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10 CFR 50.59

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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Joseph M. Farley Nuclear Plant
10 CFR 50.59 Annual Report


Gentlemen:

Attached for your review is the annual report required by 10 CFR 50.59 for 1991. This report summarizes changes to the plant performed in accordance with the provisions of 10 CFR 50.59 for Joseph M. Farley Nuclear Plant as described below.

- Attachment 1: Unit 1
- Attachment 2: Unit 2
- Attachment 3: Shared (Applicable to Units 1 and 2)

If you have any questions, please advise.

Respectfully submitted,


J. D. Woodard

JDW/DRC:map

Attachments

cc: Mr. S. D. Ebner
Mr. S. T. Hoffman
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SOUTHERN NUCLEAR OPERATING COMPANY

JOSEPH M. FARLEY NUCLEAR PLANT

ANNUAL REPORT

REQUIRED BY 10 CFR 50.59

Section 59 of Title 10, Part 50, "Domestic Licensing of Production and Utilization Facilities," of the Code of Federal Regulations, states that the holder of a license authorizing operation of a production or utilization facility may (1) make changes in the facility as described in the safety analysis report, and (2) make changes in the procedures as described in the safety analysis report, and (3) conduct tests or experiments not described in the safety analysis report, without prior commission approval, unless the proposed change, test or experiment involves a change in the technical specifications incorporated in the license or an unreviewed safety question (as defined in 10 CFR 50.59).

The licensee is required to maintain records of such changes, tests or experiments, and those records are required to include written safety evaluations which provide the basis for the determination that the changes, tests or experiments do not involve any unreviewed safety questions.

Brief descriptions and a summary of the safety evaluations for the changes, tests or experiments as described above, for the Joseph M. Farley Nuclear Plant which were completed in 1991, are provided in the following.

ATTACHMENT 1

UNIT 1 ANNUAL REPORT
REQUIRED BY 10 CFR 50.59

SUBJECT: FNP-1-SOP-12.2, Rev. 19

PORC REVIEW: PORC Meeting 2360, 08/16/91

DESCRIPTION: Provided guidance for operating containment mini-purge without the supply fan. This change provides a contingency method for controlling containment pressure when the mini-purge supply fan is unavailable. A jumper can be installed in the control circuit for the containment mini-purge exhaust fan which allows the fan to be operated by locally opening or closing the power supply breaker.

SAFETY EVALUATION: The containment isolation capability of the containment mini-purge system is not affected. Administrative controls ensure that pre-accident containment pressure is maintained within Technical Specification limits. During contingency operation a caution tag will be placed on the MCB handswitch to remind operators of the operating condition of the containment mini-purge.

SUBJECT: FNP-1-SOP-24.0, Rev. 31

PORC REVIEW: PORC Meeting 2335, 06/10/91

DESCRIPTION: Revised FNP-1-SOP-24.0 to include instructions to supply service water lube and cooling for the affected train from each pump's discharge vent, via a hose to the pump, should it become necessary to remove service water lube and cooling for maintenance or operational concerns. This revision requires voluntarily derating the affected train inoperable even though it is still functional. The inoperable train will be put into operation while the lube and cooling lines are being repaired, thereby providing cooling water to the ESF components.

SAFETY EVALUATION: Since any failure of the hose or pump is bounded by existing Service Water System failure events, and Technical Specification requirements will be complied with, this change is not considered to represent an unreviewed safety question.

SUBJECT: FNP-1-SOP-51.0, TCN 25C

PGRC REVIEW: PGRC Meeting 2259, 01/15/91

DESCRIPTION: Provided an alternate RCDT venting path for use when the waste gas system is out of service. The alternate path vents the RCDT via the sample connection on the RCDT vent line through polyethylene tubing to the WGDt sample station and into a WGDt. This method eliminates the need for a release in the penetration room and provides for control of RCDT pressure.

SAFETY EVALUATION: Polyethylene tubing with a burst rating of 500 psi which is much higher than the expected RCDT pressure will be used. Personnel will be present when venting is performed. This change does not create or worsen any potential accident. A leak at the sample panel would be no worse than a leak in existing sampling equipment and is not more likely to occur. An unisolated leak from this line would be much less severe than the postulated rupture of a WGDt since the RCDT gas space is smaller and is at a lower pressure than a WGDt. Thus, the potential leak rate would be less.

SUBJECT: MD 91-2328

PORC REVIEW: PORC Meeting 2325, 04/20/91

DESCRIPTION: Placed a jumper in the mini-purge exhaust fan circuit at location breaker FDG5 to temporarily defeat the interlocks that will not allow exhaust fan operation without the supply fan. This allowed the mini-purge exhaust fan to operate without the supply fan in service and with work in progress on the containment purge dampers.

SAFETY EVALUATION: The isolation function of the mini-purge exhaust dampers are unaffected by the minor departure. R24A and B radiation monitors and associated circuitry are unaffected by this change. The protection afforded by these devices for fuel accident or radiation release in containment is unimpaired. Additionally, containment ventilation A and B train isolation capabilities associated with the K622 contacts will not be affected. Tests and inspections performed on isolation valves per FSAR 6.2.4.4 are unaffected by this change.

SUBJECT: MD 91-2361

PORC REVIEW: PORC Meeting 2365, 08/29/91

DESCRIPTION: Isolated a leak found in one of the cooling coils in the LC Containment Cooler by removing the existing flexible hose assemblies at the inlet and outlet of the affected coil and adding blind flanges to the piping. This allowed the leaking coil to be isolated from the service water without having to isolate the entire cooler. The reduction in cooler capacity is insignificant and since the condition existed for only one cycle, no permanent change to the FSAR was required.

SAFETY EVALUATION: The isolation of one cooling coil does not have any adverse effect on the piping system stress level, pipe support design loads, piping movements or cooler nozzles. The reduction in cooling capacity has insignificant effects on the normal and accident containment temperature and pressures. The change does not have an adverse effect on any safe shutdown or plant systems.

SUBJECT: PCN S80-1-811, Rev. 2

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Installed an additional smoke detector head in switchgear room number 235, system 1A-31, in the Auxiliary Building.

SAFETY EVALUATION: NFPA 72E requires that at least one smoke detector head be installed in all bays where the beams that create them exceed 18 inches in depth. The ceiling of room 235 has five bays whose beams exceed 18 inches. Previously, system 1A-31 had only four detectors. The modification will not adversely impact any plant system or structure, nor will it adversely impact the effectiveness or responsiveness of system 1A-31, nor will it conflict with its design basis.

SUBJECT: PCN B84-1-2893, Rev. 0

PORC REVIEW: PORC Meeting 2264, 01/24/91

DESCRIPTION: Revised FSAR Figure 6.2-103 to reflect that manual controller (HIC-3556) for the post-accident containment combustible gas vent flow control valve FV-3556 is panel mounted. The controller was relocated from the penetration room isolation panel to the balance of plant panel to improve the operating configuration of the system and reduce potential operator radiation exposure.

SAFETY EVALUATION: The controller is non-safety related and performs no safety function. The function and operation of the system is unchanged by the relocation and replacement of the controller.

SUBJECT: PCN B84-1-2899, Rev. 2

PORC REVIEW: PORC Meeting 2270, 02/07/91

DESCRIPTION: Provided temporary power to instrumentation distribution panel N1R22L001B-N (Normal) from the 208V section of the MCC 1B through 30A breaker no. 14 and 20A breaker no. 14 of the 120V AC distribution panel Q1R21L005B-B. This temporary change allowed the plant to keep Radiation Monitor Cabinet 1A, Vent Stack Radiation Monitors and other loads energized during the replacement of the B-train inverters. The temporary cables were pulled between the 120V AC distribution panel Q1R21L005B-B and distribution panel N1R22L001B-N.

SAFETY EVALUATION: The temporary cables were only installed during outage operations. They were removed before resuming power operation. Installation of this temporary power resulted in an enhancement of the system during the inverter replacement implementation. Although design changes provided in these PCN revision represent a change to the plant as described in the FSAR, the affected Figure 8.3-24, Sheet 2, was not revised since the change was temporary.

SUBJECT: PCN B84-1-2899, Rev. 1

PORC REVIEW: PORC Meeting 2270, 02/07/91

DESCRIPTION: Changed FSAR, Appendix 9B and Section 8.3 to provide design for the replacement of Westinghouse inverters and Solatron regulators with SCI inverters and CVTs in the 120V vital and regulated AC distribution system.

SAFETY EVALUATION: The design, installation and hardware requirements specified by this PCN revision do not affect the design basis for the 120V vital and regulated AC power supply system and do not adversely affect the operation or integrity of any safety related system in the plant. The design improves the overall performance of the system.

SUBJECT:

PCN B84-1-2899, Rev. 4

PORC REVIEW:

PORC Meeting 2275, 02/21/91

DESCRIPTION:

Changed FSAR Figures 8.3-23, Sheet 1 and 8.3-24, Sheet 1 to reflect leaving the 70A breakers of the alternate source to the vital AC distribution panels 1A, 1B, 1C, 1D and the 90A breakers of the alternate source to the AC distribution panels 1J and 1K as spare breakers in the panels. The alternate source to the subject panels was no longer required.

SAFETY EVALUATION:

This design change does not affect the design basis for the 120V vital and regulated AC power supply system and does not adversely affect the operation or the integrity of any safety related system in the plant.

SUBJECT:

PCN B84-1-2899, Rev. 5

PORC REVIEW:

PORC Meeting 2275, 02/21/91

DESCRIPTION:

Provided temporary power to distribution panel N1R22L001B-N (1B) from the 208V section of MCC 1B through 15A breaker no. 16 of 120V AC distribution panel Q1R21L005B-B (1K) in order to keep loads on phase C of panel N1R22L005B-B energized during the replacement of B train inverters. The affected FSAR Figure 8.3-24, Sheet 1, was not revised since the change was temporary.

SAFETY EVALUATION:

An acceptable interface was made between the non-class 1E circuits associated with distribution panel 1B and the class 1E distribution panel 1K. The temporary cable for power was only installed during outage operations and was removed prior to resuming power operation. Installation of the temporary power enhanced the system during inverter replacement.

SUBJECT: PCN B84-1-2899, Rev. 8

PORC REVIEW: PORC Meeting 2296, 04/04/91

DESCRIPTION: Removed some kaowool fire barrier material from tray AHH806 in order to route a new power cable through a penetration. The removal was necessary to meet the cable ampacity derating requirements for the power cable. The design for reworking some interfering cables and raceways was changed so that no cable splicing was required. In addition, some flexible conduit/fitting size changes were made to some existing conduits being reworked to the new inverters. FSAR Appendix 9B was revised to reflect these changes.

SAFETY EVALUATION: The kaowool was not needed to maintain compliance with the requirements of 10 CFR 50, Appendix R, or for any other separation requirements. The FNP cables added were purchased in accordance with IEEE 383. The addition of the small amount of IEEE 383 qualified cable insulation does not increase the likelihood of a fire in Fire Area 1-01, room 223.

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SUBJECT: PCN S84-1-2904, Revs. 0 and 9

PORC REVIEW: PORC Meeting 1493, 02/25/86
2258, 01/15/91

DESCRIPTION: Replaced temperature switches NiP19TS573 through TS576 with a loop consisting of a temperature element, temperature transmitter, temperature alarm and a temperature indicator. The switches were used to monitor air temperature in the discharge headers for compressors 1A, 1B, 1C and 1D. They were unreliable and had caused numerous compressor trips. This design also allows the compressors, in the event of a loss of power, to be immediately restarted following restoration of power without requiring a manual reset to any temperature controller. FSAR Section 9.3 and Figure 9.3-1 were revised accordingly.

SAFETY EVALUATION: The temperature control loop provides more accuracy and reliability. The compressed air system is not required for safe shutdown of the plant. All of the new components are located in the Turbine Building and represent no Seismic II/I concerns. Electrical connections are made to non-safety related buses which have adequate capacity to power the new instrumentation.

SUBJECT: PCN S84-1-2914, Revs. 26 and 28

PORC REVIEW: PORC Meeting 1971, 02/23/89
2294, 03/28/91

DESCRIPTION: Revised FSAR Figures 9.2-2, Sheets 1 & 2, 9.2-3, Sheet 1, 9.2-4, Sheets 1 & 2, 9.5-18, Sheet 1, and 10.4-2, Sheet 1 & 2, to reflect the replacement of all 2" and under service water system piping with stainless steel piping. Some 1500 psig rated valves installed in service water system 2" and under piping will be replaced with 600 psig rated valves to reduce the valve weight imposed on the piping system.

SAFETY EVALUATION: Stainless steel piping replacement will provide adequate strength for system piping while minimizing the corrosion and crud accumulation problem. Plant reliability will be improved due to the decreased maintenance requirements. The use of 600 psig valves versus 1500 psig valves for service water piping improves the seismic capacity of system piping due to the lesser weight (almost half) and shorter overhang of the 600 psig valve. Also, the 600 psig valve is rated well beyond the maximum service water system design condition.

SUBJECT: PCN S85-1-3329, Rev. 5

PORC REVIEW: PORC Meeting 2175, 07/03/90

DESCRIPTION: Replaced General Electric pulse initiator, Model D41, with General Electric pulse initiator, Model D72, because Model D41 is obsolete. These pulse initiators are found in watt-hour meters on 14, 4 kV switchgear compartments. The new D72 pulse initiators are not qualified for safety related use and therefore will be electrically isolated from the potential transformer circuits with class 1E fuses. Revised FSAR Figures 8.3-4, 5, 6, 7, 58 and 60 to reflect the modification.

SAFETY EVALUATION: The model D72 weight is so small that the actual tension in case of a seismic event is negligible. Therefore the pulse initiator components will not break apart or become dislodged in case of a seismic event and will maintain the structural integrity of the system. The addition of one fuse and one fuse block in the switchgear compartment will not affect the seismic qualification of the switchgear. On the basis provided above, this change does not degrade the operability of the switchgears and does not impact the safe operation or shutdown capability of the plant.

SUBJECT: PCN B85-1-3431, Rev. 45

PORC REVIEW: PORC Meeting 2058, 09/12/89

DESCRIPTION: Revised FSAR Figures 9.4-5, 9.4-6, Sheet 1, to show the new locations of the flow switches FSL-2360 A & B and new locations of the sample line connections for radiation monitor RE-34.

SAFETY EVALUATION: Relocation of the flow switches and the sample line connections for the radiation monitor will have no significant effect on the instrument functions or the HVAC system. The flow switches and radiation monitor do not perform a safety function.

SUBJECT: PCN B85-1-3431, Rev. 65

PORC REVIEW: PORC Meeting 2256, 01/08/91

DESCRIPTION: Revised FSAR Figure 9.4-5 to show the correct tagging of dampers NSV47HV3605A and NSV47HV3605B to agree with the as-built condition. Presently, the automatic dampers are tagged as NSV47HV3605A and NSV47HV3605B for the fresh air and return air ducts, respectively, in the field. The FSAR shows the fresh air damper as NSV47HV3605B and return air damper as NSV47HV3605A.

SAFETY EVALUATION: The changing of the tag numbers does not affect the existing system design. This modification does not impair plant safety or the ability to achieve a safe shutdown.

SUBJECT: PCN S86-1-3517, Rev. 4

PORC REVIEW: PORC Meeting 2178, 07/12/90

DESCRIPTION: Installed high pressure sodium lamps around the reactor makeup water storage tank (RMWST). Also, a door and frame were installed on the stair landing of the RMWST to allow entrance after installation of the fabric cover. FSAR Section 9.5.3.1 previously stated that incandescent lamps will be used in areas with floor drains and fluorescent lamps will be used in areas without floor drains. This section has been clarified to state that incandescent lamps will be used in areas with floor drains which could ultimately communicate with the RCS and that alternate forms of lighting may be used in areas without floor drains or with drains which discharge to the yard.

SAFETY EVALUATION: The purpose of the statement in FSAR Section 9.5.3.1 is to prevent corrosive materials from entering the radioactive waste drains which could get to the RCS. Since there are no radioactive waste drains at the RMWST, there is no possibility of corrosive materials entering the radioactive waste drains from breakage of the high pressure sodium lamps. The floor drain at the RMWST area is discharged into the yard. The door, frame and lights are designed for seismic category II/I interaction due to seismic events, tornado winds and fire, and will not interrupt or interfere with the function of the RMWST.

SUBJECT: PCN S86-1-3517, Rev. 7

PORC REVIEW: PORC Meeting 2183, 07/26/90

DESCRIPTION: Revised FAHA Section 1-78 to reflect the installation of a fabric cover for the Reactor Makeup Water Storage Tank. The cover is supported by a frame which completely encompasses the tank and does not rely upon the tank for support. The intent of the cover is to eliminate the collection of rainwater between the tank and the concrete retaining wall around the tank.

SAFETY EVALUATION: The cover provides no safety related function and only has to be considered for Seismic II/I interaction and fire hazards. The fabric is specified to meet NFPA 701 and ASTM E84. No fixed combustible or flammable materials are located in the area below the cover, making ignition of the cover highly unlikely. This design change will not result in degradation of any safety related piping or components. This modification does not adversely affect the FNP Fire Protection Program.

SUBJECT: PCN B87-1-3999, Rev. 1

PORC REVIEW: PORC Meeting 2204, 09/18/90

DESCRIPTION: Added a new radio and associated communication cable between the shift foreman's office and the shift supervisor's desk. This required a revision to FSAR Figure 9.5-14.

SAFETY EVALUATION: The radio and communication cable added are not safety-related and do not jeopardize any other safety system or equipment.

SUBJECT: PCN B87-1-4052, Rev. 14

PORC REVIEW: PORC Meeting 2274, 02/14/91

DESCRIPTION: Replaced the vendor supplied carbon steel supply and return service water piping, associated with the condensers in the control room package A/C units, with stainless steel piping of the same size. FSAR Figure 9.2-3, Sheet 1, was revised to incorporate these changes.

SAFETY EVALUATION: Because of fouling in the existing carbon steel lines, the pressure drop through the new stainless steel piping will decrease. As such, replacement of the piping will improve the performance of the coolers. The pressure rating of the new stainless steel piping is compatible with the connected piping.

SUBJECT: PCN B87-1-4052, Rev. 15

PORC REVIEW: PORC Meeting 2274, 02/14/91

DESCRIPTION: Replaced carbon steel service water valves with stainless steel piping of the same size. FSAR Figure 9.2-3, Sheet 1, and Figure 9.2-4, Sheets 1 and 2, were revised to incorporate the changes.

SAFETY EVALUATION: These modifications will improve the performance of the service water system and associated coolers. There is negligible effect on the pressure drop through the piping and valves. Carbon steel connected to stainless steel is acceptable since these two materials are compatible from the standpoint of corrosion due to dissimilar metals.

SUBJECT: PCN B87-1-4052, Rev. 16

PORC REVIEW: PORC Meeting 2274, 02/14/91

DESCRIPTION: Replaced the 2" and smaller carbon steel lines and associated vent, drain and instrument root valves on the service water system with stainless steel. The 3" and 4" carbon steel and branch header piping and associated valves for the RCP motor coolers was also replaced with stainless steel.

SAFETY EVALUATION: The affected piping is non-safety related. The inside diameter of a class HCD (new) pipe and that of a class HBD (previous) pipe is the same. New valves are of the same type as the previous valves. These modifications will have a negligible effect on the pressure drops in these lines. In fact, because of possible fouling of the previous lines, the pressure drop through the piping system should actually decrease. As such, replacement of the previous piping system with the new stainless steel piping system will improve the performance of the service water system and associated coolers. The existing condition of the piping, in which carbon steel is connected to stainless steel, is acceptable since these two materials are compatible from the standpoint of corrosion due to dissimilar metals.

