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November 17, 1981

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Byron Station Units 1 and 2
Fire Protection
NRC Docket Nos. 50-454 and 50-455

Reference (a): October 31, 1977, letter from R. L. Bolger to V. Stello.

(b): June 3, 1981, letter from R. L. Tedesco to J. S. Abel.

(c): August 31, 1981, letter from T. R. Tramm to H. R. Denton.

(d): October 21, 1981, letter from D. G. Eisenhut to L. DelGeorge.

Dear Mr. Denton:

In references (b) and (d), the NRC requested our assessment of Byron/Braidwood fire protection features in terms of the Appendix R requirements for operating reactors. A table attached to reference (c) provided this assessment except for the safe shutdown study. That study has now been completed and the attached report, "Byron 1 Safe Shutdown Analysis," summarizes the findings.

Fifteen (15) copies are provided for your early review and approval. This information will be incorporated into the Byron/Braidwood Fire Protection Report transmitted in reference (a) in the next amendment.

One (1) signed original and fifty-nine (59) copies of this letter are provided for your use. Please address questions regarding this matter to this office.

Very truly yours,

F. G. Lentine
for T. R. Tramm
Nuclear Licensing Administrator

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Attachment

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2.4 SAFE SHUTDOWN ANALYSIS

2.4.1 INTRODUCTION

2.4.1.1 Purpose

The purpose of this analysis is to demonstrate that for a fire in any single plant fire area/zone in Byron Unit 1, enough equipment will remain operational in other parts of the plant to achieve and maintain a safe shutdown condition independent of that fire area/zone. For the purpose of this analysis, hot standby and cold shutdown are defined as follows:

a. Hot standby - A plant condition in which the reactor is subcritical with a shutdown margin per the Technical Specifications, and the primary coolant system average temperature is greater than or equal to 350° F.

b. Cold shutdown - A plant condition in which the reactor is subcritical with a shutdown margin per the Technical Specificaitons, and the primary coolant system average temperature is less than or equal to 200° F.

A safe shutdown condition is achieved by satisfying the following requirements:

a. maintain a condition of negative reactivity,

b. monitor and control the primary system coolant inventory and pressure, and

c. remove decay heat.

2.4.1.2 Analysis Criteria

The criteria used as a guideline for this safe shutdown analysis are that for a fire in any fire area/zone in the plant, enough redundant and/or diverse equipment will remain operable to ensure that the capability to achieve safe shutdown still exists independent of equipment or systems located within or affected by the fire in the affected fire area/zone, by satisfying the three requirements listed above in Subsection 2.4.1.1.

2.4.1.3 Evaluation Method

This evaluation was conducted in the following manner:

a. Systems and components which could be used to satisfy the three safe shutdown requirements listed in Subsection 2.4.1.1 were identified. Instrumentatation

which the operators could use to verify the plant and equipment status was also identified. Systems and components required to support the operation of the primary systems required for safe shutdown were included. The equipment and instrumentation so identified are listed in Subsection 2.4.1.4.

b. Credit is taken wherever possible for local manual operation of breakers at switchgear and motor control centers to control pumps, fans, etc., for manual operation of valves, and for visual local monitoring of instrumentation. Thus, dependence on control and instrumentation cable is minimized. Instrumentation and controls at the Remote Shutdown Panel are isolable from the Control Room and the Auxiliary Electric Equipment Room by operating a remote/local switch. However, the control room is not similarly isolable from the Remote Shutdown Panels.

c. Fire areas/zones which do not contain components or cables required for safe shutdown, or which contain components or cables from only one division of redundant trains of equipment were not analyzed further. Fire areas/zones which contain components or cables associated with only one of several diverse methods for accomplishing each of the three safe shutdown requirements listed in Subsection 2.4.1.1 were likewise not analyzed further. A more detailed analysis was performed for all other fire area/zones.

2.4.1.4 Safe Shutdown Equipment

a. Systems which may be used by the operators to perform the safe shutdown functions of reactivity control, primary coolant system inventory and pressure control, and decay heat removal are listed in Table 1.

b. Primary systems equipment which may be used to achieve and maintain the plant in a hot standby condition are listed in Table 2. The equipment on this list includes redundant and diverse means of performing the three safe shutdown functions required to achieve and maintain hot standby.

c. Primary systems equipment which may be used to achieve and maintain the plant in the cold shutdown condition are listed in Table 3. This list represents equipment required in addition to that listed in Table 2 to perform the three safe shutdown functions while taking the plant from hot standby to cold shutdown.

d. Support systems equipment required to operate to support the equipment from Table 2 and Table 3 is listed in Table 4. Equipment on this list is redundant. No attempt was made to differentiate between hot standby support equipment and cold shutdown support equipment, so the equipment on this list is required in both cases.

2.4.1.5 Assumptions

The following assumptions were made in performing the safe shutdown analysis:

1. The postulated fire shall not be considered to occur simultaneously with other accidents, events, or phenomena such as a design-basis accident except a station blackout as required by regulatory guidance.

2. A complete loss of equipment located in the main control room necessary for safe shutdown of the plant was assumed. However, credit is taken for reactor trip and verification of control rod insertion in the control room. This rapid action would be initiated prior to evacuation, should it be necessary. Any fire directly affecting control rod drive control circuits will cause a reactor trip, even if not manually initiated. Control rod insertion is sufficient to ensure subcriticality to maintain hot standby.

3. Credit is taken for manual operation of active valves, dampers, local control of pumps, and visual monitoring of essential instrumentation. The accessibility of valves and dampers which require manual operation will be verified. If a circuit breaker can be manually closed at the switchgear, the breaker is assumed operable.

4. If a fire causes electrical shorting or overload, it is assumed that automatic circuit protection will function properly. If manual action is required to reclose a breaker that is not in the fire zone, credit is taken for such action where the breaker is accessible.

5. Cables which are not needed for safe shutdown, but which have a common power source or common raceway with cables which are needed, have coordinated short circuit protection such that an open, ground or hot short of these cables will not affect the system with which the power source or raceway is shared.

2.4.2 Fire Area/Zone Safe Shutdown Analysis

The present analysis applies to Unit 1 only. Unit 2 fire zones not analyzed are listed in Table 5. Many of the Unit 1 fire zones do not contain any components or cables needed for safe shutdown. These zones are listed in Table 6. As discussed in 2.4.1.3(c), t[illegible] zones are not analyzed. Many zones contain only compone[illegible] and or cables associated with one train or equipment, with a redundant second train available independent of that zone. These zones are listed in Table 7, and as discussed in 2.4.1.3(c), these zones are not analyzed further.

All other zones were subjected to a detailed analysis of the consequences of a fire on the ability to safety maintain the plant in both hot standby and then cold shutdown. Subsections 2.4.2.1 through 2.4.2.65 contain these analyses.

2.4.2.1 Unit 1 Containment Missile Shield Area (Fire Zone 1.1-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-8. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.49.

A fire in this zone could result in the loss of all four pressurizer heaters. In this event, RCS pressure could be maintained and controlled using the CVCS charging pumps and the pressurizer PORV's.

The ability to achieve and maintain cold shutdown could be affected by the loss of the hot leg to RHR pump section valves is in RHR train A and one is in RHR train B. However, the plant can be safely maintained in hot standby indefinitely. Repairs could be effected to at least one of these valves within 72 hours, thus enabling the plant to achieve and maintain cold shutdown.

Loss of instrumentation listed in Table 2.4-9 can be tolerated. Two channels of pressurizer pressure and pressurizer level remain operable. Pressurizer temperature can be inferred from pressurizer pressure. Core thermo couples remain available for RCS temperature indication. Additional channels for other parameters remain available.

Thus, safe shutdown of the plant can be accomplished in the event of a fire in this zone.

2.4.2.2 Unit 1 Annular Area (Fire Zone 1.2-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-10. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-11.

Power and control cables for PORV 1RY455A and PORV Block valve 1RY3000A are routed through this zone. Loss of these valves would not affect the ability to safely shutdown the plant, since the redundant valves are still available.

The ability to achieve and maintain cold shutdown could be affected by the loss of the hot leg to RHR pump suction valves 1RH8701A and 1RH8701B, since one of these valves is in RHR train A and one is in RHR train B. However, the plant can be maintained in hot standby indefinitely. Repairs to allow operation of at least one of these valves could be effected within 72 hours, thus enabling the plant to achieve and maintain cold shutdown.

Many essential instrumentation cables are routed through this zone. However, redundant instrumentation cables are usually separated by large distances. Using 20 ft. as the minimum acceptable separation distance, at least one channel of the following instruments will survive a credible fire in this zone: Steam generator wide range level, wide range loop hot leg temperature, wide range loop cold leg temperature, pressurizer pressure and pressurizer level. This will insure sufficient information will be available to the operator.

Thus, safe shutdown of the plant can be accomplished in the event of a fire in this zone.

2.4.2.3 Unit 1 Containment Upper Area (Fire Zone 1.3-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-12. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-13.

Both PORV's and their block valves are located in this fire zone, as are power and control cables for these four valves. The valves are located inside the pressurizer coffin. A fire inside the pressurizer coffin is not considered to be a credible event, since no ignition sources are present, and the only cumbustible material present is cable insulation, which in this area is routed in conduit.

Cable separation for the PORV and block valve power and control cables were checked throughout the remainder of this zone. Except for the immediate area around the pressurizer coffin and one additional area, the separation between the Division II PORV and block valve cables and the Division 12 PORV and block valve cables exceeds 20 ft. As previously stated, the present arrangement in the area of the pressurizer coffin is considered acceptable. The one additional area where the cable separation is less than 20 ft is considered unacceptable. Certain of these cables are being rerouted in such a manner that a minimum separation of 20 ft between Division II and Division 12 PORV and block valve cables will be maintanined in every area of the containment except the immediate pressurizer coffin area. The final modifications will be documented in a future amendment to this report.

Additional channels are available for all instruments lost except pressurizer temperature. This parameter is not essential however, since it can be inferred from pressurizer pressure, two channels of which remain available.

Upon completion of the modifications described above, the capability will exist to safely shutdown the plant in the event of a fire in this zone.

2.4.2.4 Control Room (Fire Zone 2.1-0)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-14. Safe shutdown insturmentation cables routed through this zone are listed in Table 2.4-15

In the event of a fire in this zone, the reactor would be tripped and control rod insertion would be verified prior to control room evacuation, thus placing the plant in hot standby.

Under these circumstances, the plant can be maintained in both hot standby and cold shutdown from the Remote Shutdown Panel, (1PL04J, 1PL05J and 1PL06J), and other local instrumentation and controls.

Thus, a fire in this zone will not affect the ability to achieve and maintain the plant in a safe shutedown condition.

2.4.2.5 Record Storage Room (Fire Zone 2.1-1)

No safe shutdown equipment is located in this zone. No safe shutdown power or control cables are routed through this zone. Safe snutdown instrumentation cables routed through this zone are listed in Table 2.4-16.

All of the cables routed through this zone are associated with one electrical division. The redundant division is still available. Thus, a fire in this zone would not affect the ability to safely shutdown the plant.

2.4.2.6 Unit 1 Electrical Cable Tunnel (Fire Zone 3.1-1)

There is no safe shutdown equipment located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-17. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-18.

With the exception of cables 1DO002 and 1DG157, all cables listed are associated with electrical Division II, and thus the equipment and instrumentation is redundant. Cable 1DO002 is a control cable for diesel oil transfer pump 1A. If this were lost, redundant pump 1C would still be available, so loss of this cable is acceptable. However, loss of cable 1DG157 would result in the loss of both diesel generators, which is unacceptable. This cable will either be rerouted, on its conduit, which runs vertically straight from the ceiling to the floor against the wall at column-row 10, will be enclosed in a fire barrier of suitable rating. The modification to be made will be described in a future amendment.

Upon completion of the modification to this zone, safe shutdown of the plant will be achievable in the event of a fire in this zone.

2.4.2.7 Unit 1 Nonsegregated Bus Duct Area (Fire Zone 3.2A-1)

No safe shutdown equipment is located in this room. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-19. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-20.

Cables for both PORV's and block valves are routed through this zone, and the cables are closer together than 20 ft. This is unacceptably close. Rerouting of these cables is under investigation.

Cables for all four pressurizer heaters are routed through this zone. However, the Division II cables are separated from the Division 12 cables by more than 20 ft., which provides acceptable separation.

Control cables for both diesel generators are located in this zone. They are acceptably separated by more than 20 ft., however.

Power and control cables for all four Miscellaneous Electric Equipment Room fans are also located in this zone. Again, however, the Division 11 cables are acceptably separated from the Division 12 cables by more than 20 ft.

One steam pressure channel per steam generator is located in the zone. However, each steam generator has two additional pressure channels.

This fire zone is a controlled access area. It is provided with an automatic fire detection and suppression system.

Upon completion of the modification described above, the capability to safely shutdown the plant in the event of a fire in this zone will be assured.

2.4.2.8 Lower Cable Spreading Area (Fire Zone 3.2B-1)

No safe shutdown equipment is located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-21. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-22.

Cables from only one electrical division are located in this zone, therefore, a fire in this zone would not affect the ability to safely shutdown the plant.

2.4.2.9 Lower Cable Spreading Area (Fire Zone 3.2C-1)

No safe shutdown equipment is located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-23. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-24.

Cables from only one electrical division are located in this zone, therefore, a fire in this zone would not affect the ability to safely shut down the plant.

2.4.2.10 Lower Cable Spreading Area (Fire Zone 3.2D-1)

No safe shutdown equipment is located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-25. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-26.

Cables from only one electrical division are located in this zone, therefore, a fire in this zone would not affect the ability to safely shut down the plant.

2.4.2.11 Divi on 11 Cable Riser (Fire Zone 3.2E-1)

No safe shutdown equipment is located in this zone. Safe shutdwon po and control cables routed through this zone are listed in Table 2.4-27. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-28.

Both boric acid transfer pumps needed for cold shutdown could be rendered inoperable by a fire in this zone. However, the plant can be maintained in hot standby indefinitely. Repairs to the cables, or a temporary power supply to the pumps, could be provided within 72 hours. Thus, the ability to safely shutdown the plant would not be affected by a fire in this zone.

2.4.2.12 Control Room HVAC Equipment Room, Train A (Fire Zone 3.3A-1)

No safe shutdown equipment is located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-29.

Cables from only one electrical division are present in this zone, therefore, a fire would not affect the ability to safely shut down the plant.

2.4.2.13 Upper Cable Spreading Area (Fire Zone 3.3B-1)

No safe shutdown equipment is located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-30.

Cables from only one electrical division are present in this in this zone, therefore, a fire would not affect the ability to safely shut down the plant.

2.4.2.14 Upper Cable Spreading Area (Fire Zone 3.3C-1)

No safe shutdown equipment is located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-31.

Both boric acid transfer pumps needed for cold shutdown could be rendered inoperable by a fire in this zone. However, the plant can be maintained in hot standby indefinitely. Repairs to the cables, or a temporary power supply to the pumps, could be provided within 72 hours. Thus, the ability to safely shut down the plant would not be affected by a fire in this zone.

2.4.2.15 Upper Cable Spreading Area (Fire Zone 3.3D-1)

No safe shutdown equipment is located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-32.

Both boric acid transfer pumps needed for cold shutdown could be rendered inoperable by a fire in this zone. However, the plant can be maintained in hot standby indefinitely. Repairs to the cables, or a temporary power supply to the pumps, could be provided within 72 hours. Thus, the ability to safely shut down the plant would not be affected by a fire in this zone.

2.4.2.16 Unit 1 Cable Riser Area (Fire Zone 3.4A-1)

No safe shutdown equipment is located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-33. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-34.

Both boric acid transfer pumps needed for cold shutdown could be rendered inoperable by a fire in this zone. However, the plant can be maintained in hot standby indefinitely. Repairs to the cables, or a temporary power supply to the pumps, could be provided within 72 hours. Thus, the ability to safely shut down the plant would not be affected by a fire in this zone.

2.4.2.17 Division 12 ESF Switchgear Room (Fire Zone 5.1-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-35. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-36.

This zone contains equipment and cables from only one electrical division, therefore, a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.18 Division 11 ESF Switchgear Room (Fire Zone 5.2-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-37. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-38.

This zone contains equipment and cables from only one electrical division, therefore, a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.19 Unit 1 Nonessential Switchgear Room (Fire Zone 5.3-1)

There is no safe shutdown equipment located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-39.

This zone contains equipment and cables from only one electrical division, therefore, a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.20 Division 12 Miscellaneous Electrical Equipment and Battery Room (Fire Zone 5.4-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-40. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-41.

This zone contain equipment and cables from only one electrical division, therefore, a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.21 Unit 1 Auxiliary Electrical Equipment Room (Fire Zone 5.5-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-42. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-43.

The only equipment lost as a result of a fire in this zone that would affect safe shutdown are the boric acid transfer pumps. As stated previously, the plant can be maintained in hot standby indefinitely. Repairs can be effected within 72 hours, the ability to go to cold shutdown.

As can be seen from Table 2.4-43, much essential instrumentation would be lost as a result of a fire in this room. Because of the arrangement of cabinets in this zone, separating redundant cabinets with a fire barrier is not possible. Modifications are being considered to provide at least one channel of remote indication independent of this zone for certain essential parameters. This would be done by installing the indicator between the transmitter and the cabinet in the Auxiliary Electrical Equipmant Room. The parameters to be monitored, the number of channels required and the location of the indicators are presently under investigation.

Upon completion of the modifications being considered, the plant will have the capability to be safely shut down independent of this zone.

2.4.2.22 Division 11 Miscellaneous Electrical Equipment and Battery Room (Fire Zone 5.6-1)

Safe shutdwon equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-44. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-45.

This zone contain equipment and cables from only one electrical division, therefore, a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.23 Turbine Building, Grade Level Unit 1 (Fire Zone 8.3-1)

There is no safe shutdown equipment or instrumentation in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-46.

Since cables from only one electrical division are present, the plant can be safely shut down independent of this zone.

2.2.2.24 Unit 1 Mezzanine Floor (Fire Zone 8.6-1)

There is no safe shutdown equipment or instrumentaion in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-47.

Since cables from only one electrical division are present, the plant can be safely shutdown independent of this zone.

2.4.2.25 Diesel Generator Room 1B (Fire Zone 9.1-1)

Safe shutdown equipment located in this room and power and control cables routed through this room are listed on Table 2.4-48.

All of the equipment and cables are associated with one electrical division. Therefore, a fire in this zone will not affect the ability to safely shutdown the plant, since the redundant components in the other division will still be available.

2.5.2.26 Diesel Generator Room 1A (Fire Zone 9.2-1)

Safe shutdown equipment located in this room and power and control cables routed through this room are listed on Table 2.4-49.

All of the equipment and cables are associated with one electrical division. Therefore, a fire in this zone will not affect the ability to safely shutdown the plant, since the redundant components in the other division will still be available.

2.5.2.27 Diesel Generator Day Tank Room 1A (Fire Zone 9.3-1)

The only safe shutdown equipment located in this room is the diesel generator 1A day tank. It is listed on Table 2.4-50. No safe shut down power, control or instrumentation cables are routed through this zone.

Loss of this equipment would affect only one diesel generator, the other remains available, therefore, a fire in this zone will not affect the ability to safely shut down the plant.

2.4.2.28 Diesel Generator Day Tank Room 1B (Fire Zone 9.4-1)

The only safe shutdown equipment located in this room is the diesel generator 1B day tank. It is listed on Table 2.4-51. No safe shutdown power, control or instrumentation cables are routed through this zone.

Loss of this equipment would affect only one diesel generator, the other remains available, therefore, a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.29 Diesel Fuel Oil Storage Room 1B (Fire Zone 10.1-1)

Safe shutdown equipment located in this room and power and control cables routed through this room are listed on Table 2.4-52.

All of the equipment and cables are associated with one electrical division. Therefore, a fire in this zone will not affect the ability to safely shutdown the plant, since the redundant components in the other division will still be available.

2.4.2.30 Diesel Guel Oil Storage Room 1A (Fire Zone 10.2-1)

Safe shutdown equipment located in this room and power and control cables routed through this room are listed on TAble 2.4-53.

All of the equipment and cables are associated with one electrical division. Therefore, a fire in this zone will not affect the ability to safely shutdown the plant, since the redundant components in the other division will still be available.

2.4.2.31 Unit 1 Auxiliary Building Basement (Fire Zone 11.1-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed on Table 2.4-54.

The equipment and cables are all associated with one electrical division, therefore, a fire in this zone would not affect the ability to safely shutdown the plant.

2.4.2.32 Unit 2 Auxiliary Building Basement (Fire Zone 11.1-2)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed on Table 2.4-55.

The equipment and cables are all associated with one electrical division, therefore, a fire in this zone would not affect the ability to safely shutdown the plant.

2.4.2.33 Auxiliary Building General Area, Elevation 346 feet-0-inch (Fire Zone 11.2-0)

Safe shutdown equipment located in this zone and safe shutdown pwoer and control cables routed through this area are listed in Table 2.4-56. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-57.

Although cables from both Division 11 and Division 12 are routed through this zone, a review of the existing separation shows that at least 20 feet separates these cables throughout this zone.

The fire loading in this general area is very low. The majority of the combustible materials identified consists of the cable insulation and jacket materials. Considering the existing cable arrangements, low combustible loading, and the lack of intervening combustible materials, the 20 feet cable separation existing in this area is deemed to be adequate to assure the ability to safely shutdown the plant in the event of a fire in this zone.

2.4.2.34 Residual Heat Removal Pump 1A Room (Fire Zone 11.2A-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-58.

This zone contains equipment and cables from only one electrical division, therefore, a fire in this zone would not affect the ability to safely shutdown the plant.

2.4.2.35 Containment Spray Pump 1B Room (Fire Zone 11.2C-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-59.

This zone contains equipment and cables from only one electrical division, therefore, a fire in this zone would not affect the ability to safely shutdown the plant.

2.4.2.36 Residual Heat Removal Pump 1B Room (Fire Zone 11.2D-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-60.

This zone contains equipment and cables from only one electrical division, therefore, a fire in this zone would not affect the ability to safely shutdown the plant.

2.4.2.37 Auxiliary Building General Area Elevation 364 feet-0 inch (Fire Zone 11.3-0)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-61. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-62.

Power and control cables for all of the atmospheric main steam relief valves are located in this zone. A modification to these valves to add a hydraulic operator is presently being designed. When power and control cables for these operators are routed, the two divisions will be routed in such a way that 20 feet separation is maintained in this zone (and all others through when they will pass).

All five component cooling water pumps are located in this zone. They are located in close proximity near column rows 18 and L. Power cables for the Unit 1 and common pump also are routed through this area, and naturally in the the area of the pumps, cable separation between divisions is less than 20 feet.

Although other redundant components and cables are located in this zone, separation between electrical divisions is greater than 20 feet in all cases.

The combustible loading in this general area is very low, and the majority of combustible material identified consists of cable jacket and insulation materials. In addition, automatic fire detection (ionization detectors) is provided for the entire zone. Considering the existing cable arrangements, the low combustible loading and lack of material other than cable insulation, and the presence of automatic detection, this area is considered to be adequately protected against the effects of fire.

