ionization

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1BHR201
Portable extinguisher

CONSTRUCTION: FIRE RATING:

Walls:

North	Unrated
East	3 hour
South	Unrated
West	Unrated
Floor:	3 hour
Ceiling:	Unrated

Doors and Hatches:

Doors - Unrated
Hatches - None

Reference Drawings:

Elec. Drawings - E-1525-1

Fire Drawings - Figures 9.5-5 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Containment Prepurge Cleanup Room

FIRE ZONE 4603 BLDG. Reactor ELEV. 162

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Channel B conduit for SACS (water for fuel pool cooling) and for RHR (PT-N094 B and F)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division II cable in this zone is not required for safe shutdown. Spurious operation of equipment due to an exposure fire in this zone would not affect safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Heat Actuated (in filter unit)

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

Preaction water spray (in charcoal filter only)

H_2O hose 1VHR200

Portable extinguisher

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1556-1 and 1566-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other (charcoal)	750 lb.	9.4
d. Transient		0
AREA = 885 ft^2	TOTAL	9 min.

ROOM: Fuel Pool water Suction Area

FIRE ZONE 4607 BLDG. Reactor ELEV. 162 to 173'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Channel A conduit for RHR (PT-N094 A and E)
II	Channel B conduit for SACS (water for fuel pool cooling) and for RHR (PT-N094 B and F)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division I and II cable in this zone is not required for safe shutdown. Spurious operation of the equipment due to a fire in this zone would not affect safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

H_2O hose 1VHR200

~~Portable extinguishers~~

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1556-1 and 1586-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = N.S.	TOTAL	0 min.

ROOM: Gamma Scan Detector Area

FIRE ZONE 4613 BLDG. Reactor ELEV. 160

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Conduit to fuel pool makeup valve HV-4647
II	Conduit to fuel pool makeup valve HV-4648

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone. Spurious operation of the fuel pool makeup valves due to a fire in this zone would not affect safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

H_2O hose 1VHR200

~~Portable extinguishers~~ ~~0~~

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1546-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = N.S.	TOTAL	0 min.

ROOM: FRVS Recirc. Unit Area

FIRE ZONE 4614 BLDG. Reactor ELEV. 162

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Channel A conduit for SACS (water for FRVS) Channel C conduit for RHR (PT-H094 C and G)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division I cable in this zone is not required for safe shutdown. Spurious operation of equipment due to an exposure fire in this zone would not affect safe shutdown. Propagation of a fire in this zone through the unrated walls, or ceiling would not jeopardize more than one safe shutdown division.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization

Heat actuated (in filter unit)

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

Preaction water spray (charcoal filter only)

H_2O hose 1UHR200

Portable extinguisher

CONSTRUCTION:	FIRE RATING:
Walls:	Unrated
North	
East	
South	
West	
Floor:	Unrated
Ceiling:	Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1516-1, 1526-1, 1546-1 and E-1556-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	3,842 lb.	6.1
b. Lube oil		0
c. Other (charcoal)	7,500 lb.	35.2
J. Transient		0
AREA = 2368 ft^2	TOTAL	41 min.

ROOM: FRVS Recirc. Unit Area

FIRE ZONE 4615 BLDG. Reactor ELEV. 162

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Channel D conduit for RHR (PT-N094 D and H) and for SACS (LT-2508D)

FIRE DETECTION TYPE:

Ionization

Heat Actuated (in filter unit)

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

Preaction water spray (in charcoal filter only)

H_2O hose 1UHR200

Portable extinguisher

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division II cable in this zone is not required for safe shutdown. Spurious operation of equipment due to an exposure fire in this zone would not affect safe shutdown. Propagation of a fire in this zone through the unrated walls, floor, or ceiling would not jeopardize more than one safe shutdown division.

Reference Drawings:

Elec. Drawings - E-1526-1 and 1536-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,271 lb.	2.0
b. Lube oil		0
c. Other (charcoal)	7,500 lb.	34.1
d. Transient		0
AREA = 2438 ft^2	TOTAL	36 min.

DEVIATION REQUEST: None

ROOM: FRVS Recirc Unit Room

FIRE ZONE 461e BLDG. Reactor ELEV. 178'- 6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Channel B conduit for SACS (water for FRVS)

FIRE DETECTION TYPE:

Ionization

Heat actuated (in filter unit)

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

Preaction water spray (in charcoal filter only)

H_2O hose 1AHR202

Portable extinguisher

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1516-1, 1526-1, 1546-1 and E-1556-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division II cable in this zone is not required for safe shutdown. Spurious operation of equipment due to an exposure fire in this zone would not affect safe shutdown. Propagation of a fire in this zone through the unrated walls, floor, or ceiling would not jeopardize more than one safe shutdown division.

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	7,636 lb.	10.5
b. Lube oil		0
c. Other (charcoal)	7,500 lb.	30.4
d. Transient		0
AREA = 2740 ft^2	TOTAL	41 min.

DEVIATION REQUEST: None

ROOM: FRVS Recirc. Unit Room

FIRE ZONE 4617 BLDG. Reactor ELEV. 178' - 6 "

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Channel B conduit for SACS (water for FRVS)

FIRE DETECTION TYPE:

Ionization

Heat actuated (in filter unit)

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

Preaction water spray (in charcoal filter only)

H_2O hose 1AHR202

Portable extinguisher

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1526-1 and 1536-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division II cable in this zone is not required for safe shutdown. Spurious operation of equipment due to an exposure fire in this zone would not affect safe shutdown. Propagation of a fire in this zone through the unrated walls, floor, or ceiling would not jeopardize more than one safe shutdown division.

DEVIATION REQUEST: None

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	5,683 lb.	8.2
b. Lube oil		0
c. Other (charcoal)	7,500 lb.	32.2
d. Transient		0
AREA = 2588 ft^2	TOTAL	40 min.

ROOM: Electrical Access Area

FIRE ZONE 4619 BLDG. Reactor ELEV. 176

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

None

FIRE SUPPRESSION TYPE:

~~H_2O hose 1UHR200~~

~~Portable extinguisher~~ C

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

This zone is not readily accessible.

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

Doors - none

Hatches - unrated

Reference Drawings:

Elec. Drawings - E-1566-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

DEVIATION REQUEST: None

ROOM: Isolation Valve Room

FIRE ZONE 4624 BLDG. Reactor ELEV. 172'- 6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

~~Portable extinguisher~~ None

CONSTRUCTION:	FIRE RATING:
Walls:	Unrated
North	
East	
South	
West	
Floor:	3-hr.
Ceiling:	Unrated
Doors and Hatches:	
Doors - unrated	
Hatches - none	
Reference Drawings:	
Elec. Drawings -	
Fire Drawings - Fig. 9.5-9	

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Fuel Pool Cooling Pump Room

FIRE ZONE 4625 BLDG. Reactor ELEV. 162 to 173'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Conduit for fuel pool cooling valve HV-4689A
II	Conduit for fuel pool cooling valves HV-4689B and HV-4648.
I	Fuel pool cooling pump 1AP211

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division I and II cable and equipment in this zone is not required for safe shutdown. Spurious operation of valves HV-4689A and B and HV-4648 or pump 1AP211, due to a fire in this zone would not affect safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization ~~None~~

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1VHR200

Portable extinguisher

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1546 and 1576-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Fuel Pool Cooling Pump Room

FIRE ZONE 4626 BLDG. Reactor ELEV. 162 to 173'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Channel B conduit for SACS (water for fuel pool cooling)
II	Fuel pool cooling pump 1BP211

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division II cable and equipment in this zone is not required for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization ~~None~~

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1VHR200

Portable extinguisher

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1546-1, 1556-1, 1576-1 and E-1586-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Fuel Pool Heat Exchanger Room

FIRE ZONE 4627 BLDG. Reactor ELEV. 162 to 173'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. There is no safe shutdown equipment or cable in this zone.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization
~~None~~

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1VHR200

Portable extinguisher

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1576-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Fuel Pool Heat Exchanger Room

1/84

FIRE ZONE 4628 BLDG. Reactor ELEV. 162 to 173'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Channel D conduit for SACS (water for fuel pool cooling)

FIRE DETECTION TYPE:

Ionization
~~None~~

FIRE SUPPRESSION TYPE:

H_2O hose 1VHR200

Portable extinguisher

EMERG. LIGHTS:

Yes

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The Division II cable in this zone is not required for safe shutdown.

