10 CFR 50.59(B) REPORT OF FACILITY CHANGES, TESTS & EXPERIMENTS. NOVEMBER 13, 1996 THRU APRIL 20, 1998

VOGTLE ELECTRIC GENERATING PLANT
UNITS 1 & 2

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VOGTLE ELECTRIC GENERATING PLANT
UNITS 1 & 2

SUBJECT: DCP 92-V2N0128

DESCRIPTION: The three hour rated plaster wall that was located between the Unit 2 fuel handling building sample chase (room R110) and the Unit 2 control building sample chase (room UC 202) has been moved to a new location inside room UC-202. Additionally, the "Nelson Pillows", which were used to seal the opening in the wall, have been replaced with a permanent fire rated door that allows access from room R110 to room UC-202. Relocation of the wall redefines the room boundary between rooms UC-201 and UC-202. This change provides a safer and more cost-effective method for accessing the Unit 1 and 2 control building sample chases and ensures proper sealing of pipe penetrations through the wall.

SAFETY EVALUATION: UFSAR section 9.A.1.2.E describes the area access for fire area 2-AB-LD-B and section 9.A.1.2.D describes the boundaries of fire areas 2-AB-LD-B and 1-AB-LD-B. Sections 9.A.2.2-B and 9.A.2.2-D also describe the fire area boundaries. These sections are revised to reflect the addition of the fire door and the relocation of the wall. UFSAR section 13.5.1 mentions the Fire Fighting Preplans, but does not discuss any specifics of the preplans. The Fire Fighter Preplans are revised to reflect the addition of the fire door and the relocation of the wall.

SUBJECT: DCP 92-V1N0144-0-5

DESCRIPTION: The Non-1E Sola ferro-resonant regulating transformers or Hevi Duty Electric distribution class transformers of Unit 1 except for transformers 1ABF13X and 1BBC23X were replaced with Solidstate Controls Isolimiter transformers. This was done after noticing that some of the loads which previously survived a bus transfer, were being de-energized. The replacement corrected this problem. However, since the previous Sola transformer design was of a shallow-long design and was wired in a parallel fashion to meet the kVA rating, the space requirements for these transformers were not as great as the replacements (Solidstate Controls). Therefore, relocation of the transformers was required as dictated by adjacent equipment locations. All of the new transformers are still located in the same room or the same general vicinity. The total kVA rating of the transformer banks did not change, so the 480 volt MCC feeder breakers do not need to be replaced.

SAFETY EVALUATION: UFSAR section 8.3 discusses the location and labeling of the Sola regulating transformers. Several revisions of this section are required. UFSAR subsection 8.3.1 is revised to reflect the replacement of Sola regulating transformers. UFSAR table 8.3.1-4 is revised to reflect the change in isolation devices from Sola regulating transformers to Solidstate Controls regulating transformers. UFSAR figure 8.3.1-1 is revised to add a new sheet showing the revised electrical penetration assembly protection for a load fed from panel 1AYE1 which is supplied from new generating transformer 1ABE51RX. UFSAR table 8.3.2-5 is revised to reflect the revised location numbers for replacement transformers. UFSAR tables 9.4.2-2 and 9.4.3-5 are revised to reflect the relocation of loads on panel 1AYE1 and 1BYC1. The following UFSAR tables and sections are revised to reflect the tag and location numbers for the replacement transformers: 9.5.1-1, 9.5.3-1, 9A.1.27, 9A.1.28, 9A.1.43, 9A.1.45, 9A.1.49, 9A.1.55, 9A.1.60A, 9A.1.82, and 16.3.5.

SUBJECT: DCP 92-V2N0145-0-5

DESCRIPTION: The Non-1E Sola ferro-resonant regulating transformers or Hevi Duty Electric distribution class transformers of Unit 2 were replaced with Solidstate Controls Isolimiter transformers. This was done after it was noticed that some of the loads which had previously been able to survive a bus transfer were being de-energized. The replacement corrected this problem. However, since the previous Sola transformer design was of a shallow-long design and was wired in a parallel fashion to meet the kVA

rating, the space requirements for these transformers were not as great as the replacements (Solidstate Controls). Therefore, relocation of the transformers was required as dictated by adjacent equipment locations. All of the new transformers are still located in the same room or the same general vicinity. The total kVA rating of the transformer banks did not change. The 480 volt MCC feeder breakers for 2NBJ15RX and 2NBK30RX were changed from 40A to 50A to accommodate the maximum full load current of the replacement transformers. The remaining 480 volt MCC feeder breakers do not need to be replaced.

SAFETY EVALUATION: UFSAR section 8.3 discusses the location and labeling of the Sola regulating transformers. Several revisions of this section are required to replace the transformers. Drawing 2X3d-AA-KO2B is revised to indicate the new assigned transformer numbers. UFSAR section 8.3.1.1.6 describes the non-class 1E instrument AC power supply. Panel 2NYJ was shown as being supplied from a non-regulated source and is revised to show that it is being supplied from a new generated transformer. UFSAR sections 9A.1.180, 9A.1.104, 9A.2.33, and 9A.2.34 are revised to show the new transformers and new tag numbers under the sections on non-safety related equipment in each fire area.

SUBJECT: DCP 93-V1N0054

DESCRIPTION: Following the startup of Unit 1, NRC conducted a PASS inspection in December 1987. During this inspection it was identified that the gamma-ray panel could not meet the accuracy criterion of +/- factor of 2 when compared to the normal reactor coolant. The failure was caused by the lack of adequate shielding for the detectors from other components and lines in the PASS that contain reactor coolant during the analysis. There was no available space for the additional shielding. Therefore, the gamma spectroscopy system was deleted and now manual grab samples are analyzed in the chemistry lab. Procedures are in place to take grab samples of the reactor coolant and containment atmosphere. Samples are analyzed in the chemistry lab in accordance with NRC requirements.

SAFETY EVALUATION: The PASS gamma ray spectroscopy system is discussed in UFSAR section 9.3.2. and Emergency Plan section 1. The gamma-ray spectroscopy uses liquid nitrogen-cooled intrinsic germanium detectors as stated in the UFSAR section 9.3.2.2.5. This section is revised to show the removal of this equipment. Section 1 of the Emergency Plan indicates that the grab samples are obtained when reactor coolant and containment atmosphere samples are needed. Therefore this process does not need to be added again.

SUBJECT: DCP 93-V2N0055

DESCRIPTION: Following the startup of Unit 2, NRC conducted a PASS inspection in December, 1987. During this inspection it was identified that the gamma-ray panel could not meet the accuracy criterion of +/- factor of 2 when compared to the normal reactor coolant. The failure was caused by the lack of adequate shielding for the detectors from other components and lines in the PASS that contain reactor coolant during the analysis. There was no available space for the additional shielding. Therefore, the gamma spectroscopy system was deleted and now manual grab samples are analyzed in the chemistry lab. Procedures are in place to take grab samples of the reactor coolant and containment atmosphere. Samples are analyzed in the chemistry lab in accordance with NRC requirements.

SAFETY EVALUATION: The PASS gamma ray spectroscopy system is discussed in UFSAR section 9.3.2. and Emergency Plan section 1. The gamma-ray spectroscopy uses liquid nitrogen-cooled intrinsic germanium detectors as stated in the UFSAR section 9.3.2.2.5. This section is revised to show the

removal of this equipment. Section 1 of the Emergency Plan indicates that the grab samples are obtained when reactor coolant and containment atmosphere samples are needed. Therefore this description does not change.

SUBJECT: DCP 93-VAN0059

DESCRIPTION: The plant effluent and radiation monitoring system (PERMS) previously consisted of field instrumentation for the detection and measurement of process, effluent, and area radiation levels, safety related and non-safety related display consoles, and a general data processing system for data archival and user interface. This system had become increasingly more unreliable, more difficult to find spare parts for, and more expensive to maintain. To correct this problem several changes took place. The Unit 1 PERMS minicomputer system and peripheral devices were removed from the plant. Since the health physics laboratory IPC workstation provides access to both Unit 1 and Unit 2 IPC and PERMS data, the Unit 2 HP Lab Color CRT was removed. Electrical feed changes were made to accomplish this. A Unit 1 chemistry display console, a printer, and associated network equipment to support PERMS was added. An uninterrupted power source for the new communication console equipment was provided by re-feeding the supply breakers and changing some breaker sizes. An integrated plant computer workstation was installed in the health physics laboratory and in the clearance and tagging office. Necessary software and system configurations were also added.

SAFETY EVALUATION: UFSAR section 11.5 describes the PERMS. UFSAR section 11.5.2.1 deals with the digital radiation monitoring system. This section is revised to reflect the removal of the minicomputer and the addition of the Unit 1 chemistry display console, Unit 2 minicomputer, and the integrated plant computer. UFSAR figure 11.5.2-1 is revised to reflect the addition of all of the above parts and the locations to which the integrated plant computer is routed. Both of these sections have been revised to remove references to the Technical Support Center since it no longer interfaces with the communications console.

SUBJECT: DCP 93-VAN0083

DESCRIPTION: The Unit 1 and Unit 2 CVCS chillers (1/2-1208-E6-009) and the common-unit CVCS chillers (A-1208-E6-008) have been deleted and replaced with a new rotary screw liquid chiller. The new chiller is shared between Unit 1 and Unit 2 and has the capacity to serve only one unit at a time. The previous CVCS chillers have been physically removed from the plant and the power supplies and controls have been either spared or deleted as required. The new chiller is locally controlled with only trouble alarm indication in the control room. The CVCS chillers and the associated piping are non-safety related project class 424.

SAFETY EVALUATION: The BTRS is shown on P&ID's 1X4DB117 and 1X4DB151-2 which are referenced in UFSAR sections 9.3.4 and 9.2.11 respectively. These drawings along with UFSAR sections 1.2.2.2 , 3.2.2 , and 9.3.4 are revised to reflect the proposed system changes that result from the changing of chiller systems. The modification also changes load following operations as described in UFSAR section 9.3.4. VEGP normally operates as a base load plant with the BTRS used primarily to dilute the RCS at the end of core life. The description of the BTRS in load following operations as described in the UFSAR is revised to clarify that the chiller is shared between the operating units.

SUBJECT: DCP 94-VAN0025

DESCRIPTION: Oxidant ingress in PWR steam generators can increase the electrochemical potential (ECP) of tubing materials, thereby increasing the tendency of intergranular accelerated stress corrosion cracking (IGA/SCC). The turbine plant sampling system (1311) collects, cools, analyzes, controls, alarms, and records water quality from various sampling points throughout the building, yard, and auxiliary building. An ECP sampling and monitoring system has been installed to monitor the ECP of the main feedwater system. This sampling unit is located in the turbine building adjacent to the number 6 feedwater heater. It is piped from a connection on the combined discharge piping of the number 6 feedwater heater. Tubing is routed to the sample unit and is used to return the sample stream to the common suction header of the main feedwater pumps. The ECP autoclave can accommodate six electrodes. For this application, one alloy measuring electrode, two reference electrodes, and three "dummy" electrodes are utilized. This system will also be supplied with appropriated isolation valves, differential pressure transmitter and temperature elements, a throttle/control system, and a local buffer amplifier and transmitting unit.

SAFETY EVALUATION: The intent of the sampling system as discussed in the UFSAR is to provide a location to obtain a routine sample for analysis to verify the proper secondary side water chemistry. UFSAR figure 10.4.1-1, sheet 2, is revised under this DCP. The information depicted on the UFSAR figure 1.2.2-29 sheet 2 of 4 (equipment location layout) is also revised. UFSAR figures are revised as part of the normal UFSAR update process. UFSAR section 10.3.5 discusses sample monitoring of the secondary plant systems; however, ECP monitoring is not specifically addressed. The ECP monitor and its associated components do not alter the intent of the secondary sampling system as discussed in the UFSAR, and it will not adversely affect the safety or automatic operation of the plant in any manner.

SUBJECT: DCP 94-VAN0042

DESCRIPTION: The Unit 2 laydown area is the protected area west of the Unit 2 Train A NSCW tower and basin. This area did not meet the minimum security illumination requirements without the use of additional temporary lighting. The additional temporary lighting plan during a Unit 2 refueling outage was very time consuming and expensive. Two 60 feet tall lighting poles with four 400 Watt HPS light fixtures were placed in the Unit 2 laydown area. 120 VAC convenience receptacles were provided at the storage structures located in the laydown area to provide any additional lighting needs and miscellaneous power needs. A new permanent 400 amp disconnect switch was installed north of the Unit 2 laydown area. All power supply conduits for the above equipment are encased in concrete approximately 1 foot 6 inches below grade with approximately 6 inches of Category I backfill placed over the concrete.

SAFETY EVALUATION: The addition of the light poles, receptacles, and disconnect switch do not change the plant as described in the UFSAR. However, UFSAR section 2.5.4.5.2 is revised to address the trench for the power supply conduits. A final layer of backfill not meeting the full requirements of this section will be placed over the field routed duct runs. This revision includes the coordinates of the trench and the light poles in the area.

SUBJECT: DCP 94-VAN0043

DESCRIPTION: The auxiliary building continuous exhaust system (ABCES) is a part of the auxiliary building normal ventilation system (ABNVS). The ABNVS maintains temperatures and radiation levels within allowable limits for plant personnel and equipment, and maintains the building at a negative pressure. The previous ABCES fans had a history of vibration problems and repeated bearing failures.

This is believed to be because the fans were originally undersized for their intended application and were subsequently modified to operate at higher speeds during initial plant startup to meet the design flow rates. The ABCES fans have been replaced with Buffalo Forge heavy duty fans that are capable of providing the design system air flow rate at lower speeds. Since the new fans affect the plant internally generated missile analysis, a shield has been added to protect safety related chilled water piping that is located near the fans.

SAFETY EVALUATION: UFSAR section 3.5 addresses internally generated missiles from rotating components. This section is revised stating that missile protection is provided for essential chilled water lines. The ABCES fans are included in the missile analysis as indicated in UFSAR table 3.5 1-1. This table is revised to reflect the conditions resulting from the fan replacement. There are no changes to the ABNVS as described in UFSAR section 9.4.3.

SUBJECT: DCP 94-VAN0051

DESCRIPTION: Sodium hypochlorite (NaOCL bleach) is used for biocide injection into the circulating water system. Since bleach is expensive and potentially corrosive to turbine plant cooling water components, an additional biocide, hypobromous acid (HOBr), is now used. HOBr is a more effective biocide at existing circulating water pH levels, and is less corrosive than bleach. This design change provides an improved and cost effective biocide addition technique. A controlled flow rate of bromine salt solution is mixed with a controlled flow rate of sodium hypochlorite solution in the appropriate injection line for delivery into the circulating water system canals. New equipment consists of a polyethylene bulk storage tank for bromine salt solution, three new pumps, associated power controls, grounding, piping, valves, conduit and supports. The new pumps are separate skid mounted units. These pump skid systems and the tank are furnished by NALCO.

SAFETY EVALUATION: P&IDs AX4DB158-2 AND 1X4DB150-1 are revised to reflect the addition of the new equipment described above. P&ID 1X4DB150-1 is referenced in the UFSAR and discussed in section 10.4.5, "Circulating Water System". UFSAR table 2.2.3-18 is revised by adding bromine salt to the list of chemicals in that table. UFSAR section 2.2.3.1.4.3 is revised by noting that hypobromous acid vapor is nonvolatile (Note O). UFSAR section 2.2.3 is revised by adding the NALCO liquid material safety data sheets into the list of references (Note 58).

SUBJECT: DCP 95-V1N0003

DESCRIPTION: The Unit 1 control building electrical penetration filter and exhaust (EPFE) system 1562 was a safety-related system (project class 015), but it performed no safety function and had no at-power design bases. No credit was taken for the EPFE system in the off-site or control room post-accident dose calculations, so it had no impact on accident analysis. The EPFE was therefore deleted. The following changes resulted: 1) The power supplies to the fan motors, filter heaters, and various dampers and instruments were disconnected. 2) The CVI signal input to the 1562 system fans and isolation dampers were removed. 3) The annunciator inputs to the HVAC panel were deleted and the annunciator windows were blanked. 4) The input to the systems status monitor panel was deleted. 5) Duct blanks were installed at various locations to isolate the 1562 system from the normal HVAC system and the plant vent stack. 6) The isolation dampers that separate the normal HVAC systems from the EPFE system have the blades locked open. 7) Affected instruments and associated tubing was removed. 8) The charcoal filter from the EPA filter units was removed.

SAFETY EVALUATION: The above changes require revisions to the following sections of the UFSAR (The revisions are self-explanatory given the above changes):
Tables 1.7.1-2, 3.2.2-1, 3.5.1-8; 7.3.12-1, 9.4.5-1, 9.4.5-3, 9.5.1-7, and 16.3-5
Sections 3.11.4, 7.3.12.1.3, 7.3.12.2, 9.4.1, 9.4.5, 9.4.5.7, 9.A.1, 11.5.5.1, 18.1

In addition, there are revisions to drawings 1X3D-AA-K02A, 1X4DB209, 1X4DB259-1, 2X4DB259-1, and 2X4DB209. Drawings 1X5DN055-1, 1X5DN051-1, and 1X5DN051-2 are being voided. These drawings are referenced in UFSAR sections 7.3.12, 8.3.1, and 9.4.5.

SUBJECT: DCP 95-V1N0007

DESCRIPTION: The rod drop test system is used to verify that the individual shutdown and control rod drop times from the fully withdrawn position are less than or equal to 2.7 seconds from the beginning of decay of the stationary gripper coil voltage to dashpot entry. The rod drop test is performed to demonstrate the operation of all rods prior to reactor criticality for the following conditions: 1) following each removal of the reactor vessel head, 2) for individual rods following any maintenance on or modification to the control rod drive system which could affect the drop time of those specific rods, and 3) at least once per 18 months. The previous rod drop test system was a portable system which mated with permanently installed electrical connectors located at each data cabinet and at the control rod drive logic cabinets. This system had become more difficult to maintain due to obsolete components. Therefore, it was replaced with the Westinghouse automatic multiple rod drop test system (AMRDTS) which is PC based using industry-standard PC hardware and software. This system is used in the same manner as the previous one. However, it has a feature of being able to measure rod drop times of all 53 rods simultaneously saving 6 hours of test time. Several penetrations were breached in the control building as a result of routing the new cables.