All auxiliary feedwater pump flow indication could be lost as a result of a signle fire in this zone, since the redundant cables are not separated by 20 feet. However, equivalent information is available to the operators from the steam generator wide range level indication, which is unaffected. All residual heat removal pump flow and heat exchanger outlet temperature, and component cooling water flow to the RHR heat exchangers indication could also be lost. This is acceptable, however, since the RHR system is not required for 72 hours, allowing ample time to repair the instrumentation circuits. All other instrumentation is redundant.

Thus, upon completion of the modifications to the main steam atmospheric relief valve operators, a credible fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.38 Auxiliary Building Unit 1 Area, Elevation 364 feet - 0 inch (Fire Zone 11.3-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-63. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-64.

Safe hot standby equipment and cables located in this area includes a number of valves and power cables for both centrifugal charging pumps. Except for valves 1CVLCV112D and E, the redundant valves listed have adequate physical separation. The RUSST to charging pump suction valves, however, are located adjacent to one another so that a fire could affect both valves. In the event that a fire rendered both valves inoperable, the charging pumps could continue to take suction from the volume control tank. Although both power cables for the centrifugal charging pumps are routed through this zone, they are separated by well over 20 feet. This is considered to be adequate separation of this zone.

All of the Division 11 support systems cables are separated from the Division 12 support systems cables by well over 20 feet, which is considered to be adequate separation for this zone.

The RHR heat exchanger outlet temperature instrument cables do not have 20 feet of separation in this area. This is not of concern, however, since 72 hours are available to complete repairs before they are required. Other instrumentation with cables routed through this zone is redundant outside of this zone.

This general area has a low combustible loading, most of which consists of cable jacket and insulation materials, has adequate separation between essential components and cables, and is provided with automatic fire detection (ionization detectors). Therefore, a credible fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.39 Unit 1 Positive Displacement Charging Pump Room (Fire Zone 11.3C-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-65.

Since equipment and cables from only one electrical division are present, a fire in this zone would not affect the ability to safely shutdown the plant.

2.4.2.40 Centrifugal Charging Pump 1A Room (Fire Zone 11.3D-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-55.

Since equipment and cables from only one electrical division are present, a fire in this zone would not affect the ability to safety shutdown the plant.

2.4.2-41 Safety Injection Pump 1A Room (Fire Zone 11.3P-1)

Safe Shutdown instrumentation cables routed through this zone are listed on Table 2.4-67.

Since redundant channels are available independent of this zone, a fire would have no effect on the ability to safely shutdown the plant.

2.4.2.42 Centrifugal Charging Pump 1B Room (Fire Zone 11.3G-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-68. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-69.

Since all of the equipment and cables are from one electrical division, a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.43 Auxiliary Building General Area, Elevation 383' feet-0 inch (Fire Zone 11.40)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-70. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-71.

All of the equipment located in this zone and all of the power and control cables routed through this zone are from electrical Division 11 with only one exception. Cable 1CC020 is the Division 12 power cable to the shared component cooling pump. However, it is separated from 1CC001, the power cable to the Division 11 pump, by more than 20 feet.

At one point in this zone, cables for all of the auxiliary feedwater pump flow channels and all four steam generator wide range level channels are within 20 feet of each other. However, if these were lost, AFW flow could be read at the transmitters, and all steam generator narrow range level channels are still available. In the same area, cables 1RC612 and 1RC613 are within 20 feet of each other. However, loss of all hot and cold leg wide range temperature indication would still leave core exit thermo couple indication available. Other instrumentation present is redundant, or is not needed for 72 hours, leaving time available to effect repairs.

This general area has a low combustible loading which consists mostly of cable jacket and insulation materials, and automatic fire detection is provided. Since redundant or equivalent essential equipment and instrumentation is available independent of this zone, a fire in this zone will not prevent the safe shutdown of the plant.

2.4.2.44 Unit 1 Auxiliary Feedwater Pump Diesel Room (Fire Zone 11.4A-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed on Table 2.4-72.

With the exception of valve 1AF006A (essential service water to auxiliary feedwater pump suction); all equipment and cables are associated with one electrical division. While a fire in this zone could affect the ability to supply essential service water to both auxiliary feedwater pumps, this source of water is not normally used. The normal source is the condensate storage tank, which is still available. Therefore, a fire in this zone would not affect the ability to safely shut down the plant.

2.4.2.45 Radwaste and Remote Shutdown Control Room (Fire Zone 11.4C-0)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-73. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-74.

A number of essential functions are monitored or controlled from the remote shutdown panels. The cables routed through this zone cannot be isolated from the control room. In other words, while this zone can be isolated so that a fire in the control room cannot affect the controls and instruments in this zone, the reverse is not true. A fire in this zone will render both these panels and the corresponding controls and instruments in the control room inoperable. This is an unacceptable situation. Modifications to correct this are being investigated and designed. First, essential controls and instruments will be identified. Local panels will be provided elsewhere in the plant where these essential controls and instruments can be monitored. The modifications to be made will be described in an amendment to this report, after the design is finalized. Upon completion of the modifications, the ability to safely shut down the plant in the event of a fire in this zone will be assured.

2.4.2.46 Auxiliary Building Elevation 401 Feet-0-inch (Fire Zone 11.5-0)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-75. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-76.

A review of this zone shows that hot standby equipment from only one electrical division could be directly affected by a fire in this zone. Both of the boric acid transfer pumps and both residual heat removal pump could be affected. This is acceptable, however, since these components are not required for 72 hours, which allows ample time to make repairs.

At one point in this zone, several Division 12 Auxiliary Power cables in a cable tray pass within 10 feet of a group of cable risers containing Division 11 Auxiliary Power cables. These cables supply power to Auxiliary Building motor control centers. Since this is a potentially adverse situation, rerouting of some of the cables to increase the separation is being considered. Any modifications to be made to this zone will be reported in a future amendment to this report.

After modifications to this zone are completed, it will be re-evaluated to show that a fire in this zone will not prevent the safe shutdown of the plant.

2.4.2.47 Unit 1 Containment Refrigeration Equipment Room (Fire Zone 11.5-1)

No safe shutdown equipment is located in this zone. Safe shutdown power and control cables routed through this zone are listed in Table 2.4-77.

All of the safe shutdown cables routed through this zone are Division 11 cables except for three cables as described below. Cable 1CV011, the power feed to the Division 12 centrifugal charging pump, is in this zone. The redundant cable for the Division 11 centrifugal charging pump is not routed through this zone, howerver, so a fire could affect only one of the pumps. Cables 1VA152 and 1VA153 supplying power to the Division 12 RHR pump room cubicle coolers are routed through this zone. The redundant cables for the Division 11 equipment are not in this zone, so a fire could affect at most one of the two divisions.

A fire in this zone would not affect the ability to safely shut down the plant.

2.4.2.48 Division 11 Cable Penetration Area (Fire Zone 11.5A-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-78. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-79.

Since all of the equipment and cables in this zone are associated with one electrical division, a fire in this zone could not affect the ability to safely shut down the plant.

2.4.2.50 Auxiliary Building Elevation 426 feet-0 inch

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-80. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-81.

In all areas of this zone except one, Division 11 cables are separated from Division 12 cables by 20 feet or more. The one exception is by ESF motor control centers 131X5 and 132X5. These MCC's are located ten feet apart, thus cable separation of 20 feet cannot be maintained in the immediate area, and rerouting cables would not solve the problem. Installation of a fire barrier between these MCC's is presently being investigated.

A future amendment will document any modifications made to this zone to ensure the ability to safely shut down the plant.

2.4.2.51 Division 12 Electrical Penetration Area (Fire Zone 11.6-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-82.

All equipment; all but one; cables in this zone are associated with Division 12. The one Division 11 cable is 1VA016, which is the power feed to auxiliary building exhaust fan CA. Thus, a fire in this zone could affect both Unit 1 auxiliary building exhaust fans. However, both Unit 2 fans would be unaffected, and can handle the HVAC load for the building.

A fire in this zone, therefore, would not affect the ability to safely shutdown the plant.

2.4.2.52 Laboratory HVAC Equipment Room (Fire Zone 11.6A-0)

No safe shutdown equipment is located in this zone, and no safe shutdown power and control cables are routed through this zone. The only safe shutdown instrument cable routed through this zone is listed in Table 2.4-83.

Although this instrument is not redundant, it would not be required for up to 72 hours, allowing ample time to repair the circuit. A fire in this zone would not affect the capability to safely shutdown the plant.

2.4.2.53 HEPA Filter Rooms (Fire Zone 11.7-0)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-84.

All of the auxiliary building exhaust fans are located in this zone. The two Unit 2 fans are separated from the two Unit 1 fans, and their power feed cables by over 40 feet, with no significant quantities of combustible material intervening. In addition, the charcoal filters which contain most of the combustible material in this zone have automatic fire detection and a manual deluge suppression system. Thus, a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.54 Fuel Handling Building (Fire Zone 12.1-0)

No safe shutdown equipment is located in this zone, and no safe shutdown power and control cables are routed through this zone. Table 2.4-85 lists the safe shutdown instrumentation cables routed through this zone.

Only one of four RWST level channels could be affected by a fire in this zone, which could not affect the ability to safely shutdown the plant.

2.4.2.55 Radwaste Drumming Station and Tunnel (Fire Zone 14.1-0)

No safe shutdown equipment is located in this zone, and no safe shutdown power and control cables are routed through this zone. Table 2.4-86 lists the safe shutdown instrumentation cables routed through this zone.

A fire in this zone could cause loss of all auxiliary feedwater flow indication in the control room . Local indication of the transmitters is still available. All four channels of steam generator wide range level could also be lost. However, two channels of narrow range level are still available for each steam generator. All other instrumentation which might be lost has redundancy to survive a fire in this zone. A fire in this zone would therefore, not affect the ability to safely shutdown the plant.

2.4.2.56 Byron Unit 1 ESW Cooling Tower (Fire Zone 17.2-1)

Safe shutdown power and control cables routed through this zone are listed in Table].4-82.

This entire tower is Division 11. Thus, loss of this tower leaves redundant equipment available, so a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.57 Byron Unti 2 ESW Cooling Tower (Fire Zone 17.2-2)

Safe shutdown power and control cables routed through this zone are listed in Table 2.4-88.

This entire tower is Division 12. Thus, loss of this tower leaves redundant equipment available, so a fire in this zone will not affect the ability to safely shutdown the plant.

2.4.2.58 Diesel Generator 1B and Switchgear Room Airshaft (Fire Zone 18.1-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-89. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-90.

Since the equipment and cables present in this room are associated with one electrical division only, a fire in this zone could not affect the ability to safely shutdown the plant.

2.4.2.59 Diesel Generator 1A and Switchgear Room Airshaft (Fire Zone 18.2-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-91. Safe shutdown instrumentation cables routed through this zone are listed in Table 2.4-92.

Since the equipment and cables present in this room are associated with one electrical division only, a fire in this zone could not affect the ability to safely shutdown the plant.

2.4.2.60 Unit 1 Main Steam and Auxiliary Feedwater Pipe Tunnel (Fire Zone 18.3-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed in Table 2.4-93. Safe shutdown instrumentation routed through this zone is listed in Table 2.4-94.

All of the equipment listed in Table 2.4-93 is located in the two safety valve enclosures located adjacent to the containment. The separation between these two areas is sufficient to ensure that no single event could affect both enclosures at onces. Since the only combustible material identified in this zone is the oil for the hydraulic valve operators, the only credible fire is in one of the valve enclosures. Thus, at most one division of equipment and cables could be affected, leaving the redundant division available. Therefore, a fire in this zone could not affect the ability to safely shut down the plant.

2.4.2.61 Control Room HVAC Equipment Room, Train A (Fire Zone 18.4-1)

No safe shutdown equipment is located in this zone, and no safe shutdown power or control cables are routed through this zone. Instrumentation cables routed through this zone are listed on Table 2.4-95.

All of the cables in this zone are associated with one electrical division, thus a fire would not affect the ability to safely shut down the plant.

2.4.262 Kitchen/Locker Area (Fire Zone 18.5-1)

No safe shutdown equipment is located in this zone, and no safe shutdown power or control cables are routed through this zone. Instrumentation cables routed through this zone are listed on Table 2.4-96

All of the cables in this zone are associated with one electrical division, thus a fire would not affect the ability to safely shut down the plant.

2.4.2.63 ESW Cooling Tower Electrical Substation OB, Division 12 (Fire Zone 18.14A-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed on Table 2.4-97.

Since only one electrical division could be affected by a fire in this zone, the ability to safely shutdown the plant is not affected.

2.4.2.64 ESW Cooling Tower Electrical Substation OA, Division 11 (Fire Zone 18.14B-1)

Safe shutdown equipment located in this zone and safe shutdown power and control cables routed through this zone are listed on Table 2.4-98.

Since only one electrical division could be affected by a fire in this zone, the ability to safely shutdown the plant is not affected.

2.4.2.65 Condensate Storage Tank (Fire Zone 18.23-0)

Safe shutdown equipment located in this zone is listed in Table 2.4-99. Safe shutdown instrumentation cables routed through this zone are listed on Table 2.4-100.

Due to the negligible combustible loading in this zone, a fire could not actually affect the condensate storage tank. If the tank level instrumentation were lost, this would be acceptable since the auxiliary feedwater pump suction has pressure switches which trip the pumps on low pressure, allowing the operators to switch over the source to the ESW system. Thus, a fire in this zone would not affect the ability to safely shut down the plant.

TABLE 2.4-1

SYSTEMS REQUIRED TO PERFORM SAFE SHUTDOWN FUNCTIONS

Safe Shutdown Function	Systems for Hot Standby	Systems for Cold Shutdown
Reactivity Control	Reactor Trip	CVCS (Boric acid transfer pumps)
Reactor Coolant System inventory and pressure control	CVCS (charging pumps)	Same as for hot standby
	Pressurizer PORV's and heaters	Same as for hot standby
Decay heat removal	Auxiliary Feedwater	Residual Heat Removal
	Steam generator atmospheric relief valves	
	Steam generator safety valves	

B/B

TABLE 2.4-2

PRIMARY SYSTEMS HOT STANDBY EQUIPMENT

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
1A Centrifugal Charging Pump	1CV01PA-1	11.3D-1	364'-0"	16/U-V	
1B Centrifugal Charging Pump	1CV01PB-2	11.3G-1	364'-0"	14/Y-Z	
1A Aux. Feed Pump - Motor Driven	1AF01PA-1	11.4-0	383'-0"	17-18/M	
1B Aux. Feed Pump - Diesel Driven	1AF01PB-2	11.4A-1	383'-0"	15-16/L-M	
RWST to Charging Pump Suction Valve	MOV-1CV LCV112D	11.3-1	377'-6"	13-15/U-V	
RWST to Charging Pump Suction Valve	MOV-1CV LCV112E	11.3-1	377'-6"	13-15/U-V	
ESW to AF Pump Suction Valve	MOV-1AF 006A-1	11.4A-1	391'-0"	17-18/M-N	
ESW to AF Pump Suction Valve	MOV-1AF 006B-2	11.4A-1	383'-0"	15-16/L-M	
ESW to AF Pump Suction Valve	MOV-1AF 017A-1	11.4-0	391'-0"	16-17/M-N	
ESW to AF Pump Suction Valve	MOV-1AF 017B-2	11.4A-1	383'-0"	15-16/L-M	

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TABLE 2.4-2 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
Steam Generator Safety Valves	1MS013A, D	18.3-1	404'-6"	6-7.7/Q-S	
Steam Generator Safety Valves	1MS013B, C	18.3-1	404'-6"	6-7.7/Y-AA	
Steam Generator Safety Valves	1MS014A, D	18.3-1	404'-6"	6-7.7/Q-S	
Steam Generator Safety Valves	1MS014B, C	18.3-1	404'-6"	6-7.7/Y-AA	
Steam Generator Safety Valves	1MS015A, D	18.3-1	404'-6"	6-7.7/Q-S	
Steam Generator Safety Valves	1MS015B, C	18.3-1	404'-6"	6-7.7/Y-AA	
Steam Generator Safety Valves	1MS016A, D	18.3-1	404'-6"	6-7.7/Q-S	
Steam Generator Safety Valves	1MS016B, C	18.3-1	404'-6"	6-7.7/Y-AA	
Steam Generator Safety Valves	1MS017A, D	18.3-1	404'-6"	6-7.7/Q-S	
Steam Generator Safety Valves	1MS017B, C	18.3-1	404'-6"	6-7.7/Y-AA	

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TABLE 2.4-2 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
Reg. HX Line Containment Isolation Valve	MOV-1CV 8105-2	11.3-1	379'-0"	12-13/V-W	
Reg. HX Line Containment Isolation Valve	MOV-1CV 8106-1	11.3-1	379'-0"	12-13/V-W	
Cold Leg Injection Valve	MOV-1SI 8801A-1	11.3-1	383'-0"	12-13/V-W	
Cold Leg Injection Valve	MOV-1SI 8801B-2	11.3-1	383'-0"	12-13/V-W	
Volume Control Tank to Charging Pump Suction Valve	MOV-1CV LCV112B-1	11.6A-1	427'-1"	16-17/Q-S	
Volume Control Tank to Charging Pump Suction Valve	MOV-1CV LCV112C-2	11.6A-1	427'-1"	16-17/Q-S	
Atmospheric Relief Valves	1MS018A, D	18.3-1	404'-6"	6-7.7/Q-S	
Atmospheric Relief Valves	1MS018B, C	18.3-1	404'-6"	6-7.7/Y-AA	
Main Steam Isolation Valves	1MS001A, D	18.3-1	--	--	
Main Steam Isolation Valves	1MS001B, C	18.3-1	386'-6"	6-7.7/Y-AA	
PORV	1RY PCV455A	1.3-1	451'-0"	11-12/U-V	
PORV	1RY PCV456	1.3-1	451'-0"	11-12/U-V	

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TABLE 2.4-2 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
Centrifugal Charging Pump Mini-Flow Valve	MOV-1CV 8110-1	11.3-1	366'-0"	14-15/S-U	
Centrifugal Charging Pump Mini-Flow Valve	MOV-1CV 8111-2	11.3-1	366'-0"	14-15/S-U	
Refueling Water Storage Tank	1SI01T	18.25-1	Grade	N/A	
Condensate Storage Tank	1CD01T	18.23-0	Grade	N/A	
Pressurizer Heaters	1RY03EA 1RY03EB 1RY03EC 1RY03ED	1.1-1			Figure 2.3-22

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TABLE 2.4-3

PRIMARY SYSTEMS COLD SHUTDOWN EQUIPMENT

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
Residual Heat Removal Pump	1RH01PA-1	11.2A-1	346'-0"	12-13/U-V	
Residual Heat Removal Pump	1RH01PB-2	11.2D-1	346'-0"	12-13/X-Y	
Boric Acid Transfer Pump	1AB03P	11.5-0	401'-0"	15-17/N-P	
Boric Acid Transfer Pump	0AB03P	11.5-0	401'-0"	15-17/N-P	
Hot Leg to RHR Pump Suction Valve	MOV-1RH 8701A-1	1.2-1	395'-0"	12/V	
Hot Leg to RHR Pump Suction Valve	MOV01RH 8701B-2	1.1-1	386'-6"	8-10/V	
Hot Leg to RHR Pump Suction Valve	MOV-1RH 8702A-1	1.2-1	379'-0"	12/X-Y	
Hot Leg to RHR Pump Suction Valve	MOV-1RH 8702B-2	1.1-1	394'-1"	10-11/W-X	
Pump Mini-flow Valve	MOV-1RH 610-1	11.2-0	359'-0"	15-16/L-M	
Pump Mini-flow Valve	MOV-1RH 611-2	11.2-0	358'-0"	15-16/V-W	
HX Bypass Valve	1RH FCV 618	11.3B-1	364'-0"	15-16/S-U	
Hx Bypass Valve	1RH FCV 619	11.3E-1	364'-0"	15-16/V-W	

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TABLE 2.4-3 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
RHR HX to Charging Pump Suction Valve	MOV-1CV 8804A	11.3-1	364'-0"	13-14/Q-S	
Boric Acid Transfer Pump to CCP Suction Valve	MOV-1CV 8104	11.6A-1	427'-0"	16-17/Q-S	
HX Discharge	1RH HCV 606	11.3B-1	364'-0"	15-16/S-U	
HX Discharge	1RH HCV 607	11.3E-1	364'-0"	15-16/V-W	
Boric Aicd Tank	1AB03T	11.5-0	401'-0"	16-18/L-M	
RHR HX 1A	1RH02AA	11.3B-1	357'-0"	15-16/S-U	
RHR HX 1B	1RH02AB	11.3E-1	357'-0"	15-16/V-W	

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TABLE 2.4-4

SUPPORT SYSTEMS EQUIPMENT

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
1A Service Water Pump	1SX01PA	11.1-1	330'-0"	14-16/N	
1B Service Water Pump	1SX01PB	11.1-2	330'-0"	18-20/M-N	
Diesel Driven Auxiliary Feed Pump Cooling Water Pump	1SX04P	11.4A-1	383'-0"	15-16/L-M	Assumes approximate location near 1B Aux Feed Pump - Diesel Driven
Pump Discharge to Comp Cooling HX "O" Valves	MOV 15X005	11.1-2	330'-0"	19-20/P-Q	
	MOV 25X005	11.1-2	330'-0"	19-20/P-Q	
Comp. Cooling HX "O" Discharge Valves	MOV 0SX146	11.2-0	346'-0"	16-17/N-P	
	MOV 0SX147	11.2-0	346'-0"	20-21/N-P	
AFW Pump 1A Oil Cooler Outlet Valve	1SX101A	11.4-0	384'-2"	17-18/M-N	
DG 1A HX Outlet Valve	1SX169A	9.1-1	401'-0"	6-7/N-P	
DG 1B HX Outlet Valve	1SX169B	9.2-1	413'-0"	7.7-8/N-P	
Service Water to Engine Driven Cooling Water Pump Suction Valves	1SX173	11.4A-1	383'-0"	15-16/L-M	

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TABLE 2.4-4 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
AFW Pump 1B Auxiliaries to Service Water Return Valve	1SX178	11.4A-1	383'-0"	16-17/L-M	
1A Component Cooling Pump	1CC 01PA	11.3-0	364'-0"	16-18/L-M	
1B Component Cooling Pump	1CC 01PB	11.3-0	364'-0"	16-18/L-M	
"0" Component Cooling Pump	0CC 01P	11.3-0	364'-0"	18-19/L-M	
Component Cooling Valve	MOV 1CC 9473A	11.3-0	364'-0"	17/L-M	
Header Crosstie Valves	MOV 1CC 9473B	11.3-0	364'-0"	18-19/L-M	
	MOV 1CC 9467B	11.3-0	364'-0"	16-17/M-N	
	MOV 1CC 9459B	11.3-0	364'-0"	17-18/L-M	
1A RHR HX Outlet Valve	MOV 1CC 9412A	11.3-0	364'-0"	16-17/S	
1B RHR HX Outlet Valve	MOV 1CC 9412B	11.3-0	364'-0"	17-18/V-W	
1A Fuel Oil Transfer Pump	1DO 01PA	10.2-1	374'-9"	6.8-7.7/N-P	
1B Fuel Oil Transfer Pump	1DO 01PB	10.1-1	383'-0"	6-6.8/N-P	
1C Fuel Oil Transfer Pump	1DO 01PC	10.2-1	374'-9"	6.8-7.7/L-M	
1D Fuel Oil Transfer Pump	1DO 01PD	10.1-1	374'-9"	6-6.8/L-M	
Transfer Pump Discharge	1DO 055A	10.2-1	394'-0"	7.7-8/L-M	
to Diesel Driven Aux	1DO 055B	10.1-1	394'-0"	6-6.8/L-M	
Feed Pump Day Tank Valves	1DO 057	10.2-1	396'-0"	7-7.7/L-M	