DEVIATION REQUEST: None

CONSTRUCTION: FIRE RATING:

Walls: Unrated

North

East

South

West

Floor: Unrated

Ceiling: Unrated

Doors and Hatches:

None

Reference Drawings:

Elec. Drawings - E-1576 and 1586-1

Fire Drawings - Fig. 9.5-6 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = N.S.	TOTAL	0

ROOM: RPS MG Set Room

FIRE ZONE 5105 BLDG. Auxiliary/Control ELEV. 54

MECH SHUTDOWN DIVISION:	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Cabling

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II cabling, which has III.G.2.a separation, will be used for shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Photoelectric
Ionization

FIRE SUPPRESSION TYPE:

~~CO_2 hose 1HO402~~
H_2O hose 1EHR400
Portable Ext.

EMERG. LIGHTS:

No

CONSTRUCTION: FIRE RATING:

Walls:	All walls are 3-hour rated except for 2-hour rated stairwell enclosure.
North	
East	
South	
West	
Floor:	Unrated (basemat)
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1661-1

Fire Drawings - Figure 9.5-1
Figure 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,275 lbs	10.4
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 460 ft^2	TOTAL	10 min.

ROOM: Cable Spreading Room

FIRE ZONE 5202 BLDG. Auxiliary/Control ELEV. 77 to 101 ft

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I & II	Power, instrumentation and control cable for both safe shutdown divisions.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The cable spreading room contains power, instrumentation, and control cabling for both safe shutdown divisions. Alternate shutdown is accomplished from the remote shutdown panel and local equipment operating areas if both divisions of cable in this zone are damaged, in accordance with III.G.3 of Appendix R. Transfer switches located at the remote shutdown panel (fire zone 3576) allow one train of safe shutdown equipment to be isolated from the control building. Spurious actuations have been analyzed and will not prevent safe shutdown using the RSF.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Photoelectric
Ionization
~~Heat actuated~~

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

~~CO_2 hose 1WO404~~
Fire H_2O 1LHR400, 1IHR400
Preaction sprinkler
Portable extinguisher

CONSTRUCTION: FIRE RATING:

Walls: 3 hour

North

East

South

West

Floor: 3 hour

Ceiling: 3 hour

Doors and Hatches:

North wall: 3 hour rated door
South wall: 3 hour rated door (two)
West wall: 3 hour rated doors (four) to elect shafts and (one) to corridor

Reference Drawings:

Elec. Drawings - E-1652
E-1662

Fire Drawings - Figure 9.5-2
Figure 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	182,087 lbs	237
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 5760 ft^2	TOTAL	237 min.

ROOM: Electrical Tray Area

FIRE ZONE 5203 BLDG. Auxiliary/Control ELEV. 77

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II Cable Trays

FIRE DETECTION TYPE:
~~Heat actuated~~
Photoelectric
Ionization
(Detectors located in Zone 5531)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
~~CO_2 hose 1H0404~~ Q
H_2O hose 1LHR404
Portable Extinguisher
Auto preaction sprinkler

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I cable has III.G.2.a separation and will be used for shutdown. The sprinkler system is installed to reduce the hazard due to the vertical cable tray concentrations.

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	None (open to 5323)
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1662

Fire Drawings - Figure 9.5-2
Figure 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	2,018 lbs	90.1
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 84 ft^2	TOTAL	90 min.

ROOM: Electrical Tray Area

FIRE ZONE 5204 BLDG. Auxiliary/Control ELEV. 77

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II Cable Trays

FIRE DETECTION TYPE:
Heat actuated
Photoelectric
Ionization
(Detectors located in Zone 5532)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
~~CO_2 hose 1HR404~~
H_2O hose 1LHR400
Portable Extinguisher
Auto preaction sprinkler

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I cable has III.G.2.a separation and will be used for shutdown. The sprinkler system is installed to reduce the hazard due to the vertical cable tray concentration

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	None (open to 5324)
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1662

Fire Drawings - Figure 9.5-2
Figure 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,535 lbs	68.5
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 84 ft^2	TOTAL	69 min.

ROOM: Electrical Tray Area

FIRE ZONE 5205 BLDG. Auxiliary/Control ELEV. 77

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Cable Trays and Conduit

FIRE DETECTION TYPE:
Heat actuated
Photoelectric
Ionization
(Detectors located in Zone 5533)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
~~CO_2 hose 1H0404~~ e
H_2O hose 1LHR404
Portable Extinguisher
Auto preaction sprinkler

CONSTRUCTION: FIRE RATING:

Walls: 3 hour

North

East

South

West

Floor: 3 hour

Ceiling: None (open to 5325)

Doors and Hatches: 3 hour

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II cable has III.G.2.a separation and will be used for shutdown. the sprinkler system is installed to reduce the hazard due to the vertical cable tray concentrations.

Reference Drawings:

Elec. Drawings - E-1662-1

Fire Drawings - Figure 9.5-2
Figure 9.5-9

DEVIATION REQUEST: None

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,535 lbs	69
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 84 ft^2	TOTAL	69 min.

ROOM: Electrical Tray Area

FIRE ZONE 5206 BLDG. Auxiliary/Control ELEV. 77

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Cable Trays

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II cable has III.G.2.a separation and will be used for shutdown. The sprinkler system is installed to reduce the hazard due to the vertical cable tray concentrations.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:
Heat actuated
Photoelectric
Ionization
(Detectors located in Zone 5534)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
~~CO_2 hose 1H0404~~
H_2O hose 1LHR400
Portable Extinguisher
Auto preaction sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	None (open to 5326)
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1662-1

Fire Drawings - Figure 9.5-2
Figure 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,535 lbs	69
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 84 ft^2	TOTAL	69 min.

ROOM: Electrical Access Areas

FIRE ZONE 5207 [redacted] & 3204 | BLDG. Auxiliary/Control & Service ELEV. 77

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Class 1E cable trays containing ADS, RSP control and instrumentation for RCIC, SSW, SACS, and SWGR room cooling

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. A three hour fire barrier has been added at Column Q to separate Division II (East of Q) from Division I (West of Q). Therefore, a fire in 5207 East and/or 3204 will not prevent shutdown from the MCR using Division I which has III.G.2.a separation. There is no safe shutdown equipment or cable in rooms adjacent to 5207/3204 unrated walls. An auto sprinkler system is installed to reduce the hazard due to cable concentrations.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Photoelectric
Ionization
Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

CO_2 Hose 1H0405 & 1H0404
H_2O Hose 1LHR400 & 1JHR400
Portable Extinguisher
Auto preaction sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	See Fire Drawings
North	3 hour
East	3 hour
South	3 & 2 hr @ stairwell
West	Unrated & 2 hr @ stairwell
Floor:	2 hour
Ceiling:	2 hour
Doors and Hatches:	See Fire Drawings

Reference Drawings:

Elec. Drawings - E-1652, E-1662, E-1732, E-1734, and E-1736

Fire Drawings - Figure 9.5-2
Figure 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	54,100 lbs	50.7
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 4000 ft^2	TOTAL	51 min.