SAFETY EVALUATION: Breakers 1NYF115 and 1NYF116, which feed the rod drop test equipment, are associated with containment penetration circuits added per this design change. UFSAR table 16.3-5, which documents the containment penetration overcurrent protective devices, is revised to reflect the addition of these breakers. The requirement to retest rod control cluster assemblies (RCCAs) that have drop times outside two standard deviations from the average of all drop times has been removed. This requirement is in UFSAR section 4.2.4.4. It was removed because this section only pertains to initial startup testing. Also, an editorial correction to UFSAR section 4.2.4.4 was made to clarify that testing of RCCAs at hot full-flow conditions is not done during manufacturing.

SUBJECT: DCP 95-V2N0008

DESCRIPTION: The rod drop test system is used to verify that the individual shutdown and control rod drop times from the fully withdrawn position are less than or equal to 2.7 seconds from the beginning of decay of the stationary gripper coil voltage to dashpot entry. The rod drop test is performed to demonstrate the operation of all rods prior to reactor criticality for the following conditions: 1) following each removal of the reactor vessel head, 2) for individual rods following any maintenance on or modification to the Control Rod Drive System which could affect the drop time of those specific rods, and 3) at least once per 18 months. The previous rod drop test system was a portable system which mated with permanently installed electrical connectors located at each data cabinet and at the control rod drive logic cabinets. This system had become more difficult to maintain due to obsolete components. Therefore, it was replaced with the Westinghouse automatic multiple rod drop test system (AMRDTS) which is PC based using industry-standard PC hardware and software. This system is used in the same manner as the previous one. However, it has a feature of being able to measure rod drop times of all 53 rods simultaneously saving 6 hours of test time. Several penetrations were breached in the control building as a result of routing the new cables.

SAFETY EVALUATION: Breakers 2NYF115 and 2NYF116, which feed the rod drop test equipment, are associated with containment penetration circuits added per this design change. UFSAR table 16.3-5, which documents the containment penetration overcurrent protective devices, is revised to reflect the addition of these breakers. The requirement to retest rod control cluster assemblies (RCCAs) that have drop times outside two standard deviations from the average of all drop times has been removed. This requirement is in UFSAR section 4.2.4.4. It was removed because this section only pertains to initial startup testing. Also, an editorial correction to UFSAR section 4.2.4.4 was made to clarify that testing of RCCAs at hot full-flow conditions is not done during manufacturing.

SUBJECT: DCP 95-V1N0014

DESCRIPTION: Several changes were made to various components associated with the turbine driven auxiliary feedwater pump (TDAFWP) in order to improve the operation and reliability of the turbine and provide for the monitoring of the turbine performance. A monitoring system has been installed that will cover the following parameters: turbine speed, turbine stop value position, ramp generator output, EGM output, governor valve position, oil pressure for the governor to remote servo control lines, steam ring pressure. The TDAFWP receives steam from two different steam generators. These two stream lines are isolated from each other by check valves 1-1301-U4-404 and 1-1301-U4-008. Check valve 1-1301-U4-006 was upstream of check valve 1-1301-U4-404 but was deleted along with check valve 1-1301-U4-405. These check valves were used for chemical cleaning which is no longer used. Check valves 1-1301-U4-404 and 008 now have continuous drains to the main condenser immediately upstream of the valves. Also, a continuous drain was installed on the TDAFWP steam ring that balances the steam entering the turbine blades. Four swing-type check valves located on the TDAFWD steam admission lines were replaced due to excessive banging.

SAFETY EVALUATION: Drawing 1X4DB161-3 is referenced in UFSAR section 10.4.9. It is revised to reflect the addition of the non safety-related data acquisition system (DAS) and the addition of new drain lines. 1X4DB159-2 is revised to reflect the addition of flanges to valves 1-1301-U4-404 and 408, addition of new drains, and deletion of 1-1301-U4-006 and 405. The symbol for the check valves will not change since it is generic for all check valves. UFSAR table 3.9.B.3-9, sheet 3 of 6 is revised to reflect the deletion of 1-1301-U4-006 as an active valve. No change to the text of the UFSAR is required as a result of the design change.

SUBJECT: DCP 95-V1N0018

DESCRIPTION: The auxiliary feedwater (AFW) pumps can be lined up to take suction from either condensate storage tank (CST). Previously, the discharge of the minimum flow of the motor driven AFW pumps was directed to CST 2 while the discharge of the turbine driven pump minimum flow was to CST 1. Under this piping configuration, the minimum volume of the CST appeared to be unbounded due to all of the motor discharge going to CST 2. Therefore, piping and manual valves were provided to allow the option of directing the minimum flow of the motor driven AFW pumps to CST 1 and the turbine driven pump to CST 2. A new line was added from each existing minimum flow line to a dedicated line on the opposite CST. Manual valves were added to allow the directing the flow to the tank from which the AFW pump is taking suction. A minimum flow bypass line was added to allow operation of the motor driven feed water pumps at approximately 265 gpm. This allows the operation of these pumps continuously during startup. The bypass will add a manual valve and flow orifice in parallel with the existing 17 stage minimum flow orifice.

SAFETY EVALUATION: The AFW system and the P&IDs are described in UFSAR section 10.4.9 and Appendix 10A. The description of the minimum flow capacity in Appendix 10A will require changing to describe the additional bypass line around the existing flow orifice. Additionally, the referenced drawings will show the new piping for both the minimum flow bypass and the flow paths to the alternate CDT's.

SUBJECT: DCP 95-VAN0024

DESCRIPTION: The circulating water chemical injection system (CWCIS), system 1410, is a non-safety related system. The components of this system originally associated with providing gaseous chlorine, sulfuric acid, and dispersant, to treat the circulating water system (CWS), system 1401, have been retired. This system had been designed to treat the CWS in order to reduce corrosion, prevent algae and mollusk growth, and maintain solids in suspension. The CWS is used to provide water for removing heat from the main condensers, and from the components of the turbine plant cooling system. After the CWCIS was installed it was decided that the use of gaseous chlorine to treat the CWS involved greater hazards than were desired. The system was redesigned to provide treatment of the CWS using bleach/biocide instead of gaseous chlorine. This bleach/biocide system also provides corrosion control.

SAFETY EVALUATION: There are several sections describing the components of the CWCIS in the UFSAR. UFSAR sections 8.3.2.1, 9.3.7, and 10.4.5 are revised to reflect the removal or retirement of equipment and the changing from chlorine gas to bleach/biocide. Additionally, UFSAR tables 2.2.3-18, 3.2.2-1, and 9.3.7-1 are revised to reflect these changes. These revisions include the removal or retirement in place of the chlorine skid (tag A-1410-S4-501), liquid chlorine expansion tanks (A-1410-S4-501-V01, V02, and V03) , chlorine cylinder manifold rack and cylinder connection valves, sulfuric acid storage tank (A-1410-T4-002), sulfuric acid day tanks (1/2-1410-T4-501), dispersant day tanks (A-1410-T4-502/503), chlorine detector (A-ASH-9957) and switch, the monorail hoist (A-2162-R4-5010) in the chlorine fill bay, and all equipment associated with these to include buried piping.

SUBJECT: DCP 95-VAN0025

DESCRIPTION: The river intake structure chlorination system (RISCS) is a subsystem of the river intake structure system (RISS), system 1402. The RISS is a non- safety related system. The components in the RISCS used to deliver gaseous chlorine to the river makeup water at the river intake structure have been retired. After this system was installed it was decided that the use of gaseous chlorine to treat the CWS involved greater hazards than were desired. The system was redesigned to provide treatment of the CWS using bleach/biocide instead of gaseous chlorine. This bleach/biocide system also provides corrosion control.

SAFETY EVALUATION: There are several sections describing the components of the RISCS in the UFSAR. UFSAR sections 8.3.2.1 and 9.3.7 are revised to reflect the removal or retirement of equipment and the changing from chlorine gas to bleach/biocide. Additionally, UFSAR tables 2.2.3-18, 3.2.2-1, 9.2-1-2, and 9.3.7-1 are revised to reflect these changes. These revisions include the removal or retirement in place of the chlorine skid (tag A-1402-S4-501), liquid chlorine expansion tanks (A-1402-S4-501-V01 and V02), chlorine cylinder manifold rack and cylinder connection valves, chlorine detector and switch, chlorine solution diffusers, isolation valves (AHV-17711 through AHV-17714), and all equipment associated with these to include buried piping.

SUBJECT: DCP 95-VAN0027

DESCRIPTION: The nuclear service cooling water chemical injection system (NSCWCIS), system 1413, is a non-safety related system. It was redesigned for Unit 1 under DCP 88-V1N0063 to provide chemical treatment of the NSCW system utilizing chemicals other than sulfuric acid and gaseous chlorine. This redesign was accomplished by CCP on Unit 2. System additions were provided that use biocide for control of biological growth and chemical treatment for the control of corrosion. The components in the NSCWSIC that were provided to inject sulfuric acid and dispersant into the Nuclear Service Cooling Water (NSCW) system have been removed or retired in place.

SAFETY EVALUATION: The chemical injection system being removed or retired-in-place is currently described in the applicable text and tables of the UFSAR, as well as depicted on P & ID's that are referenced in the UFSAR. UFSAR table 3.9.B.3-9 was revised to reflect that check valves 1/2-1202-U4-155, -156, -167, and -168 are no longer "BOP Active Valves". Additionally the NSCWCIS is referenced in UFSAR sections 7.3.9.1, 9.2.1, 9.2.4.2, 9.2.5.2, 9.3.7, and 14.2.8.1. These sections as well as UFSAR tables 1.7.1-2, 3.2.2-1, 9.2.1-2, 9.2.1-3, 9.3.2-4, 9.3.7-1, and 10.3.5-4 are revised to reflect the removal of NSCW systems. The removal includes Units 1 and 2 sulfuric acid day tank and pumping skids (1/2-1413-S4-001 and 002), dispersant day tank and pump skids (1/2-1413-S4-003 and 004), sulfuric acid storage tanks (1/2-1413-T4-001), acid transfer pumps (1/2-1413-T4-001-P01), chlorination control panels for both units (1/2-1413-P5-NSA), unused portion of lines (1/2-1202-015 and 016), interlocks from the NSCW pumps to the acid feed pumps, the signal from the pH analyzers (AIC-9442 and AIC-9443), and equipment associated with these systems. Other equipment was retired in place.

SUBJECT: DCP 95-V1N0031

DESCRIPTION: As a result of the implementation of MDC 92-VAM152, the Turbine Plant Sampling System (TPSS) chilled water for Units 1 and 2 is cooled by heat exchangers 1-1311-E4-001 and 2-1311-E4-001, respectively. The chilled water cools various sample streams to allow chemistry personnel to obtain grab samples. The new heat exchangers' heat sink is normal chilled water. As a result of this MDC, TPSS water chillers 1-1311-G5-501 and 2-1311-G5-501 are no longer needed. Therefore, these chillers, associated valves, piping, instrumentation, and electrical circuitry were physically removed from the Units 1 and 2 Turbine Buildings. All associated water lines were cut and capped.

SAFETY EVALUATION: The removal of the turbine plant sampling system (TPSS) water chillers and associated piping, valves, instruments and electrical circuitry do not affect the description of the system in the UFSAR. However, P&IDs 1X4DB154-2 and 1X4DB171-1 are referenced in UFSAR sections 9.2.10 and 9.3.2. These drawings are revised to reflect the removal of the chillers and all associated equipment. Also, UFSAR section 9.3.2.5 is revised to remove the sentence that referenced the chiller unit that was removed.

SUBJECT: DCP 95-V2N0040

DESCRIPTION: The high flux at shutdown (HFS) alarm has been modified so that no adjustments are required inside the source range nuclear instrument (SRNI) drawers. This alarm warns the operator of slow positive reactivity changes in the reactor core when the unit is shutdown. It requires a setpoint dependent on the background radiation level, which changes periodically throughout the unit shutdown and return to power. The only changes pertain to how the alarm is generated and how the setpoint is changed. The HFS alarm continues to be derived from the source range neutron detectors. Two channels

(N31 and N32) are separately wired to the IPC. A computer program is used to compare each detector's output level with its associated setpoint, and generate an alarm if necessary. Two new cables from the IPC contact outputs in the computer room (A-30) to the NSSS auxiliary relay rack 2-1604-Q5-ARC (2NCQARC in room R-164) have been installed. The alarm signals from the IPC are used to drive the HFS annunciators, and to activate the containment horn using the auxiliary relays.

SAFETY EVALUATION: Combustible loading for the computer room (A-30) is tracked in UFSAR section 9A.2.60.K. Cables have been added and therefore change the combustible loading for Fire Zone 96 in this unit. This is the only change to the text of the UFSAR for Unit 2 Fire Zone 96. Page 9A.2.60-2 of the UFSAR reflects the additional combustible loading. No other changes to the UFSAR are required. The description of this alarm in the UFSAR is not to the level that would require change.

SUBJECT: DCP 95-V1N0052

DESCRIPTION: The Unit 1 diesel generator fuel oil return lines were located above the North walkway which restricted access for maintenance and was a tripping hazard. Therefore the Unit 1 diesel generator fuel oil return lines and bypass header return lines (1-2403-039-1¼" & -1½", 1-2403-040-1¼" & -1½", 1-2403-019-1¼" & -1½", 1-2403-099-1¼" & -1½") have been relocated to below the North access platform. This reduces the potential for personal injury and also protects the diesel generator from damage by a falling object.

SAFETY EVALUATION: P&I Diagram 1X4DB170-1 AND 1X4DB170-2, which are referenced in the UFSAR, are revised. Modifications to the P&IDs are identified by worksheets 95-0052-M001 and 95-0052-M002, respectively. The physical modifications to the fuel oil return piping/tubing do not alter the description of the system or its operation; therefore no text changes to the UFSAR are necessary.

SUBJECT: DCP 95-VAN0053

DESCRIPTION: The Unit 1 spent fuel skimmer pump was retired in place, during startup, because it did not function per design. It was replaced with a temporary filter unit (Tri-Nuke). As a result, a larger pump had to be installed on Unit 2. Operation and maintenance of the Unit 2 spent fuel pit skimmer pump has been considerably superior to the temporary filter on Unit 1. Therefore, a pump similar to the Unit 2 pump was installed on Unit 1. Improvements are expected in water clarity (which enhances safe fuel handling), debris prevention, maintenance costs, generation of radioactive waste, and personnel exposure. In addition to these changes, a flow control orifice was added to the pump discharge line on Unit 1 and Unit 2 to prevent cavitation of the pump due to extreme run-out during low discharge pressure drop conditions.

SAFETY EVALUATION: P&IDs 1X4DB130 and 2X4DB130 were revised to reflect the change to the spent fuel cooling and purification system. These P&IDs are referenced in the UFSAR as figure 9.1.3-1. A tabulation of missiles generated by postulated failures of rotating components, their sources and characteristics, location, and provided missile protection is given in UFSAR table 3.5.1-1. The spent fuel pool skimmer pump is listed in this table. This table is revised to incorporate the changes due to the change in pumps.

SUBJECT: DCP 95-V1N0054

DESCRIPTION: Due to the occurrence of several leaks on the line which returns main stream line condensate to the condenser, it was determined that a more erosion-resistant, low-alloy material or stainless steel should be substituted for the previous carbon steel piping at the locations most susceptible to erosion. The most highly susceptible locations are at the discharge of the flow of 1-FO-15135 and 1-FO-15141; however, the entire line downstream of the flow orifices is susceptible, based on the occurrence of leaks at different locations. Portions of the piping were replaced with low-alloy steel, which is resistant to pipe wall-thinning caused by erosion. The replaced piping is located in the auxiliary feedwater pumphouse and the auxiliary building. The original carbon steel valves on Lines 1-1301-144-1", -101-1", and -288-1" have been retained, since wear in the valves has not been a concern. In order to ensure availability of the auxiliary feedwater turbine-driven pump in the event leaks ever occur on the lengthy run of un-replaced carbon steel pipe, an alternate drain path to atmosphere has been added. In addition, two sets of vent valves and on line 1-1301-101-1" (1-1301-x4-761, 762,407, and 094) and one set of drain valves (1-1301-X4-763, 764) have been eliminated. It is permissible to eliminate two sets of the vent valves, since they are not at high points in the line.

SAFETY EVALUATION: The replacement of carbon steel pipe, project class 313 and 424, with low-alloy pipe and stainless steel pipe does not constitute a change which would affect the description of the plant as described in the UFSAR. Nor does adding an alternate main stream condensate drain path for temporary use when the normal drain path to the condenser is unavailable due to repairs being performed require change; nor does removing several sets of vent valves and a set of drain valves. However, the affected P&ID 1X4DB161-3 referenced in UFSAR section 10.4.9 and P&ID 1X4DB168-1 referenced in UFSAR section 10.4.1 is revised per the above changes.

SUBJECT: DCP 95-VAN0056

DESCRIPTION: The piping penetration exhaust dampers have a long history of modulating problems with dual indicating lights in the control room. The problems have been traced to actuators mounted to the dampers and potentiometer on M/A station used to set the dampers to a throttled position to establish required flow to the plant vent stack. To eliminate the problem, the controller setting for the dampers was revised to allow the dampers to fully open when energized and required air flow to the plant vent stack has been established through the orifices (Unit 1) or the volume control dampers (Unit 2). Despite this change the dampers moved slow to the open and close positions with dual indicating lights in the control room. Therefore, the mode of operation of the piping penetration room exhaust dampers (1/2PV-2550B and 1/2PV-2551B) has been changed from modulating to "on/off". This allows the dampers to quickly stroke to their full open position.

SAFETY EVALUATION: The normal mode of operation of the piping penetration room exhaust dampers has been changed from modulating to "on/off". This represents changes to UFSAR section 9.4.3 that reference the piping penetration filtration and exhaust system for Units 1 and 2 as shown on P&IDs 1X4DB205-1 and 2X4DB205-1. UFSAR table 7.3.13-1 is revised to remove reference of the dampers that were listed as pressure regulating dampers. Also, note that PV2551B was listed incorrectly as PV2552B in the UFSAR table. Table 9.4.3-5 previously listed the dampers as modulating. This table is revised to indicate the damper is "on-off."