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TABLE 2.4-4 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
Auxiliary Building Exhaust Fans	OVA 02CA	11.7-0	475'-6"	16-17/S-U	
	OVA 02CB	11.7-0	475'-6"	16-17/S-U	
	OVA 02CC	11.7-0	475'-6"	19-20/S-U	
	OVA 02CD	11.7-0	475'-6"	19-20/S-U	
Essential Service Water Pump Room Cubicle Coolers and Fans	1VA 01SA 1VA 01CA&B	11.1-1	330'-0"	13-15/N-P	Assume coolers and fans as one unit.
	1VA 01SB 1VA 01CC&D	11.1-2	330'-0"	19/L-M	
	2VA 01SA 2VA 01CA&B	11.1-1	330'-0"	17/L-M	
	2VA 01SB 2VA 01CC&D	11.1-2	330'-0"	21-23/N-P	
RHR Pump Room Cubicle Coolers and Fans	1VA 02SA 1VA 02CA&B	11.2A-1	346'-0"	12-13/U	Assume coolers and fans as one unit.
	1VA 02SB 1VA 02CC&D	11.2D-1	346'-0"	13/X-Y	
Centrifugal Charging Pump Room Cubicle Coolers and Fans	1VA 06SA 1VA 06CA&B	11.3D-1	364'-0"	16-17/U-V	Assume coolers and fans as one unit.
	1VA 06SB 1VA 06CC&D	11.3G-1	364'-0"	14/Y-Z	
Diesel-Driven Auxiliary Feed Pump Cubicle Cooler and Fans	1VA 08S 1VA 08CA&B	11.4A-1	383'-0"	16-18/L-M	Assume coolers and fans as one unit.
ESF Switchgear Room Fans	1VX 01C	5.1-1	426'-0"	6-7/P-Q	
	1VX 04C	18.2-1	426'-0"	7.7-8/P-Q	
Diesel Generator Room Fans	1VD 01CA	18.2-1	401'-0"	8-10/P-Q	
	1VD 03CA	9.2-1	4-1'-0"	7.7-8/L-M	
	1VD 01CB	18.1-1	401'-0"	6-7/P-Q	
	1VD 03CB	9.1-1	401'-0"	7-7.7/L-M	
Remote Shutdown Control Room Fans	0VI 01C	11.4-0	383'-0"	20-21/N-P	
	0VI 02C	11.401	394'-4"	21-23/N-P	

B/B

TABLE 2.4-4 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
Miscellaneous Electric Equipment Room Fans	1VE 01C-2	5.4-1	468'-6"	8-10/P-Q	
	1VE 02C-2	5.4-1	464-'8"	8-10/N-P	
	1VE 04C-1	5.6-1	469'-2"	8-10/L-M	
	1VE 03C-1	5.6-1	471'-6"	8-10/L-M	
Lube Oil Pumps for Centrifugal Charging Pumps 1A, 1B	1A	11.3D-1	364'-0"	16/U-V	Assumes approximate location near 1A & 1B Centrifugal Charging Pumps
	1B	11.3G-1	364'-0"	14/Y-Z	
Lube Oil Pumps for Auxiliary Feedwater Pumps 1A, 1B	1A	11.4-0	383'-0"	17-18/M	Assumes approximate location near 1A & 1B Auxiliary Feedwater Pumps
	1B	11.4A-1	383'-0"	15-16/L-M	
4160 Volt Switchgear Bus 141 - ESF Div. 11	1AP05E	5.2-1	426'-0"	8/L-P	
4160 Volt Switchgear Bus 142 - ESF Div. 12	1AP06E	5.1-1	426'-0"	6-7/L-P	
480 Volt Switchgear:					
131X - ESF Div. 11	1AP10E	5.2-1	426'-0"	8-10/M	
131Z - ESF Div. 11		18.14-B-1	874'-6"	K/2	Located in Essential Service Cooling Tower
132X - ESF Div. 12	1AP12E	5.1-1	426'-0"	6-7/M	
132Z - ESF Div. 12		18.14-A-1	874'-6"	A/2	Located in Essential Service Cooling Tower

B/B

TABLE 2.4-4 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
480 Volt MCC:					
131X1	1AP21E	11.3-1	364"-0"	12/S	
131X3	1AP22E	11.4-0	383'-0"	15/N	
131X4	1AP26E	11.5A-1	414'-0"	13/S	
131X5	1AP30E	11.6-0	426'-0"	16/Q	
132X1	1AP23E	11.3-0	364'-0"	18/P	
132X3	1AP24E	11.4-0	383'-0"	17/P	
132X4	1AP28E	11.6-1	426'-0"	12/S	
132X5	1AP32E	11.6-0	426'-0"	17/P	
133X3	1AP42E	11.5-0	401'-0"	14/Q	
134V3	1AP43E	11.5-0	401'-0"	18/M	
125 Volt DC Bus 111					
ESF Div. 11		5.6-1	451'-0"	8-10/L-M	
125 Volt DC Bus 112					
ESF Div. 12		5.4-1	451'-0"	8-10/P-Q	
DC Pwr Supply/Batt Chgr:					
1DC01EA		5.6-1	451'-0"	7.7-10/L-M	Column/Row
1DC01EB		5.6-1	451'-0"	7.7-10/L-M	coordinates
1DC02EA		5.4-1	451'-0"	7.7-10/M-Q	represent Fire
1DC02EB		5.4-1	451/-0"	7.7-10/M-Q	Zone boundaries
1DC03E		5.6-1	451'-0"	7.7-10/L-M	
1DC05EA		5.6-1	451'-0"	7.7-10/L-M	
1DC06EA		5.4-1	451'-0"	7.7-10/M-Q	
Local Control Panels:					
0VI01J		11.4C-0	383'-0"	24-25/N	
1VA01J		11.1-1	330'-0"	15/M	
1VA02J		11.1-2	330'-0"	19/M	

B/B

TABLE 2.4-4 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
1VA03J		11.2A-1	346'-0"	13/U	
1VA04J		11.2D-1	346'-0"	15/Y	
1VA10J		11.3C-1	364'-0"	16/U	
1VA11J		11.3-1	364'-0"	15/Y	
1VE01J		18.2-1	451'-0"	8/Q	
1VX01J		5.2-1	426'-0"	10/P	
1VX02J		5.1-1	426'-0"	6/P	
2VA01J		11.1-1	330'-0"	17/M	
2VA02J		11.1-2	330'-0"	21/M	
Main Control Board:					
1PM05J		2.1-0	451'-0"	14/M-N	
1PM06J		2.1-0	451'-0"	15-17/L-M	
Diesel Control Panels:					
1PL07J		9.2-i	401'-0"	10/P	
1PL08J		9.1-1	401'-0"	7/M	
Local Switches:					
1LS-D0033					
1LS-D0036					
1PLS-AF055					
1PS-CV032					
1PS-CV033					
Aux Equipment Rm Panels:					
1PA27J		5.5-1	451'-0"	11-13/M-Q	Column/Row coordinates represent Fire Zone boundaries
1PA28J		5.5-1	451'-0"	11-13/M-Q	

B/B

TABLE 2.4-4 (Cont'd)

COMPONENT	EQUIPMENT NUMBER	FIRE AREA/ZONE	ELEVATION	COLUMN/ROW	COMMENTS
Remote Control Panels:					
1PL04J		11.4C-0	383'-0"	23-24/N-P	
1PL05J		11.4C-0	383'-0"	23-24/N-P	
1PL06J		11.4C-0	383'-0"	23-24/N-P	
Penetrations:					
1SI01E (E45)					
1SI02E (E11)					
1SI03E (E44)					
1SI04E (E12)					
Diesel Generators:					
1A	1D601KA	9.2-1	401'-0"	7.7-10/L-P	
1B	1D601KB	9.1-1	401'-0"	6-7/L-P	
1A Diesel Generator Day Tank	1D002TA	9.3-1	412'-0"	7.7/P	
1B Diesel Generator Day Tank	1D002TB	9.4-1	412'-0"	7.7/P	
1A Diesel Fuel Oil Tank	1D001TA	10.2-1	383'-0"	6.8-8/M-P	
1B Diesel Fuel Oil Tank	1D001TB	10.1-1	383'-0"	6-6.8/M-P	
1C Diesel Fuel Oil Tank	1D001TC	10.2-1	383'-0"	6.8-8/L-M	
1D Diesel Fuel Oil Tank	1D001TD	10.1-1	383'-0"	6-6.8/L-M	

B/B

TABLE 2.4-5

UNIT 2 FIRE ZONES NOT ANALYZED

1.1-2	Unit 2 Containment Missile Shield Area
1.2-2	Unit 2 Annular Area
1.3-2	Unit 2 Containment Upper Area
3.1-2	Unit 2 Cable Tunnel
3.2A-2	Unit 2 Nonsegregated Bus Duct Area
3.2B-2	Lower Cable Spreading Room, Zone B-2
3.2C-2	Lower Cable Spreading Room, Zone C-2
3.2D-2	Lower Cable Spreading Room, Zone D-2
3.2E-2	Division 22 Cable Riser, Lower Spreading Room
3.3A-2	Upper Cable Spreading Room, Zone A-2
3.3B-2	Upper Cable Srpeading Room, Zone B-2
3.3C-2	Upper Cable Spreading Room, Zone C-2
3.3D-2	Upper Cable Spreading Room, Zone D-2
3.4A-2	Division 22 Cable Riser Area, Elevation 451 Feet 0 Inch
4.1-2	Unit 2 Computer Room
5.1-2	Division 22 ESF Switchgear Room
5.2-2	Division 21 ESF Switchgear Room
5.3-2	Unit 2 Non-ESF Switchgear Room
5.4-2	Division 22 Miscellaneous Electrical Equipment and Battery Room
5.5-2	Unit 2 Auxiliary Electrical Equipment Room
5.6-2	Division 21 Miscellaneous Electrical Equipment and Battery Room
7.1-2	Unit 2 BOP Battery Room
8.2-2	Turbine Building Basement, Grade Level
8.3-2	Unit 2 Turbine Building Grade Level
8.4-2	Unit 2 Auxiliary Boiler Room
8.5-2	Unit 2 Turbine Oil Reservoir Room
8.6-2	Unit 2 Turbine Building, Mezzanine Floor
9.1-2	Diesel Generator Room 2B
9.2-2	Diesel Generator Room 2A
9.3-2	Diesel Generator Day Tank Room 2A
9.4-2	Diesel Generator Day Tank Room 2B
10.1-2	Diesel Fuel Oil Storage Room 2B
10.2-2	Diesel Fuel Oil Storage Room 2A
11.2A-2	Residual Heat Removal Pump 2A Room
11.2B-2	Containment Spray Pump 2A Room
11.2C-2	Containment Spray Pump 2B Room
11.2D-2	Residual Heat Removal Pump 2B Room
11.3-2	Auxiliary Building Unit 2 Area, Elevation 364 Feet 0 Inch
11.3A-2	Safety Injection Pump 2A Room
11.3B-2	Residual Heat Removal Heat Exchanger 2A Room
11.3C-2	Unit 2 Positive Displacement Charging Pump Room
11.3D-2	Centrifugal Charging Pump 2A Room
11.3E-2	Residual Heat Removal Heat Exchanger 2B Room
11.3F-2	Safety Injection Pump 2B Room
11.3G-2	Centrifugal Charging Pump 2B Room

TABLE 2.4-5 (Cont'd)

11.4A-2	Unit 2 Auxiliary Feedwater Pump Diesel Room
11.4B-2	Unit 2 Seal Water Heat Exchanger Room
11.4C-2	Letdown Heat Exchanger 2A Room
11.4D-2	Letdown Heat Exchanger 2B Room
11.5-2	Unit 2 Containment Refrigeration Equipment Room
11.5A-2	Division 21 Containment Electrical Penetrations Area
11.6-2	Division 22 Electrical Penetrations Area
11.7-2	Unit 2 Purge Room
16.1-2	Unit 2 Refueling Water Storage Tank
17.1-2	Unit 2 Cooling Tower
18.1-2	Diesel Generator 2B and Switchgear Room Air Shaft
18.2-2	Diesel Generator 2A and Switchgear Room Air Shaft
18.3-2	Unit 2 Main Steam and Auxiliary Feedwater Pipe Tunnel
18.4-2	Control Room HVAC Equipment Room, Train B
18.5-2	Security Control Center
18.10A-2	Main Power Transformer 2E
18.10B-2	Main Power Transformer 2W
18.10C-2	Unit Auxiliary Transformer 241-1
18.10D-2	Unit Auxiliary Transformer 241-2
18.10E-2	System Auxiliary Transformers 242-1 and 242-2
18.25-2	Unit 2 Primary Water Storage Tank

TABLE 2.4-6

UNIT 1 OR SHARED ZONES

WHICH CONTAIN NO SAFE SHUTDOWN COMPONENTS OR CABLES

2.1-2	Records Storage and Toilet Room
3.2-0	HVAC Duct Room
4.1-1	Unit 1 Computer Room
4.1-2	Unit 2 Computer Room
8.1-0	Unit 1 Clean and Dirty Oil Tank Room
8.2-1	Unit 1 Turbine Building Basement
8.4-1	Unit 1 Auxiliary Boiler Room
8.5-1	Unit 1 Turbine Oil Reservoir Room
8.7-0	Turbine Building - Main Floor
11.2B-1	Containment Spray Pump 1A Room
11.3A-1	Safety Injection Pump 1A Room
11.3B-1	Residual Heat Removal Heat Exchanger 1A Room
1.3E-1	Residual Heat Removal Heat Exchanger 1B Room
11.4A-0	Control Room refrigeration Equipment Room
11.4B-1	Unit 1 Seal Water Heat Exchanger Room
11.4C-1	Letdown Heat Exchanger 1A Room
11.4D-1	Letdown Heat Exchanger 1B Room
11.6A-0	Laboratory/HVAC Equipment Room
11.7-1	Auxiliary Building, Unit 1 Purge Room, Elevations 451 Feet 0 Inch, and 467 Feet 0 Inch
13.0	QA Records Storage Area
14.0	Radwaste Areas
16.1-1	Unit 1 Refueling Water Storage Tank
17.1-0	Open Flume
17.1-1	Unit 1 Natural Draft Cooling Tower
18.4-1	Control Room HVAC Equipment Room, Train A
18.5-1	Kitchen/Locker Room Area
18.5-2	Security Control Center
18.6-0	Service Building, Ground Floor
18.7-0	Service Building, Second Floor
18.8-0	Service Building, Third Floor
18.9-0	Service Building, Fourth Floor
18.10A-1	Main Power Transformer 1E
18.10B-1	Main Power Transformer 1W
18.10C-1	Unit Auxiliary Transformer 141-1
18.10D-1	Unit Auxiliary Transformer 141-2
18.10E-1	Unit Auxiliary Transformers 142-1 and 142-2
18.11-0	Byron River Screen House
18.11-1	Byron River Screen House Diesel Oil Storage Tank Room 1
18.11-2	Byron River Screen House Diesel Oil Stroage Tank Room 2
18.12-0	Circulating Water Pump House
18.13-0	Diesel Driven Fire Pump House Cubicles
18.16-1	Sulferic Acid Tank #1

TABLE 2.4-6 (Cont'd)

18.16-2	Sulferic Acid Tank #2
18.17-0	Nitrogen Storage Tank
18.18-0	Hydrogen Storage Tank
18.19-0	Sodium Hypochlorite Tank
18.20-0	Fuel Oil Storage Tank
18.22-0	Water Purifying Building
18.24-0	Turbine Building Sampling Room
18.25-1	Unit 1 - Primary Water Storage Tank

TABLE 2.4-7

UNIT 1 ZONES WHICH CONTAIN

SAFE SHUTDOWN COMPONENTS OR CABLES FROM 1 TRAIN ONLY

2.1-1	Record Storage Room
3.2B-1	Lower Cable Spreading Area
3.2C-1	Lower Cable Spreading Area
3.2D-1	Lower Cable Spreading Area
3.2E-1	Division II Cable Riser
3.3A-1	Control Room HVAC Equipment Room, Train A
3.3B-1	Upper Cable Spreading Area
3.3C-1	Unit 1 Upper Cable Spreading Area
3.3D-1	Unit 1 Upper Cable Spreading Area
3.4A-1	Unit 1 Cable Riser Area
5.1-1	Division 12 ESF Switchgear Room
5.2-1	Division 11 ESF Switchgear Room
5.3-1	Unit 1 Nonessential Switchgear Room
8.3-1	Turbine Building, Grade Level Unit 1
8.6-1	Unit 1 Mezzanine Floor
9.2-1	Diesel Generator Room 1A
9.3-1	Diesel Generator Day Tank Room 1A
9.4-1	Diesel Generator Day Tank Room 1B
10.1-1	Diesel Fuel Oil Storage Room 1B
10.2-1	Diesel Fuel Oil Storage Room 1A
11.1-1	Unit 1 Auxiliary Building Basement
11.1-2	Unit 2 Auxiliary Building Basement
11.2A-1	Residual Heat Removal Pump 1A Room
11.2C-1	Containment Spray Pump 1B Room
11.3C-1	Unit 1 Positive Displacement Charging Pump Room
11.3D-1	Centrifugal Charging Pump 1A Room
11.3F-1	Safety Injection Pump 1B Room
11.3G-1	Centrifugal Charging Pump 1B Room
11.6A-1	Laboratory/HVAC Equipment Room
12.1-0	Fuel Handling Building
17.2-1	Essential Service Water (ESW) Cooling Tower - Unit 1
17.2-2	ESW Cooling Tower - Unit 2
18.1-1	Diesel Generator 1B and Switchgear Room Airshaft
18.14A-1	ESW Cooling Tower Electrical Equipment Room, Division 12
18.14B-1	ESW Cooling Tower Electrical Equipment Room, Division 11
18.23-0	Condensate Tank Storage Area

TABLE 2.4-8

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 1.1-1

	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
FUNCTION	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby	1RY03EA	Pressurizer Heater	1RY023-1RY099 (odd #'s only)	1RY03EA	Pressurizer Heater
	1RY03EB	Pressurizer Heater		1RY03ED	Pressurizer Heater
	1RY03EC	Pressurizer Heater	1RY116-1RY192 (even #"s only)	1RY03EB	Pressurizer Heater
	1RY03ED	Pressurizer Heater		1RY03EC	Pressurizer Heater
Cold Shutdown	1RH8701B-2	Hot Leg to RHR Pump Suction Valve			
	1RH8702B-2	Hot Leg to RHR Pump Suction Valve			
Support		None			None

TABLE 2.4-9

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 1.1-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1FW022	1LT-0503	Steam Generator Loop 1A Wide Range Level
1RC224	1PT-403	Wide Range Loop 1A Hot Leg Pressure
1RC351	1TE-413A	Wide Range Loop 1A Hot Leg RTD
1RC352	1TE-413A	Wide Range Loop 1A Hot Leg RTD
1RC356	1TE-423A	Wide Range Loop 1B Hot Leg RTD
1RC357	1TE-423A	Wide Range Loop 1B Hot Leg RTD
1RC361	1TE-433A	Wide Range Loop 1C Hot Leg RTD
1RC362	1TE-433A	Wide Range Loop 1C Hot Leg RTD
1RC366	1TE-443A	Wide Range Loop 1D Hot Leg RTD
1RC367	1TE-443A	Wide Range Loop 1D Hot Leg RTD
1RC373	1TE-413B	Wide Range Loop 1A Cold Leg RTD
1RC374	1TE-413B	Wide Range Loop 1A Cold Leg RTD
1RC392	1TE-423B	Wide Range Loop 1B Cold Leg RTD
1RC393	1TE-423B	Wide Range Loop 1B Cold Leg PTD

TABLE 2.4-9 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RC397	1TE-433B	Wide Range Loop 1C Cold Leg RTD
1RC398	1TE-433B	Wide Range Loop 1C Cold Leg RTD
1RC402	1TE-443B	Wide Range Loop 1D Cold Leg RTD
1RC403	1TE-443B	Wide Range Loop 1D Cold Leg RTD
1RY203	1TE-456	Pressurizer Pressure
1RY205	1TE-460	Pressurizer Level
1RY211	1TE-458	Pressurizer Pressure
1RY226	1TE-0453	Pressurizer Temperature
1RY228	1TE-0454	Pressurizer Temperature

TABLE 2.4-10

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 1.2-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1RY246	1RY455A	PORV-C
			1RY002	1RY8000A	PORV Block Valve-P
			1RY004	1RY8000A	PORV Block Valve-C
Cold Shutdown	1RH8701A-1	Hot Leg to RHR Pump Suction Valve			None
	1RH8702A-1	Hot Leg to RHR Pump Suction Valve			None
Support		None			None

B/B

TABLE 2.4-11

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 1.2-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1FW018	1LT-0501	Steam Generator Loop 1A Wide Range Level
1FW020	1LT-0502	Steam Generator Loop 1B Wide Range Level
1FW022	1LT-0503	Steam Generator Loop 1C Wide Range Level
1FW024	1LT-0504	Steam Generator Loop 1D Wide Range Level
1RC223	1PT403	Wide Range Loop 1A Hot Leg Pressure
1RC224	1PT403	Wide Range Loop 1A Hot Leg Pressure
1RC351	1TE-413A	Wide Range Loop 1A Hot Leg RTD
1RC356	1TE-423A	Wide Range Loop 1B Hot Leg RTD
1RC361	1TE-433A	Wide Range Loop 1C Hot Leg RTD
1RC366	1TE-443A	Wide Range Loop 1D Hot Leg RTD
1RC373	1TE-413B	Wide Range Loop 1A Cold Leg RTD
1RC392	1TE-423B	Wide Range Loop 1B Cold Leg RTD

TABLE (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RC397	1TE-433B	Wide Range Loop 1C Cold Leg RTD
1RC402	1TE-443B	Wide Range Loop 1D Cold Leg RTD
1RY199	1PT-455	Pressurizer Pressure
1RY201	1LT-459	Pressurizer Level
1RY203	1PT-456	Pressurizer Pressure
1RY205	1LT-460	Pressurizer Level
1RY207	1PT-457	Pressurizer Pressure
1RY209	1LT-461	Pressurizer Level
1RY211	1PT-458	Pressurizer Pressure
1RY226	1TE-0453	Pressurizer Temperature
1RY228	1TE-0454	Pressurizer Temperture