ROOM: Electrical Access Area

FIRE ZONE ~~5207 West~~ 5237 BLDG. Auxiliary/Control & Diesel ELEV. 77

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Class 1E cable trays containing power, control and/or instrumentation for inboard isolation valve and containment instrument gas valves, D/G breaker indication at RSP, SWGR room cooling indication, control area HVAC, suppression pool temperature monitoring, HPCI, RHR,, SSW, SACS, and SDG.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. A three hour fire barrier has been added at Column Q to separate Division I from Division II. Since only one division remains in this fire zone, a fire in 5207 West will not prevent safe shutdown using the MCR and redundant Division II equipment, which has III.G.2.a separation. The auto sprinkler system is installed to reduce the hazard due to cable concentrations.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Photoelectric
Ionization
Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

CO_2 hose 1HO404 & 1HO403
H_2O hose 1HR400 & 1GHR400
~~Portable Extinguisher~~ &
Auto preaction sprinkler

CONSTRUCTION: FIRE RATING:

Walls:	See Fire Drawings
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour, except for stairwell door

Reference Drawings:

Elec. Drawings - E-1662, E-1672, and E-1682

Fire Drawings - Figure 9.5-2
Figure 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	28,147 lbs	35.5
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 2977 ft^2	TOTAL	35 min.

ROOM: Electrical Access Areas

FIRE ZONE 5301 ~~5001~~ & 3314 BLDG. Auxiliary/Control & Diesel ELEV. 102'

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II, Channel B cable tray, includes RCIC, RSP control and inst. recirc. pump B trip.

FIRE DETECTION TYPE:

Photoelectric

Ionization

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1AHR401, 1NHR400

CO_2 hose 1H0408

Portable ext.

CONSTRUCTION: FIRE RATING:

Walls: See Fire Drawings

North

East

South *

West

Floor: See Fire Drawings

Ceiling: See Fire Drawings

Doors and Hatches: See Fire Drawings

* Two electrical bus ducts penetrate 3hr wall without fire stop.

Reference Drawings:

Elec. Drawings - E-1663

Fire Drawings - Figure 9.5-3
Figure 9.5-9

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. A 3 hr fire barrier added at column Q separates Division II from I. Redundant safe shutdown equipment in Division I has III.G.2.a separation and will be used for shutdown from the MCR. Areas 3314 and 4313 are separated by a series of presssure tight doors with an airlock between. 3314 contains Division II as above; 4313 contains non-1E cable tray and some Division I conduit within 10-foot radius of the PT equip access and the PT doors (see Fig. 9.5-3). These Division I conduit contain some Division I RSP suppression pool level indication and reactor recirc pump trip signals. Loss or spurious actuation of these signals on fire in 3314 is acceptable. Therefore, no deviation is requested.

Two electrical bus ducts penetrate this 3 hour fire barrier without a fire stop. An auto suppression system is installed in 5339 which prevents a fire in 5301 from affecting the redundant division in 5339 through these bus ducts. An auto suppression system is installed in 4313 adjacent to these PT doors.

DEVIATION REQUEST: ~~None~~ Bus ducts ~~with~~ without barrier.

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	25,661 lbs	37.9
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 2539 ft^2	TOTAL	38 min.

ROOM: Corridors

FIRE ZONE 5308 & 5315 BLDG. Auxiliary/Diesel ELEV. 102

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Photoelectric

Ionization

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

~~CO_2 hose 1H0406 (Zone 5308 only)~~

H_2O hose 1BHR401, 1QHR400, 1SHR401

Portable Extinguisher

CONSTRUCTION: FIRE RATING:

Walls: See Fire Drawings

North

East

South

West

Floor: See Fire Drawings

Ceiling: See Fire Drawings

Doors and Hatches: See Fire Drawings

Reference Drawings:

Elec. Drawings - E-1673-1
E-1683-1

Fire Drawings - Fig. 9.5-3 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,615 lbs	3.4
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 1770 ft^2	TOTAL	3 min.

ROOM: Electrical Cable Chases

FIRE ZONE 5323 & 5324 BLDG. Auxiliary/Diesel ELEV. 102

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II Tray and Conduit

FIRE DETECTION TYPE:
Heat actuated
Ionization
Photoelectric
(Detectors located in Zones 5531 & 5532)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
CO_2 hose 1H0407
H_2O hose 1DHR401
Portable Extinguisher
Auto precaution sprinkler

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I cable which has III.G.2.a separation will be used for shutdown.

Note: Detection, suppression, construction and combustibles are per room.

the auto sprinkler system is installed to reduce the hazard due to cable concentrations. vertical

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	Unrated (grating)
Ceiling:	Unrated (grating)
Doors and Hatches:	3 hour

See note under effects of fire

Reference Drawings:

Elec. Drawings - E-1663-1

Fire Drawings - Figure 9.5-3

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	2,122 lbs	111
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 72 ft^2	TOTAL	111 min.

ROOM: Electrical Cable Chases

1/84

FIRE ZONE 5325 & 5326 BLDG. Auxiliary/Diesel ELEV. 102

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Tray and Conduit

FIRE DETECTION TYPE:
Heat actuated
Ionization
Photoelectric
(Detectors located in Zones 5533 & 5534)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
CO_2 hose 1H0407
H_2O hose 1DHR401
Portable Extinguisher
Auto precaution sprinkler

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II cable which has III.G.2.a separation will be used for shutdown.

Note: Detection, suppression, construction and combustibles are per room.

The auto sprinkler system is installed to reduce the hazard due to vertical cable concentrations.

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	Unrated (grating)
Ceiling:	Unrated (grating)
Doors and Hatches:	3 hour

See note under effects of fire

Reference Drawings:

Elec. Drawings - E-1663-1

Fire Drawings - Figure 9.5-3

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	2,122 lbs	111
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 72 ft^2	TOTAL	111 min.

R42/2-37

ROOM: Electrical Cable Chases

FIRE ZONE 5331 & 5332 BLDG. Auxiliary/Diesel ELEV. 102

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II Tray and Conduit

FIRE DETECTION TYPE:
Heat actuated
Ionization
Photoelectric
(Detectors located in Zones 5531 & 5532)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
CO_2 hose 1HO406
H_2O hose 1BHR401 & 1QHR400
Portable Extinguisher
Auto preaction sprinkler

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I cable has III.G.2.a separation and would be used for shutdown.

Note: Detection, suppression, construction, and combustibles are per room.

the auto sprinkler system is installed to reduce the hazard due to V cable concentrations - vertical

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	Unrated (grating)
Ceiling:	Unrated (grating)
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1683-1

Fire Drawings - Figure 9.5-3

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	312 lbs	39
b. Lube oil		
c. Other		
d. Transient		
AREA = 30 ft^2	TOTAL	39 min.

ROOM: Electrical Cable Chases

1/84

FIRE ZONE 5333 & 5334 BLDG. Auxiliary/Diesel ELEV. 102

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Tray and Conduit

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II cable has III.G.2.a separation and would be used for shutdown.