SUBJECT: DCP 95-V1N0058

DESCRIPTION: The plant effluent and radiation monitoring system (PERMS) consists of field instrumentation for the detection and measurement of process, effluent, and area radiation levels, safety related and non-safety related display consoles, and a general data processing system for data archival and user interface. The communications console and minicomputer portions of this system had become increasingly more unreliable, more difficult to find spare parts for, and more expensive to maintain. DCP 93-VAN0059 was issued to remove the PERMS minicomputer and associated peripheral devices from Unit 1 replacing this data retrieval and archival equipment with the chemistry display console and printer. Now, all devices and internal wiring from panel 1NCQRM1 (communications console) in the Unit 1 control room have been removed and replaced with a Unit 1 primary PERMS data acquisition processor with associated peripheral devices, line driver communications hardware for the data processing modules (DPMs), and digital output hardware in 1NCQRM1. The PERMS data acquisition processor is connected to the Unit 1 and 2 IPC computers and PERMS chemistry display consoles and printers via the IPC network. Connection of the Unit 1 equipment to the IPC rendered the short haul modems, 1NCCRSHM1 & 1NCCRSHM2, designed for DCP 93-VAN0059 unnecessary, so they were removed. The communications card for each DPM was removed and a new short-haul modem (line driver) was installed to interface with 1NCQRM1 line drivers. All of the existing 80/10A CPU boards were replaced with the newer 80/10B CPU boards. Software necessary to achieve the functionality present on the existing PERMS Communication Console and minicomputer systems, with improvements in man-machine interface and storage based on more recent computer software and hardware technologies was provided with the installation of the Unit 1 PERMS computers. The data link communications software on the Unit 1 IPC is revised to communicate with the Unit 1 PERMS system via an enter-net link.

SAFETY EVALUATION: UFSAR section 11.5 and Emergency Plan section H describe the general system layout and functionality of the PERMS. UFSAR sections 11.5.2.1, 12.3.4.1.9 (page 12.3.4-7), and figures 11.5.2-1, 11.5.2-2, and 11.5.2-3 are revised to replace the words "communication console" with "Communication Display Computer (CDC)". Each subsequent entry of "communication console" is replaced with "CDC". In UFSAR section 11.5.2.1 the words "a minicomputer" are replaced with "PERMS Display Computer (PDC)". UFSAR figure 11.5.2-1 is revised to graphically display the interconnection of the computer display console with the integrated plant computer and perms display computer. UFSAR figure 11.5.2-2 is revised to specify the number and type of signal carriers that transmit data from the data processing module of a safety related monitor to the non-safety related CDC. The title of UFSAR figure 11.5.2-3 is changed from "PERMS Communication Console" to "DRMS Communication Console" and this figure is updated to reflect its new configuration.

SUBJECT: DCP 95-V2N0059

DESCRIPTION: The plant effluent and radiation monitoring system (PERMS) consists of field instrumentation for the detection and measurement of process, effluent, and area radiation levels; safety related and non-safety related display consoles; and a general data processing system for data archival and user interface. The communications console (non-safety) and minicomputer (non-safety) portions of this system had become increasingly more unreliable, more difficult to find spare parts for, and more expensive to maintain. Therefore, the Unit 2 PERMS minicomputer systems and peripheral devices have been removed from the plant. A Unit 2 chemistry display console and printer and associated network communications equipment to support PERMS data archival, retrieval, and system maintenance in the radiochemistry lab have been added. All devices and internal wiring from panel 2NCQRM1 (communications console) in the Unit 2 control room have been removed and replaced with a Unit 2 Primary PERMS Data Acquisition Processor (2-1609-C5-PR1) and associated peripheral devices, line driver communications hardware for the DPMs, and digital output hardware in 2NCQRM1. This

computer is connected to the IPC computers and the PERMS chemistry display consoles and printers via the IPC network. The communications card for each DPM was removed and a new short-haul modem (line driver) was installed to interface with 2NCQRM1 line drivers. All of the existing 80/10A CPU boards were replaced with the newer 80/10B CPU boards. Software necessary to achieve the functionality present on the existing PERMS communication console and minicomputer systems, with improvements in man-machine interface and storage based on more recent computer software and hardware technologies was provided with the installation of the Unit 2 PERMS computers. The data link communications software on the Unit 2 IPC is revised to communicate with the Unit 2 PERMS system via an enter-net link.

SAFETY EVALUATION: UFSAR section 11.5 and Emergency Plan section H describe the general system layout and functionality of the PERMS. UFSAR sections 11.5.2.1, 12.3.4.1.9 (page 12.3.4-7), and figures 11.5.2-1, 11.5.2-2, and 11.5.2-3 are revised to replace the words "communication console" with "Communication Display Computer (CDC)". Each subsequent entry of "communication console" is replaced with "CDC". In UFSAR section 11.5.2.1 the words "a minicomputer" are replaced with "PERMS Display Computer (PDC)". UFSAR figure 11.5.2-1 is revised to graphically display the interconnection of the computer display console with the integrated plant computer and perms display computer. UFSAR figure 11.5.2-2 is revised to specify the number and type of signal carriers that transmit data from the data processing module of a safety related monitor to the non-safety related CDC. The title of UFSAR figure 11.5.2-3 is changed from "PERMS Communication Console" to "DRMS Communication Console" and this figure is updated to reflect its new configuration.

SUBJECT: DCP 95-VAN0068

DESCRIPTION: The Unit 1 & 2 control building local area network (LAN) has been upgraded to allow for expansion of the telecommunications system and to support 4 to 16 megabyte data transmission. Fiber optic and telecommunications-grade cables were added to room 400 in the Unit 1 turbine building, several rooms in the control building, and in the auxiliary building. The control building rooms include A31, A37, 107, 119, 137, 155, 160, 162, 163, 164, 187, 194, 207, and 229. The auxiliary building room is 140. Two LAN cables originating in room 140 of the auxiliary building and terminating in splice boxes on the East and West exterior walls of the auxiliary building were also added. Several new penetrations were added for the new conduits.

SAFETY EVALUATION: UFSAR section 9A is revised to reflect the addition of combustible loading (cable insulation) in fire zones 110, 119, and 183A, and an increase in the documented fixed combustible loading value for zone 110.

SUBJECT: DCP 95-VAN0078

DESCRIPTION: The turbine building fume exhaust fan (1-2110-U1-501) and stainless steel ductwork have been replaced with a non-metallic fiberglass reinforced plastic. This replacement prevents the fume hood exhaust ductwork from corroding due to boiling acid fumes during chemical analysis. The new fan and ductwork provide the same exhaust flow capacity as the previous system. The new ductwork follows the existing duct routing and uses the previous supports where possible.

SAFETY EVALUATION: As part of this change, a fire damper located in the ductwork has been deleted. The new ductwork penetrates the fire wall in the north end of the laboratory through the existing duct opening, but does not include a fire damper. Drawing 1X4DB229-1, which is referenced UFSAR section 9.4.4, is revised to reflect the change.

SUBJECT: DCP 96-V1N0005

DESCRIPTION: The previous position indicators for the auxiliary feedwater flow control valves were located on the main control board, shutdown panel A, shutdown panel B, and the Auxiliary Feedwater control panels. The readings for these indicators became unreliable because the position transmitter used on the subject flow control valves was not well suited for the type of valve operator being used. Several work orders have resulted because of this. Position indicators 1ZI-5120A/B, 5122A/B, 5125A/B, 5127A/B, 5132A/B, 5134A/B, 5137A/B, and 5139A/B have been removed from their respective panels. In addition, the position transmitters for each of the valves above were removed. In addition, the illuminated bar-type indicator used to indicate condensate storage tank (CST) level on the Auxiliary Feedwater Control panel has been replaced for the same reason. Level indicator switches 1LIS-5111 and 5116 have been replaced with an analog indicator. The switch function is provided using a tape mark on the face on the analogue meter

SAFETY EVALUATION: This modification revises P&ID 1X4DB161-1 due to changing out of 1LIS-5111 and 1LIS-5116 to analogue indicators LI-5111C and LI-5116C. This drawing is referenced in UFSAR section 9.2.6. This modification also revises P&ID IX4DB161-2 bv reflecting the deletion of position transmitters and indicators listed above. This drawing is referenc in UFSAR section 10.4.9. UFSAR table 10.4.9-4 and the text of UFSAR section 10.4.9.2.2.3 are also revised to reflect the deletion of the position indicators.

SUBJECT: DCP 96-V2N0006

DESCRIPTION: The previous position indicators for the auxiliary feedwater flow control valves were located on the main control board, shutdown panel A, shutdown panel B, and the Auxiliary Feedwater control panels. The readings for these indicators became unreliable because the position transmitter used on the subject flow control valves was not well suited for the type of valve operator being used. Several work orders have resulted because of this. Position indicators 2ZI-5120A/B, 5122A/B, 5125A/B, 5127A/B, 5132A/B, 5134A/B, 5137A/B, and 5139A/B have been removed from their respective panels. In addition, the position transmitters for each of the valves above were removed. In addition, the illuminated bar-type indicator used to indicate Condensate Storage Tank (CST) level on the Auxiliary Feedwater Control panel has been replaced for the same reason. Level indicator switches 2LIS-5111 and 5116 have been replaced with an analog indicator. The switch function is provided using a tape mark on the face on the analogue meter.

SAFETY EVALUATION: This modification revises P&ID 2X4DB161-1 due to changing out of 2LIS-5111 and 2LIS-5116 to analogue indicators LI-5111C and LI-5116C. T his drawing is referenced in UFSAR section 9.2.6. This modification also revises P&ID 2X4DB161-2 by reflecting the deletion of position transmitters and indicators listed above. This drawing is referenced in UFSAR section 10.4.9. UFSAR table 10.4.9-4 and the text of UFSAR section 10.4.9.2.2.3 are also revised to reflect the deletion of the position indicators.

SUBJECT: DCP 96-V1N0007

DESCRIPTION: The nuclear service cooling water (NSCW) system, which performs both safety and non-safety related functions, provides cooling water for the containment coolers, control building essential chiller condensers, various engineered safety features (ESF), pump coolers, standby diesel generator jacket water coolers, and the component cooling water (CCW) and auxiliary component cooling water (ACCW) heat exchangers. Indications were found on all pumps in the Unit 1 NSCW system where

the 4 in. slow fill line connects to the individual NSCW pump 18 in. discharge lines. Pumps 1-1202-P4-001 and 1-1202-P4-004 had a through wall indication where water seepage was observed. Therefore, the affected NSCW pump discharge line spool piece was replaced, tie-back supports were added between each of the NSCW pumps and the 4" bypass line, and three existing supports per train were strengthened. In addition, two ½" instrument root valves per train, valves 1-1202-X4-A11, A12, A13, and A14, were removed and the line cut and capped. Snubbers V1-1202-512-H06 and V1-1202-516-H602 were replaced with a strut.

SAFETY EVALUATION: The NSCW system and the P&IDs are referenced in UFSAR section 9.2.1. The Deletion of the ½" instrument root valves is a change to the P&IDs. UFSAR section 3.9.B.3 is revised to clarify that editions of the ASME Code piping may be used when properly reconciled to the Code of Record. The reanalysis of the support base plates and anchor bolts utilized ACI 349-76. UFSAR sections 1.9.142 and 3.8.4.5 are revised to reflect this. UFSAR sections 1.9.142 and 3.8.4.5 are revised to clarify that ACI 349 including Appendix B may be used with the given qualifications given in Regulatory Guide 1.142.

SUBJECT: DCP 96-VAN0020

DESCRIPTION: The containment building polar bridge cranes (tag nos. 1 / 2 –2101-R4-001) for Units 1 and 2 are used to provide hoisting capacity during refueling and service operations and for installation of equipment in the containment building and lifting miscellaneous tools and parts. The Polar Bridge Crane auxiliary hoist previously had a lift capacity of 50 ton with an auxiliary hoist speed of 28 feet per minute. This was with a 12 part rope reeving system. If the number of rope parts is decreased, the hoist would lose lift capacity but gain speed. During a refueling outage, the slow speed of the 12 part rope system resulted in slow loading and unloading of material in the containment building. Therefore the reeving system was changed from 12 parts to 8 parts. The new lift speed is 43 feet per minute, and the new lift capacity is 25 tons, which is still more than enough. This was accomplished using the same rope and same sheaves. The rope was rerouted through the sheaves while not using the top two and bottom two sheaves.

SAFETY EVALUATION: UFSAR section 9.1.5 discusses the containment building polar bridge crane auxiliary hoist. UFSAR section 9.1.5.2.3 is revised to reflect that the auxiliary hoist is 8-part reeving instead of 12-part-reeving and has a lift capacity of 25 tons instead of 50 tons. UFSAR table 9.1.5-1 is revised to reflect the new lifting capacity of 25 tons and new hoist speed of 43 feet per minute of the hoist. UFSAR figure 9.1.5-4 and table 9.1.5-3 are revised to reflect the new hoist capacity of 25 tons.

SUBJECT: DCP 96-VAN0022

DESCRIPTION: With the installation of the IPC to replace Proteus, the main generator temperature monitor had been affected by electrical noise. The addition of temperature transmitters, which include filtering, have removed the noise from these RTD and thermocouple loops. A high excitation current transmitter, developed by Moore Industries, has been used to remove the AC noise from the copper RTDs. The thermocouples do not require a special transmission to remove the noise, so the Moore Industries standard temperature transmitter is used to provide the required filtering for the thermocouple loops. A new panel to house the temperature transmitters is located in the control building level A computer rooms.

SAFETY EVALUATION: This change does not affect the function of the temperature monitoring loops. It does, however, increase their accuracy by removing the electrically induced noise. Combustible loading for the computer rooms is tracked in UFSAR section 9A.2.k. This design change adds cables and therefore changes the combustible loading for fire zone 96 in both units. Page 9A.2.60-2 of the UFSAR is revised to reflect the additional combustible loading.

SUBJECT: DCP 96-V2N0029

DESCRIPTION: The turbine driven auxiliary feedwater (TDAFW) pump is a part of the auxiliary feedwater system (1302). This pump had been experiencing over-speed trips upon starting up. To prevent this, the governor valve at the inlet to the turbine had to close within one second, but could not operate that quickly. Therefore, the previous steam admission valve (HV-5106) for the TDAFW pump turbine driver, a motor operated gate valve, has been replaced with a new globe valve and operator. The steam admission valve for the TDAFW pump is a part of the main steam system (1301). The new valve and motor operator are designed to slowly admit steam to the driver during the startup acceleration transient. Using this type valve permits slow turbine acceleration, allows turbine oil pressure to build up, and thus solves the problem with slow governor response. The additional load requirements for the new valve operator have been analyzed for battery 2CD1B. An air-test connection with an isolation valve (2-1301-X4-265) has been added to test the TDAFW pump turbine driver and associated instrumentation during periods when it is not practical to test using steam. The hydrostatic test vent and temperature indicator (TI-15110) have been deleted. The connection point for pressure transmitter (PT-5105) has been relocated to accommodate the installation of the new valve.

SAFETY EVALUATION: Valve HV-5106, a 4", 900-lb. gate valve, has been replaced by a 4" 900-lb. globe valve. The text of the UFSAR does not describe the valve type. However, the valve is depicted on P&ID 2X4DB161-3, so it is therefore an implied change to the UFSAR description. Additionally, tables 8.3.2-3 and 8.3.2-8 are revised to reflect the change to battery 2CD1B load profiles for LOCA/LOSP and SBO conditions as a result of the new actuator being used by the new globe valve. The addition of an air-test connection, relocation of pressure transmitter PT-5105, and deletion of TI-15110 are also reflected on the P&ID. The service test profile incorporated into plant procedures is revised to reflect the new battery load profile in UFSAR tables 8.3.2-3 and 8.3.2-8. The text of the UFSAR does not spell out the type of valve being used, but procedures at the plant have been reviewed for impact due to the change in valve type and opening time. The opening time has changed from 20 seconds to 38 seconds on receipt of a pre-selected signal with supplied voltage equal to 70 percent of rated voltage.

SUBJECT: DCP 96-V2N0032

DESCRIPTION: The previous Siemens vacuum degasifier pumps were in need of repair, but replacement parts are no longer available. Therefore, the previous vacuum degasifier pumps, motors and ejectors for the Unit 2 condensate storage tanks (CST) and reactor makeup water storage tank (RMWST) have been replaced with new ones supplied by Nash-Kinema. Additionally, the air operated pump inlet isolation valves (2HV-7734, 2HV-7735, 2HV-5075, AND 2HV-5076) and their associated solenoid valves have been deleted and replaced with manually operated valves.

SAFETY EVALUATION: UFSAR sections 9A.1.126 and 9A.2.89 are revised to delete valves 2HV-7734 and 2HV-7735. P&I D's 2X4DB184 for the RMWST degasifier system and 2X4DB161-1 for the CST degasifier system are mentioned in UFSAR section 9.2.6. The drawings are revised to reflect the above changes.

SUBJECT: DCP 96-VAN0034

DESCRIPTION: The personnel air lock for entrance into containment is equipped with provisions for normal and essential lighting (diesel generator backup). The plant discovered an essential lighting feed had not been connected on Unit 2 and inadequate backup containment penetration protection had been provided for the normal lighting circuits in the Unit 1 and 2 personnel locks (penetration no. 81) and the escape air locks (penetration no. 84). The same was found for the essential lighting circuits in these areas as well. Also, emergency lighting (battery backup) was not provided in the personnel and escape air locks on both Unit 1 and 2. Two fuses in series were installed in the circuits feeding the lighting inside the personnel and escape air locks on both Unit 1 and 2. This provides adequate conductor penetration protection for these circuits. These fuses were installed in junction boxes located outside the air locks in both the normal and essential lighting circuits. Previously, containment penetration protection for the personnel air lock motors was provided by a 30 amp circuit breaker with a 50 amp breaker as backup. The 50 amp breaker is inadequate. Since, a 20 amp circuit breaker and fuse already existed in the junction box outside the air locks, it became the primary protection with the 30 amp breaker as the backup. The personnel air locks are located in Room 117 and the escape air locks are located in room RB13 (Unit 1) and RB15 (Unit 2).