SUBJECT: PCN B87-1-4052, Rev. 17

PORC REVIEW: PORC Meeting 2274, 02/14/91

DESCRIPTION: Provided removable spool sections in the service water piping to facilitate coil cleaning of 15 air handling units in the Auxiliary Building. FSAR Figure 9.2-3, Sheets 2 and 3, was revised to show the spool pieces.

SAFETY EVALUATION: The addition of flanges for the removable spool pieces was evaluated from a pipe stress and pipe support standpoint and found to be acceptable.

SUBJECT: PCN B87-1-4052, Rev. 21

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Accepted the bolting to a later ASME Code Edition of a 3/4" - 600# globe valves furnished in conformance to ASME Code Section III, 1977 Edition Winter 1979 Addenda rather than the 1974 Edition, Summer 1975 Addenda. This PCN also revised sheets M-2, M-14, M-45, M-75 and L-1 to correctly reflect the location and size of the vendor supplied piping associated with the control room air conditioning units. FSAR Figure 9.2-3, Sheet 1, was changed accordingly.

SAFETY EVALUATION: The use of bolts to the later Code Edition does not constitute a change to the plant as described in the FSAR. The change to Figure 9.2-3, Sheet 1, does not add any new component nor does it introduce failure modes of existing equipment which could lead to accidents.

SUBJECT: PCN B87-1-4117, Rev. 1

PORC REVIEW: PORC Meeting 2256, 01/08/91

DESCRIPTION: Changed FSAR Figure 9.2-5, Sheet 3, to reflect the replacement of PDI 694, 695 and 696 in the CCW system with orifice plates and flow indicators. Local flow indicators are utilized with square-root scales calibrated directly in GPM. This PCN provided the same flow information for Unit 1 as is currently available in Unit 2.

SAFETY EVALUATION: The flow indicators provide local indication only to aid in balancing and troubleshooting the CCW system, and to aid the operators in verifying that the HHSI pump oil coolers are receiving proper cooling water flow. This design change results in corrections to drawings contained in the FSAR. These corrections do not result in functional modifications to plant safety systems.

SUBJECT: PCN B87-1-4128, Revs. 0 and 2
and SECL 89-40, Revs. 2 and 3

PORC REVIEW: PORC Meeting 2147, 04/13/90
2177, 07/10/90

DESCRIPTION: Modified the design of the mechanical seal on the IC charging pump. The modified seal design eliminates the need for CCW cooling water to the seals as well as the mechanical seal heat exchangers and the external piping associated with the seals. The internal seal components were reconfigured so that the quantity of internal parts was reduced. The seal housing design and the shaft sealing design were modified. The FSAR was revised to reflect the modified design.

SAFETY EVALUATION: These modifications are an enhancement to the charging pumps. The simplified design improves the pump reliability and availability. Thus, these modifications do not degrade the operation or safety performance of the charging pumps.

SUBJECT: PCN B87-1-4502, Rev. 0

PORC REVIEW: PORC Meeting 2286, 03/12/91

DESCRIPTION: Revised exemption request 1-31 in FSAR Appendix 9B pages 9B.B-114 and 9B.B-115. The exemption request was written based on the assumption that a fire induced failure in the control circuit cables for SV3009B could result in SV3009B spuriously energizing and FV3009B (for swing CCW heat exchanger 1B) failing closed. Review of the air schematic diagram of the valve indicated that a hot short which could energize SV3009B would place FV3009B in the modulate position and an open circuit would place the valve in the open position. So, if the valve fails, it would fail in an acceptable position in either case. Therefore, an exemption for SV3009B from the requirements of 10CFR50 Appendix R is not necessary.

SAFETY EVALUATION: This design change reflects the as-built plant condition and corrects an inaccurate statement regarding spurious actuation of an SSD component previously considered credible.

SUBJECT: PCN B87-1-4608, Rev. 1

PORC REVIEW: PORC Meeting 2258, 01/15/91
2282, 03/05/91

DESCRIPTION: Added three vendor supplied cables for the refueling transfer system. One cable services a load cell and the other two are programmable limit switch cables. Also, the piping downstream of service air valve N1P18V058 was capped. FSAR Appendix 9B was revised to reflect these design changes.

SAFETY EVALUATION: Based on the small quantity of cable, the size of the conductors (#22 AWG), the small quantity of insulation material, its installation inside an enclosed raceway system, and the fact that the rooms through which the three cables are routed do not contain redundant safe shutdown circuits, use of this cable will not decrease the effectiveness of the Fire Protection Program, nor introduce a significant amount of PVC at FNP. Also, the affected service air piping is non-safety related and the change to the piping will have no adverse effect on the operation of the service air system or on any safety related systems or components.

SUBJECT: PCN B88-1-4850, Rev. 0

PORC REVIEW: PORC Meeting 2336, 06/11/91

DESCRIPTION: Installed a lockable wire mesh door and wire mesh enclosure to provide administrative access control of the BTRS heat exchanger exclusion area. The previous condition allowed inadvertent or unauthorized entry into open areas above existing walls and through open penetrations. FSAR Figures 12.1-5, 12.1-24 and 9B-12 were revised to reflect these changes.

SAFETY EVALUATION: This design change is an enhancement to radiological controls. It does not adversely affect the operation of any safety related or safe shutdown system.

SUBJECT: PCN S88-1-5010, Revs. 0, 1, and 2

PORC REVIEW: PORC Meeting 2169, 06/07/90

DESCRIPTION: Revised FSAR Figures 8.3-2, 8.3-40, 8.3-41 and 8.3-42 to agree with the as-built configuration of the plant. CRDM fans 1A and 1B are fed from load centers 1E and 1D respectively. The fans and their associated dampers and/or differential pressure switches were mislabeled.

SAFETY EVALUATION: This design change results in corrections to drawings contained in the FSAR. These corrections do not result in physical changes to the plant or functional modifications to plant safety systems.

SUBJECT: PCN 088-1-5259, R . 2

PORC REVIEW: PORC Meeting 2267, 01/31/91

DESCRIPTION: Replaced the Reactor Coolant System RTD manifold with direct measurement fast - response RTDs. The RTDs were mounted in new thermowells installed in the sampling scoops used with the existing manifold. Also, existing cables that are part of the Unit 1 Fire Protection Program, were replaced with new cables. The associated cables and raceways were also added. These components were added to enhance the capabilities already included in the program. Revised FSAR Figure 5.1-1, Sheet 1, and 5.1-3, Sheet 1, to reflect these changes.

SAFETY EVALUATION: The new cable creates no changes to the Fire Area Hazards Analysis. Implementation of this design change does not decrease the effectiveness of the Fire Protection Program or affect the safe shutdown of the plant.

SUBJECT: PCN B88-1-5406, Revs. 1, 2, and 4

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Installed temporary temperature monitoring instrumentation to obtain loop seal water temperatures and pressurizer cavity concrete temperature. The instrumentation will confirm the design adequacy of the insulation installed on the pressurizer loop seal piping to resolve concerns about potential stresses in the safety valve discharge piping during certain plant transients. FSAR Figure 5.1-2, Sheet 1, was revised to show the temperature sensors. The addition of the associated cables results in a small increase in the combustibles for fire areas 1-34 and 1-55. The FAHA in Appendix 9B of the FSAR was revised to show this increase.

SAFETY EVALUATION: The location and installation of the temperature sensors has been evaluated by Westinghouse. The temporary cables installed meet the requirements of IEEE 383-1974. Although the combustible load has increased for fire areas 1-34 and 1-55, the fire severity rating has not changed.

SUBJECT: PCN B89-1-5890, Rev. 4

PORC REVIEW: PORC Meeting 2241, 11/29/90

DESCRIPTION: Removed deactivated fire damper N1V47XV064 from the duct and revised FSAR Figure 9.4-3/Sheet 2 accordingly.

SAFETY EVALUATION: Since the damper was already deactivated, its removal from the duct has no effect on the design or operation of the non-radioactive area HVAC system.

SUBJECT: PCN B89-1-5898, Rev. 1

PORC REVIEW: PORC Meeting 21> 08/23/90

DESCRIPTION: Revised FSAR Figure 9.4-3, Sheets 1 and 2, to show the correct TPNS numbers for fire dampers 1-121-116-15 and 1-121-116-16. A field walkdown verified that the assigned TPNS numbers for the dampers were reversed from the way they are shown on the drawing.

SAFETY EVALUATION: The correction of the assigned fire damper numbers does not affect the function of either damper nor does it affect the safety of the plant or its ability to achieve a safe shutdown.

SUBJECT: PCN S89-1-5944, Rev. 0

PORC REVIEW: PORC Meeting 2258, 01/15/91

DESCRIPTION: Rearranged the fire water supply lines for the low voltage switchyard deluge spray systems so that each of the unit auxiliary and start-up transformers are supplied by one dedicated deluge clapper valve instead of having a deluge clapper valve for the set of transformers. The new arrangement of piping also provides one deluge clapper valve supplying two phase transformers and one valve supplying both the third phase and spare main transformers. FSAR Figures 9E-35 and 9B-37 were revised to reflect these changes.

SAFETY EVALUATION: Allowing each unit auxiliary transformer and each start-up transformer a dedicated deluge clapper valve reduces the potential for the loss of all offsite power. The main power transformers' four deluge spray systems are consolidated into two deluge spray systems, but this does not compromise the level of fire protection that previously existed.

SUBJECT: PCN B89-1-6088, Rev. 0

PORC REVIEW: PORC Meeting 2229, 11/08/90

DESCRIPTION: Deleted the individual auxiliary feedwater pump low flow alarms from BOP panels 2504L and N as part of the annunciator changes resulting from the control room design review. The low flow switches are included in control board annunciator J-75. FSAR Figure 6.5-1 was revised to incorporate this change.

SAFETY EVALUATION: Since the annunciators are not safety related, this modification does not affect the operation of safety related equipment in the auxiliary feedwater system.

SUBJECT: PCN B89-1-6094, Rev. 2

PORC REVIEW: PORC Meeting 2275, 02/21/91

DESCRIPTION: Rerouted cable 1VYK5061A utilizing cable tray 1VBHFC18. During review, it was discovered that this tray was overfilled based on values in the FSAR and the electrical details and notes. An engineering analysis was performed to evaluate the cable tray configuration and the impact of the additional control cable. The combustible loading table of FSAR Appendix 9B, Attachment A for fire area 1-20 was revised to include the additional cable insulation. Additionally, FSAR Section 8.3.1.4.2 was revised to indicate that a cable tray overfill will be evaluated on a case by case basis.

SAFETY EVALUATION: The configuration of cable tray 1VBHFC18 does not create an unfavorable condition where the temperature of the conductors could rise above 90°C. These are low ampacity control cables and as such do not generate sufficient heat to create a less than desirable installation. From a seismic standpoint the installation does not compromise the acceptable level of the cable tray support design limit of 35 lb/ft. The cables were purchased in accordance with IEEE 383. The fire severity of fire area 1-20 did not increase.

SUBJECT: PCN S89-1-6191, Rev. 1

PORC REVIEW: PORC Meeting 2185, 07/31/90

DESCRIPTION: Added two new alarm monitors to the fire protection annunciator, N1H11NGFP2516-N, in order to provide remote alarms in the main control room central supervisory station for all low and high pressure CO₂ systems in safety related areas. FSAR Section 9B.4.1.16 was revised accordingly.

SAFETY EVALUATION: The fire protection annunciator is not safety related, but is located near safety related equipment. The addition of the new monitors was reviewed and it was determined that there were no adverse effects on the cabinet mounting. The addition of the trouble alarms for these CO₂ systems enhances the fire protection system and conforms to NFPA-72D, 1975.

SUBJECT: PCN 89-1-6195, Rev. 0

PORC REVIEW: PORC Meeting 2307, 04/23/91

DESCRIPTION: Modified halon suppression systems 1A-31, 1A-33 and 1A-34 to provide electrical supervision of the system actuation circuitry. Currently a break, ground or short in the systems actuation circuits may render the halon system inoperative, and can go undetected. This modification provides the systems with reliable actuation circuitry and remote control room annunciation of alarm and trouble conditions.

SAFETY EVALUATION: The modifications will not adversely impact any other FNP system or structure or degrade the capability of the FNP Fire Protection Program to perform its intended function.

SUBJECT: PCN S89-1-6195, Rev. 4

PORC REVIEW: PORC Meeting 2307, 04/22/01

DESCRIPTION: Modified halon suppression systems 1A-31, 1A-33 and 1A-34 to provide electrical supervision of the system actuation circuitry. This modification consists of the addition of control panels to each system. The new control panels are low voltage while the existing systems are high voltage. This voltage change will require new types of system detectors and halon bottle solenoids. FSAR Appendix 9B was revised accordingly.

SAFETY EVALUATION: All of the new equipment is UL listed and/or Factory Mutual approved and is installed and operated per appropriate NFPA standards. The new control panels perform the action of pressure switches and provide local and remote alarm annunciation for the halon systems and the isolation of the ventilation systems. No equipment important to safety is impacted by this system modification since equivalency to existing conditions is maintained.

SUBJECT: PCN 89-1-6338, Revs. 0 and 2

PORC REVIEW: PORC Meeting 2258, 01/15/91

DESCRIPTION: Installed stainless steel piping sections and temperature detectors to measure service water flow, inlet temperature, and outlet temperature for safety related heat exchangers. The PCN also changed TPNS numbers of the new temperature detectors to match the numbers assigned to the Unit 2 temperature detectors and installed one 1/2 inch stainless steel socket weld connection, pipe nipple and pipe cap to each new stainless steel piping section. Furthermore, the PCN approved the use of more recent ASME Section III code editions for the new piping. FSAR Figure 9.2-3, Sheets 1, 2, and 3, and Figure 9.5-18, Sheet 1, were revised to reflect the changes.

SAFETY EVALUATION: The addition of the stainless steel piping sections will not have an adverse effect on the existing seismic analyses for the service water system. The addition of the temperature detectors contributes little to the overall mass of the piping systems and associated components. The detectors do not penetrate the piping. The approved use of more recent editions of ASME Section III code editions has no adverse effect on the pressure boundary of the service water system. The performance of the service water system and the associated components and/or systems will not be affected in such a way that the plant safety or operation would be impacted in an adverse manner.

SUBJECT: PCN B89-1-6353, Rev. 0

PORC REVIEW: PORC Meeting 2340, 06/20/91

DESCRIPTION: Eliminated the SPDS line conditioner, upgraded the alternate power source by replacing transformer N1R19E003 with a constant voltage transformer (CVT) N1R22E012 and installed a neutral wire between inverter N1R21E008 and distribution panel N1R19L0012. The added cables increased the combustible loading for fire areas 1-4, 1-23, 1-34 and 1-41 over that specified in FSAR, Appendix 9B, Attachment A.

SAFETY EVALUATION: The new CVT gets its power from MCC 1V. The additional load has been reviewed and there is no net increase in load over the previously calculated value. This modification will improve the reliability of the SPDS power supply.

SUBJECT: PCN S90-1-6372, Revs. 0 and 1

PORC REVIEW: PORC Meeting 2336, 06/11/91

DESCRIPTION: Revised FSAR Figure 10.3-1, Sheet 3, to show a short section of the warming line on the A and B steam dumps, which was changed from schedule 40S to schedule 80S by MD 89-2167. The increase in wall thickness strengthens this area which has experienced failure in the past. The line was also field rerouted to reduce stresses.

SAFETY EVALUATION: This design change updates an FSAR drawing. The change was in the non-safety related portion of the main steam system and has no impact on plant safety.

SUBJECT: PCN B90-1-6380, Rev. 1

PORC REVIEW: PORC Meeting 2240, 11/27/90

DESCRIPTION: Added a Westinghouse Ultrasonic Level Measuring System (ULMS) and an alarm for monitoring RCS narrow range level during mid-loop operation. In addition, a dry reference leg from RCS wide range level transmitters LT-2965A & B was added to provide a pressure reference for a more accurate RCS level measurement. FSAR Figures 5.1-1, Sheet 1, and 5.1-2, Sheet 1, were revised accordingly.

SAFETY EVALUATION: The RCS level monitoring instrumentation is non-safety related and performs non-safety related functions. The ULMS system transducer interfaces with the RCS piping (which is safety related), but it has been reviewed by Westinghouse and found to be acceptable.

SUBJECT: PCN B90-1-6380, Rev. 2

PORC REVIEW: PORC Meeting 2240, 11/27/90

DESCRIPTION: Revised FSAR Figure 5.1-2, Sheet 1, to show the addition of a permanent 3/8 inch tubing connection at the top of the pressurizer for attaching tygon hose. This connection along with the connection off the bottom of the loop "B" RCS crossover piping, is utilized to provide an additional means of monitoring RCS level during refueling and mid-loop operation.

Additionally, this revision included design for temporary cables between the level sensors and the pre-amps. These cables were laid out on floors and grating, and attached to the outside of raceways. As such, they constitute combustible materials in containment and room 334. The combustible loading calculations for these areas were temporarily modified to show the additional combustible material.

SAFETY EVALUATION: The tygon hose connection provided for RCS level monitoring is non-safety related and performs no safety function. The branch connection for the tygon hose is in the non-nuclear section of piping which was added for LT-2965A & B dry reference leg in revision one. This change does not create any new safety concerns beyond that previously reviewed.

The temporary cables to be put in containment and the electrical penetration room 334 meet the requirements of IEEE 383-1974. They will not be put into raceways containing safety related cables. The cables will only be installed during outage operations (while the reactor is shut down). The combustible loading of the cables do not increase the fire severity for fire areas 1-34 and 1-55.

SUBJECT: PCN B90-1-6380, Rev. 9

PORC REVIEW: PORC Meeting 2299, 04/11/91

DESCRIPTION: Changed the design pressure/temperature conditions of the ECS piping connection for the RCS level instrumentation and tygon tubing to reflect the expected design and service conditions. This section of piping is isolated during normal operation and does not see normal RCS temperatures and pressures. This revision to the design change also reviewed tube routing downstream of root valves Q1B13V012 and Q1B13V028A and provided approval for on-site modification of insulation panels to accommodate the relocation of ULMS transducer which was addressed in earlier PCN revisions. FSAK Figure 5.1-2 was revised to reflect the necessary changes.

SAFETY EVALUATION: The new design pressure/temperature conditions are less than the existing design conditions. Therefore, they are still within the design capability of the piping. The failure of the RCS piping affected by this design change revision cannot cause an accident. In addition, the piping connection for RCS level instrumentation is not used for controlling post-accident doses.

SUBJECT: PCN B90-1-6385, Rev. 0

PORC REVIEW: PORC Meeting 2242, 12/04/90

DESCRIPTION: Deleted three MCB alarms as a result of the control room design review. Deleting two of these annunciators, the BIT low temperature alarm and the batching tank low level alarm, was a change to the plant as described in the FSAR. FSAR Section 6.3.5.A, Figure 6.3-1 and Figure 9.3-7 were revised to reflect the deletion of these alarms.

SAFETY EVALUATION: The purpose of the BIT low temperature alarm was to warn the operators of conditions that could lead to boron crystallization in the BIT. The BIT temperature low alarm is no longer required because the BIT no longer contains a 20,000 ppm concentrated boric acid solution per FSAR Section 6.3.2.2.2.A. The batching tank is in the non-safety related portion of the CVCS system. Deletion of the tank low level alarm does not affect the operation of the system's safety functions and makes the annunciator panel consistent with Unit 2.