Note: Detection, suppression, construction and combustibles are per room.

the auto sprinkler system is installed to reduce the hazard due to vertical cable concentrations.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:
Heat actuated
Ionization
Photoelectric
(Detectors located in Zones 5533 & 5534)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
CO_2 hose 1HO406
H_2O hose 1BHR401 & 1QHR400
Portable Extinguisher
Auto precaution sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	Unrated (grating)
Ceiling:	Unrated (grating)
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1683-1

Fire Drawings - Figure 9.5-3

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	312 lbs	39
b. Lube oil		
c. Other		
d. Transient		
AREA = 30 ft^2	TOTAL	39 min.

ROOM: Electrical Raceway

FIRE ZONE 5336 BLDG. Auxiliary/Control ELEV. 102

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

~~CO_2 hose 1H0407 and 1H0408~~

H_2O hose 1AHR401
Portable extinguisher

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

CONSTRUCTION: FIRE RATING:

Walls: 3 hour

North

East

South

West

Floor: Unrated (grating)

Ceiling: Unrated (grating)

Doors and Hatches: 3 hour

Reference Drawings:

Elec. Drawings - E-1653-1

Fire Drawings - Fig. 9.5-3

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	922 lbs	108
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 32 ft^2	TOTAL	108 min.

DEVIATION REQUEST: None

ROOM: Electrical Access Area

FIRE ZONE ~~5301 West~~ 5339 BLDG. Auxiliary/Control & Diesel ELEV. 102'

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I & II	Diesel Generator Intake Silencers
I	Channel A & C cable which includes the diesel A & C control power supply cable.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Loss of Division I equipment is acceptable. Division II equipment and cable, etc., has III.G.2.a separation and will be used for shutdown. Loss of Diesel Generator in Division II due to a fire and/or fire fighting activity damaging the DG intake silencers or connecting piping is not postulated. The piping material and configuration is such that a failure is not credible.

The auto sprinkler is installed to reduce the hazard due to cable concentrations. The sprinkler system will more than compensate for the electrical bus ducts which penetrate the north wall.

DEVIATION REQUEST: ~~Wall~~ Bus ducts without barrier

FIRE DETECTION TYPE:
Heat actuated
Photoelectric
Ionization

EMERG. LIGHTS:
Yes

FIRE SUPPRESSION TYPE:
H_2O hose 1DHR401 & 1BHR401
CO_2 hose 1H0406 & 1H0407
Portable ext.
Auto preaction sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	
North	3 hour *
East	3 hour
South	3 hour
West	2 hour (outside)
Floor:	3 hour
Ceiling:	½ hour
Doors and Hatches:	3 hour (except stairwell door)

* ~~One~~ two electrical bus ducts penetrate this wall without 3 hr fire barrier.

Reference Drawings:

Elec. Drawings - E-1663, E-1673 and E-1683

Fire Drawings - Figure 9.5-3
Figure 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	29,153 lbs	32.7
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 3339 ft^2	TOTAL	33 min.

ROOM: Electrical Access Area

FIRE ZONE 5401 & 3425 BLDG. Auxiliary/Control & Radwaste ELEV. 124'

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II Cable

FIRE DETECTION TYPE:

Ionization
Photoelectric
Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

CO_2 hose 1HO410 in 5401
H_2O hose 1RHR400 in 5401
Portable Extinguisher
Auto preaction sprinkler

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I cable has III.G.2.a separation and would be used for safe shutdown.

The auto sprinkler system is installed to reduce the hazard due to inaccessible cable concentrations.

CONSTRUCTION:	FIRE RATING:
Walls:	
North	3 hour
East	1 and 2 hour
South	3 hour
West	Open to 5423 east
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1654, E-1664, E-1767 & E-1769

Fire Drawings - Figure 9.5-4 & 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	33,849 lb	41.9
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 3032 ft^2	TOTAL	42 min.

DEVIATION REQUEST: None

ROOM: Control Equipment Room Mezzanine

FIRE ZONE 5403 BLDG. Auxiliary/Control ELEV. 117'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I & II	Division I & II cable trays and conduit ~~and panels~~ required for safe shutdown from the main control room.

FIRE DETECTION TYPE:

Ionization
Photoelectric
Heat Actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

CO_2 auto total flooding
~~CO_2 hose 0HO402 & 1HO410~~
H_2O hose 1RHR400 & 1HHR401
Portable Extinguishers
Manual deluge

CONSTRUCTION: FIRE RATING:

Walls:	
North	3 hour
East	3 hour
South	3 hour
West	1 hour (corridor)
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 and 1 hour

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Shutdown can be accomplished using Remote Shutdown Facilities which are separate from this area. Auto Suppression is provided. Room 5404, corridor, was analyzed along with 5403. The combination of 5403 and 5404 has three hour fire barriers on all sides.

A manual water deluge system provides backup to the auto CO_2 system.

Reference Drawings:

Elec. Drawings - E-1654 and E-1664

Fire Drawings - Figure 9.5-4 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	95,195 lbs	79.3
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 4,500 ft^2	TOTAL	79 min.

DEVIATION REQUEST: None

ROOM: Electrical Cable Chases

FIRE ZONE 5405 & 5406 BLDG. Auxiliary/Diesel Area ELEV. 124

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Cable Tray and Conduit (CH. B and D)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I cable, which has III.G.2a separation, would be used for shutdown.

Note: Detection, suppression, construction and combustibles are per room.

The auto sprinkler system is installed to reduce the hazard due to vertical cable concentrations.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:
Heat actuated
Ionization
Photoelectric
(in 5531/5532)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
CO_2 hose OHO402
H_2O hose 1HHR401
Portable Extinguisher
Auto preaction sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	↓
East	
South	
West	
Floor:	Open to 5323/5324
Ceiling:	Open to 5531/5532
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1664-1

Fire Drawings - Figure 9.5-4 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,061 lbs	51.7
b. Lube oil		
c. Other		
d. Transient		
AREA = 77 ft^2	TOTAL	52 min.

ROOM: Electrical Cable Chases 1/84

FIRE ZONE 5407 & 5408 BLDG. Auxiliary Diesel Area ELEV. 124

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Cable Tray and Conduit (CH. A and C)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant division II cable, which has III.G.2a separation, would be used for shutdown.

Note: Detection, suppression, construction and combustibles are per room.

The auto sprinkler system is installed to reduce the hazard due to vertical cable concentration

DEVIATION REQUEST: None

FIRE DETECTION TYPE:
Heat actuated
Ionization
Photoelectric
(in 5533/5534)

EMERG. LIGHTS:
No

FIRE SUPPRESSION TYPE:
CO_2 hose OHO402
H_2O hose 1HHR401
Portable Extinguisher
Auto preaction sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	v
East	
South	
West	
Floor:	Open to 5325/5326
Ceiling:	Open to 5533/5534
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1664-1

Fire Drawings - Figure 9.5-4 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,061 lbs	51.7
b. Lube oil		
c. Other		
d. Transient		
AREA = 77 ft^2	TOTAL	52 min.