SAFETY EVALUATION: Containment penetration protection coordination curves for the normal lighting circuits in the Unit 1 and 2 escape air locks and personnel air locks are shown in UFSAR figure 8.3.1-1 sheets 7 and 6 of 20, respectively. A new coordination curve is added to this section to show the penetration protection by two fuses instead of two circuit breakers. UFSAR table 16.3-5 sheets 23 and 25 of 36 are revised to reflect the protective devices for containment penetration conductor overcurrent protection for the normal and essential lighting circuits in the escape air locks and personnel air locks. This section is also revised to list two fuses as protective devices for these circuits instead of two circuit breakers. Plant maintenance procedures implied in UFSAR section 13.5 are revised to remove the surveillance requirements to verify proper containment penetration protection coordination for the circuit feeding the normal lighting circuits to the escape air locks. Penetration protection is now provided by a fuse which does not require testing.

SUBJECT: DCP 96-V1N0035

DESCRIPTION: The four RCS loops may be drained simultaneously to the midpoint of the reactor vessel nozzles in less than 8 hours when both reactor coolant drain tank (RCDT) pumps are used. Previously, on Unit 1, a spool piece was connected to the RCDT pumps' suction. The spool piece was installed at a location that is in a high radiation area. The installation and removal of the spool piece was labor intensive resulting in almost one rem of exposure per installation or removal. The removable spool piece was provided to separate the high pressure (1500#) portion of the system from the low pressure (150#). This prevents a rupture of the low pressure piping system and/or equipment. It was only installed while draining the reactor coolant system at low pressure. A modification to the liquid water processing system (1901) has been made. Instead of a removable spool piece, a spectacle flange is used to positively isolate the high pressure portion of the LWPS from the low pressure portion. This is similar to the configuration on Unit 2. Also, the spectacle flange location is in a low radiation area compared with the previous location of the removable spool piece.

SAFETY EVALUATION: UFSAR paragraph 11.2.2.8.1 is revised to reflect the change from the spool piece to the spectacle flange. The spectacle flange provides the same positive isolation. This has no impact on the ASME Class 1 reactor coolant system pressure boundary. This pressure boundary is provided by redundant manual isolation valves that are normally closed and locked. UFSAR sections 11.2.2, 5.1.2 (P&ID 1X4DB111), and 11.2.1.3 (P&ID 1X4DB127) are revised to reflect these changes as

well. This change affected a procedure as described in UFSAR paragraph 11.2.2.8.1. The spool piece was required to be installed by paragraph 11.2.2. for loop draining. UFSAR section 11.2.2 is revised to reflect this change. A change to procedures in Chapter 13 is not required.

SUBJECT: DCP 96-V2N0036

DESCRIPTION: The four RCS loops may be drained simultaneously to the midpoint of the reactor vessel nozzles in less than 8 hours when both reactor coolant drain tank (RCDT) pumps are used. Previously, on Unit 2, a spool piece and a spectacle flange were connected to the RCDT pumps' suction. The spool piece was installed at a location that is in a high radiation area. The installation and removal of the spool piece was labor intensive resulting in almost one rem of exposure per installation or removal. The removable spool piece was provided to separate the high pressure (1500#) portion of the system from the low pressure (150#). This prevents a rupture of the low pressure piping system and/or equipment. It was only installed while draining the reactor coolant system at low pressure. A modification to the liquid water processing system (1901) has been made. Instead of a removable spool piece, a spectacle flange is used to positively isolate the high pressure portion of the LWPS from the low pressure portion. This is similar to the configuration on Unit 1. Also, the spectacle flange location is in a low radiation area compared with the previous location of the removable spool piece.

SAFETY EVALUATION: UFSAR paragraph 11.2.2.8.1 is revised to reflect the change from the spool piece to the spectacle flange. The spectacle flange provides the same positive isolation. This has no impact on the ASME Class 1 reactor coolant system pressure boundary. This pressure boundary is provided by redundant manual isolation valves that are normally closed and locked. UFSAR sections 11.2.2, 5.1.2 (P&ID 2X4DB111), and 11.2.1.3 (P&ID 2X4DB127) are revised to reflect these changes as well. This change affected a procedure as described in UFSAR paragraph 11.2.2.8.1. The spool piece was required to be installed by paragraph 11.2.2. for loop draining. UFSAR section 11.2.2 is revised to reflect this change. A change to procedures in Chapter 13 is not required.

SUBJECT: DCP 96-V2N0038

DESCRIPTION: The auto fill valves on the upender hydraulic power units for Unit 2 provided demineralized makeup water to the hydraulic power unit reservoirs. These valves were located inside the reservoirs on each end of the fuel transfer system in both the fuel handling building. They were experiencing operational problems, such as not closing on high reservoir levels, resulting in over-filling of the reservoirs and overflow of water on to the building floors. These auto fill valves have been removed. Now, the manual operation of the system is performed using the existing demineralized water isolation valve. The operator will maintain sufficient inventory in the reservoir by visually monitoring the water level and controlling makeup by using the existing inlet isolation valve. A larger sight glass has been added to the reservoir to help the operator monitor the reservoir level and a permanent drain valve has been added to the reservoir in the event overfilling occurs. The existing sight glass on the reservoir has been abandoned in place. The manual valve now is used for level control in the hydraulic reservoir and may require initiation or change to operational procedures. Also, the plant procedure for high flux at shutdown alarm has been reviewed to consider the effects of overflow from the upender hydraulic power unit reservoir (in the spent fuel building) as a boron dilution path during refuel operations.

SAFETY EVALUATION: P&ID AX4DB190-2, plant demineralized water system, is revised to add the sight glass and drain valve to both upender HPTs (2-2203-P6-001 and 002). This P&ID is referenced in UFSAR table 1.7.1-2. In several places, demineralized water lines showed a break at the Unit 1 operator / Unit 2 construction boundary. The distinction between operational and construction has been

removed since both units are now operational. Another correction was made to remove the "lock closed" designation from valve 2-1418-U4-121 and to remove note 2 from the drawing that references locking this valve. The demineralized water system line–up procedure 11750-C shows 2-1418-U4-121 as closed instead of locked closed. The procedure does not require a revision due to this P&ID change.

SUBJECT: DCP 96-VAN0039

DESCRIPTION: The fuel handling building post-accident (FHB-PA) ventilation system functions during emergency or post-accident conditions and prevents ex-filtration of contaminated air by imposing a negative pressure on the building. The FHB-PA ventilation system was previously automatically actuated by radiation monitoring or low differential pressure between the building and atmosphere. The actuation circuit for low differential pressure between the building and atmosphere was normally disabled except during fuel handling activities. The FHB-PA ventilation system can also be actuated manually from the control room. The automatic actuation of the FHB-PA ventilation system on low differential pressure between the building and atmosphere has been removed by deleting pressure transmitters APDT-12567, APDSL-12567, AZI-12567, APDT-12568, APDSL-12568, AZI-12568, AHS-2533C, and the associated annunciator window This was done to prevent the risk of inadvertent ESFAS actuation and to reduce the run hours on the FHB-PA carbon bed. Also, it allows for better working conditions in the FHB due to better heating, cooling and dehumidifying being provided by the normal ventilation system. The functional change to the FHB-PA ventilation system is that it is now actuated automatically only on a high radiation signal. The primary function of the FHB-PA ventilation system to prevent ex-filtration of contaminated air by imposing a negative pressure on the building will not be affected.

SAFETY EVALUATION: The FHB-PA ventilation system is described in detail in UFSAR section 9.4.2 and is mentioned in UFSAR sections 6.5.1, 7.3.5, 15.7.4, and UFSAR table 15.7.4-2 (sh. 3). UFSAR section 7.3.5.1.1 is revised to reflect the deletion of the differential pressure signals that provide automatic actuation on low differential pressure between the building and atmosphere. UFSAR sections 9.4.2.1.2.3, 9.4.2.2.2.3, and 9.4.2.2.5 are revised to reflect the deletion of the automatic actuation of the FHB-PA ventilation system on low differential pressure between the building and atmosphere. Also, UFSAR section 9.4.2.2.5 is revised to show the deletion of the alarm in the control room for low negative pressure in the FHB relative to atmosphere. No procedures described in the UFSAR based on a review of UFSAR sections 7.3.5 and 9.4.2 are affected. However, an alarm on low negative pressure between the FHB and atmosphere will no longer be available in the control room. This alarm indication is mentioned in UFSAR section 9.4.2.2.5.

SUBJECT: DCP 96-V2N0043

DESCRIPTION: The previous containment sump level transmitters were ITT Barton differential pressure transmitters, which provided indication without any control function. Over a period of time, gas accumulation in the capillary lines occurred causing the sensing level readings to become erroneous. These transmitters (2LT-7777, 2LT-7778, 2LT-7789, 2LT-764, and 2LT-765) were replaced with GEMS float type level transmitters. Signal conditioner units (designated as LYs) have been added to each of the GEMS float type level transmitters to convert the signals from the GEMS transmitters to 4-20 mA for input into the plant systems. 2LY-764A and 2LY-7777 are located in room R-B04 of the Control building. 2LY-765A and 2LY-7789 are located in room R-B09, and 2LY-7778 is located in room R-A22. Patel Bayonet connectors were used to provide the required environmental seal and allow removal of the instruments. The transmitters continue to provide level indication without any control function. This change improves reliability (due to decreased system downtime) and response to level changes, and decrease the LCO time associated with a level sensor element replacement. Also, radiation exposures

have been decreased since personnel do not have to enter the sumps to perform calibration/inspection of the transmitters and signal converters.

SAFETY EVALUATION: The affected transmitters are part of PAMS, reactor coolant system (RCS) leakage detection systems and equipment & floor drain systems. The new GEMS level transmitters are environmentally and seismically qualified. Calculations X5CP0764 and X5CP7777 have been revised to verify that loop tolerances as a range of accuracy are acceptable. Based on the above, the new GEMS transmitters do not alter the functions of any affected systems. Based on a review of the above UFSAR sections and tables, this design change does not change any text, tables or figures in the UFSAR. However, P&IDs 2X4DB122 & 2X4DB143, which are referenced in the UFSAR, are modified to reflect the changes.

SUBJECT: DCP 97-V1N0001

DESCRIPTION: Previously, the Unit 1 spent fuel pool contained two Boraflex equipped spent fuel racks. These racks have been removed and are being replaced with high density racks that were originally licensed and installed for use at the Maine Yankee Atomic Power Company. This modification package does not allow plant use of the racks after they are installed until the Technical Specification is NRC approved. Several activities are associated with the installation of the racks to include the following: connection bracket, installation of gantry crane, cask bridge crane temporary modification, staging pad installation, rack storage, and rack cleaning. The modification for Unit 1 Spent Fuel Pool RCCA, BPRA, and thimble plug tool hangers has been included in this design change. New hangers have also been added at the east end of the Unit 1 pool.

SAFETY EVALUATION: Seismic and structural analysis has been completed and indicates the racks can be stored safely in the Unit 1 SFP prior to approval use. An amendment to the Technical Specifications has been submitted to the NRC to allow the plant operation with the new racks and the UFSAR and Tech. Specs. will be changed appropriately after its approval. The UFSAR changes as proposed in this document can not be implemented until the Technical Specification change is approved. The relocation of the spent fuel handling tools support requires a change to drawing 1X4DE317 which is in UFSAR section 1.2.2, Facility Arrangement. The overhead heavy load handling systems (OHLHS) analyzed heavy load lift heights and safe load paths are evaluated in UFSAR section 9.1.5. Administrative controls applicable to OHLHS are specified in the load handling procedures. Implementation of this DCP will require specific procedures to be utilized for moving the racks, rack gantry crane, and associated equipment. This is considered a change to the OHLHS procedure as described in the UFSAR. Temporary revisions to the storage procedures for spent fuel have been made to prevent use of the new Unit 1 racks prior to NRC approval. Also, a procedure revision was made for Unit 2 storage in the new Unit 1 racks. These temporary changes will not be reflected in the UFSAR due to the limited duration of the condition.

SUBJECT: DCP 97-V2N0009

DESCRIPTION: A review of surveillance requirements (SR) for the pressurizer safety valve (PSV) from the Technical Specification (TS) showed that a number of "out of TS tolerance" conditions (SR 3.4.10.1) had occurred (pre-calibration as found setpoints > +/- 1%). During outages 1R6 and 2R5, "out of tolerance" conditions were still being experienced. The pressurizer safety valve "lift" setpoints and setpoint tolerances have been changed from 2485 psig +/- 1% to 2460 psig +/- 2%. The as-left setpoints and tolerances, following calibration, have become 2460 psig +/- 1%.

SAFETY EVALUATION: The decrease in pressurizer safety valve set pressure and concurrent increase in set pressure tolerance changed the UFSAR analysis of the inadvertent operation of the ECCS during power operation. A discussion of the plant hydraulic model and design evaluation in section 3.9.N.3 includes the specific value of the PSV lift setpoint and the tolerances for the setpoint. UFSAR sections 5.4.10 and 5.4.13 contain tables that include the PSV setpoint. An accident analysis has also been put into the text of the UFSAR to reflect the setpoint value and associated tolerance. Certain plant procedures are revised to lower the administrative pressure value to maintain the same operating buffer below the PSV setpoint to prevent challenging the PSVs while maintaining the pressurizer pressure using the PORVs.

SUBJECT: DCP 97-V1N0010

DESCRIPTION: A review of surveillance requirements (SR) for the pressurizer safety valve (PSV) from the Technical Specification (TS) showed that a number of "out of TS tolerance" conditions (SR 3.4.10.1) had occurred (pre-calibration as found setpoints > +/- 1%). During outages 1R6 and 2R5, "out of tolerance" conditions were still being experienced. The Pressurizer Safety Valve "lift" setpoints and setpoint tolerances have been changed from 2485 psig +/- 1% to 2460 psig +/- 2%. The as-left setpoints and tolerances, following calibration, have become 2460 psig +/- 1%.

SAFETY EVALUATION: The decrease in pressurizer safety valve set pressure and concurrent increase in set pressure tolerance changed the UFSAR analysis of the inadvertent operation of the ECCS during power operation. A discussion of the Plant Hydraulic Model and Design Evaluation in section 3.9.N.3 includes the specific value of the PSV lift setpoint and the tolerances for the setpoint. UFSAR sections 5.4.10 and 5.4.13 contain tables that include the PSV setpoint. An accident analysis has also been put into the text of the UFSAR to reflect the setpoint value and associated tolerance. Certain plant procedures are revised to lower the administrative pressure value to maintain the same operating buffer below the PSV setpoint to prevent challenging the PSVs while maintaining the pressurizer pressure using the PORVs.

SUBJECT: DCP 97-V1N0013

DESCRIPTION: As part of the plant's response to NRC generic letter 96-06, "Assurance of Equipment Operability and Containment Integrity During a Design-Basis Accident Conditions", fifteen containment penetrations per unit were identified as being susceptible to thermally-induced overpressurization during postulated design-basis events. Four of the fifteen penetrations were determined not to be susceptible to this overpressurization because of inherent design feature possessed by the containment isolation valves used for these penetrations. Another seven penetrations required plant procedure changes to establish appropriate administrative controls to prelude this overpressurization potential. The remaining four penetrations did require overpressurization. A ¾" ASME Section III, class 2, pressure relief valve was added to the four penetrations. The new valves, 1PSV-1978, 1PSV-8871, 1PSV-7699, and 1PSV-0780 have been added to penetrations 28, 41, 77, and 78 respectively. These valves, capable of liquid or steam service, have been installed inside containment and relieve locally to provide overpressure protection for these penetrations.

SAFETY EVALUATION: The containment isolation system is defined in UFSAR section 6.2.4. Therefore, UFSAR table 6.2.4-1 (Containment Penetration / Isolation Valve Information), UFSAR figure 6.2.4-1 (Containment Isolation Valve Arrangement Details), and UFSAR table 16.3-4 (Containment Isolation Valves) are revised to reflect this change. Also, P&IDs 1X4DB121, 1X4DB138-2, 1X4DB127,

and 1X4DB143 are revised to reflect the addition of the new valves. These drawings are referenced in UFSAR sections 5.4.7, 3.9, 6.3.2, 9.2.8, 9.3.3, 11.2.2, and 11.2.1.

SUBJECT: DCP 97-V2N0014

DESCRIPTION: As part of the plant's response to NRC generic letter 96-06, "Assurance of Equipment Operability and Containment Integrity During a Design-Basis Accident Conditions", fifteen containment penetrations per unit were identified as being susceptible to thermally-induced overpressurization during postulated design-basis events. Four of the fifteen penetrations were determined not to be susceptible to this overpressurization because of inherent design feature possessed by the containment isolation valves used for these penetrations. Another seven penetrations required plant procedure changes to establish appropriate administrative controls to prelude this overpressurization potential. The remaining four penetrations did require overpressurization. A ¾" ASME Section III, class 2, pressure relief valve was added to the four penetrations. The new valves, 2PSV-1978, 2PSV-8871, 2PSV-7699, and 2PSV-0780 have been added to penetrations 28, 41, 77, and 78 respectively. These valves, capable of liquid or steam service, have been installed inside containment and relieve locally to provide overpressure protection for these penetrations.

SAFETY EVALUATION: The containment isolation system is defined in UFSAR section 6.2.4. Therefore, UFSAR table 6.2.4-1 (Containment Penetration / Isolation Valve Information), UFSAR figure 6.2.4-1 (Containment Isolation Valve Arrangement Details), and UFSAR table 16.3-4 (Containment Isolation Valves) are revised to reflect this change. Also, P&IDs 2X4DB121, 2X4DB138-2, 2X4DB127, and 2X4DB143 are revised to reflect the addition of the new valves. These drawings are referenced in UFSAR sections 5.4.7, 3.9, 6.3.2, 9.2.8, 9.3.3, 11.2.2, and 11.2.1.