SUBJECT: PCN S90-1-6392, Rev. 0

PORC REVIEW: PORC Meeting 2175, 07/03/90

DESCRIPTION: Revised FSAR Figure 9.3-7, Sheet 1, and Table 9.3.3 to document the existence of sample isolation valves located between the boric acid transfer pump discharge pressure indicators and the associated root valves. Instrument line drain isolation valves are located between PI 110 and root valve Q1E21V221A and between PI 105 and root valve Q1E21V221B. The drain lines downstream of these isolation valves are being used as local sample isolation valves. TPNS numbers have been assigned to these isolation valves.

SAFETY EVALUATION: The instrument line drain isolation valves were installed in accordance with the requirements of a Seismic I and an ASME class 3 application. The use of the drain lines and isolation valves as sample lines and isolation valves was evaluated and approved. This change does not adversely affect the operation of the associated components or the system.

SUBJECT: PCN B90-1-6401, Rev. 0

PORC REVIEW: PORC Meeting 2241, 11/29/90

DESCRIPTION: Installed instrument air filters in instrument air lines to safety related pneumatic equipment in order to improve the quality of instrument air. This change added air filters and a manual valve to the non-safety related portion of the instrument air system and added additional air operated valve numbers associated with the PCN. FSAR Figure 9.3-1, Sheets 8, 9 and 10 were revised to reflect these changes.

SAFETY EVALUATION: The addition of these air filters enhances the ability of the associated valves to perform their safety related functions and does not have an effect on any safety related systems or components.

SUBJECT: PCN B90-1-6401, Rev. 3

PORC REVIEW: PORC Meeting 2307, 04/23/91

DESCRIPTION: Revised FSAR Figures 9.3-1, Sheets 8 and 10, to reflect TPNS number changes for the instrument air filters. The TPNS numbers are now consistent with Unit 2.

SAFETY EVALUATION: This TPNS number change does not affect the operation of any component or system.

SUBJECT: PCN S90-1-6407, Revs. 0, 6, 7 and 10

PORC REVIEW: PORC Meeting 2227, 11/01/90
2297, 04/09/91
2318, 05/09/91

DESCRIPTION: Provided design to reduce the dissolved oxygen in the main condenser. The condensate makeup line to the condenser was modified to discharge above the condenser tube bundles. A 3/4 inch line was added to facilitate the use of condensate from the condensate pump discharge for condensate pump seals in lieu of demineralized water. In addition, the condenser sparging system was modified to be used as a nitrogen injection system. Other piping that discharges into the condenser was also modified. FSAR Sections 10.3 and 10.4.1.2 and Figures 9.2-7, 10.3-1 and 10.4-3 were revised to reflect the above changes.

SAFETY EVALUATION: Reduction of dissolved oxygen in the condensate/feedwater system reduces corrosion in the system thus reducing sludge deposited in the steam generators. The condensate pump seal modification was evaluated by Engineering Study ES 90-1741 and found to be acceptable.

SUBJECT: PCN B90-1-6484, Rev. 0

PORC REVIEW: PORC Meeting 2242, 12/04/90

DESCRIPTION: Revised FSAR Table 6.2-32 to reflect the replacement of solenoid valves Q1N235V3227AA, AC, BA, BC, CA, CC, Q1N235V3228AA, BA, and CA, as well as, Q1N125V3234A and B. The corresponding AOVs for Q1N125V3234A and B (HV3234A and B) were deleted from this table as well.

SAFETY EVALUATION: Replacing the solenoid valves will cause the stroke time to double, but it will remain within the 30 second design value, or be close to it, since a review of IST stroke times for these valves indicates that the maximum time previously observed for these valves is on the order of 11 seconds. The new stroke time value of approximately 30 seconds is still well within the 60 second response time requirement for the AFW system. Decreasing the solenoid valve orifice size for any of these valves will not increase the probability of valve inoperability due to orifice obstruction because the air supply to each solenoid valve is filtered.

SUBJECT: PCN B90-1-6493, Rev.0

PORC REVIEW: PORC Meeting 2286, 03/12/91

DESCRIPTION: Changed FSAR Table 3K.4-4 to show the revised pipe stress levels resulting from the pipe support evaluations performed due to the revised Copes-Vulcan valve weights and centers of gravity. FSAR Figure 3K.4-9, Sheet 4, was also revised to show a physical pipe anchor at the design location. This location agrees with the as-built condition of the plant and with the location considered in the pipe stress analyses.

SAFETY EVALUATION: The revised pipe stress levels are considered acceptable since they are less than the pipe break threshold.

SUBJECT: PCN S90-1-6516, Rev. 0

PORC REVIEW: PORC Meeting 2242, 12/04/90

DESCRIPTION: Replaced the 3/4 inch swing check valves with lift check valves upstream of the 1B emergency diesel generator air start system's air receiver tanks to maintain air pressure available for starting the diesel, typically in a loss of offsite power event. The swing check valves were providing an inadequate shortened service life which was attributed to wear caused by pressure pulsations from the air start air compressor. FSAR Figure 9.5-19 was revised accordingly.

SAFETY EVALUATION: The performance and length of service of the lift check valves is superior to that of the swing check valves. The lift check valve manufacturer has qualified these valves for seismic loading in excess of twice what is currently required. The weight variation between the original and replacement valves is negligible and will not affect the seismic qualification of the piping. The operation of the emergency diesel air start system has not been altered.

SUBJECT: PCN B90-1-6524, Rev. 2

PORC REVIEW: PORC Meeting 2286, 03/12/91

DESCRIPTION: Revised FSAR Figure 9.2-5, Sheet 1, to show independent annunciators for the CCW supply to each RHR pump seal cooler in place of the shared annunciator. The individual annunciators were changed to alarm only if the pump breaker is closed. This change is a result of the control room design review to eliminate a previously normally lit annunciator.

SAFETY EVALUATION: This change does not affect the operation of the CCW system or the RHR/LHSI pump because it only affects annunciation.

SUBJECT: PCN B90-1-6526, Rev. 0

PORC REVIEW: PORC Meeting 2242, 12/04/90

DESCRIPTION: Adjusted the high and low alarm setpoints for accumulator nitrogen pressure and water level in the conservative direction. FSAR Table 6.3-1 was revised to reflect the new alarm setpoint for high water level.

SAFETY EVALUATION: An earlier alarm will result in normal corrective action being initiated earlier resulting in more conservative action. The setpoint changes made by this design change are used for annunciation only and do not affect plant safety.

SUBJECT: PCN S90-1-6558, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Revised FSAR Figure 9.2-1/Sheet 1 to document the replacement of a Custom Components model 604CG0 pressure switch which had been used in the river water system as QSP25PS514 and PS515. The obsolete pressure switches were replaced with ASCO model S111AR - TF10A44R pressure switches.

SAFETY EVALUATION: The ASCO pressure switches have seismic and performance characteristics which meet or exceed those of the originally furnished switches and were previously approved by PCN S88-0-5331. Revision of documentation to reflect this change will not impact the safe shutdown of the plant.

SUBJECT: PCN S90-1-6607, Revs. 0, 1, 3

PORC REVIEW: PORC Meeting 2266, 01/29/91

DESCRIPTION: Replaced portions of the main steam and high pressure steam drain carbon steel piping except for the carbon steel control valves, stainless steel non-pluggable orifices and steam traps which were cleaned and reused. FSAR Figure 10.3-1, Sheet 3, was revised accordingly.

SAFETY EVALUATION: Stainless steel piping replacement provides adequate strength for system piping while minimizing the erosion/corrosion problem. In addition, plant reliability is improved due to decreased maintenance requirements.

SUBJECT: PCN S90-1-6607, Rev. 4

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Replaced the main steam and high pressure steam drain carbon steel piping with stainless steel. Per ANSI 16.5, the 600# stainless flange pressure rating is inferior to the 600# carbon steel flange at identical temperatures. Therefore, 900# stainless flanges were used on small bore lines whose design parameters exceeded the ANSI B16.5 guidelines.

SAFETY EVALUATION: Stainless steel piping replacement provides adequate strength for system piping while minimizing the erosion/corrosion problem. Plant reliability will be improved due to the decreased maintenance requirements. The 900# stainless flange has been evaluated and approved for use in 600# stainless piping.

SUBJECT: PCN S90-1-6609, Revs. 0 and 1

PORC REVIEW: PORC Meeting 2266, 01/29/91

DESCRIPTION: Replaced the carbon steel drain piping from heaters 6A and 6B and MSR 1st stage extraction steam to each respective condenser drain manifold with stainless steel piping. Specific line numbers were provided for the new piping by Revision 1. FSAR Figure 10.2-1 was revised to reflect this change.

SAFETY EVALUATION: Stainless steel provides adequate strength for system piping while minimizing the erosion/corrosion problem. Plant reliability is improved due to the decreased maintenance requirements. Also, providing specific line numbers for small bore lines will aid plant personnel in determining the design and service conditions for the piping to be replaced.

SUBJECT: PCN S90-1-6612, Revs. 0-2

PORC REVIEW: PORC Meeting 2266, 01/29/91

DESCRIPTION: Replaced portions of the main steam and high pressure steam drain carbon steel piping except for the carbon steel control valves, stainless steel non-pluggable orifices and steam traps which were cleaned and reused. FSAR Figure 10.3-1, Sheet 3, was revised accordingly.

SAFETY EVALUATION: Stainless steel piping replacement provides adequate strength for system piping while minimizing the erosion/corrosion problem. In addition, plant reliability is improved due to decreased maintenance requirements.

SUBJECT: PCN S90-1-6672, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Revised FSAR Figure 9.3-5, Sheet 1, to reflect the as-built condition of the chemical and volume control system. The changes include placing the 3/4 inch test connection between the 3 inch X 2 inch reducer and letdown orifice F06000C rather than downstream of the 3 inch x 2 inch reducer in 3 inch line CCB-13, showing that 2 inch line ECB-1 branches off of 3 inch line ECB-1 rather than upstream of letdown orifice F0-6000A and Q1E21V253A in 2 inch line ECB-1, showing that 2 inch line CCB-12 branches off of 3 inch line CCB-10 upstream of valves Q1E21V532A and B rather than downstream, and showing that 3/4 inch line CCB-45 branches off of 2 inch line CCB-12 rather than 3 inch line CCB-10.

SAFETY EVALUATION: This design change results in corrections to a drawing contained in the FSAR. These corrections do not result in functional modifications to plant safety systems.

SUBJECT: PCN S90-1-6732, Rev. 0

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Revised FSAR Figures 8.3-12 and 8.3-13/Sheet 1 to document the replacement of Agastat time delay relays which were replaced per PCN B87-0-4384.

SAFETY EVALUATION: This PCN is for documentation purposes only. There are no physical changes to the plant or functional modifications to plant safety systems.

SUBJECT: PCN S90-1-6742, Rev. 0

PORC REVIEW: PORC Meeting 2276, 02/26/91

DESCRIPTION: Revised FSAR Figures 8.3-47 and 8.3-48 to show breakers 4, 5 and 28 as spares. These drawing changes were necessary because of partial implementation of 2BE-581.

SAFETY EVALUATION: This PCN provides drawing revisions to document the as-built configuration to reflect plant conditions. This does not involve an unreviewed safety question.

SUBJECT: PCN S90-1-6776, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Revised FSAR Figure 9.2-7, Sheet 1, to show the correct setpoints for pressure switches NSP11PS512 and NSP11PS513. When the setpoints were changed from 110 psig and 125 psig to 90 psig and 140 psig, certain drawings were not revised.

SAFETY EVALUATION: This design change results in corrections to a drawing contained in the FSAR. No procedural changes or physical changes were required by this document change.

SUBJECT: PCN S90-1-6781, Rev. 0

PORC REVIEW: PORC Meeting 2258, 01/15/91

DESCRIPTION: Revised FSAR Figure 9.2-5/Sheet 1 to show the component cooling water heat exchanger drain lines as being capped instead of being routed to the floor drains.

SAFETY EVALUATION: This revision brings plant documentation into conformance with the existing design configuration. These drain lines perform no safety related function and the pipe caps are downstream of normally closed safety grade isolation valves.

SUBJECT: PCN S90-1-6810, Rev. 0

PORC REVIEW: PORC Meeting 2258, 01/15/91

DESCRIPTION: Revised FSAR Figure 10.3-1, Sheet 2, to show where piping has been field routed from the turbine driven auxiliary feedwater pump (TDAFWP) governor valve leak-off to the sump per Minor Departure 90-2228. This piping delivers the moisture exiting the valve leak-off to the sump rather than releasing it to the atmosphere and thus maintaining moderate room temperatures.

SAFETY EVALUATION: FSAR Figure 10.3-1 now matches plant as-built conditions. The AFW system is Seismic Category I. The piping added is seismically supported. These changes do not prevent the AFW system from performing its intended function nor is there any affect on plant safety.

SUBJECT: PCN S90-1-6867, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Revised FSAR Figures 8.3-10, 8.3-11, 8.3-12, and 8.3-13, Sheet 1, to indicate the correct relay model numbers for the model 12STD15B5A transformer differential relays used in 4KV buses 1A, 1D, 1E, 1F, 1G, and 1H and 600V LC 1N. These relays were modified to correct an RF interference problem.

SAFETY EVALUATION: This design change updates FSAR drawings and does not involve an unreviewed safety question, nor are any equipment changes required.

SUBJECT: PCN S90-1-6897, Rev. 0

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Removed the fire area boundary designations on the north and east walls of the Unit 1 vertical duct chase at elevation 121'-0" on FSAR Figure 9B-12. The duct chase is in Fire Area number 1-4 and extends between elevations 121'-0" and 164'-8".

SAFETY EVALUATION: This drawing change reflects as-built conditions and will not degrade the capability of the Fire Protection System to perform its intended functions, nor will it impact any exemption request associated with this fire area. An analysis of the duct chase was conducted to determine the impact on Appendix R safe shutdown requirements. The analysis concluded that the walls of the duct chase at any elevation need not be fire rated.

SUBJECT: PCN B90-1-6901, Rev. 0

PORC REVIEW: PORC Meeting 2358, 08/08/91

DESCRIPTION: Revised FSAR Figure 9.2-5, Sheets 1 and 2, to resolve drawing discrepancies which were identified during preparation of the CCW Functional System Description.

SAFETY EVALUATION: This design change results in corrections to drawings contained in the FSAR. These corrections do not result in physical changes to the plant or functional modifications to plant safety systems.

SUBJECT: PCN S90-1-6923, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Revised FSAR Figure 10.3-1/Sheet 4 to reflect the correct TPNS number for the low pressure steam purity sample cooler as N1P15H502 instead of N1P15H504 which is the TPNS number for the high pressure steam purity sample cooler.

SAFETY EVALUATION: This drawing revision results in corrections to the FSAR. These corrections do not result in functional modifications to plant safety systems.

SUBJECT: PCN S90-1-6925, Revs. 0 and 1

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Revised FSAR Figure 9.2-5, Sheet 1, for the CCW system to show the correct as-built configuration of solenoid valves Q1P17SV3028A and Q1P17SV3028B. When the valves were installed in the control air line to vent valve Q1P17RV3028, SV3028A was installed between RV3028 and SV3028B, but plant documentation showed SV3028B installed between RV3028 and SV3028A. Also, revision 1 of this PCN corrected the TPNS number train designators of the components associated through electrical signals to the solenoid valves.

SAFETY EVALUATION: This drawing change documents as-built conditions. No functional or physical changes were required. The solenoid valves are installed in series and their function is not dependent on their orientation in the control air line going to the vent valve, RV3028.

SUBJECT: PCN B90-1-6928, Rev.0

PORC REVIEW: PORC Meeting 2354, 07/25/91

DESCRIPTION: Revised FSAR Figure 10.3-1, Sheet 2, to change the designation of the computer points for the valve position of HV-3235A and HV-3226. This change is a result of the retagging of the computer points from a sequential number to the primary equipment number which occurred during the replacement of the plant computer.

SAFETY EVALUATION: The plant computer is non-safety related. The retagging of computer points does not affect the function of the associated equipment nor does it directly affect plant operation. This point identification number is used for the computer only and does not affect any other indication of valve position.

SUBJECT: PCN B90-1-6951, Rev. 0

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Revised FSAR Figures 8.3-18, Sheet 1, and 8.3-20 to document the replacement of Agastat time delay relays which were replaced per PCN B87-0-4384.

SAFETY EVALUATION: These changes were editorial in nature and serve only to clarify the FSAR sections. These changes do not result in physical change to the plant or functional modifications to plant safety systems.

SUBJECT: PCN S90-1-6973, Rev. 0

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Revised FSAR Table 9B.C-1 to reflect the correct total number of fire detectors located below the drop ceiling of corridor 402 to be two detectors.

SAFETY EVALUATION: This design change reflects the as-built condition of the plant. It will assist plant personnel in operational, surveillance, and maintenance plant activities.

SUBJECT: PCN S90-1-6991, Rev. 0

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Revised FSAR Figures 9B-10 and 9B-15 to reflect changes made to the Fire Zone Data Sheets noting those locations in floors and ceilings where credit was taken for fulfilling Appendix R separation requirements. Portions of room 241's floor, which form a portion of the room 192 ceiling, were identified as an Appendix R separation barrier.

SAFETY EVALUATION: The addition of a note on the applicable drawings to ensure ceilings and ceiling penetrations of rooms 191 and 192 (including designated floor areas of room 241) are properly maintained to meet Appendix R separation criteria will assist plant personnel in operation, surveillance, modification and maintenance activities.

SUBJECT: PCN B90-1-7009, Rev. 0

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Revised FSAR Section 9B.B-128 to correct an inaccurate statement regarding the wrapped raceways in room 2185 for the CCW pumps. It now reflects the NRC approved as-built condition.

SAFETY EVALUATION: This design change was editorial in nature and served only to clarify the FSAR. This change does not result in physical change to the plant or functional modifications to plant safety systems.

SUBJECT: PCN S90-1-7128, Rev. 0

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Revised FSAR Figure 9B-17 to change the door number for the door between Unit 1 Auxiliary Building rooms 312 and 327 from 326 to 526. This puts the figure in agreement with the controlling design documentation and plant as-built conditions.

SAFETY EVALUATION: This design change results in corrections to drawings contained in the FSAR. These corrections do not result in functional modifications to plant safety systems.

SUBJECT: PCN B91-1-7305, Rev. 0

PORC REVIEW: PORC Meeting 2318, 05/09/91

DESCRIPTION: Revised FSAR Figures 8.8-47 and 8.3-49 to reflect circuit breaker changes made under PCN B-80-887, Rev. 0. The changes were made in 125V distribution panels Q1R41L001B-A and Q1R41L001E-B. The 50A circuit breaker located in circuit number 5 was changed to a 30A circuit breaker and the 30A circuit breaker in number 12 was changed to a 50A circuit breaker.

SAFETY EVALUATION: Rearrangement of the above mentioned breakers was evaluated and approved under the Nuclear Safety Evaluation Checklist for PCN B-80-887, Rev. 0. This design change updates FSAR drawings and does not involve an unreviewed safety question.

SUBJECT: PCN B91-1-7305, Rev. 1

PORC REVIEW: PORC Meeting 2318, 05/09/91

DESCRIPTION: Revised FSAR Figure 8.3-47 to indicate that circuit breaker number 12 in 125V DC distribution panel 1B, Q1R41L001B-A, is a single pole 30A breaker.

SAFETY EVALUATION: Based on a review of the DC Load Profile, the single pole 30A breaker is adequately sized to handle the circuit load. Additionally, the time-current characteristics of the breaker coordinate with the upstream breaker and downstream fuses and protect the downstream cable.

SUBJECT: PCN B91-1-7305, Rev. 2

PORC REVIEW: PORC Meeting 2354, 07/25/91

DESCRIPTION: Revised FSAR Figure 8.3-48 to reflect the change of the 50A circuit breaker located in circuit breaker number 5 to a 30A breaker and the 30A circuit breaker located in circuit number 12 to a 50A breaker. These circuit breakers are located in the 125V distribution panel Q1R41L001E-B.