TABLE 2.4-12

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 1.3-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby	1RY455A	PORV - Pressurizer	1RY002	1RY8000A	PORV Block Valve-P
	1RY456	PORV - Pressurizer	1RY004	1RY8000A	PORV Block Valve-C
			1RY007	1RY8000B	PORV Block Valve-P
			1RY009	1RY8000B	PORV Block Valve-C
			1RY246	1RY455A	PORV-C
			1RY247	1RY455A	PORV-C
			1RY248	1RY455A	PORV-C
			1RY249	1RY455A	PORV-C
			1RY252	1RY456	PORV-C
			1RY253	1RY456	PORV-C
			1RY254	1RY456	PORV-C
			1RY255	1RY456	PORV-C
			1RY388	1RY455A	PORV-C
			1RY389	1RY456	PORV-C
Cold Shutdown		None			None
Support		None			None

B/B

TABLE 2.4-13

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 1.3-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1FW020	1LT-0502	Steam Generator Wide Range Level Loop 1B, 1C
1FW022	1LT-0503	Steam Generator Wide Range Level Loop 1B, 1C
1RC224	1PT403	Wide Range Loop 1A Hot Leg Pressure
1RC373	1TE-413B	Wide Range Loop 1A Cold Leg RTD
1RC392	1TE-423B	Wide Range Loop 1B Cold Leg RTD
1RY203	1PT-456	Pressurizer Pressure
1RY205	1LT-460	Pressurizer Level
1PY211	1PT-458	Pressureizer Pressure
1RY226	1TE-0453	Pressurizer Temperature
1RY228	1TE-0454	Pressurizer Temperature

TABLE 2.4-14

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 2.1-0

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1DC100	1RY455A	PORV-C
			1DC102	1RY455A	PORV-C
			1DC112	1RY456	PORV-C
			1RY251	1RY456	PORV-C
			1RY394	1RY8000A	PORV Block Valve-C
			1RY397	1RY8000B	PORV Block Valve-C
			1RY398	1RY455A	PORV-C
Cold Shutdown		None	1AB006	0,1AB03P	Boric Acid Transfer Pumps-C
Support	1PM05J	Main Control Board	1AF019	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
	1PM06J	Main Control Board	1AF160	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1VE007	1VE01C	Misc Electric Equip Room Fan-C
			1VX004	1VX04C	Misc Electric Equip Room Fan-C
			1VX008	1VX01C	Misc Electric Equip Room Fan-C

B/B

TABLE 2.4-15

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 2.1-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RC612	1TE-0423A	Wide Range Loop 1B Hot Let RTD
1RC613	1TE-0413B	Wide Range Loop 1A Cold Leg RTD

TABLE 2.4-16

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 2.1-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF077	1FT-AF011	Division II AFW Pump Flow
1AF077	1FT-AF013	Division II AFW Pump Flow
1AF077	1FT-AF015	Division II AFW Pump Flow
1AF077	1FT-AF017	Division II AFW Pump Flow
1AF143	1FT-AF011	Division II AFW Pump Flow
1AF143	1FT-AF013	Division II AFW Pump Flow
1AF143	1FT-AF015	Division II AFW Pump Flow
1AF143	1FT-AF017	Division II AFW Pump Flow
1FW017	1LT-0501	Steam Generator Wide Range Level Loop 1A
1FW025	1LT-0501	Steam Generator Wide Range Level Loop 1A
1FW028	1LT-0504	Steam Generator Wide Range Level Loop 1D
1MS099	1PT-514B	Steam Generator Loop 1A Steam Pressure
1MS103	1PT-524B	Steam Generator Loop 1B Steam Pressure

TABLE 2.4-16 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS107	1PT-534B	Steam Generator Loop 1C Steam Pressure
1MS111	1PT-544B	Steam Generator Loop 1D Steam Pressure
1RC350	1TE-413A	Wide Range Loop 1A Hot Leg RTD
1RC355	1TE-423A	Wide Range Loop 1B Hot Leg RTD
1RC360	1TE-433A	Wide Range Loop 1C Hot Leg RTD
1RC365	1TE-443A	Wide Range Loop 1D Hot Leg RTD
1RC612	1TE-413A, 423A, 433A, 443A	Wide Range Loops 1A, 1B, 1C, D Hot Leg RTD
1RY193	1PT-455	Pressurizer Pressure
1RY200	1LT-459	Pressurizer Level
1RY227	1TE-0454	Pressurizer Temperature
1SI467	1LT-0930	RWST Level

TABLE 2.4-17

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.1-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1RY251	1RY456	PORV-C
			1RY397	1RY8000B	PORV Block Valve-C
Cold Shutdown		None	1RH008	1RH01PB	1BRHR Pump-P
Support		None	1CC010	1CC01PB	Component Cooling Pump-P
			1CC027	0CC01PB	Component Cooling Pump-P
			1CV499	1CV01PB-A	Centrifugal Charging Pump Lube Oil Pump-C
			1DO002	1DO01PA	DG 1A Fuel Oil Transfer Pump-C
			1DO006	1DO01PB	DG 1B Fuel Oil Transfer Pump-P
			1DO007	1DO01PB	DG 1B Fuel Oil Transfer Pump-C
			1DO009	1DO01PD	DG 1D Fuel Oil Transfer Pump-P
			1DO010	1DO01PD	DG 1D Fuel Oil Transfer Pump-C
			1DG178	1DG01KB	Diesel Generator-C
			1DG159	1DG01KB	Diesel Generator 1B-C
			1DG157	1DG01KA	Diesel Generator 1A-C
			1VA057	1VA06CC	Centrifugal Charging Pump Cooler Fans-C
			1VA105	1VA02CC	RHR Cooler Fans-C

B/B

TABLE 2.4-17 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
			1VA115	1VA01CE	ESW Cooler Fans-C
			1VA141	1VA06CD	Centrifugal Charging Pump Cooler Fans-C
			1VA154	1VA02CD	RHR Cooler Fans-C
			1VA170	1VA01CH	ESW Cooler Fans-C
			1VA583	1VA08CA	Aux Feedwater Pump Cooler Fans-P
			1VD085	1VD03CB	DG Room Exhaust Fan-P
			1VD086	1VD03CB	DG Room Exhaust Fan-C
			1VE008	1VE01C	Misc Electrical Equip Room Fan-C
			1VE014	1VE02C	Misc Electrical Equip Room Fan-C
			1VX006	1VX01C	ESF Switchgear Room Fan-P
			1VX007	1VX01C	ESF Switchgear Room Fan-C

B/B

TABLE No. 2.4-18

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 3.1-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS115	1PT-515	Steam Gen. Loop 1A Steam Pressure
1MS118	1PT-525	S.G. Loop 1B Steam Pressure
1MS121	1PT-535	S.G. Loop 1C Steam Pressure
1MS124	1PT-545	S.G. Loop 1D Steam Pressure
1MS127	1PT-516	S.G. Loop 1A Steam Pressure
1MS128	1PT-546	S.G. Loop 1D Steam Pressure
1IP020	1PA02J	Power Feed; Alternate Feed Available
1IP020	1PA06J	Power Feed; Alternate Feed Available
1IP044	1PA04J	Power Feed; Alternate Feed Available
1IP044	1PA08J	Power Feed; Alternate Feed Available

TABLE 2.4-19

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.2A-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1CV011	1CV01PB	Centrifugal Charging Pump B
			1DC021	1RY455A	PORV-P
			1DC023	1RY456	PORV-P
			1DC102	1RY455A	PORV-C
			1DC112	1RY456	PORV-C
			1RY251	1RY456	PORV-C
			1RY258	1RY01EA	Pressurizer Heater-P
			1RY259	1RY01ED	Pressurizer Heater-P
			1RY260	1RY01EC	Pressurizer Heater-P
			1RY261	1RY01EB	Pressurizer Heater-P
			1RY394	1RY8000A	PORV Block Valve-C
			1RY397	1RY8000B	PORV Block Valve-C
Cold Shutdown		None			None
Support		None	1AF013	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF064	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1DG159	1DG01KB	Diesel Generator-C
			1DG178	1DG01KB	Diesel Generator-C
			1DG157	1DG01KA	Diesel Generator-C
			1VA009	0VA01CB	ESW Cubicle Cooler Fans-P
			1VA019	0VA02CB	RHR Cubicle Cooler Fans-P
			1VA154	1VA02CD	RHR Cubicle Cooler Fans-C
			1VA583	1VA08CA	Aux Feedwater Cubicle Cooler Fans-P

B/B

TABLE 2.4-19 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
			1VD085	1VD03CB	Diesel Generator Exhaust Fan-P
			1VE006	1VE01C	Misc Electrical Equip Room Fan-P
			1VE007	1VE01C	Misc Electrical Equip Room Fan-C
			1VE008	1VE01C	Misc Electrical Equip Room Fan-C
			1VE012	1VE02C	Misc Electrical Equip Room Fan-P
			1VE014	1VE02C	Misc Electrical Equip Room Fan-C
			1VE016	1VE03C	Misc Electrical Equip Room Fan-P
			1VE018	1VE03C	Misc Electrical Equip Room Fan-C
			1VE028	1VE01C	Misc Electrical Equip Room Fan-C
			1VE032	1VE04C	Misc Electrical Equip Room Fan-P
			1VX006	1VX01C	ESF Switchgear Room Fan-P
			1VX008	1VX01C	ESF Switchgear Room Fan-C

B/B

TABLE No. 2.4-20

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 3.2A-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP002	1PA01J	Power Feed; Alternate Feed Available
1IP002	1PA05J	Power Feed; Alternate Feed Available
1IP004	1PA01J	Power Feed; Alternate Feed Available
1IP004	1PA05J	Power Feed; Alternate Feed Available
1IP018	1PA02J	Power Feed; Alternate Feed Not Available
1IP018	1PA06J	Power Feed; Alternate Feed Not Available
1IP019	1PA02J	Power Feed; Alternate Feed Not Available
1IP019	1PA06J	Power Feed; Alternate Feed Not Available
1IP020	1PA02J	Power Feed; Alternate Feed Not Available
1IP020	1PA06J	Power Feed; Alternate Feed Not Available
1IP021	1PA02J	Power Feed; Alternate Feed Not Available
1IP021	1PA06J	Power Feed; Alternate Feed Not Available
1IP022	1PA02J	Power Feed; Alternate Feed Not Available
1IP022	1PA06J	Power Feed; Alternate Feed Not Available
1IP023	1PA02J	Power Feed; Alternate Feed Not Available

TABLE No. 2.4-20 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP030	1PA03J	Power Feed; Alternate Feed Available
1IP030	1PA07J	Power Feed; Alternate Feed Available
1IP032	1PA03J	Power Feed; Alternate Feed Available
1IP032	1PA076	Power Feed; Alternate Feed Available
1IP043	1PA04J	Power Feed; Alternate Feed Not Available
1IP043	1PA08J	Power Feed; Alternate Feed Not Available
1IP044	1PA04J	Power Feed; Alternate Feed Not Available
1IP044	1PA08J	Power Feed; Alternate Feed Not Available
1IP045	1PA04J	Power Feed; Alternate Feed Not Available
1IP045	1PA08J	Power Feed; Alternate Feed Not Available
1IP046	1PA04J	Power Feed; Alternate Feed Not Available
1IP046	1PA08J	Power Feed; Alternate Feed Not Available
1MS115	1PT-0515	S. G. Loop 1A Steam Pressure
1MS118	1PT-0525	S. G. Loop 1B Steam Pressure
1MS121	1PT-0535	S. G. Loop 1C Steam Pressure
1MS124	1PT-0545	S. G. Loop 1D Steam Pressure

TABLE 2.4-21

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.2B-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1DC102	1RY455A	PORV-C
			1DC112	1RY456	PORV-C
			1RY251	1RY456	PORV-C
			1RY397	1RY8000B	PORV Block Valve-C
Cold Shutdown		None			None
Support		None	1AF162	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF169	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1VE007	1VE01C	Misc Electrical Equip Room Fan-C
			1VE028	1VE01C	Misc Electrical Equip Room Fan-C
			1VX008	1VX01C	ESF Switchgear Room Fan-C
			1DG178	1DG01KB	Diesel Generator-C

B/B

TABLE 2.4-22

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 3.2B-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF079	1FT-AF012	AFW Pump Flow
1AF079	1FT-AF014	AFW Pump Flow
1AF079	1FT-AF016	AFW Pump Flow
1AF079	1FT-AF018	AFW Pump Flow
1AF144	1FT-AF012	AFW Pump Flow
1AF144	1FT-AF014	AFW Pump Flow
1AF144	1FT-AF016	AFW Pump Flow
1AF144	1FT-AF018	AFW Pump Flow
1CC095	1FT-0688	CCW RHR Hx 1RH02AC Discharge Flow
1CD078	1LT-CD051	Condensate Storage Tank Level
1CD080	1LT-CD051B	Condensate Storage Tank Level
1CV139	1FT-0121	Charging Pump HDR Flow
1FW019	1LT-0502	Steam Generator Loop 1B Wide Range Level

TABLE 2.4-22 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1FW021	1LT-0503	Steam Generator Loop 1C Wide Range Level
1FW026	1LT-0502	Steam Generator Loop 1B Wide Range Level
1FW027	1LT-0503	Steam Generator Loop 1C Wide Range Level
1MS115	1PT-515	Steam Generator Loop 1A Steam Pressure
1MS118	1PT-525	Steam Generator Loop 1B Steam Pressure
1MS121	1PT-535	Steam Generator Loop 1C Steam Pressure
1MS124	1PT-545	Steam Generator Loop 1D Steam Pressure
1MS127	1PT-516	Steam Generator Loop 1A Steam Pressure
1MS128	1PT-546	Steam Generator Loop 1D Steam Pressure
1IP021	1PA02J	Power Feed; Alternate Feed Not Available
1IP021	1PA06J	Power Feed; Alternate Feed Not Available

TABLE 2.4-22 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP022	1PA02J	Power Feed; Alternate Feed Not Available
1IP022	1PA06J	Power Feed; Alternate Feed Not Available
1IP023	1PA02J	Power Feed; Alternate Feed Not Available
1IP045	1PA04J	Power Feed; Alternate Feed Not Available
1IP045	1PA08J	Power Feed; Alternate Feed Not Available
1IP046	1PA04J	Power Feed; Alternate Feed Not Available
1IP046	1PA08J	Power Feed; Alternate Feed Not Available
1IP047	1PA04J	Power Feed; Alternate Feed Not Available
1IP052	1PA08J	Power Feed; Alternate Feed Not Available
1RC223	1PT-403	Wide Range Loop 1A Hot Leg Pressure
1RC372	1TE-413	Wide Range Loop 1A Cold Leg RTD
1RC391	1TE-423	Wide Range Loop 1B Cold Leg RTD

TABLE 2.4-22 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RC396	1TE-433	Wide Range Loop 1C Cold Leg RTD
1RC401	1TE-433	Wide Range Loop 1D Cold Leg RTD
1RC406	1LT-460	Pressurizer Level
1RH074	1TE-0604	RHR Hx 1RH02AA Outlet RTD
1RH075	1FT-0618	RHR Pump 1A Discharge Flow
1RH079	1TE-0605	RHR Hx 1RH02AB Outlet RTD
1RH084	1FT-0619	RHR Pump 1B Discharge Flow
1RY202	1PT-456	Pressurizer Pressure
1RY204	1LT-460	Pressurizer Level
1RY210	1PT-458	Pressurizer Pressure
1RY225	1IT-0450	Pressurizer Temperature
1SI468	1LT-0931	RWST Level
1SI470	1LT-0933	RWST Level

TABLE 2.4-23

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.2B-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1DC102	1RY455A	PORV-C
			1DC112	1RY456	PORV-C
			1RY251	1RY456	PORV-C
			1RY397	1RY8000B	PORV Block Valve-C
Cold Shutdown		None			None
Support		None	1AF160	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF162	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF169	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1DG178	1DG01KB	Diesel Generator-C
			1VE007	1VE01C	Misc Electrical Equip Room Fan-C
			1VE028	1VE01C	Misc Electrical Equip Room Fan-C
			1VX008	1VX01C	ESF Switchgear Room Fan-C

B/B

TABLE No. 2.4-24

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 3.2C-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF079	1FT-AF012	AFW Pump Flow
1AF079	1FT-AF014	AFW Pump Flow
1AF079	1FT-AF016	AFW Pump Flow
1AF079	1FT-AF018	AFW Pump Flow
1CD078	1LT-CD051	Condensate Storage Tank Level
1RC613	1TE-0413B	Wide Range Loop 1A Cold Leg RTD
1RC613	1TE-0423B	Wide Range Loop 1B Cold Leg RTD
1RC613	1TE-0433B	Wide Range Loop 1C Cold Leg RTD
1RC613	1TE-0443B	Wide Range Loop 1D Cold Leg RTD

TABLE 2.4-25

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.2D-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support		None	1AF160	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF162	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF169	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1DG178	1DG01KB	Diesel Generator-C
			1VE028	1VE01C	Misc Electrical Equip Room Fan-C

B/B

TABLE 2.4-26

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 3.2D-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF079	1FT-AF012	AFW Pump Flow
1AF079	1FT-AF014	AFW Pump Flow
1AF079	1FT-AF016	AFW Pump Flow
1AF079	1FT-AF018	AFW Pump Flow
1CC095	1FT-0688	CCW RHR Hx 1RH02AC Discharge Flow
1CD080	1LT-CD051B	Condensate Storage Tank Level
1CV139	1FT-0121	Charging Pump HDR Flow
1FW026	1LT-0502	Steam Generator Loop 1B Wide Range Level
1FW027	1LT-0503	Steam Generator Loop 1C Wide Range Level
1RC406	1LT-460B	Pressurizer Level
1RC613	1TE-413B	Wide Range Loop 1A Cold Leg RTD
1RC613	1TE-423B	Wide Rang Loop 1B Cold Leg RTD
1RC613	1TE-433B	Wide Range Loop 1C Cold Leg RTD

TABLE 2.4-26 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RC613	1TE-443B	Wide Range Loop 1D Cold Leg RTD
1RH074	1TE-0604	RHR Hx 1RH02AA Outlet RTD
1RH075	1FT-0618	RHR Pump 1A Discharge Flow
1RH079	1TE-0605	RHR Hx 1RH02AB Outlet RTD

TABLE 2.4-27

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.2E-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1RY398	1RY455A	PORV-C
Cold Shutdown		None	1AB005	0,1AB03P	Boric Acid Transfer Pumps-C
			1AB006	0,1AB03P	Boric Acid Transfer Pumps-C
Support		None	1AF019	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1DG174	1DG01KA	Diesel Generator-C
			1VE018	1VE03C	Misc Electric Equip Room Fan-C
			1VX004	1VX04C	ESF Switchgear Room Fan-C

B/B

TABLE 2.4-28

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 3.2E-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF077	1FT-AF011	AFW Pump Flow
1AF077	1FT-AF013	AFW Pump Flow
1AF077	1FT-AF015	AFW Pump Flow
1AF077	1FT-..F017	AFW Pump Flow
1FW025	1LT-0501	Steam Generator Loop 1A Wide Range Level
1FW028	1LT-0504	Steam Generator Loop 1D Wide Range Level
1MS099	1PT-514B	Steam Generator Loop 1A Steam Pressure
1MS103	1PT-524B	Steam Generator Loop 1B Steam Pressure
1MS107	1PT-534B	Steam Generator Loop 1C Steam Pressure
1MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1RC350	1TE-413A	Wide Range Loop 1A Hot Leg RTD

TABLE 2.4-28 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RC355	1TE-423A	Wide Range Loop 1B Hot Leg RTD
1RC360	1TE-433A	Wide Range Loop 1C Hot Leg RTD
1RC365	1TE-443A	Wide Range Loop 1D Hot Leg RTD
1RC371	1LT-459B	Pressurizer Level
1RY198	1PT-455	Pressurizer Pressure
1RY200	1LT-459	Pressurizer Level
1RY227	1TE-0454	Pressuriver Temperature
1SI467	1LT-0930	RWST Level

TABLE 2.4-29

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.3A-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1DC100	1RY455A	PORV-C
Cold Shutdown		None			None
Support		None			None

B/B

TABLE 2.4-30

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.3B-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1DC100	1RY455A	PORV-C
			1RY394	1RY8000A	PORV Block Valve-C
Cold Shutdown		None	1AB005	1AB03P	Boric Acid Transfer Pump-C
Support		None	1AF013	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF064	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1VE018	1VE03C	Misc Electric Equip Room Fan-C
			1DG174	1DG01KA	Diesel Generator-C

B/B

TABLE 2.4-31

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.3C-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1DC100	1RY455A	PORV-C
			1RY394	1RY8000A	PORV Block Valve-C
			1RY398	1RY455A	PORV-C
Cold Shutdown		None	1AB005	0,1AB03P	Boric Acid Transfer Pumps-C
			1AB006	0,1AB03P	Boric Acid Transfer Pumps-C
Support		None	1AF019	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1DG174	1DG01KA	Diesel Generator-C
			1VX004	1VX04C	ESF Switchgear Room Fan-C

B/B

TABLE 2.4-32

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.3D-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1RY398	1RY455A	PORV-C
Cold Shutdown		None	1AB005	0,1AB03P	Boric Acid Transfer Pumps-C
			1AB006	0,1AB03P	Boric Acid Transfer Pumps-C
Support		None	1AF019	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1DG174	1DG01KA	Diesel Generator-C
			1VE018	1VE03C	Misc Electric Equip Room Fan-C
			1VX004	1VX04C	ESF Switchgear Room Fan-C

B/B

TABLE 2.4-33

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 3.4A-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1LV002	1RY455A	PORV-C
			1RY398	1RY455A	PORV-C
Cold Shutdown		None	1AB005	0,1AB03P	Boric Acid Transfer Pumps-C
			1AB006	0,1AB03P	Boric Acid Transfer Pumps-C
Support		None	1AF019	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1DG174	1DG01KA	Diesel Generator-C
			1VE013	1VEC3C	Misc Electric Equip Room Fan-C
			1VX004	1VX04C	ESF Switchgear Room Fan-C

B/B

TABLE 2.4-34

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 3.4A-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF077	1FT-AF011	AFW Pump Flow
1AF077	1FT-AF013	AFW Pump Flow
1AF077	1FT-AF015	AFW Pump Flow
1AF077	1FT-AF017	AFW Pump Flow
1FW017	1LT-0501	Steam Generator Loop 1A Wide Range Level
1FW025	1LT-0501	Steam Generator Loop 1A Wide Range Level
1FW028	1LT-0504	Steam Generator Loop 1D Wide Range Level
1MS098	1PT-0514	Steam Generator Loop 1A Steam Pressure
1MS099	1PT-514B	Steam Generator Loop 1A Steam Pressure
1MS102	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS103	1PT-524B	Steam Generator Loop 1B Steam Pressure

TABLE 2.4-34 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS106	1PT-534	Steam Generator Loop 1C Steam Pressure
1MS107	1PT-534B	Steam Generator Loop 1C Steam Pressure
1MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1MS111	1PT-544B	Steam Generator Loop 1D Steam Pressure
1RC350	1TE-413A	Wide Range Loop 1A Hot Leg RTD
1RC355	1TE-423A	Wide Range Loop 1B Hot Leg RTD
1RC360	1TE-433A	Wide Range Loop 1C Hot Leg RTD
1RC365	1TE-443A	Wide Range Loop 1D Hot Leg RTD
1RC371	1LT-459B	Pressurizer Level
1RC612	1TE-413A	Wide Range Loop 1A Hot Leg RTD
1RC612	1TE-423A	Wide Range Loop 1B Hot Leg RTD
1RC612	1TE-433A	Wide Range Loop 1C Hot Leg RTD
1RC612	1TE-443A	Wide Range Loop 1D Hot Leg RTD
1RY198	1PT-455	Pressurizer Pressure
1RY200	1LT-459	Pressurizer Level