SUBJECT: DCP 97-V1N0022

DESCRIPTION: Pressure locking in flexible-wedge gate valves generally occurs when fluid becomes pressurized within the valve bonnet, creating a large internal pressure, and the actuator is not capable of supplying the additional thrust required. Susceptible valves are normally closed valves that need to open for accident mitigation, or valves that are closed during an accident and need to open for subsequent accident mitigation. Valve 1HV-8840 was susceptible to pressure locking due to RCS leakage past the downstream check valves or heating of the fluid trapped in the closed valve. This valve is required to open for the RHR pumps to inject into the RCS hot legs. It has been modified by drilling a small hole (1/8" diameter) in the containment side of the valve disc. The hole acts as a vent and allows the pressure inside the bonnet and between the valve disc halves to communicate with the containment side piping system. This prevents the pressure in the valve bonnet from being higher than the line pressure, thereby preventing pressure locking of the valve. Also, a beam has been permanently installed in Unit 2 auxiliary building room A-18 to use for rigging a chain hoist while performing maintenance on valve 1HV-8840. In addition, the valve packing configuration and packing leak off line has also been changed. The new packing configuration consists of a five ring graphite packing set and a carbon bushing installed per AX4AR39-20. The lantern ring is no longer used with the new packing configuration for valve 1HV-8840. As a result, the leak off line, which was routed to a floor drain near the valve, served no purpose and has been entirely removed. The leak off connection on the valve has been capped.

SAFETY EVALUATION: P&ID 1X4DB121 (Safety Injection System) is referenced in section 6.3.2. This drawing is revised to reflect the capped leak off line, and to add notes to indicate that valve 1HV-8840 has a vent hole drilled on the containment side of the valve disc and the leak off line has been capped. UFSAR table 6.2.4-1 sheet 9 (Containment Penetration/Isolation Valve Information) and table

6.3.2-3, sheet 1 (Motor-Operated Isolation Valves in the Emergency Core Cooling System) are revised to indicate that valve 1HV-8840 has been modified to add a bonnet vent to the containment side of the valve disc. Table 6.3.2-5 (Emergency Core Cooling System - Safeguards Operations - Failure Modes and Effects Analysis) is unchanged. Also, there is no change to the text of UFSAR section 6.3.2.2.11 (Motor-Operated Valves) since this modification does not affect the operation of the valve. UFSAR table 9.1.5-2 is revised to document the heavy load analysis associated with lifting the 1HV-8840 valve and actuator. The associated UFSAR figure, 9.1.5-5 sheet 8, is also revised to indicate the load path analyzed. The overhead heavy load handling systems (OHLHS), analyzed heavy load lift heights, and safe load paths are evaluated in UFSAR section 9.1.5. Administrative controls applicable to OHLHS are specified in the load handling procedures. UFSAR section 9.1.5 is revised to add the analyzed safe load path and load height for valve 1HV-8840. Maintenance procedure 26610-C is revised to provide the proper orientation of the vent hole in the disc of 1HV-8840.

SUBJECT: DCP 97-V2N0023

DESCRIPTION: Pressure locking in flexible-wedge gate valves generally occurs when fluid becomes pressurized within the valve bonnet, creating a large internal pressure, and the actuator is not capable of supplying the additional thrust required. Susceptible valves are normally closed valves that need to open for accident mitigation, or valves that are closed during an accident and need to open for subsequent accident mitigation. Valve 2HV-8840 was susceptible to pressure locking due to RCS leakage past the downstream check valves or heating of the fluid trapped in the closed valve. This valve is required to open for the RHR pumps to inject into the RCS hot legs. It has been modified by drilling a small hole (1/8" diameter) in the containment side of the valve disc. The hole acts as a vent and allows the pressure inside the bonnet and between the valve disc halves to communicate with the containment side piping system. This prevents the pressure in the valve bonnet from being higher than the line pressure, thereby preventing pressure locking of the valve. Also, a beam has been permanently installed in Unit 2 auxiliary building room A-18 to use for rigging a chain hoist while performing maintenance on valve 2HV-8840. In addition, the valve packing configuration and packing leak off line has also been changed. The new packing configuration consists of a five ring graphite packing set and a carbon bushing installed per AX4AR39-20. The lantern ring is no longer used with the new packing configuration for valve 2HV-8840. As a result, the leak off line, which was routed to a floor drain near the valve, served no purpose and has been entirely removed. The leak off connection on the valve has been capped.

SAFETY EVALUATION: P&ID 2X4DB121 for safety injection system (equivalent to 1X4DB121 which is referenced in section 6.3.2) is revised to reflect the capped leak off line, and to add notes to indicate that valve 2HV-8840 has a vent hole drilled on the containment side of the valve disc and the leak off line has been capped. UFSAR table 6.2.4-1 sheet 9 (Containment Penetration/Isolation Valve Information) and table 6.3.2-3, sheet 1 (Motor-Operated Isolation Valves in the Emergency Core Cooling System) are revised to indicate that valve 2HV-8840 has been modified to add a bonnet vent to the containment side of the valve disc. Table 6.3.2-5 (Emergency Core Cooling System - Safeguards Operations - Failure Modes and Effects Analysis) is unchanged. Also, there is no change to the text of UFSAR section 6.3.2.2.11 (Motor-Operated Valves) since this modification does not affect the operation of the valve. UFSAR table 9.1.5-2 is revised to document the heavy load analysis associated with lifting the 2HV-8840 valve and actuator. The associated UFSAR figure, 9.1.5-5 sheet 8, is also revised to indicate the load path analyzed. The overhead heavy load handling systems (OHLHS) analyzed heavy load lift heights, and safe load paths are evaluated in UFSAR section 9.1.5. Administrative controls applicable to OHLHS are specified in the load handling procedures. UFSAR section 9.1.5 is revised to add the analyzed safe load path and load height for valve 2HV-8840. Maintenance procedure 26610-C is revised to provide the proper orientation of the vent hole in the disc of 2HV-8840.

SUBJECT: DCP 97-VAN0032

DESCRIPTION: The electric steam boilers (A-1314-B4-003 and 004), were retired in place by DCP 95-VAN0026. Now they have been removed from the plant under this DCP 97-VAN0032. All equipment, components, platforms, and associated supports that were dedicated to the boilers and were not required for building support have been removed. As part of DCP 95-VAN0026, the piping for utility water was cut and capped. This utility water has been put back into service. The piping for instrument air has been terminated in the building. The roof penetrations have been capped and sealed. Floor drains have been covered as necessary, and all cables associated with the electric steam boilers have been either spared or removed.

SAFETY EVALUATION: UFSAR section 7.6.6.5 and table 3.2.2-1 (sheets 49 & 50 of 101) are revised to reflect the removal of the electric steam boilers and associated equipment from the Electric Steam Boiler Building. Also, drawings 1X4DB186-9 AND 1X4DB146-2 are included in the UFSAR by reference and are listed in UFSAR table 1.7.1-2. These drawing have been revised to reflect the above changes.

SUBJECT: DCP 97-V2N0036

DESCRIPTION: This DCP is broken down into three phases (Note: A transmittal is an administrative tracking number only). The first phase addresses numerous changes made to the VEGP MOV program. It includes setpoint data sheets for all valves in the GL 89-10 program with the exception of the valves which were modified via transmittal two. Additionally, VEGP implemented the ComEd methodology for MOV motor torque capability which requires the use of the pullout efficiency for actuators in the closing directions. The second phase provided a greater thrust/torque margin by applying the calculational methodology described in the first transmittal and by modifying the gearing configuration between the motor shaft and the worm shaft of the valve operator. All valves that underwent a gearing modification will have an associated stroke time and thrust/torque margin change. These changes are reflected in the associated setpoint data sheets and the MOV thrust/torque modification calculation, M-X4C1000U02-W01. The third phase revised IST stroke times for the 2HV-8508A/B, 2HV8509A/B, 2HV-8105 and 2HV-8106 valves. Additionally, one valve outline drawing is revised to reflect the IST stroke time requirement; and modification calculation M-X4C1000U02-W01 is revised to correctly reflect a calculated stroke time change associated with a revised valve stroke length. These changes are reflected in the associated setpoint data sheets.

SAFETY EVALUATION: The first phase does not change the plant or procedures as described in the UFSAR. The second phase, , the proposed gear modifications, changed the plant as described in the UFSAR by changing the stroke times outlined for ECCS isolation valves. The design changes will increase MOV stroke times listed in table 6.3.2-3 for valves 2HV-8105 and 2HV-8106. The stroke times along with note "f" at the end of table 6.3.2-3 are revised. A review of the UFSAR identified a necessary change to a procedure, specifically, table 6.3.2-7, "Sequence of Switchover Operations". Eight valves are listed in this table with associated times for each step in the procedure. Steps 3,4,and 6 are revised. Also, calculation X4C1204T03, rev. 3, of this table is revised. The third phase, the proposed IST stroke time changes, revised UFSAR tables 6.2.4-1, sheet 9 of 17, and UFSAR table 6.3.2-3, sheets 1 of 3 and 3 of 3. The revisions reflect 17 seconds rather than 15 seconds as the stroke time for said valves.

SUBJECT: DCP 97-VAN0052

DESCRIPTION: The turbine plant cooling water system (TPCW) was the previous source of seal water to the condensate storage tanks vacuum degasifier system vacuum pumps (1-1302-D4-001-P04 and P05). The buried TPCW line had experienced leaks and an internal buildup of corrosion that has reduced the pressure and volume of water being supplied. Therefore, the line was cut and capped as close as practical to the TPCW header. A new line was installed from the steam tunnel (1T1) following approximately the same route as the abandoned line. This line has a protective coating and is buried at a depth of 18 to 20 inches below grade between the 1T1 wall and the CST drainage moat wall. No new structures or components will be located in this area without engineer approval. The portion of the old TPCW line was cut out and removed so that the new utility water line could be routed through the existing hole. Also, the hole through the 1T1 wall was enlarged to fit the new line. A new gate valve was added to the line, inside the steam tunnel, to provide isolation for maintenance.

SAFETY EVALUATION: UFSAR section 9.2.6 discusses the condensate storage tanks vacuum degasifier. Although no text reference is made to the vacuum pumps' seal water, the P&ID (1X4DB161-1) that shows the seal water piping is referenced in this section and in UFSAR table 1.7.1-2. The new piping and one of the two new valves are shown on this drawing as well. Also, P&ID 1X4DB151-2 that is referenced in UFSAR section 9.2.11 and table 1.7.1-2 shows the TPCW supply to the vacuum pump seal is revised to reflect the pipe as cut and capped.

SUBJECT: DCP 97-V2N0053

DESCRIPTION: During each outage, the removal and installation of the fuel transfer tube blind flange inside containment involves substantial radiation exposure to the individuals involved in the work. In order to decrease the radiation exposure to these workers the amount of time involved in the removal of the flange had to be decreased. This was done by deleting one half of the bolts on the Fuel Transfer Tube flange, decreasing the overall number of bolts from twenty to ten. These 10 bolts are spaced evenly at 36 degree increments. The flange installation still meets all applicable ASME Section III criteria and continues to maintain its function as a containment boundary.

SAFETY EVALUATION: As part of this modification, P&ID 2X4DB130 is revised to reflect the new bolting configuration. This drawing is referenced in the UFSAR. This constitutes the only change to the plant as described in the UFSAR.

SUBJECT: DCP 97-V2N0066

DESCRIPTION: Several small-bore carbon steel pipelines in the main steam (system 1301), extraction steam (system 1303), and heater vents (system 1310) systems had experienced significant wall-thinning due to flow-accelerated corrosion (FAC). Site engineering provided a list of the lines that, judging from recent ultrasonic (UT) examinations, might have experienced steam leaks sometime before the 2R7 outage in 1999. Such leaks are considered an unacceptable risk to plant personnel safety. Therefore, several lines were replaced with a more FAC-resistant material. The replacement material is low-alloy (P-22 and F-22). The routing of the replacement piping matches the existing routing. As such, there will be no stress concerns and no hanger additions or rework.

The following lines were replaced:
Main Steam: 2-1301-552-1", 2-1301-808-1", 2-1301-553-2", 2-1301-557-1", 2-1301-809-1", 2-1301-558-2",

Extraction Steam: 2-1303-577-1", 2-1303-009-2", 2-1303-578-1", 2-1303-010-2", 2-1303-581-1", 2-1303-007-2", 2-1303-586-1", 2-1303-008-2", 2-1303-571-1", 2-1303-547-2", 2-1303-563-1", 2-1303-532-2",
Heater Vents: 2-1310-033-2", 2-1310-039-2"

SAFETY EVALUATION: The material changes described in this DCP have equivalent pressure-temperature rating as the original material is less susceptible to the effects of flow-accelerated corrosion. Therefore the requirements of the original design are met and there is no adverse effect on system operation. These changes to various non-safety-related pipelines on systems located in the turbine building do not change the plant as described in the UFSAR; however the Unit 1 equivalent of P&ID 2X4DB160-1 is referenced in table 1.7.1-2 and this P&ID is revised to reflect the new piping.

SUBJECT: MDC 92-V2M156, Revision 0, Sequence 1

DESCRIPTION: Nitrogen is used in conjunction with the backflushable filters as a means of motive force. Following backflush and return to service of these filters, it was noted that there was a reduction in seal flow. It was determined that metal particulate was being introduced into the system through the nitrogen supply causing an accumulation on the needle valves and subsequent reduction in flow. A filter has been added to the nitrogen supply (accumulator 2-1224-V4-001) to the backflushable filters to remove particulates.

SAFETY EVALUATION: UFSAR section 9.3 discusses the function and operation of the auxiliary gas system. The discussion does not provide the level of detail involving filtering of auxiliary gas supplies to plant components nor was this change significant enough to require a revision to the text contained in this section. The change requires a revision to P&ID 1X4DB148 to reflect the addition of the new filters. This drawing is included in UFSAR section 11.4 as figure 11.4.2-3. UFSAR section discusses the function and operation of the liquid radwaste processing system. The addition of the filters does not impact this discussion. The addition of the filters will not adversely affect the operation or function of any safety related system or component. The auxiliary gas system is not the topic of any Technical Specification or Technical Requirement.

SUBJECT: MDC 93-V1M138, Revision 0, Sequence 1

DESCRIPTION: The Unit 1 control building electrical penetration filter and exhaust system (EPFE) has been abandoned in place. The abandoned equipment includes power supplies to fan motors, filter heaters and various dampers, CVI signal inputs to EPFE equipment, inputs into the system status monitor panel (SSMP) and a control room annunciator. The system did not perform any safety function and was not being utilized.

SAFETY EVALUATION: UFSAR section 9.4.5.3.2 describes the automatic activation of the EPFE system in response to a containment ventilation isolation (CVI) signal. Deactivation of the CVI signal and abandonment of the system impacts this section and requires a revision to the UFSAR. Then original design function of the system was to minimize the release or airborne radioactivity from the electrical penetration area. This function was not taken credit for in the plant accident analysis. Section 9.4.1 discusses the function and operation of the control building normal ventilation systems. The normal HVAC will not be the only source of ventilation to the electrical penetration rooms. This impacts the discussion contained within this section requiring revision. This also required a change to plant operating procedure to reflect the new system configuration. Deletion of the EPFE System also impacted several tables and figures contained in the UFSAR and several other sections addressing ventilation systems and CVI. The EPFE system is not described in the Technical Specifications.

SUBJECT: MDC 94-VAM130, Revision 0, Sequence 1

DESCRIPTION: Containment local alarms and indications associated with containment low range monitors 1/2-RE-0002 and 1/2-RE-0003 have been deleted. The alarms and indications were originally installed to provide local indication of ambient gamma radiation and local alarms at key points to warn personnel in containment of higher than normal radiation levels. Electronic Direct Reading Dosimeters (EDRD) capable of alarming on dose and dose rate are now required for containment entry and are being used to warn personnel in lieu of the local radiation alarms. The change does not impact control room annunciation on high radiation. The capability of each loop to generate a containment ventilation isolation (CVI) signal is not affected by this change.

SAFETY EVALUATION: The area radiation monitors (ARM) are discussed in UFSAR section 12.3.4 and appear in the containment purge and pre-access filter systems which are depicted on P&ID 1/2X4DB213-2 (figure 9.4.6-2 sheet 3 of 3) which was contained in section 9.4.6. The discussion contained in section 12.3.4 concerning the Area Radiation Monitoring System states that all ARM channels are provided with alarm and indication local to the detector. The section will be revised to reflect deletion of this function. Sections 12.1.3 and 12.5.3.6 will also be revised to reflect the use of EDRDs in lieu of this alarm and indication function. The change is consistent with guidelines addressed in UFSAR section 12.5.3, which discusses procedures for maintaining personnel radiation exposures ALARA, and within the guidelines of 10CFR20. The local alarm and indicator are not described in the Technical Specifications. The control functions of loops 1/2-RE-0002 and 1/2-RE 0003 were not affected by this change.

SUBJECT: MDC 94-V1M026, Revision 0, Sequence 1

DESCRIPTION: Two restriction orifice plates were added to the vent line from the Unit 1 backflushable filter crud tank to the waste holdup. Previously, the Waste Holdup Tank was pressurized with nitrogen during backflushing operations of the filter. The increased pressure in the Waste Holdup Tank would cause a loss of the loop seal in the drain line to the radioactive drain system thereby resulting in the contents of the tank being forced out the drain line to the radioactive drain system. This resulted in increased contamination in the Auxiliary Building. The orifice plates will prevent pressurization of the Waste Holdup Tank and subsequent blowdown to the radioactive drain system.

SAFETY EVALUATION: The function and operation of the backflushable filter crud tank is described in UFSAR section 11.2 (Liquid Waste Management System) and section 11.4 (Solid Waste Management System). The description provided in this section does not contain the level of detail that would be impacted by the addition of orifices in the crud tank vent line to the waste holdup tank. The addition of the orifice will not impact the function or operation of the system. The addition of the orifices will require a revision to P&IDs 1X4DB124 and 1X4DB148 which are referenced in table 1.7.1-1. The backflushable filter crud tank is not the topic of any Plant Technical Specification.