SAFETY EVALUATION: Rearrangement of the above mentioned breakers was evaluated and approved under the nuclear safety evaluation checklist for PCN B80-887, Rev. 0. This design change updates drawings in the FSAR and does not involve an unreviewed safety question.

SUBJECT: PCN S91-1-7328, Rev. 1

PORC REVIEW: PORC Meeting 2355, 08/01/91

DESCRIPTION: Updated design documents to designate the normal supply for 4160V buses 1D and 1E coming from the startup transformers with the alternate supply being provided from the unit auxiliary transformers to agree with present as-built conditions. FSAR Figure 8.3-1 and FSAR Sections 3.1.13, 8.1.2, 8.2.1.3, 8.3.1.1.1, 8.3.1.1.3, 8.3.1.2 and 15.2.9 were revised to reflect these changes.

SAFETY EVALUATION: In APCo letters to the NRC dated 12-11-79, 5-1-80 and 7-17-80, concerning the "Adequacy of Station Electrical Distribution Systems Voltages", it was demonstrated that the startup transformers had sufficient capacity to provide power to 4160 V buses 1D and 1E without degrading the performance of the startup transformers to provide AC power to the class 1E loads.

SUBJECT: PCN B91-1-7401, Revs. 0 and 1

PORC REVIEW: PORC Meeting 2303, 04/19/91
2304, 04/22/91

DESCRIPTION: Replaced 6 inch carbon steel valve N1P16V077, service water return from RCP motor cooler, with a 6 inch stainless steel valve. The replacement valve ends were machined to schedule 10S but the existing piping was schedule 40. A short piece of schedule 40 stainless steel pipe, counterbored to schedule 10S at one end, was welded to each end of the replacement valve to facilitate installation. FSAR Figure 9.2-3, Sheet 2, was revised to reflect these changes.

SAFETY EVALUATION: Bechtel performed an equivalency evaluation for these two valves and determined that they were identical in all respects except that the material and the wedge design are different. Stainless steel material is acceptable for the service water application and the different wedge design will have no adverse impact on the performance of the valve. The replacement pipe thickness is adequate for the design conditions and therefore does not introduce new failure modes of the pipe or service water system.

SUBJECT: PCN S91-1-7406, Rev. 0

PORC REVIEW: PORC Meeting 2381, 10/03/91

DESCRIPTION: Revised FSAR Figure 9.2.2, Sheet 2, and Figure 9.5-18, Sheet 1, to resolve discrepancies between design documents and as-built conditions and to enhance design documents to reduce potential system operator error. These changes were initiated by open item observations from the Service Water Functional System Description.

SAFETY EVALUATION: These changes do not impact the original design of the service water system. The operability of the system is not compromised. The changes will enhance design documents and reduce potential error.

SUBJECT: Charging/SI Pump Cooling Water Requirements, SECL 91-160

PORC REVIEW: PORC Meeting 2296, 04/04/91

DESCRIPTION: Modified cooling water flow rates for the centrifugal charging/SI pump lube oil and gear oil coolers. The originally specified flow rates in the FSAR were 37 gpm for the lube oil cooler and 20 gpm for the gear oil cooler. Westinghouse has determined the minimum allowable cooling water flow rates to be 10 gpm for the pump lube oil cooler and 8 gpm for the gear oil cooler. The maximum flow rates for the lube oil cooler and gear oil cooler are 70 gpm and 75 gpm, respectively. FSAR Section 9.2 was revised to show these modifications.

SAFETY EVALUATION: The required cooling water flow rates originally specified by Westinghouse were based on the pump manufacturer's design heat load values. The newly determined values are based on actual heat load test data taken at the plant in 1986 for the motor and gear bearings, and contain sufficient conservatism to cover all operating conditions of the pump. Evaluation results show that operation of the charging/SI pumps at the new cooling water flows is consistent with the requirements of the pumps and will not affect pump performance.

SUBJECT: Hydrogen Production Due to Corrosion of DRPI Connectors, SECL 91-218, Rev. 1

PORC REVIEW: PORC Meeting 2320, 05/11/91

DESCRIPTION: Evaluated the impact of an additional 4.3 pounds of aluminum in containment on post-LOCA hydrogen production due to aluminum corrosion. A damaged DRPI coil stack that had stainless steel connectors was replaced with one that has the old style amphenol connectors which are made of aluminum. FSAR Sections 6A and 15.4 were revised to reflect the additional amount of aluminum.

SAFETY EVALUATION: When the aluminum DRPI connectors were previously replaced with stainless steel connectors an evaluation was performed. This evaluation reduced the mass of aluminum in containment, with respect to the FSAR analysis, by approximately 238 pounds. Table 15.4-8 was footnoted to reflect the aluminum reduction subsequent to the analysis, but the results of the analysis were not revised. Therefore, the results of the FSAR analysis reflect the original aluminum inventory that included aluminum DRPI and CRDM connectors, and the addition of 4.3 pounds of aluminum is bounded by the current FSAR analysis.

SUBJECT: Refueling Transfer System Cable Drive
Modification, SECL 90-127, Rev. 1

PORC REVIEW: PORC Meeting 2258, 01/15/91

DESCRIPTION: Modified the FNP Unit 1 fuel transfer system cable drive. The modification was achieved by replacing critical drive components which are presently located underwater in somewhat inaccessible areas with cable drive winch units which are located above water in readily accessible areas. A winch driven programmable limit switch controls the carriage positioning and is easily adjusted and maintained. This switch will replace existing underwater end limit proximity switches. FSAR Section 9.1-19.20 and Figure 9.1-13 were revised accordingly.

SAFETY EVALUATION: This entire modification is made as a product upgrade and does not adversely effect the functionality of the fuel transfer system. Additionally, the fuel transfer system is classified as a non-nuclear safety system.

SUBJECT: RTD Bypass Elimination, SECL 90-217,
Revs. 2 and 3

PORC REVIEW: PORC Meeting 2267, 01/31/91
2278, 02/28/91

DESCRIPTION: Modified Field Change Notice (FCN) ALAO-40554A to correct for several wiring and document reference discrepancies mentioned in the previous revision of the FCN. These modifications do not change any of the descriptions, bases, or conclusions in this SECL.

SAFETY EVALUATION: This change is editorial in nature and serves only to clarify the FSAR sections. These changes do not result in physical changes to the plant or functional modifications to plant safety systems.

SUBJECT: RTD Bypass Elimination, SECL-90-216,
Revs. 1, 2, 3, and 5

PORC REVIEW: PORC Meeting 2267, 01/31/91
2278, 02/28/91
2286, 03/12/91
2292, 03/22/91

DESCRIPTION: Removed the RTD bypass manifold and replaced it with fast response RTDs mounted in thermowells. Revision 2 corrected the fillet weld size from 0.31 inches to 0.38 inches. Revision 3 provided more detailed information on the effect of Dissolve paper and Metal Disintegration Machining (MDM) debris on RCS chemistry. Finally, Revision 5 changed the three new penetration locations of the RTD thermowells for the loop A scoops from 20 inches downstream of the scoop's centerline to 39 inches downstream at the 55, 175 and 295 degree points around the pipe circumference.

SAFETY EVALUATION: The change in weld size does not affect the thermowell stress analysis. The soluble purge dam paper, Dissolve WLD-60, assuming it was dispersed and flushed into the RCS during start-up operations, would not significantly increase the halogen concentration in the RCS or increase the risk of corrosion in NSSS components. Also the relocation of the penetrations does not alter the originally calculated accuracy for measuring the temperature in this loop nor will it result in differences between measured loop-to-loop temperature. The removal of the RTD bypass piping and the installation of a modified temperature measurement system does not affect the integrity of the reactor coolant system.

SUBJECT: Unit 1, Cycle 11 Reload, Rev. 1

PORC REVIEW: PORC Meeting 2283, 03/07/91

DESCRIPTION: Revised FSAR Sections 4.2, 15.2.3 and 15.2.4 to incorporate the Cycle 11 reload design which is based on the Cycle 10 end-of-life burnup within a range of 16,100 to 17,300 MWD/MTU. The Cycle 11 burnup is also limited to 17,800 MWD/MTU which may include a power coast-down beyond the end of full power capability. A total of 32 Region-11, 61 Region-12, and 64 fresh Region-13 fuel assemblies are used in the design. A total of 720 fresh Wet Annular Burnable Absorbers (WABAs) are used in clusters of 8, 12, and 16. The Region-13 assemblies differ from the previous design in that they include minor changes to the fuel assembly design due to Westinghouse implementation of Updated Fuel Assembly Design features and a Modified Debris Filter Bottom Nozzle (MDFBN). All changes to Unit 1 fuel are identical to changes already incorporated into Unit 2 fuel in Cycle 8.

SAFETY EVALUATION: The Unit 1 Cycle 11 design does not involve an unreviewed safety question. In addition, no Technical Specification change will be required for Cycle 11.

SUBJECT: Unit 1, Cycle 11 Reload Safety Evaluation, Rev. 2

PORC REVIEW: PORC Meeting 2297, 04/09/91

DESCRIPTION: Redesigned Cycle 11 to exclude a leaking Region-11 fuel assembly (2A57) from the design of the Cycle 11 core. The following FSAR Sections were revised accordingly: Section 4.2 was changed to reflect the Updated Fuel Assembly Design and the Modified Debris Filter Bottom Nozzle, Section 15.2.3 was changed to reflect the new Dropped Rod Event methodology, and Section 15.2.4 was changed to reflect the final Operating Procedure for Modes 4 and 5 boron requirements.

SAFETY EVALUATION: The redesign resulted in no Reload Safety Analysis Checklist (RSAC) current limits being exceeded that had not already been addressed in the original design. The conclusions of the safety evaluation performed to address those items which exceeded their limits in the original design have been determined to remain valid in the redesign.

ATTACHMENT 2

UNIT 2 ANNUAL REPORT
REQUIRED BY 10 CFR 50.59

SUBJECT: FNP-2-ETP-3021, Rev. 0

PORC REVIEW: PORC Meeting 2373, 09/17/91

DESCRIPTION: Provided procedural guidance to feed the recycle evaporator (REV) directly from the reactor makeup water storage tank (RMWST). FSAR Sections 9.3.4.1.2.5.27 and 9.3.4.1.2.3 were revised accordingly.

SAFETY EVALUATION: Since the use of the flush valve for flushing is recognized by the FSAR and existing procedures, this ETP will not operate the RMW system outside of its normal limits. Since evaporator skid and distillate return header operation is unchanged from FNP-2-SOP-2.2 to the ETP, this procedure will not operate the REV, nor the return header, outside of their normal limits. Therefore, the only potential concern is back-contamination of the RMW header, which is prevented if the RMWST level is maintained above approximately 19' in the tank. In conclusion, no off normal conditions adverse to equipment reliability will occur due to this change.

SUBJECT: FNP-2-SOP-12.2, Rev. 10

PORC REVIEW: PORC Meeting 2360, 08/16/91

DESCRIPTION: Provided guidance for operating containment mini-purge without the supply fan. This provides a contingency method for controlling containment pressure when the mini-purge supply fan is unavailable. A jumper can be installed in the control circuit for the containment mini-purge exhaust fan which allows the fan to be operated by locally opening or closing the power supply breaker.

SAFETY EVALUATION: The containment isolation capability of the containment mini-purge system is not affected. Administrative controls ensure that pre-accident containment pressure is maintained within Technical Specification limits. During contingency operation a caution tag will be placed on the MCB handswitch to remind operators of the operating condition of the containment mini-purge.

SUBJECT: FNP-2-SOP-24.0, Rev. 23

PORC REVIEW: PORC Meeting 2335, 06/10/91

DESCRIPTION: Revised FNP-2-SOP-24.0 to include instructions to supply service water lube and cooling for the affected train from each pump's discharge vent should it become necessary to remove service water lube and cooling for maintenance or operational concerns. This revision requires voluntarily declaring the affected train inoperable. The inoperable train will be operational while the lube and cooling lines are being repaired, thereby providing cooling water to the ESF components even though they are conservatively considered inoperable. All requirements of Technical Specification 3/4.7.4 will be met. FSAR Section 9.2 was revised to reflect this change.

SAFETY EVALUATION: Since any failure of the hose or pump is bounded by existing service water system failure events, and Technical Specification requirements will be complied with, this change is not considered to represent an unreviewed safety question.

SUBJECT: PCN S84-2-2886, Rev. 6

PORC REVIEW: PORC Meeting 2227, 11/01/90

DESCRIPTION: Added an additional Gaitronics telephone with four area paging and merge/isolate capabilities at the OATC desk. This telephone allows individual paging to the EOF, plant, service building and warehouse or it will allow merging of these four areas simultaneously. FSAR Figure 9.5-11 was revised to reflect this addition.

SAFETY EVALUATION: This addition will improve the plant communication system and will have no adverse effects on plant operation.

SUBJECT: PCN B84-2-2905, Rev. 1

PORC REVIEW: PORC Meeting 2209, 09/27/90

DESCRIPTION: Replaced Westinghouse inverters and Solatron regulators with SCI inverters and CVTs in the 120V vital and regulated AC distribution system. The following FSAR figures were revised to reflect these changes: 8.3-23/Sheet 2, 8.3-24/Sheet 2, 8.3-67 and 8.3-67A. FSAR Paragraph 8.3.1.1.4 and Attachment A to Appendix 9B for fire areas 2-01, 2-04, 2-08, 2-09, 2-18, 2-19, 2-20, 2-21, 2-41 and 2-43 were also revised.

SAFETY EVALUATION: Implementation of this PCN will result in an improved 120V vital and regulated AC power supply system and will not adversely affect the safety of the plant. The design basis of the 120V vital and regulated AC power supply is not affected.

SUBJECT: PCN B84-2-2905, Rev. 3

PORC REVIEW: PORC Meeting 2209, 09/27/90

DESCRIPTION: Provided temporary power to the 120V AC vital and regulated distribution panels for use during the inverter replacement modification. FSAR Figures 8.3-23, Sheet 2, and 8.3-24, Sheet 2, were not revised since the design was temporary.

SAFETY EVALUATION: Installation of this temporary power was an enhancement to the system during inverter replacement implementation.

SUBJECT: PCN B84-2-2905, Rev. 6

PORC REVIEW: PORC Meeting 2227, 10/26/90

DESCRIPTION: Changed the routing of the cables which provide the alternate AC power supply to the vital and regulated 120V AC panels. These cables contribute to the combustible loading in several rooms. The cables will no longer be routed in rooms 2116, 2229, 2233, 2246, 2335, 2409, 2419, 2429 and 2452. The FSAR was revised to show these changes to the combustible loading in fire areas 2-001, 2-004 and 2-035.

SAFETY EVALUATION: This change does not decrease the effectiveness of the FNP Fire Protection Program.

SUBJECT: PCN B84-2-2905, Rev. 9

PORC REVIEW: PORC Meeting 2235, 11/15/90

DESCRIPTION: Changed Revision 1 of this PCN to leave the 70 amp breakers of the alternate source to the vital AC distribution panels 2A, 2B, 2C, 2D and the 90 amp breakers of the alternate source to the AC distribution panels 2J and 2D as spares in the panels instead of removing them. FSAR Figures 8.3-23/Sheet 2 and 8.3-24/Sheet 2 were revised to reflect the changes above.

SAFETY EVALUATION: The design change required by this PCN revision will not affect the design basis for the 120V vital and regulated AC power supply system and will not adversely affect the operation or integrity of any safety-related system in the plant.

SUBJECT: PCN B84-2-2905, Rev. 10

PORC REVIEW: PORC Meeting 2239, 11/21/90

DESCRIPTION: Provided temporary power to instrumentation distribution panel 2B (N2R22L001B-N) from the 208V section of MCC 2B. This allowed the plant to keep radiation monitor cabinet 2A, the RCP vibration monitor panel, the vent stack radiation monitor and the miscellaneous radiation monitors energized during the replacement of the B train inverters. Temporary cables were laid on the floor between 120V AC distribution panel Q2R21L005B-B and distribution panel N2R22L001B-N. As such, they constituted combustible materials in DC switchgear room 2226. The combustible loading calculation for this area was temporarily modified to show the additional combustible material. FSAR Figure 8.3-24, Sheet 2, was not revised since the change was temporary.

SAFETY EVALUATION: Installation of this temporary power resulted in an enhancement of the system during inverter replacement implementation. The temporary cables met the requirements of IEEE 383-1974. They were only installed during outage operations. Calculations show that the addition of the temporary cables did not increase the fire severity for fire area 2-19.

SUBJECT: PCN B85-2-3342, Rev. 0

PORC REVIEW: PORC Meeting 1511, 04/17/86

DESCRIPTION: Installed a removable spool piece to allow steam generator blowdown flow transmitter N2G24FT1152 to be removed from the system for inspection and cleaning. FSAR Figure 10.4-4A was revised accordingly.

SAFETY EVALUATION: This modification will improve the system operation. The additional weight of the spool piece and flanges (approximately 22 pounds) will have no significant effect on the piping stresses and supports.

SUBJECT:

PCN S86-2-3518, Rev. 4

PORC REVIEW:

PORC Meeting 2178, 07/12/90

DESCRIPTION:

Installed high pressure sodium lamps around the reactor makeup water storage tank (RMWST). Also, a door and frame were installed on the stair landing of the RMWST to allow entrance after installation of the fabric cover. FSAR Section 9.5.3.1 previously stated that incandescent lamps will be used in areas with floor drains and fluorescent lamps will be used in areas without floor drains. This section has been clarified to state that incandescent lamps will be used in areas with floor drains which could ultimately communicate with the RCS and that alternate forms of lighting may be used in areas without floor drains or with drains which discharge to the yard.

SAFETY EVALUATION:

The purpose of the statement in FSAR Section 9.5.3.1 is to prevent corrosive materials from entering the radioactive waste drains which could get to the RCS. Since there are no radioactive waste drains at the RMWST, there is no possibility of corrosive materials entering the radioactive waste drains from breakage of the high pressure sodium lamps. The floor drain at the RMWST area is discharged into the yard. The door, frame and lights are designed for II/I interaction due to seismic events, tornado winds and fire, and will not interrupt or interfere with the function of the RMWST.

SUBJECT: PCN S86-2-3518, Rev. 7

PORC REVIEW: PORC Meeting 2183, 07/26/90

DESCRIPTION: Installed a fabric cover for the reactor makeup water storage tank. The cover is supported by a frame which completely encompasses the tank and does not rely upon the tank for support. The intent of the cover is to eliminate the collection of rainwater between the tank and the concrete retaining wall around the tank. The FAHA for fire area 2-78 was revised to reflect the addition of the cover.

SAFETY EVALUATION: The cover provides no safety related function and only has to be considered for Seismic II/I interaction and fire hazards. The fabric is specified to meet NFPA 701 and ASTM E84. No fixed combustible or flammable materials are located in the area below the cover, making ignition of the cover highly unlikely. This design change will not result in degradation of any safety related piping or components. This modification does not adversely affect the fire protection program.

SUBJECT: PCN B87-2-3972, Revs. 7, 9 and 11

PORC REVIEW: PORC Meeting 1993, 04/18/89
2024, 06/13/89
2212, 10/04/90

DESCRIPTION: Installed temporary cables in containment and room 2334 for the main steam line monitoring system. The combustible loading calculations for these areas were temporarily modified to show the additional combustible material. Since these cables were considered a temporary installation, no changes to the FSAR were made.