TABLE 2.4-34 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RY227	1TE-0454	Pressurizer Temperature
1SI467	1LT-0930	RWST Level

TABLE 2.4-35

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 5.1-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1CV011	1CV01PB	Centrifugal Charging Pump-P
			1DC023	1RY456	PORV-P
			1RY251	1RY456	PORV-C
			1RY397	1RY8000B	PORV Block Valve-C
			1RY260	1RY01EC	Pressurizer Heater-P
			1RY261	1RY01EB	Pressurizer Heater-P
Cold Shutdown		None	1RH001	1RH01PA-1	RHR-P
			1RH008	1RH01PB-2	RHR-P
Support	1VX01C	ESF Switchgear Room Fans	1CC010	1CC01PB	Component Cooling Pump-P
			1CC027	0CC01PB	Component Cooling Pump-P
	1VX04C	ESF Switchgear Room Fans	1CV499	1CV01PB-A	Centrifugal Charging Pump Lube Oil Pump-C
	1AP06E	4160 Volt Switchgear Bus 142 - ESF Div. 12	1DG159	1DG01KB	Diesel Generator-C
			1DO006	1DO01PB	DG Fuel Oil Transfer Pump-P
	1AP12E	480 Volt Switchgear: 132X - ESF Div. 12	1DO009	1DO01PD	DG Fuel Oil Transfer Pump-P
			1SX012	1SX01PB-M	ESW Pump-P
	1VX02J	Local Control Panel	1VA009	0VA01CB	ESW Cubicle Cooler Fans-P
			1VA019	0VA02CB	RHR Cubicle Cooler Fans-P
			1VA057	1VA06CC	CCP Cubicle Cooler Fans-C
			1VA105	1VA02CC	RHR Cubicle Cooler Fans-C
			1VA115	1VA01CE	ESW Cubicle Cooler Fans-C
			1VA141	1VA06CD	CCP Cubicle Cooler Fans-C
			1VA154	1VA02CD	RHR Cubicle Cooler Fans-C
			1VA170	1VA01CH	ESW Cubicle Cooler Fans-C

B/B

TABLE 2.4-35 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1VA583	1VA08CA	Aux Feedwater Cubicle Cooler Fans-P
			1VD007	1VD01CB	DG Vent Fan-P
			1VD076	1VD03CB	DG Exhaust Fan-C
			1VD085	1VD03CB	DG Exhaust Fan-P
			1VD086	1VD03CB	DG Exhaust Fan-C
			1VE008	1VE01C	Misc Electric Equip Room Fan-C
			1VE014	1VE02C	Misc Electric Equip Room Fan-C
			1VX006	1VX01C	ESF Switchgear Room Fan-P
			1VX007	1VX01C	ESF Switchgear Room Fan-C
			1VX008	1VX01C	ESF Switchgear Room Fan-C
			1AP117	1AP13E	480-V ESF Substation 132X Transformer
			1AP149	1AP23E	480-V Aux Bldg ESF MCC 132X1
			1AP150	1AP27E	480-V Aux Bldg ESF MCC 132X2
			1AP152	1AP24E	480-V Aux Bldg ESF MCC 132X3
			1AP153	1AP28E	480-V Aux Bldg ESF MCC 132X4
			1AP154	1AP32E	480-V Aux Bldg ESF MCC 132X5

B/B

TABLE 2.4-35 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Cold Shutdown & Support (Cont'd)			1AP252	1AP27E	480-V Aux Bldg ESF MCC 132X2
			1AP254	1AP23E	480-V Aux Bldg ESF MCC 132X1
			1AP420	1AP12EA	480-V ESF SWGR 131X
			1AP421	1AP12EA	480-V ESF SWGR 131X
			1AP422	1AP12EA	480-V ESF SWGR 131X
			1AP423	1AP12EA	480-V ESF SWGR 131X
			1AP424	1AP12EA	480-V ESF SWGR 131X
			1AP425	1AP12EA	480-V ESF SWGR 131X
			1AP426	1AP12EA	480-V ESF SWGR 131X
			1AP427	1AP12EA	480-V ESF SWGR 131X
			1AP501	1AP73E	480-V Turb Bldg, Unit Substa 134V

B/B

TABLE 2.4-36

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 5.1-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF077	1FT-AF011	AFW Pump Flow
1AF077	1FT-AF013	AFW Pump Flow
1AF077	1FT-AF015	AFW Pump Flow
1AF077	1FT-AF017	AFW Pump Flow
1AF079	1FT-AF012	AFW Pump Flow
1AF079	1FT-AF014	AFW Pump Flow
1AF079	1FT-AF016	AFW Pump Flow
1AF079	1FT-AF018	AFW Pump Flow
1AF143	1FT-AF011	AFW Pump Flow
1AF143	1FT-AF013	AFW Pump Flow
1AF143	1FT-AF015	AFW Pump Flow
1AF143	1FT-AF017	AFW Pump Flow
1AF144	1FT-AF012	AFW Pump Flow
1AF144	1FT-AF014	AFW Pump Flow

TABLE 2.4-36 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF144	1FT-AF016	AFW Pump Flow
1AF144	1FT-AF18	AFW Pump Flow

TABLE 2.4-37

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 5.2-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1AF001	1AF01PA-M	Aux Feedwater Pump-P
			1CV001	1CV01PA	Centrifugal Charging Pump-P
			1DC021	1RY455A	PORV-P
			1RY258	1RY01EA	Pressurizer Heater-P
			1RY259	1RY01ED	Pressurizer Heater-P
			1RY394	1RY8000A	PORV Block Valve-C
Cold Shutdown		None	1RH001	1RH01PA-1	RHR Pump-P
Support	1AP05E	4160 Volt Switchgear Bus 141 - Div. 11	1AF013	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
	1AP10E	480 Volt Switchgear: 131X - ESF Div. 11	1AF064	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
	1VX01J	Local Control Panel	1CC001	1CC01PA	Component Cooling Pump-P
			1CC019	0CC01P	Component Cooling Pump-P
			1CV498	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump-C
			1DG157	1DG01KA	Diesel Generator-C
			1DG174	1DG01KA	Diesel Generator-C
			1DO001	1DO01PA	DG Vent Fan-P
			1DO002	1DO01PA	DG Vent Fan-C
			1DO004	1DO01PC	DG Vent Fan-P
			1DO005	1DO01PC	DG Vent Fan-C
			1SX001	1SX01PA-M	ESW Pump-P
			1VA001	0VA01CA	ESW Cubicle Cooler Fan-P
			1VA016	0VA02CA	RHR Cubicle Cooler Fan-P
			1VA053	1VA06CA	CCP Cubicle Cooler Fan-C

B/B

TABLE 2.4-37 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1VA104	1VA02CA	RHR Cubicle Cooler Fan-C
			1VA111	1VA01CA	ESW Cubicle Cooler Fan-C
			1VA137	1VA06CB	CCP Cubicle Cooler Fan-C
			1VA149	1VA02CB	RHR Cubicle Cooler Fan-C
			1VA165	1VA01CD	ESW Cubicle Cooler Fan-C
			1VD001	1VD01CA	DG Vent Fan-P
			1VD071	1VD03CA	DG Exhaust Fan-C
			1VD084	1VD03CA	DG Exhaust Fan-C
			1VE016	1VE03C	Misc Electric Equip Room Fan-P
			1VE018	1VE03C	Misc Electric Equip Room Fan-C
			1VE031	1VE04C	Misc Electric Equip Room Fan-C
			1VE032	1VE04C	Misc Electric Equip Room Fan-P
			1VX001	1VX04C	ESF Switchgear Room Fan-P
			1VX003	1VX04C	ESF Switchgear Room Fan-C
			1VX004	1VX04C	ESF Switchgear Room Fan-C
			1VX102	1VE04C	Misc Electric Equip Room Fan-C
			1AP081	1AP11E	480-V ESF Unit Substation 131X Transformer
			1AP093	1AP14E	480-V Aux Bldg Unit Substation 133X
			1AP143	1AP21E	480-V Aux Bldg ESF MCC 131X1

B/B

TABLE 2.4-37 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1AP144	1AP25E	480-V Aux Bldg ESF MCC 131X2
			1AP146	1AP26E	480-V Aux Bldg ESF MCC 131X4
			1AP147	1AP22E	480-V Aux Bldg ESF MCC 131X3
			1AP148	1AP30E	480-V Aux Bldg ESF MCC 131X5
			1AP414	1AP10EA	480-V ESF SWGR 131X
			1AP415	1AP10EA	480-V ESF SWGR 131X
			1AP416	1AP10EA	480-V ESF SWGR 131X
			1AP417	1AP10EA	480-V ESF SWGR 131X
			1AP418	1AP10EA	480-V ESF SWGR 131X
			1AP419	1AP10EA	480-V ESF SWGR 131X
			1AP428	1AP10EA	480-V ESF SWGR 131X
			1AP429	1AP10EA	480-V ESF SWGR 131X

B/B

TABLE No. 2.4-38

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 5.2-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP002	1PA01J	Power Feed; Alternate Feed Available
1IP002	1PA05J	Power Feed; Alternate Feed Available
1IP004	1PA01J	Power Feed; Alternate Feed Available
1IP004	1PA05J	Power Feed; Alternate Feed Available
1IP030	1PA03J	Power Feed; Alternate Feed Available
1IP030	1PA07J	Power Feed; Alternate Feed Available
1IP032	1PA03J	Power Feed; Alternate Feed Available
1IP032	1PA07J	Power Feed; Alternate Feed Available
1MS115	1PT-0515	S.G. Loop 1A Steam Pressure
1MS118	1PT-0525	S.G. Loop 1B Steam Pressure
1MS121	1PT-0535	S.G. Loop 1C Steam Pressure
1MS124	1PT-0545	S.G. Loop 1D Steam Pressure

TABLE 2.4-39

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 5.3-1

FUNCTION	EQU NUMBER	LOCA	ZONE PTION	POWER CABLES ROUTED THROUGH ZONE CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		No				None
Cold Shutdown		None				None
Support		None		1VE006	1VE01C	Misc Electric Equip Room Fan-P
				1VE012	1VE02C	Misc Electric Equip Room Fan-P

B/B

TABLE 2.4-40

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 5.4-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1DC112	1RY456	PORV-C
			1DC098	1RY456	PORV-C
Cold Shutdown		None			None
Support	1VE01C-2	Misc Electric Equipment Room Fans	1DG159	1DG01KB	Diesel Generator-C
			1DG178	1DG01KB	Diesel Generator-C
	1VE02C-2	Misc Electric Equipment Room Fans	1VE006	1VE01C	Misc Electric Equip Room Fan-P
	1DC02E	DC Power Supply/ Battery Charger	1VE007	1VE01C	Misc Electric Equip Room Fan-C
	1DC06EA	DC Power Supply/ Battery Charger	1VE008	1VE01C	Misc Electric Equip Room Fan-C
		125 Volt d-c Bus 112, ESF Div. 12	1VE012	1VE02C	Misc Electric Equip Room Fan-P
			1VE014	1VE02C	Misc Electric Equip Room Fan-C
			1VE028	1VE01C	Misc Electric Equip Room Fan-C

B/B

TABLE No. 2.4-41

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 5.4-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP018	1PA02J	Power Feed; Alternate Feed Not Available
1IP018	1PA06J	Power Feed; Alternate Feed Not Available
1IP019	1PA02J	Power Feed; Alternate Feed Not Available
1IP019	1PA06J	Power Feed; Alternate Feed Not Available
1IP020	1PA02J	Power Feed; Alternate Feed Not Available
1IP020	1PA06J	Power Feed; Alternate Feed Not Available
1IP022	1PA02J	Power Feed; Alternate Feed Not Available
1IP022	1PA06J	Power Feed; Alternate Feed Not Available
1IP042	1PA04J	Power Feed; Alternate Feed Not Available
1IP042	1PA08J	Power Feed; Alternate Feed Not Available
1IP043	1PA04J	Power Feed; Alternate Feed Not Available
1IP043	1PA08J	Power Feed; Alternate Feed Not Available
1IP044	1PA04J	Power Feed; Alternate Feed Not Available
1IP044	1PA08J	Power Feed; Alternate Feed Not Available
1IP045	1PA04J	Power Feed; Alternate Feed Not Available
1IP045	1PA08J	Power Feed; Alternate Feed Not Available
1IP046	1PA04J	Power Feed; Alternate Feed Not Available
1IP046	1PA08J	Power Feed; Alternate Feed Not Available

TABLE 2.4-42

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 5.5-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None	1AB005	0,1AB03P	Boric Acid Transfer Pumps-C
Support	1PA27J	Aux Equipment Room Panels	1AF013	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
	1PA28J	Aux Equipment Room Panels	1AF064	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF162	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF169	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1DG178	1DG01KB	Diesel Generator-C

B/B

TABLE 2.4-43

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 5.5-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1CC093	1FT-0689	CCW RHR Hx 1RH02AC Discharge Flow
1CC095	1FT-0688	CCW RHR Hx 1RH02AA Discharge Flow
1CD078	1LT-CD051	Condensate Storage Tank Level
1CD080	1LT-CD051B	Condensate Storage Tank Level
1CV139	1FT-0121	Charging HDR Flow
1FW017	1LT-0501	Steam Generator Loop 1A Wide Range Level
1FW019	1LT-0502	Steam Generator Loop 1B Wide Range Level
1FW021	1LT-503	Steam Generator Loop 1C Wide Range Level
1FW023	1LT-0504	Steam Generator Loop 1D Wide Range Level
1FW025	1LT-0501	Steam Generator Loop 1A Wide Range Level
1FW026	1LT-0502	Steam Generator Loop 1B Wide Range Level

TABLE 2.4-43 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1FW027	1LT-0503	Steam Generator Loop 1C Wide Range Level
1FW028	1LT-0504	Steam Generator Loop 1D Wide Range Level
1SI467	1LT-0930	RWST Level
1SI468	1LT-0931	RWST Level
1SI469	1LT-0932	RWST Level
1SI470	1LT-0933	RWST Level
1IP007	1PA01J	Power Feed; Alternate Feed Available
1IP013	1PA05J	Power Feed; Alternate Feed Available
1IP021	1PA02J	Power Feed; Alternate Feed Not Available
1IP021	1PA06J	Power Feed; Alternate Feed Not Available
1IP022	1PA02J	Power Feed; Alternate Feed Not Available
1IP022	1PA06J	Power Feed; Alternate Feed Not Available

TABLE 2.4-43 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP023	1PA02J	Power Feed; Alternate Feed Not Available
1IP026	1PA06J	Power Feed; Alternate Feed Not Available
1IP033	1PA03J	Power Feed; Alternate Feed Not Available
1IP033	1PA07J	Power Feed; Alternate Feed Not Available
1IP034	1PA03J	Power Feed; Alternate Feed Not Available
1IP034	1PA07J	Power Feed; Alternate Feed Not Available
1IP035	1PA03J	Power Feed; Alternate Feed Not Available
1IP038	1PA07J	Power Feed; Alternate Feed Not Available
1IP045	1PA04J	Power Feed; Alternate Feed Not Available
1IP045	1PA08J	Power Feed; Alternate Feed Not Available
1IP046	1PA04J	Power Feed; Alternate Feed Not Available

TABLE 2.4-43 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP046	1PA08J	Power Feed; Alternate Feed Not Available
1IP047	1PA04J	Power Feed; Alternate Feed Not Available
1IP052	1PA08J	Power Feed; Alternate Feed Not Available
1MS098	1PT-0514	Steam Generator Loop 1A Steam Pressure
1MS099	1PT-514B	Steam Generator Loop 1A Steam Pressure
1MS102	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS103	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS106	1PT-534	Steam Generator Loop 1C Steam Pressure
1MS107	1PT-534B	Steam Generator Loop 1C Steam Pressure
1MS110	1PT-0544	Steam Generator Loop 1D Steam Pressure
1MS115	1PT-0515	Steam Generator Loop 1A Steam Pressure

TABLE 2.4-43 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS118	1PT-0525	Steam Generator Loop 1B Steam Pressure
1MS121	1PT-0535	Steam Generator Loop 1C Steam Pressure
1MS124	1PT-0545	Steam Generator Loop 1D Steam Pressure
1MS125	1PT-0526	Steam Generator Loop 1B Steam Pressure
1MS126	1PT-0536	Steam Generator Loop 1C Steam Pressure
1MS127	1PT-0516	Steam Generator Loop 1A Steam Pressure
1MS128	1PT-0546	Steam Generator Loop 1D Steam Pressure
1RH074	1TE-0604	RHR Hx 1RH02AA Outlet Temperature
1RH075	1FT-0618	RHR Pump 1A Discharge Flow
1RH079	1TE-0605	RHR Hx 1RH02AB Outlet Temperature
1RH084	1FT-0619	RHR Pump 1B Discharge Flow
1RC223	1PT-403	Wide Range Loop 1A Hot Leg Pressure
1RC350	1TE-413A	Wide Range Loop 1A Hot Leg RTD

TABLE 2.4-43 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RC355	1TE-423A	Wide Range Loop 1B Hot Leg RTD
1RC360	1TE-433A	Wide Range Loop 1C Hot Leg RTD
1RC365	1TE-443A	Wide Range Loop 1D Hot Leg RTD
1RC371	1LT-459B	Pressurizer Level
1RC372	1TE-413B	ide Range Loop 1A Cold Leg RTD
1RC391	1TE-423B	Wide Range Loop 1B Cold Leg RTD
1RC396	1TE-433B	Wide Range Loop 1C Cold Leg RTD
1RC401	1TE-433B	Wide Range Loop 1D Cold Leg RTD
1RC406	1LT-460B	Pressurizer Level
1RY198	1PT-455	Pressurizer Pressure
1RY200	1LT-459	Pressurizer Level
1RY202	1PT-456	Pressurizer Pressure
1RY204	1LT-460	Pressurizer Level
1RY206	1PT-457	Pressurizer Pressure
1RY208	1LT-461	Pressurizer Level
1RY210	1PT-458	Pressurizer Pressure
1RY227	1TE-0454	Pressurizer Temperature

TABLE 2.4-44

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 5.6-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1DC021	1RY455A	PORV-P
			1DC095	1RY455A	PORV-C
			1DC100	1RY455A	PORV-C
			1RY394	1RY8000A	PORV Block Valve-C
Cold Shutdown		None			None
Support	1VE03C	Misc Electric Equipment Room Fans	1AF013	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
	1VE04C	Misc Electric Equipment Room Fans	1AF064	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
	1DC01E	DCPower Supply/ Battery Charger	1DG157	1DG01KA	Diesel Generator-C
			1DG174	1DG01KA	Diesel Generator-C
	1DC03E	DC Power Supply/ Battery Charger	1VE016	1VE02C	Misc Electric Equip Room Fan-P
	1DC05E	DC Power Supply/ Battery Charger	1VE018	1VE03C	Misc Electric Equip Room Fan-C
		125 Volt d-c Bus III, ESF Div. 11	1VE032	1VE04C	Misc Electric Equip Room Fan-P

B/B

TABLE 2.4-45

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 5.6-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP002	1PA01J	Power Feed; Alternate Feed Not Available
1IP002	1PA05J	Power Feed; Alternate Feed Not Available
1IP003	1PA01J	Power Feed; Alternate Feed Not Available
1IP003	1PA05J	Power Feed; Alternate Feed Not Available
1IP004	1PA01J	Power Feed; Alternate Feed Not Available
1IP004	1PA05J	Power Feed; Alternate Feed Not Available
1IP005	1PA01J	Power Feed; Alternate Feed Not Available
1IP005	1PA05J	Power Feed; Alternate Feed Not Available
1IP006	1PA01J	Power Feed; Alternate Feed Not Available
1IP006	1PA05J	Power Feed; Alternate Feed Not Available
1IP030	1PA03J	Power Feed; Alternate Feed Not Available
1IP030	1PA07J	Power Feed; Alternate Feed Not Available
1IP031	1PA03J	Power Feed; Alternate Feed Not Available
1IP031	1PA07J	Power Feed; Alternate Feed Not Available
1IP032	1PA03J	Power Feed; Alternate Feed Not Available
1IP032	1PA07J	Power Feed; Alternate Feed Not Available
1IP033	1PA03J	Power Feed; Alternate Feed Not Available

TABLE No. 2.4-45 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP033	1PA07J	Power Feed; Alternate Feed Not Available
1IP034	1PA03J	Power Feed; Alternate Feed Not Available
1IP034	1PA07J	Power Feed; Alternate Feed Not Available

TABLE 2.4-46

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 8.3-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shu 'own		None			None
Support		None	1AP166	1AP39E	480-V Aux Bldg MCC 134V1
			1AP168	1AP43E	480-V Aux Bldg MCC 134V3
			1AP169	1AP45E	480-V Aux Bldg MCC 134V4
			1AP271	1AP43E	480-V Aux Bldg MCC 134V3
			1AP447	1AP45E	480-V Aux Bldg MCC 134V4

B/B

TABLE 2.4-47

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 8.6-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support		None	1AP166	1AP39E	480-V Aux Bldg MCC 134V1
			1AP168	1AP43E	480-V Aux Bldg MCC 134V3
			1AP169	1AP45E	480-V Aux Bldg MCC 134V4
			1AP271	1AP43E	480-V Aux Bldg MCC 134V3
			1AP447	1AP45E	480-V Aux Bldg MCC 134V4

B/B

TABLE 2.4-48

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 9.1-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	1SX169B	DG 1B HX Outlet Valve	1DO059	1DO01PB	DG 1B Fuel Oil XFR Pump 1B
	1VD03CB	DG Room 1B Exhaust Fan	1DO006	1DO01PB	DG 1B Fuel Oil XFR Pump 1B
	1PL08J	Diesel Control Panel	1DO007	1DO01PB	DG 1B Fuel Oil XFR Pump 1B
	1DG01KB	1B Diesel Generator	1DO009	1DO01PD	DG 1B Fuel Oil XFR Pump 1D
			1DO010	1DO01PD	DG 1B Fuel Oil XFR Pump 1D
			1DG159	1DG01KB	1B Diesel Generator
			1DG178	1DG01KB	1B Diesel Generator
			1VD076	1VD03CB	DG Room 1B Exhaust Fan
			1VD085	1VD03CB	DG Room 1B Exhaust Fan
			1VD086	1VD03CB	DG Room 1B Exhaust Fan