SUBJECT: MDC 94-VAM049, Revision 0, Sequence 1

DESCRIPTION: The floor drain tanks serve to collect floor drain water from the controlled areas of each Units primary system. The floor drain tank pumps pump the contents of the tank to the alternate radwaste building (ARB) for processing through demineralizers, bag filters and a microfiltration system before being pumped to the waste monitor tanks for discharge. The installed pumps were not designed to overcome the dynamic and static losses associated with the addition of the ARB processing system resulting in lower flow rates and increased processing times. The pumps have been replaced with higher capacity pumps capable of providing the desired flow rate. Additionally, a strainer has been added to the suction of each pump to prevent foreign objects from entering and causing damage to the pumps.

SAFETY EVALUATION: The function and operation of the floor drain system/floor drain tank pumps is described in UFSAR section 11.2 (Liquid Waste Processing). The new pumps will provide the same amount of flow as the original configuration discussed in this section and therefore will not impact system operation as described in this section. The new pumps meet all the operational and function requirements for the liquid waste processing system. The pump replacement did require a revision to P&ID 1X4DB126 (figure 11.2.1-1 sheet 3 of 5) which was contained in this section. UFSAR table 11.2.1-2 requires revision to reflect the design parameters associated with the new pumps. The portion of

the liquid waste processing system does not perform a safety function and is not addressed in the Technical Specifications.

SUBJECT: MDC 94-VAM056, Revision 0, Sequence 1

DESCRIPTION: The service air system supplies air to the spent fuel pool gate seals on Unit 1 and Unit 2. Nitrogen bottles, associated valves, lines, supports and instrumentation have been added to provide a backup source to maintain seal integrity in the event of a loss of service air. The backup nitrogen supply was connected to the existing service air supply lines to the gate seals. a series of check valves prevent cross flow between the two systems. The nitrogen bottles are equipped with regulators whose setpoint is below the normal operating pressure of the service air system and above the operating pressure required by the seals and will automatically supply pressure to the seals on lowering service air pressure. The bottles are seismically mounted on the North Wall of the Fuel Handling building and will supply both units.

SAFETY EVALUATION: The service air system is described in UFSAR section 9.3. The system is not covered in the level of detail within this section that would require modification to the text contained in this section. The addition of a backup nitrogen supply will not impact the function and operation of the service air system to supply the gate seals. Additionally, the change will impact the discussion contained in UFSAR section 9.1.3 that discusses the spent fuel pool. The addition of a backup supply does however result in a revision to P&ID AX4DB186-3 (figure 9.3.1-1 sheet 8 of 9) which was contained in section 9.3. The service air system does not have any safety design basis and the addition will not adversely affect the operation or function of any safety related component. The service air system is not addressed in the plant Technical Specifications.

SUBJECT: MDC 94-VAM095, Revision 0, Sequence 1

DESCRIPTION: Blind flanges associated with the fill line connections to the waste evaporator condensate demineralizers, spent fuel pit demineralizers, CVCS cation and mixed bed demineralizers, BTRS regeneration demineralizers, evaporator feed demineralizers and the recycle evaporator condensate demineralizers on both units have been replaced with a new resin fill connection consisting of a short pipe section with a threaded pipe cap. The connections are normally isolated with a normally closed valve. In addition, all connections not previously classified as project class 424, have been reclassified to 424 from project class 427. Use of a threaded pipe cap results in less time spent in preparation and recovery from demineralizer filling operations (flange torqueing) and reduces material (flange gaskets) requirements.

SAFETY EVALUATION: The change addressed by this modification replaced flanged resin fill connections with threaded pipe caps to facilitate resin fill operations on demineralizers associated with steam generator blowdown, waste evaporator condensate, spent fuel pit, chemical volume and control, BTRS and recycle evaporator feed/condensate. The function and operation of these components are discussed in UFSAR sections 9.1, 9.3, 10.4.8 and 11.2. The descriptions contained in these sections were not affected by the change in fill connection style. The modification did require revision to P&IDs 1/2X4DB179-2 (figure 10.4.8-1, sheet 2), 1/2X4DB124 (figure 11.2.1-1 sheet 1), 1/2X4DB130 (figure 9.1.3-1), 1/2X4DB115 (figure 9.3.4-1 sheet 2), 1/2X4DB117 (figure 9.3.4-1 sheet 6) and AX4DB123-2 (figure 9.3.4-2 sheet 2) which were contained in these UFSAR Sections. The affected components do not have any safety design basis and the changes will not adversely affect the operation or function of any safety related system or component. The components affected by this change are not the topic of any Plant Technical Specification.

SUBJECT: MDC 94-V1M099, Revision 0, Sequence 1

DESCRIPTION: Vacuum degasifier pumps, pump motors, water traps/silencers and ejectors for the reactor makeup water storage tank (RMWST) and the Unit 1 condensate storage tank (CST) were replaced. The existing equipment was obsolete posing a challenge for maintenance/repair. The new components will perform more efficiently and will be easier to maintain ensuring that RMWST and CST dissolved oxygen limits can be maintained as required. In addition, the air operated pump inlet isolation valves and their respective solenoids have been deleted. The isolation function, previously served by these valves, will be fulfilled by existing manually operated valves.

SAFETY EVALUATION: The condensate degasifier system is discussed in UFSAR section 9.2.6. The description states that the CST degasifier system can reduce the dissolved oxygen content in the condensate to less than 0.1 ppm. The section further states that the vacuum pumps are designed to maintain the required vacuum in the degasifier. The replacement components meet the requirements set forth in this section. The RMWST degasifier system is discussed in UFSAR section 9.2.7. The description states that the degasifier system can reduce the dissolved oxygen content in the reactor makeup water to meet the specifications for primary plant usage. The replacement components meet the requirements set forth in this section. The change does alter system configuration resulting in revisions to P&IDs 1X4DB161-1 and 1X4DB184 which were depicted on figures 9.2.6-1 and 9.2.7-1 contained within these sections. The change did not impact operability of the Condensate Storage Tanks and therefore did not affect any Plant Technical Specification.

SUBJECT: MDC 95-VAM037, Revision 0, Sequence 1

DESCRIPTION: Pressure gauges were installed on the SI pump mini-flow lines in place of the previously installed pressure ports (PP) on both units. The pressure gauges will be used to obtain discharge pressure readings during performance of surveillance procedures (inservice testing) previously obtained through M&TE installed at the miniflow PP connection. The pressure gauges are isolated during normal operations by the use of two manual isolation valves.

SAFETY EVALUATION: The SI pumps are discussed in UFSAR section 6.3.2. The addition of pressure gauges on the miniflow lines to permit data collection for IST does not affect the description provided in this section. The addition of the pressure gauges did result in necessary revision to P&ID 1/2X4DB121 which were depicted on figure 6.3.2-1 contained in this section. The installation of the gauges conforms to the requirements set forth in UFSAR sections 3.2 and 3.9.6 which address requirements of the inservice testing programs. Installation of the gauges allows performance of the IST without reliance on M&TE equipment. The gauges are normally isolated and therefore do not impact normal operation of the SI system. Technical Specification 4.0.5 sets forth the requirements for performing the IST. Installation and use of the newly installed pressure gauges will not depart from the established requirements.

SUBJECT: MDC 95-V2M057, Revision 0, Sequence 1

DESCRIPTION: 7300 NLL boards have experienced a high rate of failure during plant operation. These specific boards (2-1604-Q5-PS1, 2-1604-Q5-PS2, 2-1604-Q5-PS3, 2-1604-Q5-PS4, and 2-1604-Q5-PC2) served no function and were therefore considered to be extraneous. The change involves the elimination of control boards with high failure rates in the pressurizer pressure protection channels and the steam generator water level control (SGWLC) setpoint circuit. Additionally, the SGWLC circuitry

has been redesigned to prevent a multiple loop feedwater malfunction event as a result of a single board failure.

SAFETY EVALUATION: The pressurizer pressure protection channels and the steam generator water level control (SGWLC) setpoint circuits are discussed in UFSAR section 7.7.1. Block diagrams are included in this section describing these control systems. The change did not impact the descriptions or block diagrams contained within this section. A correction was made to the description of the SGWLC system to clarify that the controls are currently set at a fixed setpoint and did not control off of turbine load. A note was added to the block diagram to clarify flow control operations. The NLL cards for SGWLC or for generating the low pressurizer setpoint for the PORV and PORV Block Valve are not addressed in the Technical Specifications or the Technical Requirements Manual. Additionally, these changes will not impact the bases for any Technical Specification.

SUBJECT: MDC 95-VAM072, Revision 0, Sequence 1

DESCRIPTION: The spent fuel pool skimmers have been changed from fixed height intakes to floating intakes in order to provide improved skimmer pump protection from vortexing. The floating arrangement will move with spent fuel pool level rather than the previous fixed design that required operator intervention to change intake depth. The floating skimmers will be capable of maintaining the same band of level control as the previously installed fixed intake while ensuring that the skimmer pumps will have a suction source.

SAFETY EVALUATION: The spent fuel pool skimmers are described in UFSAR section 9.1.3. The change increased the design flow rate for each skimmer intake from 50 gpm to approximately 70 gpm. The design temperature discussed in this section was not affected. The new floating skimmer arrangement will be constrained to maintain the 2 foot range (maximum level decrease below normal pool level) discussed in subsection 9.1.3.3.H. The new design will also maintain the water level sufficient not to uncover the anti-siphon holes on the return piping of the spent fuel pool cooling system. The new floating skimmer arrangement meets the same design function and operation as previously served by the fixed skimmer and will not impact plant operations. The fuel pool skimmers are not the topic of any plant Technical Specification or Technical Requirement.

SUBJECT: MDC 96-VAM027, Revision 0, Sequence 1

DESCRIPTION: A jib crane with a rated capacity of 4000 pounds has been installed on the West wall of the central auxiliary building stairwell adjacent to the auxiliary building elevator shaft. Installation of the jib crane was necessary to support removal of the old auxiliary building elevator motor/generator (MG) set and installation of the new MG set. The motor generator exceeds 2000 pounds and is therefore classified as a heavy load. Appropriate evaluations have been performed for the removal/installation path and the proximity to the Class 313 fire protection piping.

SAFETY EVALUATION: UFSAR table 9.1.5-2 lists equipment that may be lifted in the auxiliary building Levels 1 and 2. Installation of the jib crane represents a new OHLHS load not previously evaluated in the UFSAR and will need to be added to this table. Additionally, figure 9.1.5-5 will require revision to show the load path area associated with the new crane. Operation of the jib crane will be under the administrative controls set forth in UFSAR section 9.1.5.6. The change does not involve or impact any plant Technical Specification.

SUBJECT: MDC 96-V1M036, Revision 0, Sequence 1

DESCRIPTION: Several changes were implemented to improve the reliability of the indication and control functions associated with condenser and electro-hydraulic control (EHC) fluid pressure indications. Two new electronic absolute pressure transmitters have been installed on each low pressure exhaust hood to monitor condenser vacuum. The signals from these transmitters provide control room alarm and indication, steam dump interlock and turbine trip signals. Each of these functions was previously supplied by a separate vacuum switch. Separate low hydraulic pressure alarm and turbine trip switches for the EHC system have been replaced with two electronic pressure transmitters. The signals from these transmitters will be used to provide control room alarm and indication, standby pump auto start and turbine trip signals. The new instrumentation provides for more accurate information.

SAFETY EVALUATION: The main turbine and its auxiliaries are described in UFSAR section 10.2. Although the turbine trips on low vacuum and low hydraulic pressure are specifically mentioned in section 10.2.2.4 and figure 10.2.2-2, the instrumentation that causes the trips is not described in detail. The description of the control room alarm and indications related to these parameters which is contained in section 10.2.5 will remain valid. The steam dump system is described in UFSAR sections 7.7.1.8 and 10.4.4. Operation of the steam dumps was not be affected by the however the setpoint at which steam dump operation will be blocked was changed from 4.9"HgA to 5.0"HgA which requires a change to the text provided in section 10.4.4.2.3 The following drawings were impacted by the change and are referenced in UFSAR section 10.2, 10.3 and 10.4: 1X4DB160-2, 1X4DB168-1, 1X4DB194 and 1X5DN203-1. The main turbine trip and steam dump control functions are not the topic of any Technical Specification.

SUBJECT: MDC 97-V1M001, Revision 0, Sequence 1

DESCRIPTION: The stator cooling water panel used opto-mechanical relays. These relays would generate a trip signal on loss of power. The relays were replaced with electronic indicating controllers (Yokogawa). The solid state controllers do not change state when they are energized or de-energized. The electronic controller interfaces directly with the RTD and does not require a transmitter, thereby eliminating the need for additional components. The components being changed are TIS-6810,6811, 6846, 16175 and AIS-6855A which correspond to stator water temperatures and machine gas pressure.

SAFETY EVALUATION: The stator cooling water system is discussed in UFSAR section 10.2 but not to the extent of control device details. The change to electronic controllers does not change the control function or operation of the system nor will it impact how the system is operated. The change will increase reliability of the system as the controllers will not fault to a tripped condition upon loss of instrument power. The transmitters that were removed as part of the change were depicted on P&ID 1X4DB193 which is referenced in the UFSAR section. The transmitters were not required for operation of the electronic controllers. The stator cooling water system is not safety related. The system is not addressed in the plant Technical Specifications.

SUBJECT: MDC 95-V2M007, Revision 0, Sequence 1

DESCRIPTION: Lines 2-1213-012-12" and 2-1313-013-12" were originally designed to act as drains for the refueling cavity if/when the containment spray system was actuated. The lines originate as drain points in the floor of the lower portion of the refueling cavity and end as open pipe discharge points above the floor of the next level down. These lines are sealed off by a blind flange during flood-up of the refueling cavity for refueling. This change addresses the installation of a reducing/valve assembly on the

open discharge end of these drain lines and foregoing installation of the blind flanges used for sealing these lines at the refueling cavity liner. The flow limiting restriction (reducing assembly) is designed to limit flow in the event of a failure of the 12" line. The added valve will remain closed except during draindown of the cavity. The assembly is also equipped with a Camlock fitting/Camlock cap downstream of the assembly for secondary isolation. The connection will be used during cavity draindown and will be removed prior to entry into Mode 4.

SAFETY EVALUATION: UFSAR section 6.2.2.2, containment spray system, discusses the subject blind flanges under "component description" (paragraph 6.2.2.2.2.3.6). The blind flanges are mentioned in the description addressing the draining of containment spray water that makes it way into the refueling canal during containment spray actuation. This section states that the drain piping is blind flanged during refueling and left open during normal operation. The modification will provide a seal for this opening by way of a reducing/valve assembly. The modification will provide the same sealing function as originally described in the UFSAR. The closing or sealing of the openings in the refueling cavity are not addressed in the Technical Specifications or the Technical Requirements Manual

SUBJECT: MDC 97-V1M019, Revision 0, Sequence 1

DESCRIPTION: The analog electronic components in the steam generator blowdown local control panel were no longer available. Several of the components were experiencing degradation to the point that they were no longer reliable. These components were replaced with functionally identical digital electronic single loop controllers (Yokagawa) that will be more accurate and reliable, easier to maintain and less expensive. The change also required the replacement of several differential pressure transmitters to models having a square root output capability. The following loops were affected by this change: 1150, 1151, 1152, 1153, 1158, 1160, 1165, 1166, 1171, 1172, 1173, 1174, 1191, 1192, 1193 and 1194.

SAFETY EVALUATION: UFSAR section 10.4.8 describes the steam generator blowdown processing system (SGBPS). This change did not functionally change operation of the SGBPS. All of the controls, indications and alarms are functionally identical. The change does not impact system function and operation. as described in this section. The description provided in this section is not of sufficient detail as to describe the type of controllers used to perform the various system functions. The control loops are depicted on P&IDs 1X4DB179-1 and 1X4DB179-2 which are referenced in the UFSAR Section. The drawings required revision as a result of the changes implemented under this design change. The steam generator blowdown processing system is not the topic of any plant Technical Specification.

SUBJECT: MDC 97-VAM025, Revision 0, Sequence 1

DESCRIPTION: The setpoint for the catalytic hydrogen recombiner high outlet hydrogen alarm was raised from 0.50% hydrogen to 1.50% hydrogen. This was necessary to eliminate nuisance alarms on the local recombiner control panels. The change was necessitated by the characteristics of the current Orbishere hydrogen analyzers not being able to distinguish between hydrogen and helium. Helium causes the analyzers to read higher than actual values resulting in values approaching and or exceeding alarms values during normal operation. As there are several inputs to this annunciator, other parameters would not cause annunciation if their parameters exceeded alarm setpoints thereby masking further problems.

SAFETY EVALUATION: UFSAR section 11.3.2 specifies the alarm setpoint for catalytic recombiner outlet hydrogen concentration. The setpoint was changed from 0.5% to 1.5% resulting in a deviation from the text contained within this section requiring a revision to this section. The change was consistent with the general design criterion 60 as discussed in UFSAR section 3.1.6. The setpoint change was

necessary to compensate for the inability to distinguish between helium and hydrogen resulting in operation at or near the alarm setpoint. Raising the alarm setpoint will not place the recombiner or hydrogen analyzer operation outside its design capabilities. The outlet hydrogen analyzer is not included in the scope of the explosive gas and storage tank radioactivity monitoring program requirements contained in TRM section 13.12. The waste gas recombiner outlet hydrogen analyzer is not the topic of any plant Technical Specification.

SUBJECT: MDC 97-VAM026, Revision 0, Sequence 1

DESCRIPTION: Steam generator blowdown conductivity analyzers, cells and flow indicators and associated piping (Equipment Numbers 1/2CIS-1182, , 1/2CIS-1183, 1/2CE-1182A, 1/2CE-118BA, 1/2CE-1182C, 1/2CE-1183A, 1/2CE-1183B and 1/2CE-11883C were not being used and have been deleted. Equipment and associated piping has been abandoned in place.