ROOM: Corridor

FIRE ZONE 5418 BLDG. Auxiliary Diesel Area ELEV. 130

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Photoelectric
Ionization

FIRE SUPPRESSION TYPE:

H_2O hose 1GHR401
Portable Extinguisher
CO_2 Hose 1H0403 e

EMERG. LIGHTS:

Yes

CONSTRUCTION:	FIRE RATING:
Walls:	See fire drawings
North	
East	
South	
West	
Floor:	Unrated
Ceiling:	Unrated
Doors and Hatches:	See fire drawings

Reference Drawings:

Elec. Drawings - E-1685-1

Fire Drawings - Figures 9.5-4 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA =	TOTAL	0

ROOM: Electrical Chases

FIRE ZONE 5419 & 5420 BLDG. Auxiliary Diesel Area ELEV. 130

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Cable Tray and Conduit (CH. B and D)

FIRE DETECTION TYPE:
Heat actuated
Ionization
Photoelectric
(in 5531/5532)

FIRE SUPPRESSION TYPE:
H_2O hose 1GHR401
Portable Extinguisher
Auto preaction sprinkler

EMERG. LIGHTS:
No

CONSTRUCTION: FIRE RATING:

Walls: 3 hour
North
East
South
West

Floor: Open to 5331/5332

Ceiling: Open to 5531/5532

Doors and Hatches: 3 hour

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I cable which has III.G.2.a separation will be used for shutdown.

Note: Detection, suppression, and combustibles are per zone.
The auto suppression system is installed to reduce the hazard due to vertical cable concentration.

Reference Drawings:

Elec. Drawings - E-1685-1

Fire Drawings - Figure 9.5-4

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,704 lbs	152
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 42 ft^2	TOTAL	152 min.

DEVIATION REQUEST: None

ROOM: Electrical Chases

FIRE ZONE 5421 & 5422 BLDG. Auxiliary Diesel Area ELEV. 130

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Cable Tray and Conduit (CH. A and C)

FIRE DETECTION TYPE:
Heat actuated
Ionization
Photoelectric
(in 5533/5534)

FIRE SUPPRESSION TYPE:
H_2O hose 1GHR401
Portable Extinguisher
Auto preaction sprinkler

EMERG. LIGHTS:
No

CONSTRUCTION: FIRE RATING:

Walls: 3 hour
North
East
South
West

Floor: Open to 5333/5334

Ceiling: Open to 5533/5534

Doors and Hatches: 3 hour

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II cable which has III.G.2.a separation will be used for shutdown.

Note: Detection, suppression, and combustibles are per zone.

the auto suppression system is installed to reduce the hazard due to vertical cable concentration

Reference Drawings:
Élec. Drawings - E-1685-1

Fire Drawings - Figure 9.5-4

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,704 lbs	152
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 42 ft^2	TOTAL	152 min.

DEVIATION REQUEST: None

ROOM: ~~FRVS Panel Room~~ Class 1E Inverter Room

FIRE ZONE 5447 BLDG. Auxiliary/Control ELEV. 124

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	FRVS Panel 1BC285 and 1DC285 Division II Cable

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Div I cabling has III.G.2.a separation and will be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

CO_2 hose OHO401
H_2O hose 1RHR400
Portable Extinguisher

CONSTRUCTION:	FIRE RATING:
Walls:	
North	3 hour
East	3 hour
South	2 hr/3 hour
West	3 hour
Floor:	3 hour
Ceiling:	3 hour

Doors and Hatches:

North 3 hr
South 2 hr

Reference Drawings:

Elec. Drawings - E-1654-1

Fire Drawings - FSAR Figures 9.5-4, 9.5-9, & 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = N.S.	TOTAL	0 min.

ROOM: Electrical Chase

FIRE ZONE 5449 BLDG. Auxiliary Control Area ELEV. 117'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

~~CO_2 hose 1H0410~~ 2
H_2O hose 1RHR400
Portable Extinguishers
Manual Deluge System

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

CONSTRUCTION:	FIRE RATING:
Walls:	~~3 hour~~
North	open at ceiling
East	3 hour
South	3 hour
West	open at ceiling
Floor:	~~Open~~ 3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1654-1

Fire Drawings - Figure 9.5-4

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	851 lbs	99.7
b. Lube oil		
c. Other		
d. Transient		
AREA = 32 ft^2	TOTAL	100 min.

DEVIATION REQUEST: None

ROOM: ~~Kitchen~~ Unassigned

FIRE ZONE 5505 BLDG. Auxiliary/Control ELEV. 137

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

H_2O hose MHC301
Portable Extinguisher

CONSTRUCTION:	FIRE RATING:
Walls:	See Figure 9.5-5
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1655-1

Fire Drawings - Figure 9.5-5 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

FINAL SAFETY ANALYSIS REPORT

TABLE 9A-182

TABLE NOT USED

ROOM: Main Control Room

FIRE ZONE 5510 BLDG. Auxiliary Control ELEV. 137

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I & II	Main Control Panels 10C651 Main Console 10C650 Vertical Board
I & II	Division I & II Cable Control and instrumentation for all safe shutdown equipment.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. The main control room contains control panels with both safe shutdown divisions of instrumentation and controls. There are no power cables in the room. The safe shutdown redundant equipment and cabling does not meet the Appendix R Section II.G 2 separation requirements and therefore alternate shutdown is provided. Transfer switches located at the remote shutdown panel (fire zone 3576) allow one train of safe shutdown equipment to be isolated from the control building. A fire in the zone would not prevent safe shutdown since shutdown division II equipment at the RSP has III.G.2.a separation and would be used for both hot and cold shutdown. A fire in the zone would have no affect on minimizing and controlling radioactive release to the environment. No fixed suppression system is provided since the control room is constantly manned, detectors are provided, manual suppression equipment is located in the corridors and the fire loading in the zone is very low. This zone was analyzed along with 5525 corridor.

DEVIATION REQUEST: Fixed suppression system

FIRE DETECTION TYPE:

Ionization in room
Ionization in cabinets 10C650 and 10C651

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1THR400
~~CO_2 hose, 1HO411, 1HO412~~ e
Portable extinguishers

CONSTRUCTION:	FIRE RATING:
Walls:	See Fire Drawings
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	See Fire Drawings

Reference Drawings:

Elec. Drawings - E-1665 and E-1655

Fire Drawings - Figures 9.5-5 and 9.5-9

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other (paper)	300 lbs	.7
d. Transient (paper)	100 lbs	.2
AREA = 2750 ft^2	TOTAL	1 min.

1/84

ROOM: Electrical Cable Chase

FIRE ZONE 5531 BLDG. Auxiliary/Diesel ELEV. 150

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Cable tray and conduit (Ch.D)

FIRE DETECTION TYPE:

Ionization

Photoelectric

Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

~~CO_2 hose 1H0412~~ ?

H_2O hose 1THR400

Portable Ext.

Auto preaction sprinkler

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I cable, which has III.G.2.a separation, would be used for shutdown.

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour (except ends)
Ceiling:	3 hour
Doors and Hatches:	3 hour

Floor is open to vertical electical shaft at each end.

Reference Drawings:

Elec. Drawings - E-1665-1, 1676-1, 1686-1

Fire Drawings - Fig. 9.5-5 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	23,110 lbs	102
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 847 ft^2	TOTAL	102 min.

ROOM: Electrical Cable Chase

FIRE ZONE 5532 BLDG. Auxiliary/Diesel ELEV. 150

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Cable tray and conduit (Ch. B)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I cable, which has III.G.2.a separation, would be used for shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization

Photoelectric

Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

CO_2 Hose 1H0412

H_2O Hose 1THR400

Portable Ext.

Auto preaction sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour (except ends)
Ceiling:	3 hour
Doors and Hatches:	3 hour

Floor is open to vertical electrical shaft at each end.

Reference Drawings:

Elec. Drawings - E-1665-1, 1676-1, 1686-1

Fire Drawings - Fig. 9.5-5 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	23,110 lbs	10
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 847 ft^2	TOTAL	102 min.