SAFETY EVALUATION: The temporary cables meet the requirements of IEEE 383. They will last the duration of one operating/refueling cycle. Although the combustible loading has increased, the fire severity rating for containment as shown in FSAR Appendix 9B, Attachment A, is not affected. Upon removal of the monitoring system, the interim calculation will again be revised to delete these cables and their effect on the combustible loading in fire areas 2-34 and 2-55.

SUBJECT: PCN B87-2-4106, Revs. 7 and 15

PORC REVIEW: PORC Meeting 2164, 05/22/90

DESCRIPTION: Provided the balance of work remaining from the original scope of this PCN which was to replace the 2 1/2 inch, 3 inch and 4 inch carbon steel service water branch header piping and valves with stainless steel. This replacement covered the piping associated with safety related coolers. Revision 15 of the PCN included the RCP motor cooler piping. Phase 1 work, installing header isolation valves, was completed during the 1987 Full outage. FSAR Figures 9.2-3 and 9.2-4 were revised as necessary to incorporate change per this modification.

SAFETY EVALUATION: The inside diameter of the replacement stainless pipe is the same as that of the original carbon steel pipe. New valves are of the same type as the original valves. This ensures a negligible effect on the pressure drops in these lines. In fact, because of the possible fouling in the original lines, the pressure drop should decrease. This replacement improves the performance of the service water system and its associated coolers.

SUBJECT: PCN B87-2-4106, Rev. 17

PORC REVIEW: PORC Meeting 2212, 10/04/90

DESCRIPTION: Relocated the flanges for CCW pump room cooler Q2E16H004B-B to provide a larger removable section. The tag connection for PD12917B also had to be relocated on the opposite side to the flanges. This required a revision to FSAR Figure 9.2-4, Sheet 2.

SAFETY EVALUATION: This change affects a figure in the FSAR. It does not affect the operation of the cooler and does not impact any other safety-related equipment.

SUBJECT: PCN B87-2-4106, Rev. 24

PORC REVIEW: PORC Meeting 2238, 11/20/90

DESCRIPTION: Relocated a set of flanges that were part of a removable spool section of pipe. The flanges were previously located on the large section of existing pipe upstream of a valve and hanger. These flanges were moved to the downstream side of the reducer allowing the spool to be removed without hanger modifications. This required a revision to FSAR Figure 9.2-4, Sheet 3.

SAFETY EVALUATION: This change only affects the background of the figure contained in the FSAR and does not have any functional impact on the service water system. The seismic qualification of the piping has not been affected.

SUBJECT: PCN B87-2-4129, Revs. 0 and 2
and SECL 89-40, Revs. 2 and 3

PORC REVIEW: PORC Meeting 2147, 04/13/90
2177, 07/10/90

DESCRIPTION: Modified the design of the mechanical seal of the 2C charging pump. The modified seal design eliminates the need for CCW cooling water to the seals as well as the mechanical seal heat exchangers and the external piping associated with the seals. The internal seal components were reconfigured so that the quantity of internal parts was reduced. The seal housing design and the shaft sealing design were modified. The FSAR was revised to reflect the modified design.

SAFETY EVALUATION: These modifications are an enhancement to the charging pump. The simplified design improves pump reliability and availability. Thus, these modifications do not degrade the operation or safety performance of the charging pump.

SUBJECT: PCN S87-2-4409, Rev. 0

PORC REVIEW: PORC Meeting 2178, 07/12/90

DESCRIPTION: Replaced the BOP panel N2H11NGSS2504D outdated Omnigard temperature monitors with state-of-the-art series 4000 Omnigard digital monitors and rewired the monitors to allow for individual replacement, inspection and maintenance.

SAFETY EVALUATION: This represents an enhancement to plant maintenance and operations. These monitors comply with the human factors design conventions for the main control room. They perform no safety related function and evaluations have been performed to ensure that these components can have no adverse impact on safety related equipment. The panel was seismically analyzed using the guidelines from IEEE 344-1975 and found to be stable during the worst seismic event postulated for Farley.

SUBJECT: PCN B87-2-4609, Revs. 1 and 2

PORC REVIEW: PORC Meeting 2196, 08/28/90
2282, 03/05/91

DESCRIPTION: Added three vendor supplied cables for the refueling transfer system. One cable services a load cell and the other two are programmable limit switch cables. Also, the piping downstream of service air valve N2P18V058 was capped. FSAR Appendix 9B was revised to reflect these design changes.

SAFETY EVALUATION: Based on the small quantity of cable, the size of the conductors (# 22 AWG), the small quantity of insulation material, its installation inside an enclosed raceway system, and the fact that the rooms through which the cables are routed do not contain redundant safe shutdown circuits, use of this cable will not decrease the effectiveness of the fire protection program, nor introduce a significant amount of PVC. The affected service air piping is non-safety related and the change to the piping will have no effect on any safety related systems or components.

SUBJECT: PCN B88-2-4789, Rev. 0

PORC REVIEW: PORC Meeting 2161, 05/15/90

DESCRIPTION: Revised FSAR Figure 6.3-B/Sheet 2 to include an additional diaphragm valve Q2P44V506 downstream of the existing RWST sampling valve Q2P44V505. This additional valve was installed under MD 87-1772 to provide a means of isolating leaking valve V505.

SAFETY EVALUATION: This design change updates an FSAR drawing and has no impact on plant safety. The added valve, piping and welds, meet all ASME Class 2 requirements.

SUBJECT: PCN B88-2-4851, Rev. 0

PORC REVIEW: PORC Meeting 2336, 06/11/91

DESCRIPTION: Installed a lockable wire mesh door and wire mesh enclosure to provide administrative access control of the BTRS heat exchanger exclusion area. The previous condition allowed inadvertent or unauthorized entry into areas above existing walls and through open penetrations. FSAR Figures 12.1-14, 12.1-29 and 9B-49 were revised to reflect these changes.

SAFETY EVALUATION: The design change is an enhancement to radiological controls. It does not adversely affect the operation of any safety related or safe shutdown system.

SUBJECT: PCN B88-2-4861, Rev. 0

PORC REVIEW: PORC Meeting 2336, 06/11/91

DESCRIPTION: Installed a lockable woven wire mesh door in storage room 2164 for administrative access control. The storage room becomes an exclusion area due to its radiological condition when used to calibrate dosimeters. FSAR Figures 12.1-13, 12.1-28 and 9B-44 were changed to reflect this installation.

SAFETY EVALUATION: This design change is an enhancement to radiological controls. It does not adversely affect the operation of any safety related or safe shutdown system.

SUBJECT: PCN B88-2-4918, Rev. 0

PORC REVIEW: PORC Meeting 2161, 05/15/90

DESCRIPTION: Provided design to replace the carbon steel piping and valves on the makeup water lines to the chemical addition tanks with equivalent stainless steel piping and valves. When the tanks are batched, the boric acid solution enters the makeup water piping causing corrosion and leaks. FSAR Figure 10.3-5 is presently based on the Unit 1 P&ID. A new figure was added to the FSAR corresponding to the Unit 2 P&ID.

SAFETY EVALUATION: The affected piping is all non-safety related. This modification is an improvement of the existing system and has no adverse impact on the safe operation of the system or on any plant safety system.

SUBJECT: PCN B88-2-4918, Rev. 1

PORC REVIEW: PORC Meeting 2172, 06/21/90

DESCRIPTION: Deleted modifications issued in revision 0 of this PCN and provided makeup water supply to the chemical addition tanks by use of a hose connection in lieu of hard piping.

SAFETY EVALUATION: The affected piping is all non-safety related. This modification is an improvement of the existing system and will have no adverse impact on the safe operation of the system or on any plant safety system.

SUBJECT: PCN B88-2-5245, Rev. 0

PORC REVIEW: PORC Meeting 2164, 05/22/90

DESCRIPTION: Routed the discharge from the RVHVS to the PRT in order to prevent leakage from the solenoid valves of the RVHVS from dripping onto the reactor vessel head area.

SAFETY EVALUATION: The PRT has a nitrogen gas cover which would mitigate the effects of a hydrogen gas discharge from the RVHVS discharge piping. The basic purpose of the RVHVS remains unchanged by this modification. Analyses concluded that the piping and supports meet code requirements.

SUBJECT: PCN B88-2-5407, Rev. 0

PORC REVIEW: PORC Meeting 2189, 08/07/90

DESCRIPTION: Installed metal reflective insulation on the pressurizer loop seal piping in order to achieve sufficient increase in the loop seal temperature to ensure flashing of the fluid. Raising the loop seal water temperature will decrease the potential stresses in the discharge piping. In order to verify design adequacy, temporary temperature monitoring instrumentation was also installed. This requires a revision to FSAR Figure 5.1-2, Sheet 2. The addition of cable for the temperature monitoring results in a small increase in the combustibles for fire area 2-55. The temporary temperature monitoring equipment is scheduled to be removed after one fuel cycle.

SAFETY EVALUATION: The temporary temperature monitoring instrumentation will confirm the design adequacy of the insulation design and will not affect the performance of any safety related system. Although the combustible loading has increased, the fire severity rating for containment as shown in FSAR Appendix 9B, Attachment A, is not affected. Calculation SE-87-790-1 shows the additional amount of combustible material (cable insulation) added by this PCN revision in fire area 2-55. Upon removal of the temperature monitoring system, calculation SE-87-790-1 and the FSAR will be revised to delete these cables and their effects on the combustible loading in the above mentioned fire area.

SUBJECT: PCN S89-2-5679, Rev. 0

PORC REVIEW: PORC Meeting 2170, 06/15/90

DESCRIPTION: Revised FSAR Figure 11.2-5, Sheet 2, to show the sample isolation valves on both waste monitor tank sample lines. These valves are located downstream of valves Q2G21V109A and B.

SAFETY EVALUATION: The changes are editorial in nature and serve only to clarify the FSAR figure. These changes do not result in physical change to the plant or functional modifications to plant safety systems.

SUBJECT: PCN B89-2-5758, Rev. 1

PORC REVIEW: PORC Meeting 1988, 04/11/89

DESCRIPTION: Added temporary monitoring cables to room 2334 (fire area 2-34) and to containment (fire area 2-55). Interim combustible calculation E-93 has been revised to include the presence of these cables in fire areas 2-34 and 2-55. Since the cables are required to be removed in the next refueling outage, the FSAR tables were not revised.

SAFETY EVALUATION: The fire severity ratings for these fire areas are not increased. This change does not decrease the effectiveness of the fire protection program and does not affect the safe shutdown of the plant.

SUBJECT: PCN B89-2-6089, Rev. 0

PORC REVIEW: PORC Meeting 2163, 05/18/90

DESCRIPTION: Deleted the 2A MDAFWP, 2B MDAFWP and the TDAFWP low flow alarms from BOP panels L and N as part of the annunciator changes resulting from the control room design review. A new FSAR figure will be added to include the Unit 2 P&ID which is currently included in Figure 6.5-1.

SAFETY EVALUATION: The low flow switches are included in control board annunciator J-75. Since the annunciators are not safety related, this modification does not affect the operation of safety related equipment in the auxiliary feedwater system.

SUBJECT: PCN 589-2-6227, Rev. 7

PORC REVIEW: PORC Meeting 2235, 11/15/90

DESCRIPTION: Revised FSAR Figures 5.1-2, Sheet 2, 6.3-3, Sheet 2, and 9.2-7, Sheet 2, to show the correct installation of the main steam isolation valves (Q2N11V001A, B & C and Q2N11V002A, B & C).

SAFETY EVALUATION: Although the main steam isolation valve (MSIV) stud to disc set screw material is subject to stress corrosion problems, set screw failure would not adversely affect the operability of the valves. The system and component designs have not been degraded. Therefore, it is concluded that there is no adverse effect on plant safety.

SUBJECT: PCN 589-2-6227, Rev. 8

PORC REVIEW: PORC Meeting 2235, 11/15/90

DESCRIPTION: Revised FSAR Figures 5.1-2, Sheet 2, and 6.3-3, Sheet 2, to omit Westinghouse model identification numbers for several Westinghouse valves that were previously added under Bechtel change notices. This revision also restores the valve identification numbers to the design drawings.

SAFETY EVALUATION: Restoring the Westinghouse valve identification numbers to the design drawings will aid plant operations in identifying valves. The model identification numbers are not critical to plant operations and deleting them from the drawings will have no impact on plant safety.

SUBJECT: PCN S89-2-6339, Revs. 0 and 1

PORC REVIEW: PORC Meeting 2177, 07/10/90

DESCRIPTION: Installed stainless steel piping sections and temperature detectors to measure service water flow, inlet temperature and outlet temperature for performance testing of safety related service water heat exchangers. Stainless steel pipe sections replaced carbon steel pipe sections in the service water supply lines to each containment cooler and diesel generator. The stainless steel section will enhance the precision of the ultrasonic flowmeter used. Thermocouples were attached with stainless steel banding to each of the applicable heat exchangers' supply and return lines to obtain the temperature measurements required. Revision 1 of this PCN changed the TPNS instrument designation from "TC" to "TE" for the new temperature detectors. FSAR Figures 9.2-4 and 9.5-18, Sheet 2, were revised to reflect the changes.

SAFETY EVALUATION: The addition of the stainless steel piping sections has no adverse effect on the existing seismic analyses nor will it degrade the flow characteristics of the service water system. Because the addition of the temperature detectors contributes little to the overall mass of the piping systems and associated components, there will be no significant impact. There will be no adverse impact on the fire protection program or the safe shutdown analysis as a result of the addition of thermocouple wiring.

SUBJECT: PCN B89-2-6300, Revs. 1, 2, and 6

PORC REVIEW: PORC Meeting 2340, 06/20/91
2381, 10/03/91

DESCRIPTION: Deleted the line conditioner and provided cabling and installation information to establish a new dedicated alternate power source for the SPDS computer. A new 45KVA constant voltage transformer (CVT) was added to provide the dedicated alternate power source. Minor raceway and cable routing changes were made. An update to FSAR Appendix 9B, Attachment A, was not required due to the issuance of Calculation A-177678 for PCN B91-0-7278, which necessitates updating FSAR Appendix 9B, Attachment A, only if the fire severity changes or a new type of combustible is introduced in the fire area. Neither of these two occurred.

SAFETY EVALUATION: The new CVT is powered from MCC 2V. The additional load has been reviewed and there is no increase in load over the B train diesel generator 2B continuous rating. The added cables are IEEE 383 qualified. The routing of the cables is such that there is no new path for the spread of fire between redundant safe shutdown trains. There were no changes in fire severity and no new types of combustibles.

SUBJECT: PCN B90-2-6377, Rev. 5

PORC REVIEW: PORC Meeting 2204, 09/18/90

DESCRIPTION: Provided the required changes to add the narrow range level instrumentation and wide range dry reference leg into FSAR Figures 5.1-1, Sheet 2, and 5.1-2, Sheet 2. This equipment allows accurate monitoring of RCS narrow range level during mid-loop operation.

SAFETY EVALUATION: The RCS level monitoring instrumentation is non-safety related and performs no safety function. It interfaces with the RCS which is safety related and this interface has been reviewed and found acceptable. The RCS wide range level annunciator alarm which is being deleted from FSAR Figure 5.1-1, Sheet 2, is replaced by an equivalent computer generated alarm. The function and current setpoints for this alarm are unaffected.

SUBJECT: PCN B90-2-6377, Rev. 7

PORC REVIEW: PORC Meeting 2204, 09/18/90

DESCRIPTION: Revised FSAR Figure 5.1-1, Sheet 2, to show valves N2B13V020 and N2B13V021 as normally closed rather than normally open. These valves provide isolation for the wide range RCS level transmitter and the tygon hose connection for additional RCS level monitoring and are utilized during plant modes 5 and 6 only. They are not required to be open during normal plant operation.

SAFETY EVALUATION: The RCS level monitoring instrumentation which these valves are associated with is non-safety related and performs no safety function. These valves are used for isolation of each individual RCS level monitoring system from the branch line. Valve Q2B13V012 in the branch line (presently shown as normally closed) prevents flow from reaching valves N2B13V020 and N2B13V021. Therefore, closure of valves N2B13V020 and N2B13V021 does not impact RCS flow during normal operation. This change does not affect any safety related system.

SUBJECT: PCN B90-2-6377, Rev. 8

PORC REVIEW: PORC Meeting 2204, 09/18/90

DESCRIPTION: Installed temporary cables between the level sensors and the pre-amps for RCS outage level monitoring. These cables were laid out on floors and grating and attached to the outside of raceways. They constituted combustible materials in containment and room 2334 so the combustible loading calculations for these areas were temporarily modified. Since the cables were only installed while the reactor was shutdown, no plant documentation was revised, including the FSAR.

SAFETY EVALUATION: The temporary cables met the requirements of IEEE 383-1974. They were not put into raceways containing safety related cables. They were only installed during outage operations. Also, calculations show that the addition of the temporary cables did not increase the fire severity for fire areas 2-34 and 2-55.

SUBJECT: PCN B90-2-6377, Rev. 9

PORC REVIEW: PORC Meeting 2212, 10/04/90

DESCRIPTION: Added a permanent 3/8 inch tubing connection at the top of the pressurizer for attaching tygon hose. This connection along with the connection off the bottom of the loop "B" RCS crossover piping is utilized to provide an additional means of monitoring RCS level during refueling and mid-loop operations. FSAR Figure 5.1-2, Sheet 2, was revised accordingly.

SAFETY EVALUATION: This connection is non-safety related and performs no safety function. It is located in the non-nuclear section of piping and is isolated during normal plant operation.

SUBJECT: PCN B90-2-6377, Rev. 12

PORC REVIEW: PORC Meeting 2222, 10/25/90

DESCRIPTION: Installed temporary cables between penetrations Q2T52B040-N and Q2T52B041-N inside and outside containment. The cables were exposed which constituted combustible materials in containment and room 2334. The combustible loading calculations for these areas were temporarily modified to show the additional combustible material.

SAFETY EVALUATION: The temporary cables met the requirements of IEEE 383-1974. They were not put into raceways containing safety related cables. They were only installed during outage operations. Also, calculations show that the addition of the temporary cables did not increase the fire severity for fire areas 2-34 and 2-55.

SUBJECT: PCN B90-2-6402, Rev. 1

PORC REVIEW: PORC Meeting 2195, 08/23/90

DESCRIPTION: Installed instrument air filters in instrument air lines to safety related pneumatic equipment. A commitment to install these filters was made in response to NRC Generic Letter 88-14. FSAR Figure 9.3-1 was revised accordingly.

SAFETY EVALUATION: This change interfaces with the non-safety related portion of the instrument air system. The addition of these air filters will enhance the ability of the associated valves to perform their safety related functions.

SUBJECT: PCN B90-2-6402, Rev. 2

PORC REVIEW: PORC Meeting 2195, 08/23/90

DESCRIPTION: Revised FSAR Figure 9.3-1 to show the associated air operated valve numbers which were not previously shown for the instrument air system.

SAFETY EVALUATION: This change provides additional information to reflect the as-built status of the plant. It merely adds or modifies TPNS numbers to several instrument air system valves.

SUBJECT: PCN S90-2-6408, Revs. 0, 1, 2, 4 and 5

PORC REVIEW: PORC Meeting 2171, 06/19/90
2190, 08/10/90

DESCRIPTION: Provided design to reduce the dissolved oxygen in the main condenser. The condensate makeup line to the condenser was modified to discharge above the condenser tube bundles. A 3/4 inch line was added to facilitate the use of condensate from the condensate pump discharge for condensate pump seals in lieu of demineralized water. In addition, the condenser sparging system was modified to be used as a nitrogen injection system. Other piping that discharges into the condenser was also modified. FSAR Section 10.3 and 10.4.1.2 and Figures 9.2-7, 10.3-1 and 10.4-3 were revised to reflect the above changes.