SAFETY EVALUATION: UFSAR section 10.4.8 describes the steam generator blowdown (SGBD) processing system. Paragraph 10.4.8.2.2.4-D discusses the SGBD conductivity flow indicators and paragraph 10.4.8.2.2.6 describes the conductivity instrumentation and alarm functions. These instruments have been deleted and thus represent a change to the facility. Additionally, the change required a revision to P&ID 1X4DB179-2 which is incorporated into the UFSAR by reference in section 10.4.8. The capability of monitoring conductivity will be provided via local sample points and therefore will not impact the ability to maintain proper chemistry requirements. The steam generator blowdown (SGBD) processing system is not the topic of any plant Technical Specifications or the Technical Requirements Manual. Additionally, the SGBD system does not form the bases for any plant Technical Specification.

SUBJECT: MDC 97-VAM039, Revision 0, Sequence 1

DESCRIPTION: The originally installed impeller on the electric fire pump (C-2301-P4-002) was replaced with a larger diameter impeller. The replacement impeller increases the capacity of the fire pump allowing for a greater margin for wear and tear on the pump. The impeller diameter was increased from 17.125" to 17.375". This provides for a capacity of 2500 gpm at a total dynamic head (TDH) of 300 feet as opposed to the original design capacity of 2500 gpm at a 289 feet TDH. This change increases the pump operating pressure from 125 psi to 130 psi.

SAFETY EVALUATION: The fire protection system is described in UFSAR section 9.5 and Appendix 9B. The impeller replacement on the electric fire pump impacts these sections due to the change in total developed head associated with the larger diameter impeller. The replacement impeller does not impact pump function/operation nor does the change impact existing fire protection surveillance procedures or any aspect of the fire preplans. The change in impeller size does not involve a change to the Technical Specifications nor does the change impact any portion of the implementing procedures associated with the fire protection program as described in Technical Specification 5.4.1.d. The fire pump is not the topic of any Technical Requirement. The change does not alter any bases contained within the Technical Specifications.

SUBJECT: MDC 97-VAM056, Revision 0, Sequence 1

DESCRIPTION: The originally installed hydrogen storage/cryogenic system was abandoned in place under minor design change MDC 93-VAM057. The system was replaced with a portable tube trailer containing gaseous hydrogen. These components were isolated from the active portion of the auxiliary

gas system by locking closed valves A-2406-U4-516, A-2406-U4-517 and A-2406-X4-501. This change permanently removed the non-active components abandoned under the original MDC. These components included the liquid hydrogen storage tank, vent stack, vaporizers instrumentation and associated piping.

SAFETY EVALUATION: UFSAR sections 2.2.3, 3.2.2 and 9.3.5 discuss the auxiliary gas system, which includes the portion of the hydrogen system, which has been removed. Abandonment of the cryogenic portion of the system was previously performed and evaluated under MDC 93-VAM057. This change permanently removed those components previously abandoned in place. The deletion of the liquid hydrogen storage vessel and associated equipment will not change system operation as described in UFSAR section 9.3.5. P&ID AX4DB176-2 required revision to depict deletion of this equipment. The P&ID is incorporated in the UFSAR by reference in section 9.3.5. Additionally, table 3.2.3.20 (Toxic Gas Release Information), and table 3.2.2.1 require updating to reflect removal of the storage vessel. The hydrogen storage system is not the topic of any plant Technical Specification nor does help establish the bases for any Technical Specification.

SUBJECT: MDC 97-VAM062, Revision 0, Sequence 1

DESCRIPTION: Thermo-lag was originally used as a fire barrier material. Based upon the results of tests conducted on this type of insulation and Generic Letter GL 92-08, a commitment was made to remove Thermo-lag fire insulation and replace it with an alternate fire barrier material if required. This impacted various raceways in the auxiliary, control and turbine buildings and tunnels. The thermo-lag was replaced with either a metal barrier or an approved fire barrier wrap (3M wrap). Design change packages 94-V1N0061 and 94-V2N0062 previously dispositioned raceways containing the Thermo-lag material. This design change removes the remaining areas where thermo-lag was still installed and addresses those raceways that were not a part of the referenced design change packages.

SAFETY EVALUATION: The material used to provide raceway separation to comply with NRC Regulatory Guide 1.75 is not discussed or described in the UFSAR to the level of detail as to the manufacturers being used. UFSAR section 9A.2.48 describes cable trays that are encapsulated in Thermo-lag fireproofing material for life safety considerations. The Thermo-lag covering these trays was removed and replaced with 3M Interam material. This resulted a change to section 9A.2.48. The separation requirements of Reg. Guide 1.75 are met by the new material and/or the installation of metal tray covers. The type of separation utilized is not specified in plant Technical Specifications nor is this a topic addressed in the Technical Requirements Manual.

SUBJECT: MDC 98-VAM006, Revision 0, Sequence 1

DESCRIPTION: The normal operating position of the equipment drain valves (1-1218-U4-082 & 2-1418-U4-082) for the chemical volume and control system (CVCS) positive displacement (PD) charging pump rooms (R-C111 & R-C12) have been changed to allow for the valves to be partially opened at up to three turns to allow complete drainage of leak-off from the PD pump. Original design permitted these valves to be partially opened to 2 turns. These valves are located within the negative pressure zone boundary of Rooms R-C111 and R-C12 with allowances for opening the valve up to two turns evaluated. This change was necessary due to PD Pump leakage greater than drain-off flow associated with the referenced valves opened two turns.

SAFETY EVALUATION: UFSAR table 9.3.3.3 and table 3.2.2-1 states that for CVCS charging pump rooms the equipment drain isolation valves may be up to two turns opened and locked in position, if required in any mode. The note was applicable to both the centrifugal and positive displacement

charging pumps. Based upon the evaluation contained in this change permitting the PD Pump room drain valves to be open up to three turns, the change represents a change to the UFSAR. To reconcile the difference, an additional note was added to the table to address the PD pump room equipment drain isolation valves and new allowable drain valve position. The new allowable valve position will not impact system operation as described in this section. There were no physical changes to plant systems or structures as a result of this change. The affected valves are not required to mitigate the consequences of any accident described in the UFSAR. The isolation valves are not the topic of any plant Technical Specification nor are they addressed in the Technical Requirements Manual.

SUBJECT: MDC 98-V2M007, Revision 0, Sequence 1

DESCRIPTION: Core exit temperature indication for Unit 1 remote shutdown Panel B indicators are derived from the average of thermocouples located in quadrants corresponding to RCS Loops 2 and 3. It was discovered that the corresponding average temperatures for the Unit 2 remote shutdown Panel B indicators are derived from the average of thermocouples in the quadrants associated with RCS Loops 1 and 4. This was contrary to Technical Specification table B3.3.4-1 and UFSAR table 7.4.2-1 and section 7.4.3.3.2.2 which identified the source of the temperature indications as being derived from RCS Loops 2 and 3 as found on Unit 1. A review was conducted and it was determined that the use of Thermocouples corresponding to quadrants associated with RCS Loops 1 and 4 on Unit 2 would be acceptable and satisfy the design basis of the remote shutdown system. This change corrects drawings and labeling associated with the use of thermocouples associated with RCS Loops 1 and 4 quadrants on Unit 2.

SAFETY EVALUATION: Technical Specification Bases table B3.3.4-1 and UFSAR table 7.4.2-1 and section 7.4.3.3.1 originally specified that core exit thermocouple indication for remote shutdown Panel B came from quadrants corresponding to RCS Loops 2 and 3. It was determined that this was not the case on Unit 2. The indications were found to originate from RCS Loops 1 and 4 on Unit 2. This change evaluated and approved the use of Thermocouples from quadrants corresponding to RCS Loops 1 and 4. As this represents a change from the original design, the change requires a revision to the UFSAR and the Bases for Technical Specifications.

SUBJECT: RER 96-0186

DESCRIPTION: Tubing was added under MDC 95-VAM045 to supply a small continuous flow of dry instrument air through the EHC hydraulic power unit breather to help reduce the buildup of moisture in the reservoir. In order to increase the effectiveness of this capability, the tubing was modified to route the purge air into the space above the fluid in the reservoir. This configuration allows for better communication between the supply purge air and the reservoir air space providing enhanced moisture control.

SAFETY EVALUATION: The main turbine EHC system is generally discussed in UFSAR section 10.2. The level of detail provided in the discussion is such that the change being made to the purge air tubing/connections will not necessitate a revision to the UFSAR Text. The modification did however result in a revision to P&ID 1X4DB194 which is referenced in UFSAR section 10.2.2.3.1. The instrument air system is discussed in UFSAR section 9.3.1. Due to the level of detail provided in this section, the change did not impact the Text necessitating a revision. The main turbine EHC hydraulic power unit and the affected portion of the instrument air system are not the topic of any Technical Specification.

SUBJECT: RER 97-0012

DESCRIPTION: In order to support current radwaste operational methods for transferring the contents of the waste holdup tank to the alternate radwaste building , it was necessary to change the normal position for valves 1-1901-U4-062 (Unit 1) and 2-1901-U4-062 (Unit 2) for normally locked closed to normally open. The original valve position was based on operation of the Waste Evaporator Package and the resulting transfer of the evaporator concentrates to the BRS Recycle Evaporator Concentrates Filter that is no longer an available flow path.

SAFETY EVALUATION: LDCR 96-140 was issued to describe the operational changes involving the abandonment of the waste evaporator package and the use of the ARB for liquid radwaste processing. The change however did not address the P&ID associated with this system. Valves 1/2-1901-U4-062 are depicted on P&ID 1/2X4DB124. The P&ID required revision to depict the change in valve normal position. UFSAR section 11.2 describes the liquid waste processing system. The implemented change does not affect the description as provided in this section in conjunction with LDCR FS 96-140. The subject P&ID is referenced in this section. The portion of the liquid waste processing system is not addressed by any Technical Specification.

SUBJECT: RER 97-0079

DESCRIPTION: Several needle valves were added in the nuclear sampling system under DCP's (94-V1N0055 for Unit 1 and CCP #B-20043J for Unit 2) to aid in the sampling process. The valves were originally designed as normally "closed". As needle valves are often damaged when used to isolate flow and the damage could prevent the valve from properly acting as an isolation valve and/or an adjustable pressure or flow regulating device it was determined that the required position for these valves be changed from the normally "closed position" to the "normally open-throttled" position. The needle valves are located downstream of a "normally closed" isolation valve. The changed impacted the following valves; 1/2-1212-U4-130 (RHR Train A or B, 1/2-1212-U4-131 (CVCS downstream of the thermal regen. demineralizer), 1-1212-U4-134 & 2-1212-U4-132 (CVCS downstream of the mixed bed demineralizer) and 1-1212-U4-133 (CVCS downstream of the letdown heat exchanger).

SAFETY EVALUATION: UFSAR section 9.3.2 discusses the function and operation of the Liquid Nuclear Sampling System. The level of detail provided in this section is not of sufficient detail to specify valve positions. The section does address the pressure reduction and/or flow regulation provided by these needle valves. This function is not impacted by changing the position to "normally open". The valves required a revision to P&IDs 1/2X4DB140 which are referenced in the UFSAR section. There is no change to the use (throttling) of the valves during sampling. The change does not impact Technical Specifications regarding frequency, method or operability of obtaining samples. Additionally, the change will not impact any requirement set forth in the Technical Requirements Manual.

SUBJECT: RER 97-0080

DESCRIPTION: The RER changed the position of several valves in the waste gas system (WGS), system 1902, which were used as Unit 1/Unit 2 boundary control isolation points from "locked closed" to the appropriate open or closed state as required for proper operational control as defined in system operating procedures. These valves served as isolation points between Unit 1 and Unit 2 while Unit 2 was under construction. With the completion of construction on Unit 2, drawings associated with this system were revised to show the proper system configuration. The change also involved the addition of drain valves (3) associated with the gas analysis panel (GAP, added under DCP 92-VAN0211) to the appropriate P&IDs. These changes have been reflected in the valve lineup procedure (11201) and the system operating procedure (13201).

SAFETY EVALUATION: The change in required valve position for the Unit 1/Unit 2 boundary control isolation points and the addition of the drains valves associated with the GAP necessitated a revision to P&IDs 1/2X4DB128 and 1/2X4DB129 (incorporated by reference in the UFSAR sections 11.1, 11.3 and 17.7.1 that discuss waste management and the gaseous waste processing system). The change did not impact the discussion contained within the text of these sections. Redefinition of the valve alignments associated with the waste gas system is not the topic of any Technical Specification or TRM.

SUBJECT: RER 97-0084

DESCRIPTION: Nitrogen supply valves 1/2-2402-U4-012 supply nitrogen to the catalytic hydrogen recombiners and the waste gas decay tanks. These valves were depicted on P&IDs 1X4DB176-3 as normally closed valves. The auxiliary gas system-nitrogen alignment procedure 11707-C and the gaseous waste processing system procedures 13201-1/2 required the valves to be in the open position. As the nitrogen supply was already isolated from the loads via isolation valves associated with the individual system served, P&IDs 1/2-X4DB176-3 were revised to illustrate these valves as normally open. Additionally, the position of valve A-2406-U4-010 (Unit 2 hydrogen auxiliary building supply header isolation valve) which served as a Unit 1/Unit 2 boundary isolation valve during completion of Unit 2 construction was changed from locked closed to normally open. This is in agreement with procedure 11707-C.

SAFETY EVALUATION: The auxiliary gas system is discussed in UFSAR section 9.3.5. The description discusses the loads served by the nitrogen system but does not go into the level of detail such that it provides required valve positions for each of the loads. Plant procedures designated these valves as being in the normally open position. The valve configuration that existed was consistent with the design function and operation of the system. The change did require a revision to P&IDs 1/2X4DB176-3 which is incorporated by reference to this section. the auxiliary gas system is not the topic of any Technical Specification nor is it addressed in the TRM.

SUBJECT: RER 97-0085

DESCRIPTION: Chemistry samples from the Unit 2 stator cooling water system had been running close to or below the minimum 2 ppm limit. Through investigation it was determined that the vent/drain pipe did not go directly to the floor drain but instead was routed to a drain header that serviced several other loads. It was determined that the other loads in the drain header were causing the vent/drain line to fill with steam thereby limiting the vent paths capability in allowing the tank to breath thus starving the system of oxygen. The vent/drain pipe was routed to a floor drain on level A of the turbine Building and the connection to the drain header capped.

SAFETY EVALUATION: The stator cooling water system is discussed in UFSAR section 10.2. The discussion contained in this section does not provide any details on the system's vent/drain piping configuration. The change did result in a revision to P&ID 2X4DB193 which is incorporated in the UFSAR by reference. Re-routing of the vent/drain line does not affect system function or operation as described in the UFSAR text. The system will be operated as before. The main generator and the stator cooling water systems are not the topic of any Technical Specifications.

SUBJECT: RER 97-0087

DESCRIPTION: Valves A-1322-U4-679 and A-1322-X4-605 were deleted and removed from P&ID AX4DB195-2 when the auxiliary boiler was removed (DCP 95-VAN0004) but the valves were not physically removed. These valves will be required to support (demineralized water source) the new relief valve test stand that has been located in this area. These valves have been reinstated on P&ID AX4DB190-1. So that water was available at valve A1322-X4-605, the normal position of valve A-1322-U4-678 as depicted on P&ID AX4DB190-1 was changed to designate the as "normally open" versus "normally closed".

SAFETY EVALUATION: The demineralized water system is described in UFSAR section 9.2.3. Since usage of demineralized water for the purpose associated with this change is described in UFSAR section 9.2.3.1.2.a, the UFSAR text did not require revision. P&ID AX4DB190-1 did require revision to add valves A-1322-U4-679 and A-1322-X4-605 and to change the position on valve A-1322-U4-678. This P&ID is incorporated in the UFSAR through reference in section 9.2.3.2.1. Based upon the small quantity of water used for the test stand, there will be little additional load on the demineralized water system and will be well within the capacity of the system. System function and operation was not impacted by the addition of this load. The demineralized water system is not the subject of any Technical Specification.

SUBJECT: RER 97-0115

DESCRIPTION: Gate valve 1-1418-U4-072 was being used to isolate a demineralized water station servicing the steam generator blowdown demineralizer resin charging tank used during the resin addition process for sluicing new resin into the demineralizer. The valve had experienced continual leak-by and numerous repairs had been performed. Failures were attributed to the valves positioning (vertically mounted). It was determined that the most effective means of controlling this leak-by when the source was not required was to use globe valve 1-1418-U4-216 located on a horizontal run of pipe just upstream of this valve as the normal means of isolating the source. This required a revision to P&ID AX4DB190-2 to show the position of valve 1-1418-U4-216 as a "normally closed" valve.

SAFETY EVALUATION: UFSAR section 9.2 describes the function and operation of the plant water systems; and section 9.2.3 describes the function and operation of the demineralized water system. The change represented a change to the method of isolating the demineralized water user station servicing the steam generator resin charging system by changing a normally open valve to a normally closed valve. This required a revision to P&ID AX4DB190-2 which is incorporated in the UFSAR through reference in this section. The use of this valve does not alter system function or operation as described in this section. The demineralized water and other plant water systems are nor addressed by the Technical Specifications.

SUBJECT: RER 97-0128

DESCRIPTION: P&ID drawings 1X4DB196 and 2X4DB196 implied that valve X4-507 belonged to system P&ID. These drawings are for the generator gas purge system, system 1325. The valve in question is a part of the generator core monitoring system which has a 1328 system designator. The drawings were change to indicate that valve X4-507 was a part of the 1328 system.

SAFETY EVALUATION: The main generator and gas purge systems are discussed in UFSAR section 10.2. The section does not contain the level of detail as to include a discussion on system designators for system drain valves. P&ID drawings 1X4DB196 and 2X4DB196 required revision to show the proper valve system designator. These drawings are incorporated in the UFSAR through a reference in section 10.2. The main generator and gas purge systems are not the topic of any plant Technical Specification.

SUBJECT: RER 97-0232

DESCRIPTION: P&ID drawings 1X4DB182 and 2X4DB182 depicted flow indicator inlet and outlet root valves (X4-502, X4-503, X4-504, X4-505, X4-506, X4-536, X4-538, X4-540 and X4-542) for the Steam Jet Air Ejector as normally closed. Plant operating procedures 11620-1/2 listed these valves as normally open. After review it was determined that it was desirable to position the valve in the normal open position. P&ID drawings 1X4DB182 and 2X4DB182 were revised to show these valves as normally open valves. Additionally, several of the valves were shown on the P&IDs as globe valves. The valves were actually gate valves and have been annotated as such with .he drawing revision.