ROOM: Electrical Cable Chase

FIRE ZONE 5533 BLDG. Auxiliary/Diesel ELEV. 150

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Cable tray and conduit (Ch. C)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II cable, which has III.G.2.a separation, would be used for shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization

Photoelectric

Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

CO_2 Hose 1H0412

H_2O hose 1THR400

Portable Ext.

Auto preaction sprinkler

CONSTRUCTION: FIRE RATING:

Walls: 3 hour

North

East

South

West

Floor: 3 hour (except ends)

Ceiling: 3 hour

Doors and Hatches: 3 hour

Floor is open to vertical electrical shaft at each end.

Reference Drawings:

Elec. Drawings - E-1665-1, 1676-1, 1686-1

Fire Drawings - Fig. 9.5-5 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	23,110 lbs	102
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 847 ft^2	TOTAL	102 min.

ROOM: Electrical Cable Chase

FIRE ZONE 5534 BLDG. Auxiliary/Diesel ELEV. 150

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Cable tray and conduit (Ch. A)

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II cable, which has III.G.2.a separation, would be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization

Photoelectric

Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

CO_2 hose 1H0412

H_2O hose 1THR400

Portable extinguisher

Auto preaction sprinkler

CONSTRUCTION: FIRE RATING:

Walls: 3 hour

North

East

South

West

Floor: 3 hour (except ends)

Ceiling: 3 hour

Doors and Hatches: 3 hour

Floor is open to vertical electrical shaft at each end

Reference Drawings:

Elec. Drawings - E-1665-1, 1676-1, 1686-1

Fire Drawings - Fig. 9.5-5 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	23,110 lbs	102
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 847 ft ^{2}	TOTAL	102 min

ROOM: II & V Chase

FIRE ZONE 5535 BLDG. Auxiliary/Diesel ELEV. 150

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

Auto suppression system installed to reduce hazard due to inaccessibility of cable concentration.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~None~~
Heat actuated

EMERG. LIGHTS:

No

FIRE SUPPRESSION TYPE:

~~None (not accessible)~~
Auto preaction sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour (except ends)
Ceiling:	3 hour (except ends)

Doors and Hatches:

No doors to 5535. Each end is open to vertical HVAC chase.

Reference Drawings:

Elec. Drawings - E-1665-1, 1676-1, 1686-1

Fire Drawings - Fig. 9.5-5 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	8448 lbs	~~0~~ 48.4
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = ~~847~~ 714 ft^2	TOTAL	~~0~~ 48

ROOM: Class 1E Inverter Room

FIRE ZONE 5607 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:	
II	1DD444	1E 125V Battery charger Channel D
	1DD448	Fuse transfer switch box 125VDC
	1DJ482	1E 120V AC Power Supply
	1DD446	1E 125V DC SWGR

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Equipment in this zone not required for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~

Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1PHR401

Portable ext.

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1687-1

Fire Drawings - Fig. 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	705 lbs	10.1
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 263 ft^2	TOTAL	10 min.

ROOM: Corridor

FIRE ZONE 5608 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

None
~~Ionization~~ 0

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1DHR401

Portable ext.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	
North	2 hour
East	3 hour
South	3 hour
West	2 hour
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	2 hour

Reference Drawings:

Elec. Drawings - E-1687-1

Fire Drawings - Fig. 9.5-6

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = NS	TOTAL	0

ROOM: Battery Room

FIRE ZONE 5609 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	1DD447 1E Channel D Battery 125V

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Equipment in this zone not required for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~ e
Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1PHR401
Portable Extinguisher

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	|
East	|
South	|
West	|
Floor:	|
Ceiling:	|
Doors and Hatches:	v

Reference Drawings:

Elec. Drawings - E-1687-1

Fire Drawings - Figure 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other (battery case)	312 lb	17.2
d. Transient		0
AREA = 181 ft^2	TOTAL	17 min.

1/84

ROOM: Class 1E Inverter Room

FIRE ZONE 5613 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	1CD482, 1E, Channel C, Inverter, 120 VAC
I	10D436 125 VDC SWGR
I	1CD444 125VDC Battery Charger
I	1CD448 Fuse Transfer Switch

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Equipment in this zone not required for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~
Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1PHR401
Portable Extinguisher

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1687-1

Fire Drawings - Figure 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	776 lbs	11.2
b. Lube oil	0	0
c. Other	0	0
d. Transient	0	0
AREA = 259 ft^2	TOTAL	11 min.

ROOM: Battery Room

FIRE ZONE 5614 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	1CD447, Battery Rack, 125 VDC, 1E Channel C

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Equipment in this zone not required for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~ photoelectric

FIRE SUPPRESSION TYPE:

H_2O hose 1PHR401
Portable Extinguisher

EMERG. LIGHTS:

Yes

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1607-1

Fire Drawings - Figures 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	insignificant	0
b. Lube oil		0
c. Other (battery case)	312 lbs	17.2
d. Transient		0
AREA = 181 ft^2	TOTAL	17 min

ROOM: Class 1E Inverter Room

1/84

FIRE ZONE 5615 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	1BD482, Class 1E, Channel B inverter 120 VAC

FIRE DETECTION TYPE:

~~Ionization~~
Photoelectric

FIRE SUPPRESSION TYPE:

H_2O hose 1PHR401
Portable Extinguisher

EMERG. LIGHTS:

Yes

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Equipment in this zone not required for safe shutdown.

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1687-1

Fire Drawings - Figures 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	352 lbs	7.8
b. Lube oil		
c. Other		
d. Transient		
AREA = 169 ft^2	TOTAL	8 min.

ROOM: Class 1E Inverter Room

1/84

FIRE ZONE 5616 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	1AD482, 1E Channel A, Inverter 120 VAC

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Equipment in this zone not required for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~
Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1PHR401
Portable Extinguisher

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1687-1

Fire Drawings - Figures 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	352 lbs	7.1
b. Lube oil		
c. Other		
d. Transient		
AREA = 185 ft^2	TOTAL	7 min.

ROOM: TSC Electric Room 1/84

FIRE ZONE 5619 BLDG. Auxiliary/Control ELEV. 155'-3"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization
~~Photoelectric~~ e

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1DHR201
Portable Extinguisher

CONSTRUCTION:	FIRE RATING:
Walls:	Unrated
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	Unrated
Doors and Hatches:	Unrated

Reference Drawings:

Elec. Drawings - E-1656-1

Fire Drawings - Figure 9.5-6

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	850 lbs	11.1
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 287 ft^2	TOTAL	11 min.

ROOM: Inverter Room

FIRE ZONE 5621 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

~~Ionization~~ &
Photoelectric

FIRE SUPPRESSION TYPE:

H_2O hose 1KHR401
Portable Extinguisher

EMERG. LIGHTS:

Yes

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1677-2

Fire Drawings - Figures 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	141 lbs	2.2
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 238 ft^2	TOTAL	2 min.

ROOM: Inverter Room

FIRE ZONE 5622 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

~~Ionization~~ e
Photoelectric

FIRE SUPPRESSION TYPE:

H_2O hose 1½HR400
Portable Extinguisher

EMERG. LIGHTS:

Yes

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	
North	Unrated
East	3 hour
South	3 hour
West	3 hour
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1687-2

Fire Drawings - Figures 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	352 lbs	3.4
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 394 ft^2	TOTAL	3 min.

ROOM: Inverter Room

1/84

FIRE ZONE 5623 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~[2]
Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1WHR400
Portable Extinguishers

CONSTRUCTION:	FIRE RATING:
Walls:	3 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	3 hour

Reference Drawings:

Elec. Drawings - E-1687

Fire Drawings - Figures 9.5 - and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	310 lbs	4.5
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 260 ft^2	TOTAL	5 min.