B/B

TABLE 2.4-49

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 9.2-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	1SX169A	DG 1A HX Outlet Valve	1DG157	1DG01KA	1A Diesel Generator
	1VD03CA	DG Room Fans	1DG174	1DG01KA	1A Diesel Generator
	1PL07J	Diesel Control Panel	1VD071	1VD03CA	DG Room Fans
	1DG01KA	1A Diesel Generator	1VD082	1VD03CA	DG Room Fans
			1VD084	1VD03CA	DG Room Fans
			1D0004	1D001PC	DG 1A Fuel Oil XFR Pump 1C
			1D0005	1D001PC	DG 1A Fuel Oil XFR Pump 1C
			1D0001	1D001PA	DG 1A Fuel Oil XFR Pump 1A
			1D0002	1D001PA	DG 1A Fuel Oil XFR Pump 1A
			1D0058	1D001PA	DG 1A Fuel Oil XFR Pump 1A

B/B

TABLE 2.4-50

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 9.3-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	1DO02TA	1A Diesel Generator Day Tank			None

B/B

TABLE 2.4-51

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 9.4-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	1D002TB	1B Diesel Generator Day Tank			None

B/B

TABLE 2.4-52

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 10.1-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	1DO01PB	DG 1B Fuel Oil XFR Pump 1B	1DO006	1DO01PB	DG 1B Fuel Oil XFR Pump 1B
	1DO01PD	DG 1B Fuel Oil XFR Pump 1D	1DO009	1DO01PD	DG 1B Fuel Oil XFR Pump 1D
	1DO055B	XFR Pump Discharge to Diesel Driven Aux Feed Pump Day Tank Valve			
	1DO01TP	1B Diesel Fuel Oil Tank			
	1DO01TD	1D Diesel Fuel Oil Tank			

B/B

TABLE 2.4-53

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 10.2-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	1DO01PA	DG 1A Fuel Oil XFR Pump 1A	1DO001	1DO01PA	DG 1A Fuel Oil XFR Pump 1A
	1DO01PC	DG 1A Fuel Oil XFR Pump 1C	1DO004	1DO01PC	DG 1A Fuel Oil XFR Pump 1C
	1DO055A	XFR Pump Discharge to Diesel Driven Aux Feed Pump Day Tank Valve			
	1DO057	XFR Pump Discharge to Diesel Driven Aux Feed Pump Day Tank Valve			
	1DO01TA	1A Diesel Fuel Oil Tank			
	1DO01TC	1C Diesel Fuel Oil Tank			

B/B

TABLE 2.4-54

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.1-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	1SX01PA	1A Essential Service Water Pump	1SX001	1SX01PA	1A ESW Pump
	1VA01SA	ESW Pump Room Cubicle Cooler	1VA108	1VA01CA	1A ESW Cubicle Cooler Fan 1A-Power
	1VA01CA	ESW Pump Room Cubicle Cooler Fan	1VA109	1VA01J	1A Cubicle Cooler Local Panel-Control
	1VA01CB	ESW Pump Room Cubicle Cooler Fan	1VA164	1VA01CD	1A ESW Cubicle Cooler Fan 1D-Power
	1VA01J	Cubicle Cooler Local Panel	1VA166	1VA01J	1A Cubicle Cooler Local Panel-Control
	1VA01CC	ESW Pump Room Cubicle Cooler Fan	1VA191	1VA01CB	1A ESW Cubicle Cooler Fan 1B-Power
	1VA01CD	ESW Pump Room Cubicle Cooler Fan	1VA192	1VA01CC	1A ESW Cubicle Cooler Fan 1C-Power
			1VA228	1VA01J	1A Cubicle Cooler Local Panel-Control
			1VA233	1VA01J	1A Cubicle Cooler Local Panel-Control

B/B

TABLE 2.4-55

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.1-2

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	1SX01PB	1B Essential Service Water Pump	1SX012	1SX01PB	1B ESW Pump
	MOV 1SX005	Pump Discharge Valve to CC HX "0"	1VA112	1VA01CE	1B ESW Cubicle Cooler Fan 1E-Power
	MOV 2SX005	Pump Discharge Valve to CC HX "0"	1VA113	1VA02J	1B Cubicle Cooler Local Panel-Control
	1VA01SB	ESW Pump Room Cubicle Cooler	1VA168	1VA01CH	1B ESW Cubicle Cooler Fan 1H-Power
	1VA01CE	ESW Pump Room Cubicle Cooler Fan	1VA169	1VA02J	1B Cubicle Cooler Local Panel-Control
	1VA01CF	ESW Pump Room Cubicle Cooler Fan	1VA193	1VA01CF	1B ESW Cubicle Cooler Fan 1F-Power
	1VA02J	Cubicle Cooler Local Panel	1VA194	1VA01CG	1B ESW Cubicle Cooler Fan 1G-Power
	1VA01CG	ESW Pump Room Cubicle Cooler Fan	1VA229	1VA02J	1B Cubicle Cooler Local Panel-Control
	1VA01CH	ESW Pump Room Cubicle Cooler Fan	1VA234	1VA02J	1B Cubicle Cooler Local Panel-Control

B/B

TABLE 2.4-56

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.2-0

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown	1RH610-1	1A RHR Pump Mini-Flow Valve	1RH001	1RH01PA	1A RHR Pump
	1RH611-2	1B RHR Pump Mini-Flow Valve	1RH008	1RH01PB	1B RHR Pump
Support	0SX146	CCW HX "0" ESW Discharge Valve	1CV031	1CV01PB-A	CCP 1B Aux Lube Oil Pump
	0SX147	CCW HX "0" ESW Discharge Valve	1VC032	1CV01PB-A	CCP 1B Aux Lube Oil Pump-Control
			1MS081	1MS018A	Atmospheric Main Steam Relief-Control
			1MS082	1MS018B	Atmospheric Main Steam Relief-Control
			1SX001	1SX01PA	1A ESW Pump
			1SX012	1SX01PB	1B ESW Pump
			1VA063	1VA02CA	1A RHR Cubicle Cooler Fan 1A
			1VA064	1VA035	1A RHR Cubicle Cooler Local Panel-Control
			1VA066	1VA02CC	1B RHR Pump Cubicle Cooler Fan 1C
			1VA067	1VA04J	1B RHR Pump Cub Cooler Local Panel-Control
			1VA108	1VA01CA	1A ESW Cubicle Cooler Fan 1A

B/B

TABLE 2.4-56 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
			1VA109	1VA01J	1A ESW Cubicle Cooler Local Panel-Control
			1VA112	1VA01CE	1B ESW Cubicle Cooler Fan 1E
			1VA113	1VA02J	1B ESW Cubicle Cooler Local Panel-Control
			1VA140	1VA06CD	1B CCP Cubicle Cooler Fan 1D
			1VA142	1VA11J	1B CCP Cubicle Cooler Local Panel-Control
			1VA148	1VA02CB	1A RHR Cubicle Cooler Fan 1B
			1VA150	1VA03J	1A RHR Cubicle Cooler Local Panel-Control
			1VA164	1VA01CD	1A ESW Cubicle Cooler Fan 1D
			1VA166	1VA01J	1A ESW Cubicle Cooler Local Panel-Control
			1VA168	1VA01CH	1B ESW Cubicle Cooler Fan 1H
			1VA169	1VA02J	1B ESW Cubicle Cooler Local Panel-Control
			1VA191	1VA01CB	1A ESW Cubicle Cooler Fan 1B
			1VA192	1VA01CC	1A ESW Cubicle Cooler Fan 1C
			1VA193	1VA01CF	1B ESW Cubicle Cooler Fan 1F
			1VA194	1VA01CG	1B ESW Cubicle Cooler Fan 1G

B/B

TABLE 2.4-56 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
			1VA228	1VA01J	1A ESW Cubicle Cooler Local Panel-Control
			1VA229	1VA02J	1B ESW Cubicle Cooler Local Panel-Control
			1VA233	1VA01J	1A ESW Cubicle Cooler Local Panel-Control
			1VA234	1VA02J	1B ESW Cubicle Cooler Local Panel-Control
			1VA251	1VA03J	1A RHR Cubicle Cooler Local Panel-Control
			1AP156	133X1A	NSR Div 11 MCC 133X1A
			1AP166	134V1	NSR Div 12 MCC 134V1

TABLE 2.4-57

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.2-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS098	1PT-0514	Steam Generator Loop 1A Steam Pressure
1MS102	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS106	1PT-534	Steam Generator Loop 1C Steam Pressure
1MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1MS125	1PT-526	Steam Generator Loop 1B Steam Pressure
1MS126	1PT-536	Steam Generator Loop 1C Steam Pressure
1RH075	1FT-0618	RHR Pump 1A Discharge Flow

TABLE 2.4-58

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.2A-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown	1RH01PA	1A Residual Heat Removal Pump	1RH001	1RH01PA	1A RHR Pump
Support	1VA02SA	1A RHR Pump Room Cubicle Cooler	1VA063	1VA02CA	1A RHR Cubicle Cooler Fan 1A
	1VA02CA	1A RHR Pump Room Cubicle Cooler Fan	1VA064	1VA03J	1A Cubicle Cooler Local Panel-Control
	1VA02CB	1A RHR Pump Room Cubicle Cooler Fan	1VA148	1VA02CB	1A RHR Cubicle Cooler Fan 1B
	1VA03J	Cubicle Cooler Local Panel	1VA150	1VA03J	1A Cubicle Cooler Local Panel-Control
			1VA251	1VA03J	1A Cubicle Cooler Local Panel-Control

TABLE 2.4-59

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.?C-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None	1RH008	1RH01PB	1B RHR Pump
Support		None	1VA055	1VA06CC	1B CCP Cubicle Cooler Fan 1C
			1VA056	1VA11J	1B CCP Cubicle Cooler Local Panel-Control
			1VA066	1VA02CC	1B RHR Pump Cubicle Cooler Fan 1C
			1VA067	1VA04J	1B RHR Pump Cubicle Cooler Local Panel-Control
			1VA140	1VA06CD	1B CCP Cubicle Cooler Fan 1D
			1VA142	1VA11J	1B CCP Cubicle Cooler Local Panel-Control
			1VA152	1VA02CD	1B RHR Pump Cubicle Cooler Fan 1D
			1VA153	1VA04J	1B RHR Pump Cubicle Cooler Local Panel-Control
			1CV031	1CV01PB	1B CCP Lube Oil Pump
			1CV032	1CV01PB	1B CCP Lube Oil Pump-Control

B/B

TABLE 2.4-60

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.2D-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown	1RH01PB	1B RHR Pump	1RH008	1RH01PB	1B RHR Pump
Support	1VA02SB	1B RHR Pump Room Cubicle Cooler	1VA066	1VA02CC	1B RHR Pump Cubicle Cooler Fan 1C
	1VA02CC	1B RHR Pump Room Cubicle Cooler Fan	1VA067	1VA04J	1B RHR Pump Cubicle Cooler Local Panel-Control
	1VA02CD	1B RHR Pump Room Cubicle Cooler Fan	1VA152	1VA02CD	1B RHR Pump Cubicle Cooler Fan 1D
	1VA04J	1B RHR Pump Cubicle Cooler Local Panel	1VA153	1VA04J	1B RHR Pump Cubicle Cooler Local Panel-Control

B/B

TABLE 2.4-61

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.3-0

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1MS081	1MS018A	Atmospheric Main Steam Relief Valve-Control
			1MS081	1MS018D	Atmospheric Main Steam Relief Valve-Control
			1AP156	1MS018A	Atmospheric Main Steam Relief Valve-Power
			1AP156	1MS018D	Atmospheric Main Steam Relief Valve-Power
			1MS082	1MS018B	Atmospheric Main Steam Relief Valve-Control
			1MS082	1MS018C	Atmospheric Main Steam Relief Valve-Control
			1AP166	1MS018B	Atmospheric Main Steam Relief Valve-Power
			1AP166	1MS018C	Atmospheric Main Steam Relief Valve-Power
			1MS001	1MS018A	Atmospheric Main Steam Relief Valve-Control
			1MS008	1MS018B	Atmospheric Main Steam Relief Valve-Control
			1MS014	1MS018C	Atmospheric Main Steam Relief Valve-Control
			1MS020	1MS018D	Atmospheric Main Steam Relief Valve-Control
			1CV001	1CV01PA	Centrifugal Charging Pump 1A-Power

B/B

TABLE 2.4-61 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Cold Shutdown		None	1RH001	1RH01PA-1	RHR Pump 1A-Power
			1RH008	1RH01PB-2	RHR Pump 1B-Power
Support	1CC01PA	1A Component Cooling Pump	1CV028	1CV01PA-A	Lube Oil Pumps for Centrifugal Charging Pump 1A-Control
	1CC01PB	1B Component Cooling Pump	1CV498	1CV01PA-A	Lube Oil Pumps for Centrifugal Charging Pump 1A-Control
	0CC01P	"0" Component Cooling Pump	1CV031	1CV0PB-A	Lube Oil Pumps for Centrifugal Charging Pump 1B-Power
	MOV 1CC 9473A	Component Cooling Valve	1CV032	1CV0PB-A	Lube Oil Pumps for Centrifugal Charging Pump 1B-Control
	MOV 1CC 9473B	Header Crosstie Valves	1CV033	1CV0PB-A	Lube Oil Pumps for Centrifugal Charging Pump 1B-Control
	MOV 1CC 9467B	Header Crosstie Valves	1CV499	1CV0PB-A	Lube Oil Pumps for Centrifugal Charging Pump 1B-Control
	MOV 1CC 9459B	Header Crosstie Valves	1DO001	1DO01PA	DG 1A Fuel Oil Transfer Pump 1A-Power
	MOV 1CC 9412A	1A RHR HX Outlet Valve	1DO002	1DO01PA	DG 1A Fuel Oil Transfer Pump 1A-Control
	MOV 1CC 9412B	1B RHR HX Outlet Valve	1DO006	1DO01PE	DG 1B Fuel Oil Transfer Pump 1B-Power
	1/P23E	480 Volt MCC: 132X1	1DO007	1DO01PE	DG 1B Fuel Oil Transfer Pump 1B-Control

B/B

TABLE 2.4-61 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1AP254	1DO01PF	DG 1B Fuel Oil Transfer Pump 1B-Power
			1AP149	1DO01PE	DG 1B Fuel Oil Transfer Pump 1B-Power
			1VA104	1VA02CA	RHR Pump 1A Cubicle Cooling Fan A-Control
			1VA148	1VA02CB	RHR Pump 1A Cubicle Cooling Fan B-Power
			1VA150	1VA02CB	RHR Pump 1A Cubicle Cooling Fan B-Control
			1VA108	1VA01CA	ESW Pump Cubicle Cooler Fan A-Power
			1VA109	1VA01CA	ESW Pump Cubicle Cooler Fan A-Control
			1VA191	1VA01CB	ESW Pump Cubicle Cooler Fan B-Power
			1VA233	1VA01CB	ESW Pump Cubicle Cooler Fan B-Control
			1VA164	1VA01CD	ESW Pump Cubicle Cooler Fan D-Power
			1VA165	1VA01CD	ESW Pump Cubicle Cooler Fan D-Control
			1SX001	1SX01PA-M	ESW Pump 1A-Power
			1SX012	1SX01PB-M	ESW Pump 1B-Power
			1VA053	1VA06CA	Centrifugal Charging Pump 1A Cubicle Cooler Fan A-Control

B/B

TABLE 2.4-61 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1VA136	1VA06CB	Centrifugal Charging Pump 1A Cubicle Cooler Fan B-Power
			1VA138	1VA06CB	Centrifugal Charging Pump 1A Cubicle Cooler Fan B-Control
			1VA066	1VA02CC	RHR Pump 1B Cubicle Cooler Fan C-Power
			1VA067	1VA02CC	RHR Pump 1B Cubicle Cooler Fan C-Control
			1VA105	1VA02CC	RHR Pump 1B Cubicle Cooler Fan C-Control
			1VA112	1VA01CE	ESW Pump Cubicle Cooler Fan E-Power
			1VA115	1VA01CE	ESW Pump Cubicle Cooler Fan E-Control
			1VA113	1VA01CE	ESW Pump Cubicle Cooler Fan E-Control
			1VA193	1VA01CF	ESW Pump Cubicle Cooler Fan F-Power
			1VA229	1VA01CF	ESW pump Cubicle Cooler Fan F-Control
			1VA194	1VA01CG	ESW pump Cubicle Cooler Fan G-Power
			1VA234	1VA01CG	ESW Pump Cubicle Cooler Fan G-Control
			1VA168	1VA01CH	ESW Pump Cubicle Cooler Fan H-Power
			1VA169	1VA01CH	ESW Pump Cubicle Cooler Fan H-Control

B/B

TABLE 2.4-61 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)		None	1VA055	1VA06CC	Centrifugal Charging Pump 1B Cubicle Cooler Fan C-Power
			1VA056	1VA06CC	Centrifugal Charging Pump 1B Cubicle Cooler Fan C-Control
			1VA057	1VA06CC	Centrifugal Charging Pump 1B Cubicle Cooler Fan C-Control
			1VA140	1VA06CD	Centrifugal Charging Pump 1B Cubicle Cooler Fan D-Power
			1VA142	1VA06CD	Centrifugal Charging Pump 1B Cubicle Cooler Fan D-Control
			1CC010	1CC01PB	Component Cooling Pump 1B-Power
			1CC020	0CC01P	Component Cooling Pump "0"-Power
			1CC027	0CC-1P	Component Cooling Pump "0"-Power
			1AF158	1AF01PB-!	AFW Pump 1B Lube Oil Pump-Control
			1AF274	1AF01PB-A	AFW Pump 1B Lube Oil Pump-Control
			1AF160	1AF01PB-A	AFW Pump 1B Lube Oil Pump-Control
			1AP143	1CV01PA-A	Lube Oil Pumps for Centrifugal Charging Pump 1A-Power

B/B

TABLE 2.4-61 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1AP143	1DO01PA	DG 1A Fuel Oil Transfer Pump 1A-Power
			1AP143	1VA02CA	RHR Pump 1A Cubicle Cooling Fan A-Power
			1AP143	1VA01CC	ESW Pump Cubicle Cooling Fan C-Power
			1AP143	1VA01CD	ESW Pump Cubicle Cooling Fan D-Power
			1AP143	1VA06CA	Centrifugal Charging Pump 1A Cubicle Cooling Fan A-Power
			1CC001	1CC01PA	Component Cooling Pump 1A-Power

B/B

TABLE 2.4-62

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.3-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF077	1FT-AF011	AFW Pump Flow
1AF079	1FT-AF012	AFW Pump Flow
1CC093	1FT-0689	Comp. Cool Wtr. RHR Hx 1RH02AA Dish. Flow
1CC095	1FT-0688	Comp. Cool Wtr. RHR Hx 1RH02AC Dish. Flow
1CV139	1FT-0121	Charging HDR Flow Trans.
1CV484	1FT-121A&B	Charging HDR Flow Trans.
1IP020	1PA02J	Power Feed; Alternate Feed Available
1IP020	1PA06J	Power Feed; Alternate Feed Available
1MS098	1PT-0514	Steam Generator Loop 1A Steam Pressure
1MS102	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS106	1PT-534	Steam Generator Loop 1C Steam Pressure

TABLE 2.4-62 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1RH074	1TE-0604	RHR Hx 1RH02AA Out Temp.
1RH075	1FT-0618	RHR Pump 1A Discharge Flow
1RH079	1TE-0604	RHR Pump 1RH02AB Out Temp.
1RH084	1FT-0619	RHR Pump 1B Discharge Flow

TABLE 2.4-63

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.3-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby	1CV LCV112D	RWST to Charging Pump Suction Valve	1CV001	1CV01PA	Centrifugal Charging Pump-P
	1CV LCV112E	RWST to Charging Pump Suction Valve	1CV011	1CV01PB	Centrifugal Charging Pump-P
	1CV8105-2	Reg HX Line Containment Isolation Valve			
	1CV8106-1	Rev HX Line Containment Isolation Valve			
	1SI8801A-1	Cold Leg Injection Valve			
	1SI8801B-2	Cold Leg Injection Valve			
	1CV8110-1	Centrifugal Charging Pump Mini-Flow Valve			
	1CV8111-2	Centrifugal Charging Pump Mini-Flow Valve			
Cold Shutdown	1CV8804A	RHR HX to Charging Pump Suction Valve			None
Support	1AP21E	480 Volt MCC 131X1	1CV027	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump-P
	1VA11J	Local Control Panel	1CV028	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump-C
			1CV029	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump-C
			1CV031	1CV01PB-A	Centrifugal Charging Pump Lube Oil Pump-P
			1CV032	1CV01PB-A	Centrifugal Charging Pump Lube Oil Pump-C

B/B

TABLE 2.4-63 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1CV498	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump-C
			1VA051	1VA06CA	CCP Cubicle Cooler Fans-P
			1VA052	1VA06CA	CCP Cubicle Cooler Fans-C
			1VA053	1VA06CA	CCP Cubicle Cooler Fans-C
			1VA055	1VA06CC	CCP Cubicle Cooler Fans-P
			1VA056	1VA06CC	CCP Cubicle Cooler Fans-C
			1VA063	1VA02CA	RHR Cubicle Cooler Fans-P
			1VA064	1VA02CA	RHR Cubicle Cooler Fans-C
			1VA104	1VA02CA	RHR Cubicle Cooler Fans-C
			1VA136	1VA06CB	CCP Cubicle Cooler Fans-P
			1VA138	1VA06CB	CCP Cubicle Cooler Fans-C
			1VA140	1VA06CD	CCP Cubicle Cooler Fans-P
			1VA142	1VA06CD	CCP Cubicle Cooler Fans-C
			1VA152	1VA02CD	RHR Cubicle Cooler Fans-P
			1VA153	1VA02CD	RHR Cubicle Cooler Fans-C
			1VA164	1VA01CD	ESW Cubicle Cooler Fans-P
			1VA165	1VA01CD	ESW Cubicle Cooler Fans-C
			1VA166	1VA01CD	ESW Cubicle Cooler Fans-C
			1VA192	1VA01CC	ESW Cubicle Cooler Fan-P
			1VA228	1VA01CC	ESW Cubicle Cooler Fan-C
			1VA251	1VA02CA	RHR Cubicle Cooler Fan-C
			1DO001	1DO01PA	DG Fuel Oil Transfer Pump-P
			1DO002	1DO01PA	DG Fuel Oil Transfer Pump-C
			1SX062	1SX01PB-M	ESW Pump-P
			1AP143	1AP21E	

B/B

TABLE 2.4-64

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.3-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS125	1PT-526	Steam Generator Loop 1B Steam Pressure
1MS126	1PT-536	Steam Generator Loop 1C Steam Pressure
1RH074	1TE-0604	RHR Hx 1RH02AA Out Temp.
1RH079	1TE-0605	RHR Hx 1RH02AB Out Temp.
1SI468	1LT-0931	RWST Level
1SI470	1LT-0933	RWST Level

TABLE 2.4-65

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.3C-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1CV001	1CV01PA	Centrifugal Charging Pump-P
Cold Shutdown		None			None
Support	1VA10J	Local Control Panel	1VA147	1VA09J	Positive Displacement Charging Pump Cubicle Cooler Local Panel-C