SAFETY EVALUATION: Reduction of dissolved oxygen in the condensate/feedwater system reduces corrosion in the system thus reducing sludge deposited in the steam generators. The condensate pump seal modification was evaluated by Engineering Study 90-1741 and found to be acceptable.

SUBJECT: PCN S90-2-6412, Rev. 1

PORC REVIEW: PORC Meeting 2348, 07/11/91

DESCRIPTION: Added a Dionex 8100 ion chromatograph system to the primary and secondary chemistry labs. Each lab received two ion chromatographs (anion and cation), a sample selection module, and a computer system for analysis and chromatograph management. In addition, each chromatograph system was supplied with instrument air, gaseous nitrogen, waste drains and electrical power. FSAR Figures 9.3-1, Sheet 13, and 9.3-2, Sheet 5, were revised according to this design change. The FAHA of FSAR Appendix 9B was revised to reflect the change in combustible loading.

SAFETY EVALUATION: The primary and secondary labs are not safety related and are non-seismic. However, seismic II over I calculation SC-90-2-6412-001 was performed for the placement of the nitrogen dewars in the aisle outside the primary lab. This consideration is required due to the location of the dewars near a 2 inch service water line and adjacent to fire protection equipment and 125V DC distribution panel Q2R41L001C-A. The type and amount of combustibles added to room 2324 have no impact on the probability of the initiation of a fire.

SUBJECT: PCN S90-2-6412, Rev. 2

PORC REVIEW: PORC Meeting 2348, 07/11/91

DESCRIPTION: Rerouted the primary lab ion chromatograph (IC) drain to the sample system condensate return unit, eliminated the liquid nitrogen dewars, provided plant nitrogen to the primary lab ICs, reoriented the secondary lab ICs, relocated components within each lab, and made some component part number changes. FSAR Figure 11.3-2, Sheet 2, was revised accordingly.

SAFETY EVALUATION: The primary and secondary labs are not safety related and are not seismic category I. The sampling system and the nitrogen system do not impact safety systems nor do the alterations have any impact on equipment important to safety.

SUBJECT: PCN B90-2-6483, Rev. 0

PORC REVIEW: PCRC Meeting 2200, 09/10/90

DESCRIPTION: Replaced the safety-related solenoid valves in the AFW system and the TDAFWP warmup line with solenoid valves of a higher maximum operating differential pressure (MODP) to preclude inoperability due to air pressure regulator failure. The higher MODP will result in a lower flow coefficient by a factor of two, thus approximately doubling the stroke time of the corresponding AOVs. The stroke time entry in FSAR Table 6.2-32, Item 4, was changed from "5 sec" to "N/A."

SAFETY EVALUATION: This change was made in response to the concern expressed in NRC Information Notice 88-24 that air system pressure may exceed the MODP of the solenoid valve. The replacement valves have the same seismic and environmental qualifications as the previously installed valves. The greater stroke times will not adversely affect the response time of the AFW system. The stroke time entry previously in FSAR Table 6.2-32, Item 4, was unnecessarily conservative.

SUBJECT: PCN B90-2-6488, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Added three telephone lines and jacks in the TSC.

SAFETY EVALUATION: The addition of telephones enhances the overall communication system without adversely affecting its performance. The telephone lines added are not safety related nor do they have any effect on safety-related equipment.

SUBJECT: PCN 890-2-6494, Rev. 0

PORC REVIEW: PORC Meeting 2209, 09/27/90

DESCRIPTION: Provided the pipe support modifications resulting from the pipe stress and pipe support evaluations performed due to the revised Copes-Vulcan valve weights and centers of gravity. These modifications do not represent a change to the plant as described in the FSAR but they revise the pipe stress levels at the postulated pipe break locations in FSAR Tables 3.6-13, 3K.4-9 and 3K.4-10.

SAFETY EVALUATION: The arbitrary intermediate pipe break locations need not be changed because all the revised stress levels remain below $0.8(SA+1.2SH)$ and the piping has been reanalyzed due to differences between the design configuration and the as-built configuration and not due to redesign of the piping.

SUBJECT: PCN S90-2-6515, Rev. 0

PORC REVIEW: PORC Meeting 2242, 12/04/90

DESCRIPTION: Replaced the 3/4 inch swing check valves with lift check valves upstream of the 2B emergency D/G air start system's air receiver tanks to maintain air pressure available for starting the diesel, typically in a loss of off-site power event. The swing check valves were providing an inadequate shortened service life which was attributed to wear caused by pressure pulsations from the air start air compressor. FSAR Figure 9.5-19 was revised accordingly.

SAFETY EVALUATION: The performance and length of service of the lift check valves is superior to that of the swing check valves. The lift check valve manufacturer has qualified these valves for seismic loading in excess of twice what is currently required. The weight variation between the original and replacement valves is negligible and will not affect the seismic qualification of the piping. The operation of the emergency diesel air start system has not been altered.

SUBJECT: PCN 890-2-6518, Rev. 1

PORC REVIEW: PORC Meeting 2241, 11/29/90

DESCRIPTION: Verified the complete removal of flow transmitter N2E21FI2976, and the associated flow element and flow indicator, FE2976 and FI2976, and updated FSAR Figure 9.3-5, Sheet 2, accordingly. The instruments were installed in the 2A reactor coolant loop to measure the RCI seal leak-off flow for startup testing and troubleshooting. They were removed by a startup work request, but plant documents were not updated to indicate their removal.

SAFETY EVALUATION: The affected instrument loop is not required for operation of the RCPs. High seal leakoff flow is monitored by a flow switch and annunciator alarm for each RCP. This is sufficient for indication of pump seal operability.

SUBJECT: PCN S90-2-6565, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Revised FSAR Figure 9.3-8/Sheet 6 to show that recycle evaporator pump discharge pressure gauges PI-310 and 311 are pneumatic gauges connected to pressure transmitters and not gauges with diaphragm isolators and capillary tubing.

SAFETY EVALUATION: This change affects only the CVCS recycle evaporator package which is not safety related. This change does not affect the operation of the CVCS system or affect the operation of any other safety related system.

SUBJECT: PCN S90-2-6570, Rev. 0

PORC REVIEW: PORC Meeting 2196, 08/28/90

DESCRIPTION: Provided design for the replacement of carbon steel piping with chrome-moly piping for the extraction steam piping downstream of valve N2N35V510A to MSR 1A and downstream of valve N2N35V510B to MSR 1B. This piping has experienced erosion/corrosion to the extent that the piping should be replaced due to reduced wall thickness.

SAFETY EVALUATION: The change in piping material from carbon steel to chrome-moly will resist erosion/corrosion. The material substitutions have no effect on the stress qualification of the existing piping systems since both materials have the same allowable values for the design/operating temperature for these systems. The piping replacement meets the requirements of ANSI B31.1/1967 Ed. including Addenda through 1971.

SUBJECT: PCN B90-2-6574, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Revised FSAR Figure 9.4-61/Sheet 4 to show the interlock between SV-3751, radwaste HVAC recirculation damper solenoid valve, and TSL-3470, radwaste HVAC intake temperature, and to show the interlock between PDSL-3247, the radwaste exhaust fan pressure differential, and the radwaste air exhaust fans N2V46C002A and B.

SAFETY EVALUATION: This change brings Figure 9.4-61/Sheet 4 into agreement with the system description in FSAR paragraphs 9.4.3.2 and 9.4.3.5. The radwaste HVAC air exhaust fans and recirculation damper are non-safety related and perform no safety function. The function and operation of the radwaste HVAC system as described in this revision are unchanged.

SUBJECT: PCN 390-2-6664, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Revised FSAR Figure 9.3-6/Sheet 2 to add the Westinghouse valve identification number for valve Q2E2IV606, the charging flow regulator bypass valve.

SAFETY EVALUATION: This design change results in corrections to drawings contained in the FSAR. These corrections do not result in functional modification to plant safety systems.

SUBJECT: PCN R90-2-6733, Rev. 0

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Revised FSAR Figures 8.3-13/Sheet 2, 8.3-20 and 8.3-56 to document the replacement of Agastat time delay relays which were replaced per PCN B87-0-4384.

SAFETY EVALUATION: This PCN is for documentation purposes only. There are no physical changes to the plant or functional modifications to plant safety systems.

SUBJECT: PCN S90-2-6740, Rev. 0

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Revised FSAR Figure 9B-50 to remove the identification of door 2216 as being 3-hour fire rated. The wall in which the door is installed is not a fire area or fire zone barrier.

SAFETY EVALUATION: Since the rooms on either side of door 2216 do not contain redundant safe shutdown equipment or cabling, there is no requirement for door 2216 to have a fire rating. Revision of the drawing to reflect as-built conditions does not degrade the capability of the fire protection program to perform its intended functions. Additionally, no other plant system or structure is adversely impacted by the revision.

SUBJECT: PCN S90-2-6741, Rev. d
PORC REVIEW: PORC Meeting 2282, 03/05/91
DESCRIPTION: Revised FSAR Figure 9B-61 to show the existence of spray systems 2D-77 and 2D-98 in the Unit 2 Diesel Generator Cable Tunnels.
SAFETY EVALUATION: This design change results in corrections to drawings contained in the FSAR. These corrections do not result in functional modifications to plant safety systems.

SUBJECT: PCN B90-2-6770, Rev. 0
PORC REVIEW: PORC Meeting 2402, 12/10/91
DESCRIPTION: Revised FSAR Figure 6.2-124, Sheet 1, to reflect the deletion of the non-invasive reactor vessel level neutron flux detectors. PCN B84-2-2722 was implemented to remove the non-invasive reactor vessel level neutron flux detectors but failed to revise the FSAR figure.
SAFETY EVALUATION: The changes are editorial in nature and serve only to clarify the FSAR sections. These changes do not result in physical change to the plant or functional modifications to plant safety systems.

SUBJECT: PCN B90-2-6864, Rev. 0
PORC REVIEW: PORC Meeting 2357, 08/06/91
DESCRIPTION: Revised FSAR Figure 6.3-2, Sheet 2, to reflect the replacement of LI-3594B with recorder LR-3594B. Change notices 2BM-3337 and 2BE-739 replaced the indicator with an unqualified recorder, but did not revise the drawings. Subsequently, a qualified recorder was installed by PCN B84-2-2606.
SAFETY EVALUATION: This change revised the FSAR figure to reflect the as-built configuration. Recorder LR-3594B performs the indicating function and also provides a trend recording. The existing configuration meets the requirements of Regulatory Guide 1.97 as documented in the Regulatory Guide 1.97 Compliance Report.

SUBJECT: PCN B90-2-6869, Rev. 0

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Updated all documentation affected by 1976 modifications in which the model 12STD15B5A transformer differential relays used in 4KV buses 2A, 2D, 2E, 2F and 2G were converted into GE model 12STD15C5A relays to correct an RF interference problem. The affected FSAR figures are 600V load center single line diagrams where some of the affected relays are shown.

SAFETY EVALUATION: This PCN is for documentation purposes only; no equipment changes are required. The vendor addressed the modified relay in its final configuration and stated that the modification "will in no way effect seismic, warranty, nor operational requirements".

SUBJECT: PCN B90-2-6902, Rev. 0

PORC REVIEW: PORC Meeting 2358, 08/08/91

DESCRIPTION: Revised FSAR Figure 9.2-6, Sheets 1 and 2, to resolve drawing discrepancies which were identified during preparation of the CCW Functional System Description.

SAFETY EVALUATION: This design change results in corrections to drawings contained in the FSAR. These corrections do not result in physical changes to the plant or functional modifications to plant safety systems.

SUBJECT: PCN S90-2-6972, Rev. 0

PORC REVIEW: PORC Meeting 2296, 04/14/91

DESCRIPTION: Revised FSAR Figure 9.3-1, Sheet 4, to show the replacement of an obsolete temperature switch and the correct shutdown setpoint temperature of 150 degrees Fahrenheit for cooling water to air compressors 1A, 1B, and 1C.

SAFETY EVALUATION: This drawing revision is not safety related and will not affect the operation of the compressed air system which is required for normal operation and startup of the plant. This change will not impact the safe shutdown of the plant.

SUBJECT: PCN B90-2-7012, Rev. 0

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Revised FSAR Section 9B.B-174 to correct an inaccurate statement regarding the wrapped raceways in room 2185 for the CCW pumps and to reflect the NRC approved as-built condition.

SAFETY EVALUATION: This design change was editorial in nature and served only to clarify the FSAR. This change did not result in physical change to the plant or functional modifications to plant safety systems.

SUBJECT: PCN S90-2-7030, Rev. 0

PORC REVIEW: PORC Meeting, 03/05/91

DESCRIPTION: Revised FSAR Figure 9B-38, which is the suppression and detection annunciator list for Unit 2, to reflect the correct operation mode of the actuating valve for the cooling towers 2A, 2B and 2C hose cabinet supply system. The cooling tower hose cabinets are dry pipe systems which activate automatically upon indication of a fire. In addition, the column labeled "Computer AP Symbol" was deleted from the FSAR figure.

SAFETY EVALUATION: Changing the operation mode of the valve shown on the annunciator list reflects the as-built and proper system configuration. The Computer AP Symbol is no longer applicable since a new computer system has been placed in service that has eliminated this computer point information. Additionally, the cooling towers perform no safety-related function.

SUBJECT: PCN S91-2-7329, Rev. 1

PORC REVIEW: PORC Meeting 2355, 08/01/91

DESCRIPTION: Updated design documents to designate the normal supply for 4160V buses 2D and 2E coming from the startup transformers with the alternate supply being provided from the unit auxiliary transformers to agree with present as-built conditions. FSAR Figure 8.3-49 and Sections 3.1.7.3, 8.1.2, 8.2.1.3, 8.3.1.1.1, 8.3.1.1.3, 8.3.1.2 and 15.2.9 were revised to reflect these changes.

SAFETY EVALUATION: In APCo letters to the NRC dated 12/11/79, 5/01/80 and 7/17/80, concerning the "Adequacy of Station Electrical Distribution Systems Voltages", it was demonstrated that the startup transformers had sufficient capacity to provide power to 4160V buses 2D and 2E without degrading the performance of the startup transformers to provide AC power to the class 1E loads.

SUBJECT: PCN B91-2-7372, Rev. 0

PORC REVIEW: PORC Meeting 2295, 04/03/91

DESCRIPTION: Repaired RTD manifold isolation valve Q2B13V006B, which had a steam-to-yoke and a yoke-to-body leak, using guidance provided by the valve vendor Kerotest. The valve serves as an isolation valve for maintenance and is open during normal operation. The valve repair involved removing the handle and welding a cap over the yoke. FSAR Figure 5.1-1, Sheet 2, was revised to reflect these changes.

SAFETY EVALUATION: The pressure boundary integrity of the valve was not degraded by this change. The cap was welded to the valve in accordance with ASME Section III. The pressure rating of the valve was not reduced by this modification.

SUBJECT: Downflow Barrel Baffle Configuration: Effect on the Large Break LOCA ECCS Analysis

PORC REVIEW: PORC Meeting 2273, 02/14/91

DESCRIPTION: Re-examined the barrel baffle design configuration sensitivity while performing a large break LOCA analysis for transition to VANTAGE 5 fuel since the core flow area would change. The results of the analysis indicated a higher peak clad temperature (PCT) for the downflow barrel baffle design. A reanalysis was performed to determine the ECCS analysis PCT for the downflow configuration.

SAFETY EVALUATION: A safety evaluation was performed to consider the effect of the downflow barrel baffle design configuration on the following LOCA related analyses: Large Break LOCA, Small Break LOCA, LOCA Hydraulic Forcing Functions, Post-LOCA Long-Term Core Cooling, and Hot Leg Switchover to Prevent Boron Precipitation. The conclusions of the safety evaluation indicate that compliance with the requirements of 10CFR50.46 is maintained.

SUBJECT: Refueling Transfer System Cable Drive Modification (SECL 89-1031, Rev. 2)

PORC REVIEW: PORC Meeting 2196, 08/28/90

DESCRIPTION: Modified the fuel transfer system cable drive. The modification was achieved by replacing critical drive components which were located underwater in somewhat inaccessible areas with cable drive winch units which are located above water in readily accessible areas. A winch driven programmable limit switch controls carriage positioning and is easily adjusted and maintained. This switch replaces the previous underwater end limit proximity switches. FSAR Section 9.1.4.2.2.8 and Figure 9.1-13 were revised accordingly.

SAFETY EVALUATION: This modification was a product upgrade and did not adversely affect the functionality of the fuel transfer system. Additionally, the fuel transfer system is classified as a non-nuclear safety system.

ATTACHMENT 3

SHARED ANNUAL REPORT
REQUIRED BY 10 CFR 50.59

SUBJECT: ADIF 89-18, Rev. 0
(ES 90-1773)

PORC REVIEW: PORC Meeting 2278, 02/28/91

DESCRIPTION: Revised FSAR Section 9B.4.1.21 to more accurately reflect the existing plant drainage design.

SAFETY EVALUATION: Certain areas where water is the primary suppressant are not provided with drains, but in each case, the release of fire protection water has been evaluated and it has been concluded that no unacceptable conditions will result.

SUBJECT: ES 87-994, Rev. 0

PORC REVIEW: PORC Meeting 2364, 08/27/91

DESCRIPTION: Revised FSAR Figures 9B-4 and 9B-5 to include SWIS storage container, trash sorting enclosure and surepak storage modules. A fire area hazard analysis was performed for the exteriors of the Auxiliary Buildings, the Diesel Generator Building and the Service Water Intake Structure and their adjacent yard areas. Three permanent/semi-permanent yard storage arrangements were identified that should have been in the FSAR.

SAFETY EVALUATION: Fire area hazard analyses were performed on each of the three permanent/semi-permanent yard storage arrangements. The existence of the SWIS storage container located outside of and adjacent to the east wall of the SWIS does not pose a credible fire hazard to the SWIS. The trash sorting enclosure, erected in the vicinity of the northeast corner of the Unit 2 Turbine Building, does not pose significant fire threats to any plant structure or system. Surepak storage modules located within 30 feet of the east side of the Auxiliary Building do not pose a fire hazard to the Auxiliary Building nor any plant structure or equipment.

SUBJECT: ES 89-1460

PORC REVIEW: PORC Meeting 2322, 05/14/91

DESCRIPTION: Evaluated and justified leaving the door between the control room and the technical support center (Door 453) and the door between the control room and the RACA (Door 418) open while repairs of their latches are in progress. The evaluation consisted of three worst-case scenarios: 1) large break LOCA, 2) chlorine release and 3) smoke intrusion. The evaluation assumed that a dedicated person will be continuously available to close and seal the door using a temporary sealing mechanism. The temporary sealing mechanism will reestablish the design leak-tightness of the doors.

SAFETY EVALUATION: Temporarily disabling Door 453 or 418's latching mechanism to repair it, with the compensatory measures, does not adversely affect the control room habitability systems or personnel during normal operations or during postulated accident conditions. Administrative controls ensure security personnel are posted when the door is not functional.

SUBJECT: ES 89-1511

PORC REVIEW: PORC Meeting 2313, 05/02/91

DESCRIPTION: Evaluated the elevations of the charging pump room valves required to isolate cracks in the CVCS lines. The elevations did not conform to the value of 11 feet above floor level as stated in FSAR Section 3K.4.2.1.4. Based on evaluation results, the FSAR statement of the specific charging pump valve elevations was replaced with a statement specifying that all the valves in question are above flood level.

SAFETY EVALUATION: A walkdown of the pump area established that the elevations of the valves necessary to isolate a pump or piping failure from the rest of the system are well above the design flood levels of the areas in which the valves are located. Consequently, valve operability is not adversely affected.