ROOM: Inverter Room

FIRE ZONE 5624 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~ e
Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1WHR400
Portable Extinguishers

CONSTRUCTION:	FIRE RATING:
Walls:	
North	3 hour
East	3 hour
South	3 hour
West	1 hour
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	1 & 3 hour

Reference Drawings:

Elec. Drawings - E-1677 and E-1687

Fire Drawings - Figures 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	634 lbs	4.1
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 582 ft^2	TOTAL	4 min.

ROOM: Battery Room

FIRE ZONE 5626 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

~~Ionization~~ Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1WHR400
Portable Extinguishers

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	1 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	1 hour

Reference Drawings:

Elec. Drawings - E-1687

Fire Drawings - Figures 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other (battery case)	1220 lbs	30.0
d. Transient		0
AREA = 406 ft^2	TOTAL	30 min.

ROOM: Battery Room

FIRE ZONE 5627 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~
Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1WHR400
Portable Extinguishers

CONSTRUCTION:	FIRE RATING:
Walls:	1 hour
North	
East	
South	
West	
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	1 hour

Reference Drawings:

Elec. Drawings - E-1687

Fire Drawings - Figures 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other (battery case)	1220 lbs	30.0
d. Transient		0
AREA = 406 ft^2	TOTAL	30 min.

ROOM: Inverter Room

FIRE ZONE 5628 BLDG. Auxiliary/Diesel ELEV. 163'-6"

MECH SHUTDOWN DIVISION

SAFE SHUTDOWN EQUIPMENT AND CABLE:

None

FIRE DETECTION TYPE:

Ionization
~~Photoelectric~~

FIRE SUPPRESSION TYPE:

H_2O hose 1WHR400
Portable Extinguishers

EMERG. LIGHTS:

Yes

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None

CONSTRUCTION:	FIRE RATING:
Walls:	
North	1 hour
East	1 hour
South	3 hour
West	3 hour
Floor:	3 hour
Ceiling:	3 hour
Doors and Hatches:	1 hour

Reference Drawings:

Elec. Drawings - E-1687

Fire Drawings - Figures 9.5-6 and 9.5-10

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,058 lbs	6.3
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 626 ft^2	TOTAL	6 min.

DEVIATION REQUEST: None

ROOM: Diesel Area HVAC Equipment Room

FIRE ZONE 5704 & 5703 BLDG. Auxiliary/Diesel ELEV. 178

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	1A & CC483 D-G Area HVAC Panel 1AK403 Control Area Water Chiller 1AVH407 Control Equipment Room Supply Unit 1AP414 Class 1E Panel Room Chilled Water Pump 1AV410 Control Area Battery Room Exhaust Fan
II	1B & DC 483 D-G Area HVAC Panel 1BK403 Control Area Water Chiller 1BVH407 Control Equipment Room Supply Unit 1BP414 Class 1E panel Room Chilled Water Pump 1BV410 Control Area Battery Room Exhaust Fan

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE: None

The Air Handling Units AVH407 and BVH407 are enclosed in metal casings, are connected by an HVAC duct, and are physically separated by 6 ft. Loss of these VH407 units would cause a loss of air conditioning to the Control Room HVAC rooms 5602 and 5630, Electrical Access Areas 5501, control equipment mezz. 5403, Control Equipment room 5302, cable spread room 5202, Battery and Equipment rooms 5105, 5128, 5102, 5103, 5104, 5126, and Corridors 5525, 5404, 5303.

There is more than 20 ft separation between the DG HVAC panels B&DC483 and A&CC483 and their associated conduit with no intervening combustibles. Therefore, a transient fire in this area would not jeopordize both divisions of DG-HVAC. One division of DG is therefore assured for shutdown and the other division DGs may operate for sometime without HVAC, since jacket water cooling is still available.

The chillers (K403) supply chilled water to the air handling units in 5620, the TSC Air handling unit, and the RSP air handling unit. There is 4 ft between chiller skids.

There are no combustibles on this floor, since all cable is routed in conduit with the exception of a short length of non-1E cable tray which has a metal cover on it. Administrative controls will be used to prevent transient combustibles in this area.

DEVIATION REQUEST: III.G.2 separation requirements

FIRE DETECTION TYPE:

Ionization
Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1RHR401 and 1QHR401
Portable Extinguishers

CONSTRUCTION: FIRE RATING:

Walls:

North	3 hour
East	3 hour
South	Unrated (outside)
West	Unrated (outside)
Floor:	3 hour
Ceiling:	Unrated (outside)

Doors and Hatches:

Doors: 3 hour, North wall
Opening in floor for HVAC duct (Eastwall) extends down to el. 54, the RPS MG sets room 5105

Reference Drawings:

Elec. Drawings - E-1680-1 and E-1690-1

Fire Drawings - Figures 9.5-7 and 9.5-10

COMBUSTIBLES:

MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation (in metal covered tray)	2,508 lbs	1.0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 9,300 ft^2	TOTAL	1 min.

FHAT 2/3-12

ROOM: ~~Panel Area~~ Pump Room

1/84

FIRE ZONE 107 BLDG. Intake Structure ELEV. 79'-8"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Station Service Water Valves, ~~and~~ Power and control cables for station service valves. 1AP507 & 1CP507 Spray water booster pumps.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II equipment has III.G.2. separation and will be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1AHR500
Portable extinguishers

CONSTRUCTION:	FIRE RATING:
Walls:	
North	3 hour
East	Unrated
South	3 hour
West	Unrated
Floor:	Unrated (floor slab)
Ceiling:	Unrated
Doors and Hatches:	Unrated

Reference Drawings:

Elec. Drawings - E-1504, Sheet 4

Fire Drawings - Figures 9.5-11 and 9.5-12

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 552 ft^2	TOTAL	0 min.

ROOM: Pump Room ~~Panel Area~~

1/84

FIRE ZONE 110 BLDG. Intake Structure ELEV. 79'-8"

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II Station Service Valves. Power and control cables. 1BP507 & 1DP507 spray water booster pumps.

FIRE DETECTION TYPE:

None

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1BHR500
Portable extinguishers

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I equipment has III.G.2 separation and will be used for safe shutdown.

DEVIATION REQUEST: None

CONSTRUCTION:	FIRE RATING:
Walls:	
North	3 hour
East	Unrated
South	Unrated
West	Unrated
Floor:	Ground floor slab
Ceiling:	Unrated
Doors and Hatches:	Unrated

Reference Drawings:

Elec. Drawings - E-1504-0, Sheet 4

Fire Drawings - Figures 9.5-11 and 9.5-12

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 552 ft^2	TOTAL	0 min.

ROOM: Pump Room

1/84

FIRE ZONE 204 BLDG. Intake Structure ELEV. 93

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Service Water Pumps 1AP502, 1CP502. Strainers 1AF509, 1CF509 Panels 1AC581 and 1CC581 Control and power cables for service water pumps, strainers, and valves; intake structure HVAC.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II equipment has III.G.2.a separation and will be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization
photoelectric
Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1BHR500
Portable extinguishers
Auto preaction sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	
North	3 hour
East	Unrated
South	3 hour
West	Unrated
Floor:	
Ceiling:	
Doors and Hatches:	v

Reference Drawings:

Elec. Drawings - E-1504, Sheet 7

Fire Drawings - Figures 9.5-11 and 9.5-12

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	3,750 lbs	15.7
b. Lube oil	56 gal	6.9
c. Other		
d. Transient (lube oil)	28 gal	3.5
AREA = 897 ft^2	TOTAL	26 min.