B/B

TABLE 2.4-66

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.3D-1

	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
FUNCTION	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby	1CV01PA-1	Centrifugal Charging Pump			None
Cold Shutdown		None			None
Support	1VA06SA	Centrifugal Charging Pump Cubicle Cooler	1CV027	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump-P
	1VA06CA	Centrifugal Charging Pump Cubicle Cooler Fan	1CV029	1CV01PA-A	Centrifugal Charging Pump Oil Pump-C
	1VA06CB	Centrifugal Charging Pump Cubicle Cooler Fan	1VA051	1VA06CA	Centrifugal Charging Pump Cooler Fan-P
	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump	1VA052	1VA06CA	Centrifugal Charging Pump Cooler Fan-C
			1VA136	1VA06CB	Centrifugal Charging Pump Cooler Fan-P
			1VA138	1VA06CB	Centrifugal Charging Pump Cooler Fan-C

B/B

TABLE 2.4-67

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.3F-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1SI468	1LT-0931	RWST Level
1SI470	1LT-0933	RWST Level

TABLE 2.4-68

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.3G-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby	1CV01PB-2	Centrifugal Charging Pump	1CV011	1CV01PB-2	Centrifugal Charging Pump-P
Cold Shutdown		None			None
Support	1VA06SB	Centrifugal Charging Pump Cubicle Cooler	1CV031	1CV01PB-A	Centrifugal Charging Pump Lube Oil Pump-P
	1VA06CC	Centrifugal Charging Pump Cubicle Cooler Fan	1CV032	1CV01PB-A	Centrifugal Charging Pump Lube Oil Pump-C
	1VA06CD	Centrifugal Charging Pump Cubicle Cooler Fan	1VA055	1VA06CC	Centrifugal Charging Pump Cubicle Fan-P
	1CV01PB-A	Centrifugal Charging Pump Lube Oil Pump	1VA056	1VA06CC	Centrifugal Charging Pump Cubicle Fan-C
			1VA140	1VA06CD	Centrifugal Charging Pump Cubicle Fan-P
			1VA142	1VA06CD	Centrifugal Charging Pump Cubicle Fan-C
			1VA143	1VA06CD	Centrifugal Charging Pump Cubicle Fan-C

B/B

TABLE 2.4-69

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.3G-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1SI467	1LT-0930	RWST Level
1SI469	1LT-0932	RWST Level

TABLE 2.4-70

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.4-0

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby	1AF01PA-1	Aux Feedwater Pump	1AF001	1AF01PA-1	Aux Feedwater Pump-P
	1AF017A-1	ESW to AF Pump Suction Valve	1AF012	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-P
			1CV001	1CV01PA-1	Centrifugal Charging Pump-P
Cold Shutdown		None	1RH001	1RH01PA-1	RHR Pump-P
Support	1SX101A	AFW Pump Oil Cooler Outlet Valve	1CC001	1CC01PA	Component Cooling Pump-P
			1CC019	0CC01P	Component Cooling Pump-P
	0VI01C	Remote Shutdown Control Room Fan	1CC020	0CC01P	Component Cooling Pump-P
			1CV028	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump-C
	0VI02C	Remote Shutdown Control Room Fan	1CV498	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump-C
	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump	1AF014	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
	1AP21E	480-V MCC 131X13	1AF019	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1DO001	1DO01PA	DG Fuel Oil Transfer Pump-P
			1DO002	1DO01PA	DG Fuel Oil transfer Pump-C
			1VA053	1VA06CA	CCP Cubicle Cooler Fan-C
			1VA104	1VA02CA	RHR Cubicle Cooler Fan-C
			1VA108	1VA01CA	ESW Cubicle Cooler Fan-P
			1VA109	1VA01CA	ESW Cubicle Cooler Fan-C
			1VA111	1VA01CA	ESW Cubicle Cooler Fan-C
			1VA136	1VA06CB	CCP Cubicle Cooler Fan-P

E/B

TABLE 2.4-70 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1VA137	1VA06CB	CCP Cubicle Cooler Fan-C
			1VA138	1VA06CB	CCP Cubicle Cooler Fan-C
			1VA148	1VA02CB	RHR Cubicle Cooler Fan-P
			1VA150	1VA02CB	RHR Cubicle Cooler Fan-C
			1VA165	1VA01CD	ESW Cubicle Cooler Fan-C
			1VA191	1VA01CB	ESW Cubicle Cooler Fan-P
			1VA233	1VA01CB	ESW Cubicle Cooler Fan-C
			1AF017	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF018	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
			1SX001	1SX01PA-M	ESW Pump-P
			1VD084	1VD03CA	DG Room Exhaust Fan-C
			1VD082	1VD03CA	DG Room Exhaust Fan-P
			1VX102	1VE04C	Misc. Electric Equip Room Fan-C
			1AP143		
			1AP147		

B/B

TABLE 2.4-71

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.4-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF077	1FT-AF011	AFW Pump Flow
1AF079	1FT-AF012	AFW Pump Flow
1AF143	1FT-AF011B	AFW Pump Flow
1AF144	1FT-AF012B	AFW Pump Flow
1CD080	1LT-CD051B	Condensate Storage Tank Level
1CV139	1LT-0121	Charging HDR Flow
1FW025	1LT-0501	Steam Generator Wide Range Level Loop 1A
1FW026	1LT-0502	Steam Generator Wide Range Level Loop 1B
1FW027	1LT-0503	Steam Generator Wide Range Level Loop 1C
1FW028	1LT-0504	Steam Generator Wide Range Level Loop 1D
1MS098	1PT-0514	Steam Generator Loop 1A Steam Pressure
1MS099	1PT-514B	Steam Generator Loop 1A Steam Pressure

TABLE 2.4-7L (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS102	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS103	1PT-524B	Steam Generator Loop 1B Steam Pressure
1MS106	1PT-534	Steam Generator Loop 1C Steam Pressure
1MS107	1PT-534B	Steam Generator Loop 1C Steam Pressure
1MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1RC371	1LT-459B	Pressurizer Level
1RC406	1LT-460B	Pressurizer Level
1RC612		All 4 WR RC Temp. Hot and Cold Legs
1RC613		All 4 WR RC Temp. Hot and Cold Legs
1RH074	1TE-0604	RHR Hx 1RH02AA Out Temp.
1RH075	1FT-0618	RHR Pump 1A Discharge Flow
1RH079	1TE-0605	RHR Hx 1RH02AB Out Temp.
1RH084	1FT-0619	RHR Pump 1B Discharge Flow

TABLE 2.4-72

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.4A-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby	1AF01PB-2	Aux Feedwater Pump	1AF061	1AF01PB	Aux Feedwater Pump-C
	1AF006A-1	ESW to AF Pump	1AF075	1AF01PB	Aux Feedwater Pump-C
		Suction Valve	1AF076	1AF01PB	Aux Feedwater Pump-C
	1AF006B-2	ESW to AF Pump	1AF142	1AF01PB	Aux Feedwater Pump-C
		Suction Valve	1AF194	1AF01PB	Aux Feedwater Pump-C
	1AF017B-2	ESW to AF Pump	1AF195	1AF01PB	Aux Feedwater Pump-K
		Suction Valve	1AF244	1AF01PB	Aux Feedwater Pump-P
			1AF245	1AF01PB	Aux Feedwater Pump-P
			1AF246	1AF01PB	Aux Feedwater Pump-P
			1AF247	1AF01PB	Aux Feedwater Pump-P
			1AF249	1AF01PB	Aux Feedwater Pump-P
			1AF250	1AF01PB	Aux Feedwater Pump-P
			1AF252	1AF01PB	Aux Feedwater Pump-P
Cold Shutdown		None			None
Support	1SX04P	Aux Feedwater Pump	1AF161	1AF01PB-A	Aux Feedwater Pump
		Cooling Water Pump			Lube Oil Pump-P
	1SX173	Service Water to	1AF166	1AF01PB-A	Aux Feedwater Pump
		Cooling Water Pump			Lube Oil Pump-C
		Suction Valve	1AF167	1AF01PB-A	Aux Feedwater Pump
	1SX178	AF Auxiliaries to			Lube Oil Pump-C
		Service Water Return	1AF178	1AF01PB-A	Aux Feedwater Pump
		Valve			Lube Oil Pump-C
	1VA08S	AF Pump Cubicle Cooler			
	1VA08CA	AF Pump Cubicle Fan			
	1VA08CB	AF Pump Cubicle Fan			
	1AF01PB-A	AF Pump Lube Oil Pump			

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TABLE 2.4-73

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.4C-0

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1MS001	1MS018A	Atmospheric Main Steam Relief Valve-C
			1MS008	1MS018B	Atmospheric Main Steam Relief Valve-C
			1MS014	1MS018C	Atmospheric Main Steam Relief Valve-C
			1MS020	1MS018D	Atmospheric Main Steam Relief Valve-C
			1MS081	1MS018A,D	Atmospheric Main Steam Relief Valve-C
			1MS082	1MS018B,C	Atmospheric Main Steam Relief Valve-C
Cold Shutdown		None	1AB004	1AB03P	Boric Acid Transfer Pumps-C
			1AB005	1AB03P	Boric Acid Transfer Pumps-C
			1AB006	1AB03P	Boric Acid Transfer Pumps-C
Support	0VI01J	Local Control Panel	1AF014	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
	1PL04J	Remote Control Panel			
	1PL05J	Remote Control Panel	1AF019	1AF01PA-A	Aux Feedwater Pump Lube Oil Pump-C
	1PL06J	Remote Control Panel			
			1AF158	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF160	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C

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TABLE 2.4-73 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1AF274	1AF02PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1CV028	1CV01PA-A	Centrifugal Charging Pump Lube Oil Pump-C
			1CV033	1CV01PB-A	Centrifugal Charging Pump Lube Oil Pump-C
			1VI002	0VI01C	Remote Shutdown Control Room Fan-C
			1VI004	0VI02C	Remote Shutdown Control Room Fan-C
			1VI022	0VI01C,2C	Remote Shutdown Control Room Fan-C
			1SI003		

B/B

TABLE 2.4-74

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.4C-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF143	1FT-AF011B	AFW Pump Flow
1AF144	1FT-AF012B	AFW Pump Flow
1CD080	1LT-CD051B	Condensate Storage Tank Level
1FW025	1LT-0501	Steam Generator Wide Range Loop 1A
1FW026	1LT-0502	Steam Generator Wide Range Loop 1B
1FW027	1LT-0503	Steam Generator Wide Range Loop 1C
1FW028	1LT-0504	Steam Generator Wide Range Loop 1D
1MS099	1PT-514B	Steam Generator Loop 1A Pressure
1MS103	1PT-524B	Steam Generator Loop 1B Pressure
1MS107	1PT-534B	Steam Generator Loop 1C Pressure
1MS110	1PT-544	Steam Generator Loop 1D Pressure
1RC371	1LT-459B	Pressure Level

TABLE 2.4-74 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RC406	1LT-460B	Pressure Level
1RC614	1TE-0443A	Wide Range Loop 1A Hot Leg Temp.

TABLE 2.4-75

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.5-0

	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
FUNCTION	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1AF001	1AF01PA-M	Aux Feedwater Pump-P
			1CV001	1CV01PA	Centrifugal Charging Pump-P
			1LV002	1MS018A,D	Atmospheric Main Steam Relief Valve-C A,D
			1RY394	1RY8000A	PORV Block Valve-C
			1RY398	1RY455A	PORV-C
Cold Shutdown	1AB03P	Boric Acid Transfer Pump	1AB001	0,1AB03P	Boric Acid Transfer Pumps-P
	0AB03P	Boric Acid Transfer Pump	1AB002	1AB03P	Boric Acid Transfer Pumps-P
	1AB03T	Boric Acid Tank	1AB003	0AB03P	Boric Acid Transfer Pumps-P
			1AB004	0,1AB03P	Boric Acid Transfer Pumps-C
			1AB005	0,1AB03P	Boric Acid Transfer Pumps-C
			1AB006	0,1AB03P	Boric Acid Transfer Pumps-C
			1RH001	1RH01PA-1	RHR Pump-P
			1RH008	1RH01PB-2	RHR Pump-P
Support		None	1VA115	1VA01CE	ESW Pump Cubicle Cooler Fan-C
			1VA137	1VA06CB	CCP Pump Cubicle Cooler Fan-C
			1VA141	1VA06CD	CCP Pump Cubicle Cooler Fan-C

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TABLE 2.4-75 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1VA150	1VA02CB	RHR Pump Cubicle Cooler Fan-C
			1VA165	1VA01CD	RHR Pump Cubicle Cooler Fan-C
			1VA170	1VA01CH	ESW Pump Cubicle Cooler Fan-C
			1VA583	1VA08CA	AF Pump Cubicle Cooler Fan-P
			1VD082	1VD03CA	DG Room Fan-P
			1VD084	1VD03CA	DG Room Fan-C
			1VD085	1VD03CB	DG Room Fan-P
			1VD086	1VD03CB	DG Room Fan-C
			1VE028	1VE01C	Misc Electric Equip Room Fan-C
			1VE031	1VE04C	Misc Electric Equip Room Fan-C
			1VE032	1VE04C	Misc Electric Equip Room Fan-P
			1VI001	0VI01C	Remote Shutdown Control Room Fan-P
			1VI002	0VI01C	Remote Shutdown Control Room Fan-C
			1VI003	0VI02C	Remote Shutdown Control Room Fan-C
			1VI004	0VI02C	Remote Shutdown Control Room Fan-C
			1VI022	0VI01C,2C	Remote Shutdown Control Room Fan-C
			1VX006	1VX01C	ESF Switchgear Cable Tunnel Fan-P

B/B

TABLE 2.4-75 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE NUMBER	EQUIPMENT LOCATED IN ZONE DESCRIPTION	POWER CABLES ROUTED THROUGH ZONE CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1VX007	1VX01C	ESF Switchgear Cable Tunnel Fan-C
			1VX102	1VE03C,4C	Misc Electric Equip Room Fans-C
			1AF160	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF162	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AF169	1AF01PB-A	Aux Feedwater Pump Lube Oil Pump-C
			1AP093	1AP14E	
			1AP143	1AP21E	
			1AP144	1AP25E	
			1AP146	1AP26E	
			1AP147	1AP22E	
			1AP149	1AP23E	
			1AP152	1AP24E	
			1AP154	1AP32E	
			1AP156	1AP38E	
			1AP166	1AP39E	
			1AP168	1AP43E	
			1AP169	1AP45E	
			1AP254	1AP23E	
			1AP258	1AP42E	
			1AP261	1AP42E	
			1AP271	1AP43E	
			1AP447	1AP45E	

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TABLE 2.4-76

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.5-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF077	1FT-AF011	AFW Pump Flow
1AF079	1FT-AF012	AFW Pump Flow
1AF144	1PT-AF012B	AFW Pump Flow
1CC095	1FT-0688	CCW RHR Hx AC Dish. Flow
1CD080	1LT-CD051B	Condensate Storage Tank Level
1CV139	1PT-0121	Chrg. HDR Flow
1FW017	1LT-0501	Steam Generator Wide Range Level Loop 1A
1FW025	1LT-0501	Steam Generator Wide Range Level Loop 1A
1FW026	1LT-0502	Steam Generator Wide Range Level Loop 1B
1FW027	1LT-0503	Steam Generator Wide Range Level Loop 1C
1FW028	1LT-0504	Steam Generator Wide Range Level Loop 1D
1IP020	1PA02J	Power Feed; Alternate Feed Available

TABLE 2.4-76 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1IP020	1PA06J	Power Feed; Alternate Feed Available
1IP032	1PA 03J	Power Feed; Alternate Feed Available
1IP032	1PA07J	Power Feed; Alternate Feed Available
1IP044	1PA04J	Power Feed; Alternate Feed Available
1IP044	1PA08J	Power Feed; Alternate Feed Available
1MS098	1PT-0514	Steam Generator Loop 1A Steam Pressure
1MS099	1PT-514B	Steam Generator Loop 1A Steam Pressure
1MS102	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS103	1PT-524B	Steam Generator Loop 1B Steam Pressure
1MS106	1PT-534	Steam Generator Loop 1C Steam Pressure
1MS107	1PT-534B	Steam Generator Loop 1C Steam Pressure

TABLE 2.4-76 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1RC350	1TE-413A	Wide Range Loop 1A Hot Leg RTD
1RC355	1TE-423A	Wide Range Loop 1B Hot Leg RTD
1RC360	1TE-433A	Wide Range Loop 1C Hot Leg RTD
1RC365	1TE-443A	Wide Range Loop 1D Hot Leg RTD
1RC371	1LT-459B	Pressurizer Level
1RC406	1LT-0460B	Pressurizer Level
1RC613	1TE-0413B	Cold Leg RTD Loop 1A, 1B, 1C, 1D
1RH074	1TE-0604	RHR Hx AA Outlet Temeprature
1RH075	1FT-0618	RHR Pump 1A Dish. Flow
1RH079	1TE-0605	RHR Hx AB Outlet Temperature
1RH084	1FT-0619	RHR Pump 1B Dish. Flow
1RY200	1LT-459	Pressurizer Level
1RY227	1TE-0454	Pressurizer Temperature
1SI467	1LT-0930	RWST Level
1SI469	1LT-0932	RWST Level

TABLE 2.4-77

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.5-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1CV011	1CV01PB	Centrifugal Charging Pump-P
			1RY022	1RY03EA	Pressurizer Heater-P
			1RY023	1RY03EA	Pressurizer Heater-P
			1RY024	1RY03EA	Pressurizer Heater-P
			1RY025	1RY03EA	Pressurizer Heater-P
			1RY026	1RY03EA	Pressurizer Heater-P
			1RY027	1RY03EA	Pressurizer Heater-P
			1RY028	1RY03EA	Pressurizer Heater-P
			1RY029	1RY03EA	Pressurizer Heater-P
			1RY030	1RY03EA	Pressurizer Heater-P
			1RY031	1RY03EA	Pressurizer Heater-P
			1RY032	1RY03EA	Pressurizer Heater-P
			1RY033	1RY03EA	Pressurizer Heater-P
			1RY034	1RY03EA	Pressurizer Heater-P
			1RY035	1RY03EA	Pressurizer Heater-P
			1RY036	1RY03EA	Pressurizer Heater-P
			1RY037	1RY03EA	Pressurizer Heater-P
			1RY038	1RY03EA	Pressurizer Heater-P
			1RY039	1RY03EA	Pressurizer Heater-P
			1RY040	1RY03EA	Pressurizer Heater-P
			1RY041	1RY03EA	Pressurizer Heater-P
			1RY042	1RY03EA	Pressurizer Heater-P
			1RY043	1RY03EA	Pressurizer Heater-P
			1RY044	1RY03EA	Pressurzier Heater-P
			1RY045	1RY03EA	Pressurizer Heater-P
			1RY046	1RY03EA	Pressurizer Heater-P
			1RY047	1RY03EA	Pressurizer Heater-P
			1RY048	1RY03EA	Pressurizer Heater-P

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TABLE 2.4-77 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby (Cont'd)			1RY049	1RY03EA	Pressurizer Heater-P
			1RY050	1RY03EA	Pressurizer Heater-P
			1RY051	1RY03EA	Pressurizer Heater-P
			1RY052	1RY03EA	Pressurizer Heater-P
			1RY053	1RY03EA	Pressurizer Heater-P
			1RY054	1RY03EA	Pressurizer Heater-P
			1RY055	1RY03EA	Pressurizer Heater-P
			1RY056	1RY03EA	Pressurizer Heater-P
			1RY057	1RY03EA	Pressurizer Heater-P
			1RY058	1RY03EA	Pressurizer Heater-P
			1RY059	1RY03EA	Pressurizer Heater-P
			1RY060	1RY03EA	Pressurizer Heater-P
			1RY061	1RY03EA	Pressurizer Heater-P
			1RY062	1RY03EA	Pressurizer Heater-P
			1RY064	1RY03ED	Pressurizer Heater-P
			1RY065	1RY03ED	Pressurizer Heater-P
			1RY066	1RY03ED	Pressurizer Heater-P
			1RY067	1RY03ED	Pressurizer Heater-P
			1RY068	1RY03ED	Pressurizer Heater-P
			1RY069	1RY03ED	Pressurizer Heater-P
			1RY070	1RY03ED	Pressurizer Heater-P
			1RY071	1RY03ED	Pressurizer Heater-P
			1RY072	1RY03ED	Pressurizer Heater-P
			1RY073	1RY03ED	Pressurizer Heater-P
			1RY074	1RY03ED	Pressurizer Heater-P
			1RY075	1RY03ED	Pressurizer Heater-P
			1RY076	1RY03ED	Pressurizer Heater-P
			1RY077	1RY03ED	Pressurizer Heater-P
			1RY078	1RY03ED	Pressurizer Heater-P
			1RY079	1RY03ED	Pressurizer Heater-P

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TABLE 2.4-77 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby (Cont'd)			1RY080	1RY03ED	Pressurizer Heater-P
			1RY081	1RY03ED	Pressurizer Heater-P
			1RY082	1RY03ED	Pressurizer Heater-P
			1RY083	1RY03ED	Pressurizer Heater-P
			1RY084	1RY03ED	Pressurizer Heater-P
			1RY085	1RY03ED	Pressurizer Heater-P
			1RY086	1RY03ED	Pressurizer Heater-P
			1RY087	1RY03ED	Pressurizer Heater-P
			1RY088	1RY03ED	Pressurizer Heater-P
			1RY089	1RY03ED	Pressurizer Heater-P
			1RY090	1RY03ED	Pressurizer Heater-P
			1RY091	1RY03ED	Pressurizer Heater-P
			1RY092	1RY03ED	Pressurizer Heater-P
			1RY093	1RY03ED	Pressurizer Heater-P
			1RY094	1RY03ED	Pressurizer Heater-P
			1RY095	1RY03ED	Pressurizer Heater-P
			1RY096	1RY03ED	Pressurizer Heater-P
			1RY097	1RY03ED	Pressurizer Heater-P
			1RY098	1RY03ED	Pressurizer Heater-P
			1RY258	1RY03EA	Pressurizer Heater-P
			1RY259	1RY03ED	Pressurizer Heater-P
			1RY347	1RY03EA	Pressurizer Heater-P
			1RY348	1RY03EA	Pressurizer Heater-P
			1RY349	1RY03ED	Pressurizer Heater-P
			1RY350	1RY03ED	Pressurizer Heater-P
			1RY392	1RY8000A	PORV Block Valve-C
			1RY393	1RY8000A	PORV Block Valve-P
			1RY398	1RY455A	PORV-C

B/B

TABLE 2.4-77 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Cold Shutdown		None			None
Support		None	1VA001	0VA01CA	Aux Building Fan-P
			1VA016	0VA02CA	Aux Building Fan-P
			1VA152	1VA02CD	RHR Pump Room Cubicle Fan-P
			1VA153	1VA02CD	RHR Pump Room Cubicle Can-C
			1VE031	1VE04C	Misc Electric Equip Room Fan-C
			1VE032	1VE04C	Misc Electric Equip Room Fan-P
			1AP146	1AP26E	480-V MCC 131X4

B/B

TABLE 2.4-78

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.5A-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1RY392	1RY8000A	Pressurizer Relief Isolation Valve 1A
			1RY393	1RY8000A	Pressurizer Relief Isolation Valve 1A
			1RY394	1RY8000A	Pressurizer Relief Isolation Valve 1A
			1RY398	1RY455A	Pressurizer Power Relief Valve
			1RY258	1RY03EA	Pressurizer Heater-A
			1RY259	1RY03ED	Pressurizer Heater-D
Cold Shutdown		None			None
Support	1AP26E	480-V MCC 131X4	1AP144	1AP25E	480-V MCC 131X2
			1AP146	1VE04C	Misc Electrical Equip Room Fan
			1VA001	0VA01CA	Aux Bldg Supply Fan 0A Fan 0A
			1VA016	0VA02CA	Aux Bldg Exhaust Fan 0A
			1VE031	1VE04C	Misc Elecctrical Equip Room Fan
			1VE032	1VE04C	Misc Electrical Equip Room Fan

TABLE 2.4-79

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.5A-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1FW017	1LT-0501	Steam Generator Wide Range Level Loop 1A
1FW023	1LT-0504	Steam Generator Wide Range Level Loop 1D
1IP002	1PA01J	Power Feed; Alternate Feed Available
1IP002	1PA05J	Power Feed; Alternate Feed Available
1IP030	1PA03J	Power Feed; Alternate Feed Available
1MS125	1PT-526	Steam Generator Loop 1B Pressure
1MS126	1PT-526	Steam Generator Loop 1C Pressure
1RC350	1TE-413A	Wide Range Loop 1A Hot Leg Temperature
1RC355	1TE-423A	Wide Range Loop 1B Hot Leg Temperature
1RC360	1TE-433A	Wide Range Loop 1C Hot Leg Temperature
1RC365	1TE-443A	Wide Range Loop 1D Hot Leg Temperature
1RY198	1PT-455	Pressurizer Pressure
1RY200	1LT-459	Pressurizer Level
1RY206	1PT-457	Pressurizer Pressure

TABLE 2.4-79 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RY208	1LT-461	Pressurizer Level
1RY227	1TE-0454	Pressurizer Temperature
1SI467	1LT-0930	RWST Level
1SI469	1LT-0932	RWST Level

TABLE 2.4-80

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.6-0

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1AF001	1AF01PA	1A Aux Feed Pump-Motor Driven
			1CV001	1CV01PA	1A Centrifugal Charging Pump
			1RY398	1RY455A	Pressurizer Power Relief Valve
			1RY394	1RY8000A	Pressurizer Relief Isolation Valve 1A*
			1RY258	1RY03EA	Pressurizer Heater-A
			1RY259	1RY03ED	Pressurizer Heater-D
			1AP169	1MS018B	Atmospheric MS Relief Valve
			1AP169	1MS018C	Atmospheric MS Relief Valve
			1AP447	1MS018B	Atmospheric MS Relief Valve
			1AP447	1MS018C	Atmospheric MS Relief Valve
			1LV002	1MS018A	Atmospheric MS Relief Valve
			1LV002	1MS018D	Atmospheric MS Relief Valve
			1LV004	1MS018B	Atmospheric MS Relief Valve
			1LV004	1MS018C	Atmospheric MS Relief Valve

B/B

*Assumed to be Hot Standby equipment although not listed in Table 2, "Primary Systems Hot Standby Equipment."