SUBJECT: ES 90-1783

PORC REVIEW: PORC Meeting 2283, 03/07/91

DESCRIPTION: Revised FSAR Table 6.2-38 to show penetrations 25, 26 and 27 as requiring Type A leakage testing instead of Type C (i.e., draining of the lines not required). These penetrations are for the RCP seal water injection lines. FSAR Table 6.2-39 was revised to delete valves Q1(2)E21V116A, B and C from the listing of containment isolation valves for these penetrations. FSAR Section 6.2.4, Table 6.2-31 and Figure 6.2-97 required minor revisions to incorporate the changes above.

SAFETY EVALUATION: Since RCP seal water injection is maintained during most accident scenarios, these penetrations are not credible paths for leakage out of containment. No credible containment atmosphere leakage paths exist during an RCP seal water maintenance scenario or the Design Basis Accident (with a single active failure) since the lines will remain water-filled in all cases. Therefore, it was concluded that Type A testing of penetrations 25, 26 and 27, without venting and draining of the system piping, adequately satisfies the testing requirements of 10 CFR 50, Appendix J.

SUBJECT: ES 91-2037, Rev. 0

PORC REVIEW: PORC Meeting 2359, 08/13/91

DESCRIPTION: Eliminated the commitment to periodically test the in-leakage characteristics of the penetration room (PR) area joints, partitions and seals (JPS) in accordance with the Systems Acceptance Tests referred to in FSAR section 6.2.3.4.2. Systems Acceptance Tests will be used to test the in-leakage characteristics of the penetration rooms following major modifications or repair to the penetration room boundary.

SAFETY EVALUATION: The safety function of the PRF system, which is the control of dose following a fuel handling accident in the spent fuel pool area, is not affected by the leakage characteristics of the PR area JPS. Other functions of the PR area JPS such as fire or flooding protection are unaffected since the only purpose of in-leakage testing is to verify that the air flow the PRF must provide to maintain the PR area at a negative pressure has not substantially increased due to PR area JPS degradation. Existing surveillance testing would detect serious JPS degradation by the failure to achieve the expected level of vacuum in the PR area. A review of applicable regulatory and other guidance did not reveal any guidance to the effect that Systems Acceptance Tests be periodically performed.

SUBJECT: FNP-0-AP-38, Rev. 9

PORC REVIEW: PORC Meeting 2330, 05/23/91

DESCRIPTION: Removed the restriction that oxygen-acetylene equipment could only be leak checked using a "commercially available aerosol technique". Also, the listing of non-smoking areas of the plant was superseded by the FNP Clean Air Policy. FSAR Section 9B.2.2.3 and Table 9B-2 were revised to reflect the changes above.

SAFETY EVALUATION: The aerosol method of leak testing is more expensive and liquid "snoop" is easier to use and just as effective as other methods. The FNP Clean Air Policy is more restrictive than the previous listing of non-smoking areas and this should reduce the possibility of a fire.

SUBJECT: FNP-0-AP-66, Rev. 1

PORC REVIEW: PORC Meeting 2405, 12/19/91

DESCRIPTION: Revised the procedure to reflect the reorganization of the Daily and Outage Planning Groups. This included the addition of the Planning and Control Supervisor who reports to the Manager-Operations. FSAR Sections 13 and 17 were revised accordingly.

SAFETY EVALUATION: The organizational changes that were made ensure that those features necessary for safe plant operation will be maintained. The quality assurance program was not altered as a result of the changes. There was no change to the physical design or operation of the plant. Plant safety margins established through Limiting Conditions of Operation, Limiting Safety System Settings and Safety Limits specified in the Technical Specifications were unchanged.

SUBJECT: FSARC 90-002

PORC REVIEW: PORC Meeting 2264, 01/24/91

DESCRIPTION: Updated FSAR Section 11.4 by deleting both the reference to channel R-29A as a fixed monitor and the identification of specific monitor type and brand.

SAFETY EVALUATION: These changes are editorial in nature. They clarify existing FSAR information by making the FSAR internally consistent and consistent with the Tech. Specs. This level of detail is not typically provided in the FSAR. R-29A is a continuous grab sampler and has no relevance with respect to a discussion of fixed monitors.

SUBJECT: FSARC 90-007

PORC REVIEW: PORC Meeting 2313, 05/02/91

DESCRIPTION: Revised the combustible loading and fire severity tables of FSAR Appendix 9B, Attachment A, due to an error in the heat of combustion of lube oil and miscellaneous oil, changes in quantities of gas bottles and power panels, various inconsistencies in fire load, revised fire load and quantities based on re-review of the areas/rooms, and a revised computer calculation program.

SAFETY EVALUATION: The fire severity for all but four of the rooms affected by these changes did not increase. For the four rooms where the fire severity did increase, evaluation shows that the existing fire protection provisions are adequate. Furthermore, no exemptions depend on the fire severity of these four rooms.

SUBJECT: FSARC 90-011

PORC REVIEW: PORC Meeting 2276, 02/26/91

DESCRIPTION: Revised FSAR Section 13.1.2.2.5 to clarify the relationship between the health physics technicians and radiation detection men in reference to their responsibilities. Radiation detection men deal with radwaste processing and handling instead of radiation monitoring and surveying. The monitoring and surveying tasks have always been performed by health physics technicians.

SAFETY EVALUATION: The position defined in the FSAR as "radiation detection" men is a misnomer that is the result of a previous labor union contract negotiation. This FSAR change further clarifies personnel functions and responsibilities.

SUBJECT: FSARC 91-13

PORC REVIEW: PORC Meeting 2393, 11/05/91

DESCRIPTION: Revised the circulating water system chemical treatment description in FSAR Section 10.4.5.6 to reflect the requirement that cooling tower blowdown discharge to the river must be in accordance with the National Pollutant Discharge Elimination System (NPDES) permit. This requirement replaced the specific methods of biofouling and corrosion control previously listed in this section of the FSAR.

SAFETY EVALUATION: This change reflects current practices and ensures compliance with the NPDES permit issued by the State. The function and operation of the circulating water system is not affected.

SUBJECT: FSARC 90-014, Rev. 0

PORC REVIEW: PORC Meeting 2264, 01/24/91

DESCRIPTION: Deleted redundant text information concerning radioactive liquid sampling.

SAFETY EVALUATION: These changes are editorial in nature and serve only to clarify the FSAR. These changes do not result in physical changes to the plant or functional modifications to plant safety systems.

SUBJECT: FSARC 90-024, Rev. 0

PORC REVIEW: PORC Meeting 2380, 10/01/91

DESCRIPTION: Revised FSAR Section 9B.4.2.1 to show that an existing piping cross-connection between the Unit 2 service water and fire protection water systems can be utilized for refilling the fire protection water storage tanks under emergency conditions if the well water system, the normal source for tank refilling, becomes unavailable. An 18 inch pipe line connects the Unit 2 service water system on the upstream side of the standpipe/surge tank to the suction header which leads from the fire protection water storage tanks to the individual fire pumps. Fire pumps can take suction from the Unit 2 service water system if the fire protection water storage tanks are emptied for any reason.

SAFETY EVALUATION: The service water system capabilities provide an added factor of safety to the fire protection systems. The changes are editorial in nature and serve only to clarify the FSAR sections. These changes do not result in physical change to the plant or functional modifications to plant safety systems.

SUBJECT: FSARC 90-028, Rev. 0

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Revised FSAR Section 3K.4.2.1.4 by removing a reference to a charging line low pressure alarm. The plant design does not include a charging line low pressure alarm.

SAFETY EVALUATION: The FSAR refers to the charging line low pressure alarm as an indication of a charging line rupture. However, the existing charging line low flow alarm will, in conjunction with the floor drain tank high level alarm, alert the operator to a line break. Another alarm that could be expected is a reactor coolant pump seal injection low flow alarm. Since there are sufficient alarms to alert the operator to flooding, a charging line low pressure alarm is not required.

SUBJECT: FSARC 90-035, Rev. 0

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Revised FSAR Section 9.2.1.2.3.4 to correct the statement that loss of a train of the river water system will automatically cause the service water system to go into the recirculation to wetpit mode. Based on the as-built configuration, loss of a train of the river water system initiates no automatic service water system actions. This statement was replaced with: "Should the river water system become incapable of providing sufficient make-up to the service water pond, the service water system would be placed in the recirculation to pond mode of operation."

SAFETY EVALUATION: This change is consistent with the as-built configuration and with service water system design bases. Also, this change is editorial in nature and serves only to clarify the FSAR.

SUBJECT: FSARC 90-036

PORC REVIEW: PORC Meeting 2287, 03/14/91

DESCRIPTION: Deleted the discussion concerning increased sampling/analysis frequency relative to specified effluent levels outlined in the Tech. Specs. from FSAR Section 11.4.

SAFETY EVALUATION: This statement is not supported by the requirements and actions outlined in the Tech. Specs. for either liquid or gaseous effluent releases. Deleting an unsupported reference to requirements based on Tech. Specs. limits clarifies the FSAR and makes it consistent with the provisions currently outlined in the ODCM. This change does not affect the liquid or gaseous sampling and analysis program.

SUBJECT: FSARC 90-040, Steam Generator Tube Uncovery,
SECL 89-1092, Rev. 1

PORC REVIEW: PORC Meeting 2301, 04/16/91

DESCRIPTION: Evaluated the safety significance of the effect
on offsite doses due to the uncovery of steam
generator tubes following postulated events.
FSAR Section 15 was revised to include the
results of the evaluation.

SAFETY EVALUATION: Based on the most conservative assumption that
tube uncovery persists for the duration of the
accident recovery, the resultant doses for all
accidents analyzed remain well within the
10CFR100 guidelines consistent with current
statements in the FSAR.

SUBJECT: FSARC 90-045

PORC REVIEW: PORC Meeting 2279, 03/01/91

DESCRIPTION: Revised FSAR Table 9.4-6/Sheet 2 to include the
exhaust fan, NSV49C011-N, in the list of HVAC
equipment for the cable spreading rooms. This
fan is manually activated to provide smoke purge
for the cable spreading rooms to support access
by the fire brigade or operators. Also, FSAR
Section 9.42 was revised to add a discussion of
this smoke purge fan.

SAFETY EVALUATION: An interlock is provided to stop the fan when
the fire protection CO₂ system is in use. These
changes are consistent with the as-built
configuration and system design requirements and
will have no adverse effects on any safety-
related components.

SUBJECT: FSARC 90-051

PORC REVIEW: PORC Meeting 2301, 04/16/91

DESCRIPTION: Clarified FSAR Paragraph 8.2.2.2 regarding grid stability analysis to indicate that unit stability is related to the availability of and alignment to preferred (offsite) power rather than to whether a unit trip would or would not result from grid instability. There are offsite distribution system transients that may result in a unit trip without resultant instability of the system grid or separation of either unit from preferred power.

SAFETY EVALUATION: The appropriate criteria for assessing the adequacy of the offsite distribution system is that, for postulated faults and/or breaker failures, the unit is to remain aligned to an adequate preferred power source.

SUBJECT: FSARC 90-053

PORC REVIEW: PORC Meeting 2264, 01/24/91

DESCRIPTION: Removed Table 13.5-18, "General Office - Nuclear Generation Procedures," from the FSAR. This table is not described in Section 13.5, "Plant Procedures."

SAFETY EVALUATION: Regulatory Guide 1.70 (Revision 1 and 3), the Standard Review Plan (NUREG 075/87) and the Farley Safety Evaluation Report only require that "plant" procedures be addressed in Section 13.5 of the FSAR. Table 13.5-18 lists General Office procedures and does not list any plant procedures. It is, therefore, an unnecessary administrative burden to maintain. No plant procedure, structure, system or component is being changed.

SUBJECT: FSARC 90-058, Rev. 0

PORC REVIEW: PORC Meeting 2397, 11/19/91

DESCRIPTION: Revised FSAR Section 9.4.5.2.3 to describe the two ventilation exhaust fans in the SWIS Battery Room/Battery Charger Room as operating independently. During normal operation the two 100% capacity fans are operating off of separate timers. In addition, the reference to setpoints was eliminated because it could have been construed to imply that there was some actuation input other than the timer (e.g. temperature).

SAFETY EVALUATION: The normal operation of two 100% capacity exhaust fans represents an enhancement of the capability to prevent hydrogen and heat buildup. Thus, independent operation of these components is acceptable and has no impact on the capability of the other fan to perform its intended function. Also, each fan is normally in-service and runs based on its respective timer; therefore, the backup fan is already functional should the primary fan fail and does not require a failure signal from the primary fan.

SUBJECT: FSARC 90-067

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Revised FSAR Section 9.5.6.1 to agree with Tech. Spec. Section 4.8.1.1.2.a.4 which states that surveillance testing requires the emergency diesel generators to reach rated speed within 12 seconds upon receipt of a start signal. Previously, FSAR Section 9.5.6.1 stated a design starting time of 10 seconds.

SAFETY EVALUATION: This change provides a clarification of the FSAR and removes confusing information. This is a documentation change to reflect the licensing basis start time of 12 seconds. There is no change to the plant or the design of the diesel generators.

SUBJECT: FSARC 90-078

PORC REVIEW: PORC Meeting 2287, 03/14/91

DESCRIPTION: Revised FSAR Section 12.2.2.4 to resolve discrepancies with Section 9.4.3. The ventilation system described in Section 9.4.3 is the Auxiliary Building radwaste area ventilation system, not the radwaste building ventilation system as previously referenced in Section 12.2.2.4. Additionally, the principal components of the radwaste area ventilation system are described in Tables 9.4-8 and 9.4-9, not in Table 9.4-4.

SAFETY EVALUATION: This change corrects terminology and does not constitute a change to the design of the plant. It is administrative in nature and has no impact on any system or on the safe shutdown of the plant.

SUBJECT:

FSARC 90-079, Rev. 0

PORC REVIEW:

PORC Meeting 2287, 03/14/91

DESCRIPTION:

Revised FSAR Section 9B.4.1.10 to include justification for not installing additional fire protection system spray nozzles beneath ceiling obstructions (pipes, cable trays, ducts, etc.) in rooms 209, 2208 and 2209. Professional Loss Control (PLC) stated that the nozzles should be located beneath obstructions where they are individually or cumulatively over four feet in width. However, room 209 is provided with an automatic water suppression coverage by system 1A-35 and rooms 2208 and 2209 are protected by system 2A-35.

SAFETY EVALUATION:

Modification of the rooms' existing fire suppression system or the installation of additional systems would improve the fire suppression capability within the rooms. However, this improvement would be marginal and would basically, but not exclusively, benefit the floor areas.

In view of the facts that (1) a fire in any of the rooms would affect but one train of safe shutdown equipment/cabling, (2) the bulk of the rooms' in-situ combustibles are adequately protected by the existing fire protection systems, (3) ample early warning of an incipient or open fire is provided under current conditions, (4) the plant has a fire brigade which can be promptly dispatched and (5) the plant has administrative procedures for the control of transient combustibles and flammables, modification of the existing fire protection systems or the addition of systems is neither required nor justified in view of the marginal improvement which might be realized. The currently installed systems, in conjunction with the existing smoke detection systems and plant administrative controls, are considered adequate.

SUBJECT: FSARC 90-099

PORC REVIEW: PORC Meeting 2279, 03/01/91

DESCRIPTION: Updated FSAR Table 13.5-3 in accordance with 10 CFR 50.71(e) to give the latest approved names for the emergency implementing procedures.

SAFETY EVALUATION: All changes to these emergency procedures were evaluated and approved by the PORC in accordance with ANSI N18.7-1972 as stated in the operating license, Section 13.4.

SUBJECT: FSARC 90-103

PORC REVIEW: PORC Meeting 2287, 03/14/91

DESCRIPTION: Added a clarifying statement to FSAR Section 3A-1.39.1 regarding the fire protection program and its description in Appendix 9B. This section references ANSI N45.2.3-1978 with regard to housekeeping activities during the operations phase. Although ANSI N45.2.3 references the NFPA National Fire Codes, most of the fire codes cover a variety of subjects much broader than housekeeping.

SAFETY EVALUATION: Plant operations housekeeping continues to be performed in accordance with Regulatory Guide 1.39 and ANSI N45.2.3-1978 except in regard to fire protection guidelines of subdivision 3.2.3 which are described in Appendix 9B. There are no requirements that NML and OSHA conduct inspections during the plant operations phase.

SUBJECT: FSARC 90-110

PORC REVIEW: PORC Meeting 2334, 06/06/91

DESCRIPTION: Changed the procedure for evaluating MWRs for transient fire loads to limit each MWR to 10% of allowable transient load for each fire area.

SAFETY EVALUATION: No changes were made to the facility or to design basis documentation. The 10% of allowable transient combustible load limitation was imposed to assure compliance with limits given in administrative procedures. Probabilistic Risk Analysis confirmed that the limit of each MWR to 10% of the allowable transient load would present a very low risk of exceeding the allowable load for each fire area.

SUBJECT: FSARC 91-012

PORC REVIEW: PORC Meeting 2399, 11/27/91

DESCRIPTION: Removed a sentence from FSAR Section 5.2.2.4.1 concerning the residual heat removal system relief valves' (RHRSRV) function to mitigate an RCS cold overpressurization transient. The sentence erroneously stated that RHRSRV position was "fully open" when system pressure reached 495 psig. Although the RHRSRVs relieve the required design specification flow of 900 gpm at this pressure, they are not fully open.

SAFETY EVALUATION: The RHRSRV disc position has no relevance at this pressure to the valve function to mitigate low temperature RCS pressure transients or to the margin of safety in the Technical Specifications.

SUBJECT: FSARC 91-503, Rev. 0

PORC REVIEW: PORC Meeting 2344, 06/30/91

DESCRIPTION: Revised FSAR Sections 8.1.2, 8.2.1.3, 8.3.1.1.1, 8.3.1.1.3 and Figures 8.3-1 and 8.3-49 to reflect that all 4KV normal and emergency buses are capable of being supplied from the start-up transformers (A & B) simultaneously. In letters to the NRC concerning the "adequacy of station electrical distribution systems voltage" it was demonstrated that start-up transformers have sufficient capacity to provide power to all of the plants loads. The evaluation was reviewed by the NRC and found to be acceptable.

SAFETY EVALUATION: This change does not degrade the performance of the electric power system in providing power to systems, structures and components important to safety.

SUBJECT: MD 91-2321

PORC REVIEW: PORC Meeting 2293, 03/25/91

DESCRIPTION: Routed a temporary hose from a Unit 2 service water hose connection to a union on the secondary chemistry lab (SCL) A/C service water supply line because the Unit 1 A train service water was isolated for maintenance. The implementing MWK (196796) was functionally accepted on 5-7-91 at 0732 and restored the SCL A/C to normal.

SAFETY EVALUATION: The operation of the SCL air conditioner is not required in any accident analysis and the service water in the turbine building is isolated on a safety injection signal. This minor departure did not change the function of any affected equipment. It only changed the location of the cooling water supply as shown on FSAR Figure 9.4-7.

SUBJECT: PCN S88-0-5511, Rev. 0

PORC REVIEW: PORC Meeting 2283, 03/07/91

DESCRIPTION: Updated the service water batteries load profile to reflect the results of the latest load study. This load profile is used in battery testing. FSAR Section 8.3.2.1.1 was revised accordingly.

SAFETY EVALUATION: The service water batteries have over twice the design capacity required to meet the new profile. Therefore, the existing battery system is adequate. Battery testing in accordance with the new profile will ensure a conservative basis for battery surveillance.