ROOM: MCC Room

1/84

FIRE ZONE 207 BLDG. Intake Structure ELEV. 93

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II Motor Control Centers 10B563 and 10B583. Power and control cables for station service water valves, travelling screens, intake structure supply fans, service water strainers.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I equipment has III.G.2.a separation and will be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Photoelectric

FIRE SUPPRESSION TYPE:

H_2O hose 1AHR500
Portable extinguishers

EMERG. LIGHTS:

~~None~~ Yes

CONSTRUCTION: FIRE RATING:

Walls:

North 3 hour

East Unrated

South Unrated

West Unrated

Floor: Unrated

Ceiling:

Doors and Hatches: Unrated

Reference Drawings:

Elec. Drawings - E-1504-0, Sheet 7

Fire Drawings - Figures 9.5-11 and 9.5-12

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	1,430 lbs	31.7
b. Lube oil		
c. Other		
d. Transient		
AREA = 169 ft^2	TOTAL	32 min.

ROOM: Pump Room

1/84

FIRE ZONE 208 BLDG. Intake Structure ELEV. 93

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II Service Water Pumps 1BP502, 1BP502. Strainers 1BF509, 1DF509 Panels 1BC581 and 1DC581 Control and power cables for service water pumps, strainers, and valves; intake structure HVAC.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I equipment has III.G.2.a separation and will be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

Ionization
Photoelectric
Heat actuated

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

H_2O hose 1BHR500
Portable extinguishers
Auto preaction sprinkler

CONSTRUCTION:	FIRE RATING:
Walls:	
North	3 hour
East	Unrated
South	Unrated
West	Unrated
Floor:	Unrated
Ceiling:	Unrated
Doors and Hatches:	Unrated

Reference Drawings:

Elec. Drawings - E-1504, Sheet 7

Fire Drawings - Figures 9.5-11 and 9.5-12

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation	4,450 lbs	18.6
b. Lube oil	56 gal	6.9
c. Other		0
d. Transient (lube oil)	28 gal	3.5
AREA = 897 ft^2	TOTAL	29 min.

ROOM: Traveling Screen Panel Room

FIRE ZONE | BLDG. Intake Structure | ELEV. 107

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
II	Division II Panels 1BC516 and 1DC516. Control Cables for Station Service Water Pumps 1BP502 and 1DP502 Control cables for service water valves and backwash strainers.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I equipment has III.G.2 separation and will be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~
Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

Portable extinguishers

H_2O hose 1BHR500

CONSTRUCTION:	FIRE RATING:
Walls:	Unrated
North	v
East	
South	
West	
Floor:	
Ceiling:	
Doors and Hatches:	

Reference Drawings:

Elec. Drawings - E-1504-0, Sheet 1

Fire Drawings - Figures 9.5-11 and 9.5-12

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 308 ft^2	TOTAL	0 min.

ROOM: Traveling Screen Panel Room 1/84

FIRE ZONE BLDG. Intake Structure ELEV. 107

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Panels 1AC516 and 1CC516. Control Cables for Station Service Water Pumps 1AP502 and 1CP502 Control cables for service water valves and backwash strainers.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II equipment has III.G.2 separation and will be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~Ionization~~
photoelectric

EMERG. LIGHTS:

None

FIRE SUPPRESSION TYPE:

Portable extinguishers
H_2O hose 1AHR500

CONSTRUCTION:	FIRE RATING:
Walls:	Unrated
North	|
East	|
South	|
West	|
Floor:	|
Ceiling:	|
Doors and Hatches:	v

Reference Drawings:

Elec. Drawings - E-1504-0, Sheet 1

Fire Drawings - Figures 9.5-11 and 9.5-12

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 308 ft^2	TOTAL	0 min.

ROOM: Traveling Screen Motor Area

1/84

FIRE ZONE — BLDG. Intake Structure — ELEV. 114

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I & II	Travelling Screen Motors 1AS501, 1BS501, 1CS501 and 1DS501. Travelling Screen Motor Room Fan. Power and control cables for travelling screens and travelling screen motor room fans.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE: None.

All the cables are routed in conduits and motors are enclosed in casings. This area will not be used for storing any combustibles. The probability of losing all the travelling screens simultaneously is remote. Loss of all four screens simultaneously is not an immediate concern for the safe shutdown of the plant.

Access to this area is by ladder only.

DEVIATION REQUEST: III.G.2 separation requirements

FIRE DETECTION TYPE:

Ionization

Photoelectric

EMERG. LIGHTS:

Yes

FIRE SUPPRESSION TYPE:

Portable extinguishers

~~H_2O hoses 1AHR500~~
~~1BHR500~~

CONSTRUCTION:	FIRE RATING:
Walls:	Unrated
North	
East	
South	
West	
Floor:	
Ceiling:	
Doors and Hatches:	V

Reference Drawings:

Elec. Drawings - E-1504-0, Sheet 1

Fire Drawings - Figures 9.5-11 and 9.5-12

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 1,855 ft^2	TOTAL	0 min.

ROOM: Fan Room

FIRE ZONE 306 BLDG. Intake Structure ELEV. 122

MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:
I	Division I Intake Structure Supply Fans 1AV503 and 1CV503. Power and control cables for supply fans and dampers.

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division II equipment has III.G.2.a separation and will be used for safe shutdown.

DEVIATION REQUEST: None

FIRE DETECTION TYPE:

~~None~~ Photoelectric

EMERG. LIGHTS:

None

FIRE SUPPRESSION TYPE:

H_2O hose 1AHR500
Portable extinguishers

CONSTRUCTION:	FIRE RATING:
Walls:	
North	3 hour
East	Unrated
South	3 hour
West	Unrated
Floor:	
Ceiling:	
Doors and Hatches:	v

Reference Drawings:

Elec. Drawings - E-1504-0, Sheet 6

Fire Drawings - Figures 9.5-11 and 9.5-12

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 192 ft^2	TOTAL	0 min.

ROOM: Fan Room

FIRE ZONE 312 BLDG. Intake Structure ELEV. 122		FIRE DETECTION TYPE:	FIRE SUPPRESSION TYPE:
MECH SHUTDOWN DIVISION	SAFE SHUTDOWN EQUIPMENT AND CABLE:	~~None~~ Photoelectric	H_2O hose 1BHR500 Portable extinguisher
II	Division II Intake Structure Supply Fans 1BV503 and 1DV503. Power and control cables for supply fans and dampers.	EMERG. LIGHTS: None	

CONSTRUCTION: / **FIRE RATING:**

Walls:	
North	3 hour
East	Unrated
South	Unrated
West	Unrated
Floor:	Unrated
Ceiling:	Unrated
Doors and Hatches:	Unrated

Reference Drawings:

Elec. Drawings - E-1504, Sheet 6

Fire Drawings - Figures 9.5-11 and 9.5-12

EFFECTS OF FIRE ON SAFE SHUTDOWN AND/OR RADIOACTIVE RELEASE:

None. Redundant Division I equipment has III.G.2.a separation and will be used for safe shutdown.

COMBUSTIBLES: MATERIAL:	QUANTITY	EQUIV. FIRE SEVERITY (MIN.)
a. Cable insulation		0
b. Lube oil		0
c. Other		0
d. Transient		0
AREA = 192 ft^2	TOTAL	0 min.

DEVIATION REQUEST: None

8402270047