TABLE 2.4-80 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby (Cont'd)			1AP093**	1MS018A	Atmospheric MS Relief Valve
			1AP093**	1MS018D	Atmospheric MS Relief Valve
			1AP144**	1RY8000A	Pressurizer Relief Isolation Valve 1A*
Cold Shutdown		None	1RH001	1RH01PA-1	RHR Pump 1A
			1AB005	1AB03P	Boric Acid Transfer Pump-1
			1AB005	0AB03P	Boric Acid Transfer Pump-0
			1AB006	1AB03P	Boric Acid Transfer Pump-1
			1AB006	0AB03P	Boric Acid Transfer Pump-0
			11AP093***	0AB03P	Boric Acid Transfer Pump-0

*Assumed to be Hot Standby equipment although not listed in Table 2, "Primary Systems Hot Standby Equipment."
**Also listed under Cold Shutdown.
***Also listed under Hot Standby

B/B

TABLE 2.4-80 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support	1AP30E	480-V MCC 131X5	1AF014	1AF01PA	Aux Feedwater Pump 1A Lube Oil Pump
	1AP32E	480-V MCC 132X5	1AF019	1AF01PA	Aux Feedwater Pump 1A Lube Oil Pump
			1AP143	1VA01CC	Essential Service Water Pump Room Cubicle Fan
			1AP143	1VA01CD	Essential Service Water Pump Room Cubicle Fan
			1AP143	1VA02CA	RHR Pump Room Cubicle Fan and Cooler
			1AP143	1VA06CA	Centrifugal Charging Pump Room Cubicle Fan and Cooler
			1AP143	1CV01PA	Centrifugal Charging Pump 1A Lube Oil Pump
			1AP144	1RH8701A	RHR Loop 1A Inlet Isolation Valve 1A
			1AP144	1RH8702A	RHR Loop 1C Inlet Isolation Valve 1A
			1AP146	1VE04C	Misc Electric Equipment Room Fan
			1AP147	1VA06CB	Centrifugal Charging Pump Rm Cubicle Fan
			1AP147	1AF01PA	Aux Feedwater Pump 1A Lube Oil Pump
			1AP147	1VD03CA	DG Rm 1A Exhaust Fan

B/B

TABLE 2.4-80 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1AP148	1DO01PC	DG 1A Fuel Oil Transfer Pump 1C
			1AP148	1VA02CB	RHR Pump Rm Cubicle Fan
			1AP148	1VX04C	ESF SWGR Room Fan
			1AP148	1VE03C	Battery Room Exhaust Fan
			1CC001	1CC01PA	Component Cooling Pump 1A
			1CC019	0CC01P	Common Component Cocling Pump-0
			1CV028	1CV01PA	Centrifugal Charging Pump 1A Lube Oil Pump
			1CV498	1CV01PA	Centrifugal Charging Pump 1A Lube Oil Pump
			1DG174	1DG01KA	Diesel Generator 1A
			1DO001	1DO01PA	DG 1A Fuel Oil XFER Pump 1A
			1DO002	1DO01PA	DG 1A Fuel Oil XFER Pump 1A
			1DO004	1DO01PC	DG 1A Fuel Oil XFER Pump 1C
			1DO005	1DO01PC	DG 1A Fuel Oil XFER Pump 1C
			1VD084	1VD03CA	DG Rm 1A Exhaust Fan
			1SX001	1SX01PA	Essentail Service Water Pump 1A
			1VA001	0VA01CA	Aux Bldg Supply Fan 0A
			1VA016	0VA02CA	Aux Bldg Exhaust Fan 0A
			1VA053	1VA06CA	Centrifugal Charging Pump Room 1A Cubicle Cooler and Fan

B/B

TABLE 2.4-80 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1VA104	1VA02CA	RHR Pump Room Cubicle Cooler and Fan
			1VA111	1VA01CA	Essential Service Water Pump Room Cubicle Cooler and Fan
			1VA137	1VA06CB	Centrifugal Charging Pump Room 1A Fan
			1VA146	1VA02CB	RHR Pump Room Fan
			1VA149	1VA02CB	RHR Pump Room Fan
			1VA150	1VA02CB	RHR Pump Room Fan
			1VA165	1VA01CD	Essential Service Water Pump Room Fan
			1VE016	1VE03C	Battery Room Exhaust Fan
			1VE018	1VE03C	Battery Room Exhaust Fan
			1VE031	1VE04C	Misc Electric Equipment Room Fan
			1VE032	1VE04C	Misc Electric Equipment Room Fan
			1VX001	1VX04C	ESF SWGR Room Fan
			1VX003	1VX04C	ESF SWGR Room Fan
			1VX004	1VX04C	ESF SWGR Room Fan
			1VX102	1VE04C	Misc Electric Equipment Room Fan
			1VX102	1VE03C	Battery Room Exhaust Fan
			1AF160	1AF01PB	Aux Feedwater Pump 1B Lube Oil Pump
			1AF162	1AF01PB	Aux Feedwater Pump 1B Lube Oil Pump
			1AF169	1AF01PB	Aux Feedwater Pump 1B Lube Oil Pump

TABLE 2.4-80 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Support (Cont'd)			1AP154	1DO01PD	DG 1B Fuel Oil XFER Pump 1D
			1AP154	1VX01C	ESF SWGR Room Fan
			1DG178	1DG01KB	Diesel Generator 1B
			1DO009	1DO01PD	DG 1B Fuel Oil XFER Pump 1D
			1DO010	1DO01PD	DG 1B Fuel Oil XFER Pump 1D
			1VE028	1VE02C	Battery Room Exhaust Fan
			1VX006	1VX01C	ESF SWGR Room Fan
			1VX007	1VX01C	ESF SWGR Room Fan

B/B

TABLE 2.4-81

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.6-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF077	1FT-AF011	AFW Pump Flow
1AF079	1FT-AF012	AFW Pump Flow
1AF143	1FT-AF011B	AFW Pump Flow
1CC095	1FT-0688	CCW RHR Hx 2AC Dis. Flow
1CD080	1LT-CD051B	Condensate Storage Tank Level
1CV019	1FT-0110	Boric Acid Pump Flow
1CV113	1FT-0110	Boric Acid Pump Flow
1CV139	1FT-0121	Chrg. HDR Flow
1FW017	1LT-0501	Steam Generator Wide Range Level Loop 1A
1FW025	1LT-0501	Steam Generator Wide Range Level Loop 1A
1FW026	1LT-0502	Steam Generator Wide Range Level Loop 1B
1FW027	1LT-0503	Steam Generator Wide Range Level Loop 1C

TABLE 2.4-81 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1RC360	1TE-433A	Wide Range Loop 1C Hot Leg Temperature
1RC365	1TE-443A	Wide Range Loop 1D Hot Leg Temperature
1RC371	1LT-459B	Pressurizer Level
1RC406	1LT-460B	Pressurizer Level
1RC613	1TE-0423B	Wide Range Loop 1B Cold Leg Temperature
1RH074	1TE-0604	RHR Hx AA Out Temperature
1RH075	1FT-0618	RHR Pump 1A Dis. Flow
1RH079	1TE-0605	RHR Hx AB Out Temperature
1RH084	1FT-0619	RHR Pump 1B Dis. Flow
1RY200	1LT-459	Pressurizer Level
1RY227	1TE-0454	Pressurizer Temperature
1SI467	1LT-0930	RWST Level

Table 2.4-81 (Cont'd)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1FW028	1LT-0504	Steam Generator Wide Range Level Loop 1D
1IP004	1PA01J 1PA05J	Power Feed; Alternate Feed Available
1IP032	1PA03J 1PA07J	Power Feed; Alternate Feed Available
1MS098	1PT-0514	Steam Generator Loop 1A Steam Pressure
1MS099	1PT-514B	Steam Generator Loop 1A Steam Pressure
1MS102	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS103	1PT-524B	Steam Generator Loop 1B Steam Pressure
1MS106	1PT-534	Steam Generator Loop 1C Steam Pressure
1MS107	1PT-534	Steam Generator Loop 1C Steam Pressure
1MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1RC350	1TE-413A	Wide Range Loop 1A Hot Leg Temperature
1RC355	1TE-423A	Wide Range Loop 1B Hot Leg Temperature

R/B

TABLE 2.4-82

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.6-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None	1CV011	1CV01PB	Centrifugal Charging Pump 1B
			1RY251	1RY456	Pressurizer Power Relief Valve
			1RY395	1RY8000B	Pressurizer Relief Isolation Valve 1B*
			1RY396	1RY8000B	Pressurizer Relief Isolation Valve 1B*
			1RY397	1RY8000B	Pressurizer Relief Isolation Valve 1B*
			1RY111	1RY03EC	Pressurizer Heater C
			1RY112	1RY03EC	Pressurizer Heater C
			1RY193	1RY03EC	Pressurizer Heater C
			1RY194	1RY03EC	Pressurizer Heater C
			1RY260	1RY03EC	Pressurizer Heater C
			1RY261	1RY03EB	Pressurizer Heater B
			1RY351	1RY03EB	Pressurizer Heater B
			1RY352	1RY03EB	Pressurizer Heater B
			1RY116-1RY150 (Even #'s only)	1RY03EC 1RY06E 1RY01S	Pressurizer Heater C from 480-V* Htr Group to PEN to Heater
			1RY152-1RY192 (Even #'s only)	1RY03EB 1RY05E 1RY01S	Pressurizer Heater B from 480-V* Htr Group to PEN to Heater

*Assumed to be Hot Standby equipment, although not listed in Table 2, "Primary Systems Hot Standby Equipment."

B/B

TABLE 2.4-82 (Cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Cold Shutdown		None			None
Support	1AP28E	480-V MCC 132X4	1VA001	0VA01CA	Aux Bldg Supply Fan 0A
			1VA006	0VA02CA	Aux Bldg Exhaust Fan 0A
			1VA009	0VA01CB	Aux Bldg Supply Fan 0B
			1VA019	0VA02CB	Aux Bldg Exhaust Fan 0B
			1VA152	1VA02CD	RHR Pump Room 1B Cubicle Fan D
			1VA153	1VA02CD	RHR Pump Room 1B Cubicle Fan D
			1VA154	1VA02CD	RHR Pump Room 1B Cubicle Fan D
			1VE006	1VE01C	Misc Electric Equipment Room Fan
			1VE012	1VE02C	Battery Room Exhaust Fan
			1VE014	1VE02C	Battery Room Exhaust Fan

B/B

TABLE 2.4-83

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 11.6A-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1CV113	1FT-0110	Boric Acid Pump Flow

TABLE 2.4-84

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 11.7-0

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	0VA02CA	Auxiliary Bldg Exhaust Fan	1VA001	0VA01CA	Auxiliary Bldg Supply Fan
	0VA02CB	Auxiliary Bldg Exhaust Fan	1VA009	0VA01CB	Auxiliary Bldg Supply Fan
	0VA02CC	Auxiliary Bldg Exhaust Fan	1VA016	0VA02CA	Auxiliary Bldg Exhaust Fan
	0VA02CD	Auxiliary Bldg Exhaust Fan	1VA019	0VA02CB	Auxiliary Bldg Exhaust Fna

B/B

TABLE 2.4-85

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 12.1-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1SI467	1LT-0930	RWST Level

TABLE 2.4-86

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 14.1-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1AF143	1FT-AF011	AFW Pump Flow
1AF143	1FT-AF013	AFW Pump Flow
1AF143	1FT-AF015	AFW Pump Flow
1AF143	1FT-AF017	AFW Pump Flow
1AF144	1FT-AF012	AFW Pump Flow
1AF144	1FT-AF014	AFW Pump Flow
1AF144	1FT-AF016	AFW Pump Flow
1AF144	1FT-AF018	AFW Pump Flow
1FW025	1LT-0501	Steam Generator Loop 1A Wide Range Level
1FW026	1LT-0502	Steam Generator Loop 1B Wide Range Level
1FW027	1LT-0503	Steam Generator Loop 1C Wide Range Level
1FW028	1LT-0504	Steam Generator Loop 1D Wide Range Level

TABLE 2.4-86 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS099	1PT-514	Steam Generator Loop 1A Steam Pressure
1MS103	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS107	1PT-534	Steam Generator Loop 1C Steam Pressure
1MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1RC371	1LT-459	Pressurizer Level
1RC406	1LT-460	Pressurizer Level

TABLE 2.4-87

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 17.2-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support		None	1SX103	0SX03CE	Essential Service Cooling Tower Fan
			1SX104	0SX03CE	Essential Service Cooling Tower Fan
			1SX113	0SX03CF	Essential Service Cooling Tower Fan
			1SX114	0SX03CF	Essential Service Cooling Tower Fan
			2SX103	0SX03CG	Essential Service Cooling Tower Fan
			2SX104	0SX03CG	Essential Service Cooling Tower Fan
			2SX113	0SX03CH	Essential Service Cooling Tower Fan
			2SX114	0SX03CH	Essential Service Cooling Tower Fan

B/B

TABLE 2.4-88

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 17.2-2

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support		None	1SX098	0SX03CA	Essential Service Cooling Tower Fan*
			1SX099	0SX03CA	Essential Service Cooling Tower Fan*
			1SX108	0SX03CB	Essential Service Cooling Tower Fan*
			1SX109	0SX03CB	Essential Service Cooling Tower Fan*
			2SX098	0SX03CC	Essential Service Cooling Tower Fan*
			2SX099	0SX03CC	Essential Service Cooling Tower Fan*
			2SX108	0SX03CD	Essential Service Cooling Tower Fan*
			2SX109	0SX03CD	Essential Service Cooling Tower Fan*

* Although not listed in Table 3, Primary Systems Cold Shutdown Equipment," these fans assumed to apply to Cold Shutdown.

B/B

TABLE 2.4-90

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 18.1-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
			1IP020	1PA02J	Power Feed; Alternate Feed Available
			1IP020	1PA06J	Power Feed; Alternate Feed Available
			1IP044	1PA04J	Power Feed; Alternate Feed Available
			1IP044	1PA08J	Power Feed; Alternate Feed Available

TABLE 2.4-91

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 18.2-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	1VX04C	ESF SWGR Room Fan	1VD001	1VD01CA	DG Room Vent Fan 1A
	1VD01CA	DG Room Vent Fan 1A	1VD071	1VD03CA	DG Room 1A Exhaust Fan
	1VE01J	Misc. Electric Equipment Room 2E	1VD084	1VD03CA	DG Room 1A Exhaust Fan
		Vent. Sys. Local Control Panel	1VX001	1VX04C	ESF SWGR Room Fan

TABLE 2.4-92

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 18.2-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS098	1PT-0514	Steam Generator Loop 1A Steam Pressure
MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1MS115	1PT-515	Steam Generator [illegible] 1A Steam Pressure
1MS124	1PT-545	Steam Generator Loop 1D Steam Pressure
1MS127	1PT-516	Steam Generator Loop 1[illegible] Steam Pressure
1MS128	1PT-546	Steam Generator Loop 1D Steam

TABLE 2.4-93

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 18.3-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby	1M5013A	Steam Generator Safety Valve	1M5001	1M5018A	Atmospheric M5 Relief Valve
	1M5013B	Steam Generator Safety Valve	1M5008	1M5018	Atmospheric M5 Relief Valve
	1M5013C	Steam Generator Safety Valve	1M5014	1M5018C	Atmospheric M5 Relief Valve
	1M5013D	Steam Generator Safety Valve	1M5020	1M5018D	Atmospheric M5 Relief Valve
	1M5014A	Steam Generator Safety Valve			
	1M5014B	Steam Generator Safety Valve			
	1M5014C	Steam Generator Safety Valve			
	1M5014D	Steam Generator Safety Valve			
	1M5015A	Steam Generator Safety Valve			
	1M5015B	Steam Generator Safety Valve			
	1M5015C	Steam Generator Safety Valve			
	1M5015D	Steam Generator Safety Valve			
	1M5016A	Steam Generator Safety Valve			
	1M5016B	Steam Generator Safety Valve			
	1M5016C	Steam Generator Safety Valve			
	1M5016D	Steam Generator Safety Valve			

TABLE 2.4-93 (cont'd)

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 18.3-1 (cont'd)

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
	1M5017A	Steam Generator Safety Valve			
	1M5017B	Steam Generator Safety Valve			
	1M5017C	Steam Generator Safety Valve			
	1M5017D	Steam Generator Safety Valve			
	1M5018A	Atmospheric M5 Relief Valve			
	1M5018B	Atmospheric M5 Relief Valve			
	1M5018C	Atmospheric M5 Relief Valve			
	1M5018D	Atmospheric M5 Relief Valve			
	1M5001A	M5 Isolation Valve			
	1M5001B	M5 Isolation Valve			
	1M5001C	M5 Isolation Valve			
	1M5001D	M5 Isolation Valve			
Cold Shutdown		None			
Support		None			

TABLE 2.4-94

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 18.3-1

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS098	1PT-0514	Steam Generator Loop 1A Steam Pressure
1MS102	1PT-524	Steam Generator Loop 1B Steam Pressure
1MS106	1PT-534	Steam Generator Loop 1C Steam Pressure
1MS110	1PT-544	Steam Generator Loop 1D Steam Pressure
1MS115	1PT-515	Steam Generator Loop 1A Steam Pressure
1MS118	1PT-525	Steam Generator Loop 1B Steam Pressure
1MS121	1PT-535	Steam Generator Loop 1C Steam Pressure
1MS124	1PT-545	Steam Generator Loop 1D Steam Pressure
1MS125	1PT-526	Steam Generator Loop 1B Steam Pressure
1MS126	1PT-536	Steam Generator Loop 1C Steam Pressure

TABLE 2.4-94 (Cont'd.)

CABLE NO.	EQUIP. NO.	DESCRIPTION
1MS127	1PT-516	Steam Generator Loop 1A Steam Pressure
1MS128	1PT-546	Steam Generator Loop 1D Steam Pressure

TABLE 2.4-95

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 18.4-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
			1IP033	1PA03J	Power Feed; Alternate Feed Not Available
			1IP033	1PA07J	Power Feed; Alternate Feed Not Available
			1IP034	1PA03J	Power Feed; Alternate Feed Not Available
			1IP034	1PA07J	Power Feed; Alternate Feed Not Available

TABLE 2.4-96

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 18.5-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
			1IP033	1PA03J	Power Feed; Alternate Feed Not Available
			1IP033	1PA07J	Power Feed; Alternate Feed Not Available
			1IP034	1PA03J	Power Feed; Alternate Feed Not Available
			1IP034	1PA07J	Power Feed; Alternate Feed Not Available

TABLE 2.4-97

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 18.14B-1

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	*	480V SWGR 1312-ESF Division 11	1SX103	OSX03CE	Essential Service Cooling Tower Fan*
			1SX104	OSX03CE	Essential Service Cooling Tower Fan*
			1SX113	OSX03CF	Essential Service Cooling Tower Fan*
			1SX114	OSX03CF	Essential Service Cooling Tower Fan*

*Although not listed in Table 3, "Primary System Cold Shutdown Equipment," these fans assumed to apply to Cold Shutdown.

TABLE 2.4-98

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 18.14B-2

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby		None			None
Cold Shutdown		None			None
Support	*	None	1SX098	0SX03CA	Essential Service Cooling Tower Fan*
			1SX099	0SX03CA	Essential Service Cooling Tower Fan*
			0SX108	0SX03CB	Essential Service Cooling Tower Fan*
			1SX109	0SX03CB	Essential Service Cooling Tower Fan*

*Although not listed in Table 3, "Primary Systems Cold Shutdown Equipment," these fans assumed to apply to Cold Shutdown.

TABLE 2.4-99

SAFE SHUTDOWN EQUIPMENT AND POWER CABLES FOR FIRE ZONE 18.23-0

FUNCTION	EQUIPMENT LOCATED IN ZONE		POWER CABLES ROUTED THROUGH ZONE		
	NUMBER	DESCRIPTION	CABLE NO.	EQUIP. NO.	DESCRIPTION
Hot Standby	1CD01T	Condensate Storage Tank			None
Cold Shutdown		None			None
Support		None			None

B/B

TABLE 2.4-100

INSTRUMENTATION CABLES ROUTED THROUGH FIRE ZONE 18.23-0

CABLE NO.	EQUIP. NO.	DESCRIPTION
1CD078	1LT-CD051	Condensate Storage Tank Level