SUBJECT: PCN B89-0-6335, Rev. 0

PORC REVIEW: PORC Meeting 2178, 07/12/90

DESCRIPTION: Added new penetration seals and breached and sealed existing penetration seals in accordance with existing fire protection criteria. Also, combustibles were added to fire area 044. The combustible material consisted of less than or equal to 50 lbs. of fiberglass pipe insulation.

SAFETY EVALUATION: The increase of combustibles was small and did not increase the fire severity. The change did not decrease the effectiveness of the fire protection program nor will it affect the safe shutdown of the plant.

SUBJECT:

PCN B89-0-6335, Rev. 8

PORC REVIEW:

PORC Meeting 2297, 04/09/91

DESCRIPTION:

Provided an alternate temporary source of control room emergency water to accomplish PCN modifications which required isolation of the existing 600 gallon emergency water storage tank. The temporary water source was equivalent in capacity to the normal emergency source. Enough water for first day needs was stored in the control room and TSC. The remaining water was stored in the clean storage area. Since the operator had to leave the control room to get to the temporary source, it differed from the permanent source as described in the FSAR.

SAFETY EVALUATION:

The occasional short trips by the control room operations personnel via a passage through the TSC to get water from the source located in the clean storage area would have had no impact on post accident operator dose. The location of the temporary source in the clean storage area and TSC ensured separation from any safety related or safe shutdown equipment. The small volume in the control room was not stored near safety related or safe shutdown equipment. These provisions did not create the possibility of flooding since any water leakage in the clean storage area would have drained to floor drains and there was not enough water stored in the TSC or control room to cause flooding.

SUBJECT:

PCN B89-0-6335, Revs. 11 and 12

PORC REVIEW:

PORC Meeting 2319, 05/10/91
2321, 05/13/91

DESCRIPTION:

Replaced the 3/4 inch copper potable water line to the CAS condensing unit NSV49K003-N with 1/2 inch stainless steel piping. The design change also approved leaving the CAS condensing unit waste water line as a copper line in the control room. FSAR Figure 9.4-1, Sheet 1, was revised to show the change in material of the potable water line and the depiction of the piping material at the connection to the condensing unit.

SAFETY EVALUATION:

The design change from 3/4 inch copper line to 1/2 inch stainless steel line provides an acceptable design flow since the change has a negligible effect on the line pressure drop. The pressure and temperature ratings of the stainless steel piping are consistent with potable water system parameters. The piping supports meet design requirements.

SUBJECT: PCN S90-0-6404, Revs. 2, 3 and 5

PORC REVIEW: PORC Meeting 2330, 05/23/91
2359, 08/13/91

DESCRIPTION: Installed a permanent 12' x 12' modular office in the Diesel Building B train switchgear room for the Diesel Building system operator. The office includes lighting, air conditioning and communications. FSAR Figures 9B-34, 9.5-4 and 9.5-8 and the FAHA for fire area 56 zone C were revised.

SAFETY EVALUATION: All materials used for construction of the office are non-combustible. The existing combustible office material had already been accounted for in the fire loading for this area. The power required is supplied from a non-safety related lighting cabinet that already supplied the lighting in the room where the office is located. This electrical load was evaluated and found to have no unacceptable effects on safety related equipment, the electrical distribution system or other plant systems. The added heat loading was evaluated and does not affect the ability of the ventilation system to provide adequate cooling. Seismic II/I analysis was performed to ensure no interaction with any safety related equipment will occur.

SUBJECT: PCN S90-0-6410, Rev. 0

PORC REVIEW: PORC Meeting 2202, 09/12/90

DESCRIPTION: Installed a temporary ultrapure water system (reverse osmosis unit) to supplement or replace functions of the original water treatment facility in an effort to improve the reliability and service life of the steam generators. The reverse osmosis unit ties into the demineralized water system. FSAR Sections 9.2.3.1 and 10.3.5, Figures 1.2-1 and 9.2-24 and Table 9B-5, Sheet 1, were revised as appropriate.

SAFETY EVALUATION: The original water treatment plant and demineralized water system are not safety related. The new ultrapure water system enhances the performance of the water treatment system and is also non-safety related. Piping routed as a result of this design change does not enter areas containing safety related equipment and electrical connections are made to buses carrying only non-safety related loads. The hydrogen storage facility for the reverse osmosis unit meets the necessary National Fire Protection Association (NFPA) requirements. Equipment location is such that no seismic II/I interactions which could affect safe shutdown structures are possible. The chemicals required are not of a volatile or dispersant nature and do not impact the habitability of control room issues addressed in Regulatory Guide 1.78. All aspects of the new system have been reviewed and found not to pose any additional threat to safety systems.

SUBJECT: PCN S90-0-6512, Rev. 0

PORC REVIEW: PORC Meeting 2242, 12/04/90

DESCRIPTION: Replaced swing check valves QSR43V660 and V661 on the discharge of the 1C diesel generator air start system air compressors with lift check valves. The swing check valves were subjected to accelerated wear from pulsating flows. These valves also provided an inadequate service life. FSAR Figure 9.5-20 was changed to reflect the replacement of swing check valves.

SAFETY EVALUATION: The performance and length of service of the lift check valves is superior to that of the swing check valves. The lift check valves are qualified for seismic loading in excess of twice what is required. The weight variation between the original and replacement valves is negligible and does not affect the seismic qualification of the piping. The operation of the emergency diesel air start system has not been altered.

SUBJECT: PCN S90-0-6513, Rev. 0

PORC REVIEW: PORC Meeting 2242, 12/14/90

DESCRIPTION: Replaced swing check valves QSR43V658 and V659 on the discharge of the 2C diesel generator air start system air compressor with lift check valves. The swing check valves were subjected to accelerated wear from pulsating flows. These valves were providing an inadequate service life. FSAR Figure 9.5-20 was revised to reflect this change.

SAFETY EVALUATION: The performance and length of service of the lift check valves is superior to that of the swing check valves. The lift check valves are qualified for seismic loading in excess of twice what is required. The weight variation between the original and replacement valves is negligible and does not affect the seismic qualification of the piping. The operation of the emergency diesel air start system has not been altered.

SUBJECT: PCN S90-0-6514, Rev. 0

PORC REVIEW: PORC Meeting 2242, 12/04/90

DESCRIPTION: Replaced swing check valves QSR43V595 and V596 on the discharge of the 1-2A diesel generator air start system air compressor with lift check valves. The swing check valves were subjected to accelerated wear from pulsating flows. These valves were providing an inadequate service life. FSAR Figure 9.5-19 was revised to reflect this change.

SAFETY EVALUATION: The performance and length of service of the lift check valves is superior to that of the swing check valves. The lift check valves are qualified for seismic loading in excess of twice what is required. The weight variation between the original and replacement valves is negligible and does not affect the seismic qualification of the piping. The operation of the emergency diesel air start system has not been altered.

SUBJECT: PCN S90-0-6601, Rev. 0

PORC REVIEW: PORC Meeting 2276, 02/26/91

DESCRIPTION: Documented the locations and TPNS numbers of D/G building louver actuators on FSAR Figure 9.4-11.

SAFETY EVALUATION: This drawing change documents as-built conditions and provides additional information to aid plant personnel in locating, maintaining and identifying motor operated louvers.

SUBJECT: PCN S90-0-6739, Rev. 0

PORC REVIEW: PORC Meeting 2282, 03/05/91

DESCRIPTION: Revised FSAR Figure 9.4-1, Sheet 2, to remove an interlock symbol and signal shown between the computer room return air fan NSV47C010 and solenoid valve QSV47SV3623. An interlock shown on this same figure between smoke detector QSV49XSH3948A and computer room HVAC valves NSV47HV3479A and HV3479B was also removed. These interlocks were not installed.

SAFETY EVALUATION: The changes made in this PCN update documentation to the as-built condition of the plant. The indicated interlock between SV3623 and the computer room return fan would have tripped the fan upon closure of the isolation valves located immediately upstream of the fan. Since the isolation valves are capable of closing with continued flow in the HVAC ducts and the valves are capable of providing an adequate boundary, even with the negative downstream pressure which could be produced by the return fan, tripping of the fan is not a required feature to ensure the capability of the control room HVAC system to perform its safety function. Therefore, this as-built plant condition is acceptable.

SUBJECT: PCN S90-0-6828, Rev. 0

PORC REVIEW: PORC Meeting 2276, 02/26/91

DESCRIPTION: Revised FSAR Figure 8.3-30 to change the cable code of circuit 2DCS0016P from F07 to F06. Also, Figure 8.3-67, Sheet 2, was revised to change the cable size call-out on breaker LB11 from 1-2/C-2/0 to 2-1/C-1/0.

SAFETY EVALUATION: These drawing changes document as-built conditions. Circuit 2DCS0016P has been field verified as being made up of two F06 cables. Bechtel Corporation maintains the calculations under which this cable was sized. They have verified that the installed cable is fully acceptable.

SUBJECT: PCN S90-0-7049, Rev. 0

PORC REVIEW: PORC Meeting 2354, 07/25/91

DESCRIPTION: Revised the fire area hazard analysis for fire area 72 zones D and E and fire area 74 to state that "All penetrations through the area boundary are sealed with a 3-hour fire rated seal", instead of silicone foam only. Service Water Intake Structure fire barrier penetration drawings indicate three penetrations sealed with grout when in reality they are foam. Two penetrations are shown as foam when in reality they are grout. FSAR Sections 9B.4.1.4, 9B.2.2.6, 9B.C.7 and 9.2 were revised to reflect the as-built condition of these fire barrier penetrations.

SAFETY EVALUATION: The changes are editorial in nature and serve only to clarify the FSAR sections. These changes do not result in physical change to the plant or functional modifications to the plant safety systems.

SUBJECT: PCN B91-0-7278, Revs. 0 and 1

PORC REVIEW: PORC Meeting 2381, 10/03/91

DESCRIPTION: Deleted all 'quantity of combustible' figures from FSAR Appendix 9B, Attachment A, and replaced all actual fire load figures with maximum fire loading figures based on the listed fire severities of the rooms or group of rooms. A controlled document, A-177678, was created to show fire area/room(s) information such as the actual quantity of combustibles, actual fire load and the calculated fire severity. This change alleviates the necessity to update the FSAR each time a combustible is added.

SAFETY EVALUATION: The extent of the adverse effects of a fire depend only on the type of combustibles in the room(s) and the fire severity. No changes were made which add or revise combustible material or increase fire severities beyond previously evaluated values.

SUBJECT: SECL 91-090

PORC REVIEW: PORC Meeting 2307, 04/23/91

DESCRIPTION: Eliminated pressurizer surge line pipe ruptures from the structural design basis. FSAR Sections 3.1.4 and 3.6 were revised to reflect this change.

SAFETY EVALUATION: Analyses have been performed utilizing operating procedures, operator interviews, monitoring data and historical records to evaluate the effects of thermal stratification in the pressurizer surge line. Further analyses have been performed using leak-before-break techniques to demonstrate the acceptability of the elimination of surge line pipe ruptures from the structural design basis. The calculated pipe stresses and cumulative usage factors for the future surge line support configuration are within the allowable limits of the ASME Code. The critical flaw size is greater than 2 times the leakage flaw size. Predicted fatigue crack growth of a potentially existing flaw in the surge line piping would be very small and is well within the applicable limit.

SUBJECT: S. L 91-273

PORC REVIEW: PORC Meeting 2354, 07/25/91

DESCRIPTION: Evaluated and demonstrated that the peak clad temperature (PCT) margin does not exceed the 2200 degree Fahrenheit regulatory limit given in 10CFR50.46. Permanent assessment of PCT margin resulted from the investigation of two issues affecting the small break LOCA analysis. Analysis of the first issue, fuel rod performance modelling, resulted in the determination that a 37 degree Fahrenheit assessment of PCT margin would bound the effect of this issue for the Farley units. Analysis of the second issue, rod internal pressure initial condition, resulted in the determination that a 40 degree Fahrenheit assessment of PCT margin would bound the effect of this issue for the Farley units.

SAFETY EVALUATION: The PCT cumulative assessment applied to both Farley units is 77 degrees Fahrenheit. The PCT plus margin allocated for Unit 1 is 2023 degrees Fahrenheit and for Unit 2 is 1874 degrees Fahrenheit. These resultant PCT values remain below the 2200 degree Fahrenheit regulatory limit. Therefore, it can be concluded that margin allocation to account for these two issues does not cause a violation of the PCT acceptance criteria.

SUBJECT: Copes-Vulcan Valve Weight and Center of Gravity Discrepancies, SECL 90-322

PORC REVIEW: PORC Meeting 2313, 05/02/91

DESCRIPTION: Revised FSAR Tables 3L-1A, 3L-4A and 3L-4B to correct for inaccurate data concerning weight and/or center of gravity (c.g.) for valves supplied by Copes-Vulcan (C-V). Westinghouse has been working with C-V to establish a complete and verified listing of affected valve drawings that were originally within Westinghouse's scope of supply. In addition, a listing was generated specific to the Farley plants, which Westinghouse forwarded to Bechtel for inclusion in the Farley document control system.

SAFETY EVALUATION: All stresses remained within the applicable ASME Code criteria. Seismic loads increased on some pipe supports but, per C-V, the revised weights and c.g.'s do not affect the seismic qualification of the valves. Therefore, it was concluded that the consideration of the correct weights and c.g.'s for the C-V valves does not adversely affect the structural integrity of the RCS, the functional capability of the ECCS and RHR systems, or the qualification of the valves themselves.

SUBJECT: Criticality Analysis for New and Spent Fuel Racks, Rev. 2

PORC REVIEW: PORC Meeting 2343, 06/27/91

DESCRIPTION: Revised FSAR Section 4.3.2.7 to reflect the new enrichment limit for optimized fuel assembly (OFA) and Vantage-5 fuel and to reflect the use of integral fuel burnable absorber (IFBA) credit in the criticality analysis. Also, FSAR Section 9.1.5.3 was revised to show that this section is only applicable to low parasitic (LOPAR) fuel (and not OFA or Vantage-5 fuel).

SAFETY EVALUATION: The implementation of the criticality reanalysis is not an initiator for any of the postulated FSAR accidents analyzed. No new failure modes were defined for any system or component important to safety nor was any new limiting single failure identified. In addition, the dose consequences presented in the FSAR remain bounding.

SUBJECT: Deletion of Biennial Review of Safety Related Procedures, Revs. 0 and 1

PORC REVIEW: PORC Meeting 2349, 07/12/91
2375, 09/24/91

DESCRIPTION: Deleted the requirement for biennial review of safety related procedures. This process was described in FNP-0-AP-1. FSAR Sections 13.5.1, 3A.1-33 and 17.2.1 were revised to reflect this change.

SAFETY EVALUATION: Adequate controls are in place to assure that procedures are updated to reflect the current Design, operational and regulatory aspects of the plant. The SAER group performs periodic audits to assure the overall procedural maintenance process operates as designed. The PORC will continue to meet its procedural review responsibilities as defined by the Technical Specifications. The changes to the FSAR were administrative in nature.

SUBJECT: Diesel Generator Loading Study - Calculation # 42, Rev. 3

PORC REVIEW: PORC Meeting 2267, 01/03/91

DESCRIPTION: Revised FSAR Tables 8.3-3 and 8.3-2 to change the maximum estimated automatic-sequenced loads for the diesel generators because new loads were added to the buses.

SAFETY EVALUATION: The diesel generator loads modified by this change are within diesel generator continuous ratings except for diesel generator 1C which exceeds its continuous rating by 1.9% during one postulated event only (LOSP on both units and LOCA on Unit 2). However, diesel generator 1C exceeds its continuous rating by less than 2% as committed in paragraph 8.3.1.1.7 of the FSAR.

SUBJECT: ECCS Small Break LOCA Auxiliary Feedwater
Enthalpy Change Delay Time Input
(SECL 90-173)

PORC REVIEW: PORC Meeting 2294, 03/28/91

DESCRIPTION: Revised FSAR Section 15.3.1.2.2.2 and FSAR Table
15.3-2A to increase the LOCA analysis peak
cladding temperature to 1795 degrees Fahrenheit
for the Unit 2 6 inch case and 1944 degrees
Fahrenheit for Unit 1. An inconsistency was
discovered between the main feedwater purge time
assumed in the small break LOCA (SBLOCA)
analysis utilizing the NOTRUMP Evaluation Model
and the time indicated by plant geometry and
operating conditions.

SAFETY EVALUATION: This change was to assure adequate time after
auxiliary feedwater is initiated to assure the
sweep of standing main feedwater. This affects
the analysis model input only. There are no
structural or procedural changes to the plant.

SUBJECT: Leak-Before-Break Analysis
(SECL 91-001, Rev. 2)

PORC REVIEW: PORC Meeting 2263, 01/22/91

DESCRIPTION: Revised FSAR Sections 3.6.1, 3.6.2.2, 3.6.4 and 3.6.4.1 to eliminate postulated pipe ruptures in the reactor coolant loop piping from the structural design basis of the plant. Revised NRC guidance allows this elimination through the application of leak-before-break technology in accordance with NRC criteria specified in NUREG-1061.

SAFETY EVALUATION: Analyses have been performed using leak-before-break techniques to demonstrate the acceptability of the elimination of reactor coolant loop pipe ruptures from the structural design basis. Specifically, the following has been demonstrated:

The leak rate from the calculated leakage flaw is 10 times larger than the capability of the leak detection systems.

The critical (instability) flaw size is greater than 2 times the leakage flaw size.

The fatigue crack growth of a potentially existing flaw in the reactor coolant piping would be very small.

SUBJECT: RCCA Examination for 17 x 17 Arrays
(SECL 91-013, Rev. 1)

PORC REVIEW: PORC Meeting 2289, 03/19/91

DESCRIPTION: Revised the procedure for visual and eddy current inspection of RCCAs as described in Chapter 13 of the FSAR. Revision 1 specifies that procedure changes that involve a deviation from the intent of the approved procedure must be approved by the Technical Manager and one of the Westinghouse Reactor Cavity Service Managers.

SAFETY EVALUATION: The use of the procedure for NDE visual and eddy current inspections of the RCCAs using the MIZ-18 will not adversely affect plant safety.

SUBJECT: Re-evaluation of Service Water System, ES 89-1499, Rev. 0

PORC REVIEW: PORC Meeting 2352, 07/19/91

DESCRIPTION: Changed the valve alignment in the service water system, based on the re-evaluation of the system, to allow operation of the service water system with both units supplying flow to the non-shared diesel generators 1B and 2B. The physical design of the system components did not change.

SAFETY EVALUATION: This change improves the reliability and capacity of service water flow to the diesel generator cooling system and CCW heat exchangers while maintaining adequate flow to other safety related components. Further, the service water system continues to operate within its design pressure, temperature and flow parameters.

SUBJECT: Safety Related Dedication Plan for Diesel Generator Fuel Oil (DP-90-0060)

PORC REVIEW: PORC Meeting 2349, 07/12/91

DESCRIPTION: Changed the acceptance criteria for particulate contamination of the diesel generator fuel oil from 8 to 10 mg per liter.

SAFETY EVALUATION: The basis for the 8 mg per liter was a commitment to the NRC made by Alabama Power Company letter dated September 24, 1980 as it appeared in Federal Specifications VV-F-800B. However, in the latest revision to the Federal Specifications, the acceptance criteria was changed from 8 to 10 mg per liter. The Farley SER makes no reference to the NRC acceptance criteria in determining acceptability of the value. An NRC acceptance criteria of 10 mg per liter for particulate contamination has also been established in NUREG 0452 Rev. 5, Westinghouse Standard Technical Specification Section 4.8.1.1.2.e and has been approved by the NRC for a number of plants. The performance and reliability of the diesel generators and the diesel fuel oil systems will not be affected.