SAFETY EVALUATION: A general description of the steam jet air ejec' or/main condenser evacuation system is provided in UFSAR section 10.4.2.2.1. This section discusses the air flow indicator used to measure the volume of non-condensables vented from the system. The discussion does not contain any reference to the required valve positions for the flow indicator. The change did require a revision to P&ID drawings 1X4DB182 and 2X4DB182 which are incorporate into the UFSAR by reference in this section. The steam jet air ejector/main condenser evacuation system is not the topic of any Technical Specification.

SUBJECT: RER 97-0374

DESCRIPTION: Flow straightening vanes were originally installed in the heater drain system to increase the accuracy of flow measurements by providing laminar flow to the annular flow measurement devices in the number 5 to number 4 feedwater heater normal level drains. The vanes were subject to severe erosion damage and it was determined that the vanes should be removed from the system. The vanes were depicted on P&ID drawings 1X4DB163-3 and 1X4DB163-4. These drawings have been revised to reflect the deletion of the vanes.

SAFETY EVALUATION: The referenced flow straightening vanes are part of the heater drain system which is described in UFSAR section 10.4.7, condensate and feedwater system. The removal of straightening vanes 1FE-14252A and 1FE-14253A required a revision to on P&ID drawings 1X4DB163-3 and 1X4DB163-4 which are incorporated in the UFSAR by reference in this section. The details of the flow straightening vanes are not described or implied in UFSAR sections 10.4.7.2.2.8 or 10.4.7.2.2.9 which describes the feedwater heaters and their controls. Removal of the vanes did not impact overall system operation. The heater drain system is not discussed or described in the Technical specifications.

SUBJECT: RER 97-0419

DESCRIPTION: During an investigation of a deficiency, it was noted that the position of instrument air valve 1-2420-U4-152 which is a drain valve on the air header supply to RHR Train A heat exchanger outlet and bypass valves. The valve is shown on P&ID 1X4DB186-7 as being in the normally closed position. This is contrary to normal operation which requires the valve to be open when the RHR is in standby and closed when the RHR System is placed in service. The instrument air system alignment procedure 11711-1 specifies the normal valve position with the RHR system in standby as open. This configuration is in agreement with both the Unit 2 P&ID (2X4DB186-7) and the Alignment Procedure 11711-2. P&ID 1X4DB186-7 was revised to show valve 1-2420-U4-152 as a normally open valve as opposed to a normally closed valve.

SAFETY EVALUATION: UFSAR section 9.3 discusses the function and operation of the compressed air system but does not provide the level of detail involving system alignment. The valve in question is used to drain the air supply header which feeds the RHR Train A heat exchanger bypass valve (1FV-0618) and outlet valve (1FV-0608) keeping these valves in their fail open position of open and closed respectively. The change corrected a drawing discrepancy only and did not impact actual system operation. P&ID 1X4DB186-7 was revised as a result of this change. The P&ID is incorporated in the UFSAR by reference in this Section. The compressed air system is not addressed in the Technical Specifications or the TRM.

SUBJECT: RER 97-0438

DESCRIPTION: Valve A-1592-U4-353 (normal chilled water system chemical feed pot vent) was depicted on P&ID AX4DB218 as a globe valve with a cap. Alignment procedure 11743-C listed the correct valve position as closed and capped. A field walk down determined that the valve was an angle cock valve without a cap. P&ID AX4DB218 was revised to show the correct valve type for valve A-1592-U4-353. Procedure 11743-C was revised to delete the requirement addressing the installation of the cap.

SAFETY EVALUATION: UFSAR section 9.2.9 describes the function and operation of the normal chilled water system. The revision to P&ID AX4DB218 to show the proper valve style and the deletion of the cap did not impact the discussion contained in this section. The change did result in a revision to the P&ID which is incorporated in the UFSAR by reference in this Section. The change did not impact system operation. Plant procedure 11743-C was revised to reflect the deletion of the cap. The chilled water system is not discussed in the Technical Specifications.

SUBJECT: RER 97-0448

DESCRIPTION: There were several inconsistencies in valve numbering/unit designators noted between the Fire Protection System Alignment Procedure (11903-C), valve labeling, P&IDs and NPMIS. It was determined through review that valves 1-2301-X4-116 and 1-2301-X4-118 as illustrated on P&ID 1X4DB174-2 did not reflect the correct nomenclature. The valves should be illustrated with a Unit A designation (A-2301-X4-116 and A-2301-X4-118). The P&ID was revised to reflect this configuration. The change also resulted in a revision to procedure 11903-C to reflect the proper Unit designator. Valve 1-1202-U4-153 as depicted on P&ID 1X4DB174-6 was determined to have incorrect nomenclature concerning the Unit designator. The valve should have a Unit designation of A (A-1202-U4-153). P&ID 1X4DB174-6 was revised to reflect the change in nomenclature.

SAFETY EVALUATION: The Fire Protection System is described in UFSAR section 9.5.1. The changes to the Unit designators for the referenced valves do not impact the discussion contained within this section. The drain valves are not specifically referenced in this section. The valves will still perform their intended function. The change did result in a revision to P&ID drawings 1X4DB174-2 and 1X4DB174-6 which are incorporated in the UFSAR through reference in table 1.7.1-2 (sheet 9 of 32). The Fire Protection System is not specifically described in the Technical Specifications. Technical Specification 5.4.1.d which governs the implementation of the Fire Protection Program is not affected by this change.

SUBJECT: RER 98-0122

DESCRIPTION: Several of the existing globe valves on the Circulating Water System waterbox outlet drains (1/2-1401-X4-938 through 948) had become plugged during draining operations and have also experienced leakage problems during Unit operations. In order to alleviate these problems, the two inch globe valves were replaced with two inch gate valves. Plant drawings 1X4DB150 and 2X4DB150 were revised to reflect the change in valve style.

SAFETY EVALUATION: UFSAR section 10.4.5 discusses the function and operation of the circulating water system. This description addresses major components and basic system operation. The description did not provide details involving the drain valves on the condenser waterbox outlet drains. UFSAR section 10.4.1 discusses the operation of the main condenser. The change in valve styles did not impact the discussion contained in this section. A revision to plant drawings 1X4DB150 and 2X4DB150 was required to show the change in valve style. These drawings are incorporated in the UFSAR through reference in UFSAR section 10 4.5. The circulating water system is not the topic of any Technical Specification.

SUBJECT: RER 98-0123

DESCRIPTION: Existing globe valves 1/2-1307-U4-578 and 581 that are used to drain the water side of the Main Turbine lube oil coolers 1/2-1307-T4-501-E01 and E02 respectively have been replaced with gate valves. In addition to valve replacement, the piping arrangements that contain these valves have also been modified to minimize overall length and change in direction to allow for better removal of silt during draining. Drawings 1X4DB167-2 and 2X4DB167-2 have been revised to reflect the change in valve style.

SAFETY EVALUATION: A description of the turbine generator and auxiliaries is provided in UFSAR section 10.2.2. Replacement of the existing globe valves with gate valves does not impact the

discussion contained within this section. The water side drain valves and lines for the main turbine lube oil coolers are shown on plant drawings 1X4DB167-2 and 2X4DB167-2. The P&IDs are referenced in UFSAR section 10.2.2. The new valves and piping arrangement was in accordance with the specifications for the turbine lube oil coolers and will meet the requirements of the turbine plant cooling water system as given in UFSAR section 9.2.11.2.2.d. The change did not impact cooler capabilities or flow rates associated with either system. The main turbine lube oil system and the turbine plant cooling water system are not the subject of any plant Technical Specification.

SUBJECT: RER 98-0142

DESCRIPTION: The normal alignment of various manual valves utilized while operating the liquid radwaste system as described in the respective system's operating procedures did not match the required positions indicated on the various P&IDs. P&IDs were revised to illustrate the optimum configuration of the referenced valves. P&ID 2X4DB124 was revised to reflect the following valve position changes: 2-1901-U4-110 from normally open to normally closed, 2-1901-U4-108 from normally closed to normally open, 2-1901-U4-101 from normally closed to normally open, 2-1901-U4-119 from normally open to normally closed, 2-1901-U4-091 from normally open to normally closed, 2-1901-U4-100 from normally open to normally closed. P&ID 2X4DB126 was revised to reflect the following valve position changes: 2-1901-U4-176 from normally open to normally closed, 2-1901-U4-215 from normally open to normally closed, 2-1901-U4-211 from normally closed to normally open. P&ID AX4DB123-1 was revised to reflect the following valve position changes: A-1210-U4-051 from locked closed to normally closed, A-1210-U4-050 from normally open to normally closed, A-1210-U4-061 from normally open to normally closed. P&ID 1X4DB124 was revised to reflect the following valve position changes: 2-1901-U4-062 from normally closed to normally open. P&ID 1X4DB126 was revised to reflect the following valve position changes: 1-1901-U4-176 from normally open to normally closed, 1-1901-U4-215 from normally open to normally closed, 1-1901-U4-211 from normally closed to normally open. P&ID AX4DB123-2 was revised to reflect the following valve position changes: A-1210-U4-201 from normally open to normally closed. P&ID AX4DB123-2 was revised to reflect the following valve position changes: 2-1901-U4-428 from normally open to normally closed, 2-1901-U4-427 from normally open to normally closed.

SAFETY EVALUATION: Although not explicitly described, the operating position of these valves are implicit in the description of the plant in that they are represented by a piping and instrument diagrams (P&ID) which are incorporated in the UFSAR by reference in the affected UFSAR section. UFSAR section 11.2 describes the function and operation of the Liquid Radwaste Systems. The reconfiguration of the referenced valves will not impact system function or operation as described in this section. The items associated with this change involving the Liquid Radwaste System are not covered in the Technical Specification.

SUBJECT: RER 98-0143

DESCRIPTION: Lines from the suction strainer drain valves A-1591-U4-002, 003 and 004 on the normal chilled water pumps were not capped as shown on P&ID AX4DB218. A determination was made that the pipe caps were not necessary and P&ID AX4DB218 was revised to reflect the deletion of the pipe caps.

SAFETY EVALUATION: The normal chilled water system is described in UFSAR section 9.2.9. The description provided is not of sufficient detail as to describe the configuration of drain piping/connections. Deletion of the pipe caps on these drains did result in a revision to P&ID

AX4DB218 which is referenced in UFSAR section 9.2.9.2.2.1. Deletion of the pipe caps does not alter system function or operation. The normal chilled water system is not addressed by any plant Technical Specification.

SUBJECT: RER 98-0167

DESCRIPTION: A commitment was made to maintain valves 1/2-1215-U4-280 (RWST Enclosure Drain to Storm Drain System) and 1/2-1215-U4-283 (RMWST Trench Drain to Storm Drain System) in the locked closed position. P&ID 2X4DB146-3 illustrated valves 2-1215-U4-280 and 283 as being locked closed. The equivalent Unit 1 valves were shown as closed on P&ID 1X4DB146. P&ID 1X4DB146 was revised to add the notation that the referenced valves were required to be "locked closed". In addition to the revision of the P&ID, locking devices were added to the access covers to the areas containing these valves to limit access to the valves.

SAFETY EVALUATION: A description of the equipment and floor drainage systems is provided in UFSAR section 9.3.3. The discussion contained in this section was not impacted by the addition of the locking mechanisms on the access covers or the revision to the P&ID. P&ID 1X4DB146 is incorporated in the UFSAR by reference in this section. Operating procedures were revised to change the required position for valves 1-1215-U4-280 and 1-1215-U4-283 from "closed" to "locked closed". The description for the reactor makeup water facility described in UFSAR section 9.2.7 or the classifications of SSC described in UFSAR table 3.2.2 did not require revision as a result of this change. The change did not impact any procedures or the method of operation of the reactor makeup water facility as described in section 9.2.7. Miscellaneous drains and storm drains are not addressed by Technical Specifications.

SUBJECT: RER 98-0187

DESCRIPTION: Valve 2-2301-X4-230 was not shown on P&ID 2X4DB174-3. The valve is located in the control building R224 and is a drain valve on fire protection line 2-2301-330-6". P&ID 2X4DB174-3 was revised to include the referenced valve.

SAFETY EVALUATION: UFSAR section 9.5.5 provides a description of the fire Protection System. The addition of the valve to the P&ID (valve exists in plant) does not affect the discussion contained in this section. P&ID 2X4DB174-3 which is incorporated in the UFSAR by reference in this section did require revision to depict valve 2-2301-X4-230. The change did not impact operation of the fire protection system. Fire protection water systems are not described in the Technical Specifications. T.S. 5.4.1.d which requires written procedures to implement the fire protection program remained unchanged.

10 CFR 50.59(B) REPORT OF TESTS & EXPERIMENTS. NOVEMBER 13, 1996 THRU APRIL 20, 1998

VOGTLE ELECTRIC GENERATING PLANT
UNITS 1 & 2

SUBJECT: T-ENG 97-08

DESCRIPTION: The test was written to perform a verification that the accumulator discharge check valves, 2-1204-U6-079, 2-1204-U6-080, 2-1204-U6-081, 2-1204-U6-082, 2-1204-U6-083, 2-1204-U6-084, 2-1204-U6-085, 2-1204-U6-086, open by flow utilizing non-intrusive check valve diagnostic equipment and/or by performing an L/D calculation. This calculation is a measure of pipe resistance given in equivalent length, in pipe diameters of straight pipe, that will cause the same pressure drop as the given piping configuration under the same flow conditions. The test involved pressing the accumulator to a maximum pressure of 125 psig. Test equipment was used to measure and record the change in accumulator pressure and level versus time during the test. Additionally, non-intrusive check valve diagnostic equipment was attached to the check valves. The discharge MOV will be cycled open and will remain open for a short duration of time then it will be closed with sufficient time remaining before nitrogen would be injected into the RCS. If the flow causes the disk to hit the backstop with sufficient force to be recorded by the non-intrusive check valve diagnostic equipment, this will be a demonstration that the check valve fully opened. If the disk to backstop impact is not recorded by the non-intrusive check valve diagnostic equipment, then it may be proven to have opened by performance of the L/D calculation. Technical Specification 4.0.5 requires that applicable pumps and valves be tested pursuant to ASME Section XI. ASME Section XI requires that a check valve be exercised to the position required to fulfill its safety function. For primary cold leg injection valves, this requirement has been satisfied by disassembling and inspecting and manually exercising the check valves on a staggered basis. To perform this type of testing on the accumulator check valves would require the plant to be at mid-loop. This evolution is very labor intensive and exposure to involved personnel is high. This method has been recognized as an acceptable method of verifying full stroke of check valves (NUREG-1482).

SAFETY EVALUATION: 10CFR50.59 allows the holder of a license authorized to operate a nuclear power facility the capacity to investigate and disposition tests or experiments not described in the UFSAR. The accumulator blowdown check valve testing represents such a test. The design basis of the ECCS is described in UFSAR section 6.3. Specifically, the Safety Injection System, accumulators and the accumulator check valves are discussed in UFSAR section 6.3.2.2.1, 7.3.2 and 7.6.4. The ECCS requirements are discussed in Technical Specification 3/4.5. Accumulators are required operable in plant Modes 1,2 and 3 as presented in Technical Specification 3/4.5.1. Refueling operations are discussed in Technical Specification 3/4.9.1. The accumulator check valve test is performed during refueling (mode 6) operations with the reactor head removed and the pressurizer vented. Operability of the accumulators during Mode 6 is not required per the Technical Specifications. Performance of this testing will not adversely affect the integrity and function of the ECCS components assumed in the accident analysis or plant scenarios. The integrity of safety related components and systems is maintained. Based upon the results of the safety evaluation it was determined that the proposed test did not constitute an unreviewed safety question.

SUBJECT: T-ENG 97-23

DESCRIPTION: Procedure T-ENG-97-23, "TEN (10) YEAR CLASS 1 PRESSURE TEST" demonstrates the pressure retaining integrity of Class 1 and Class 2 piping and components by performing a system pressure test as required by ASME B&PV Code, Section XI, Articles IWA-5000, IWB-5000, IWC-5000 and as modified by ASME Code Case N-498 (approved for use by the NRC in revision 11 of Regulatory Guide 1.147 dated October 1994). This procedure was for additional portions of Class 1 and Class 2 piping and components which were not performed in 1R6 by T-ENG-96-08. Section 5.1 measures the existing pressure of selected Class 1 boundary extremities and selected Class 2 piping and components for evaluation purposes. The test will measure the pressures in the test boundaries associated with high head safety injection (HHSI) and hot and cold leg injection piping and components. The

pressures are measured by aligning the test boundaries to the SIS Test Header and measuring pressure at 1PI-0933. The SIS Test Header will be isolated and pressurized by valve seat leakage. Section 5.2 aligns the boundaries which are not at the required test pressure with those which are at a sufficiently high pressure. This is accomplished by utilizing the SIS Test Header valves and opening those valves to pressurize both the downstream and upstream sides of the second isolation check valves to the same pressure. This portion is applicable to boundaries associated with HHSI and SI Hot Leg Injection to Loops 2 & 3. Section 5.3 performs VT-2 examinations on the same boundaries for which the pressures were measured in section 5.1. Section 5.4 performs examination of Class 1 boundaries which are isolated by manual valves. During this portion, the first manual isolation valves will be opened and VT-2 examinations performed.

SAFETY EVALUATION: UFSAR sections 5.2.4.7 and 6.6.7 discuss pressure testing per ASME Section XI. Section 5.1 requires alignment of the SIS test header with HHSI and selected hot and cold leg injection piping and components so that pressures can be measured by 1PI-0933. This utilizes the SIS Test Header in a similar function as does performance of 14450-1, RCS pressure Isolation Valve Inservice Leak Test. The isolation valve for 1PI-0933 is a manual containment isolation valve. Technical Specification 3.6.3 is applicable if inn Modes 1, 2, 3 or 4 when the valve is open. Section 5.2 also utilizes the SIS Test Header to test boundaries. The section aligns boundaries which are not at the required test pressure with those at a sufficiently high pressure. P&IDs 1X4DB111, 1X4DB116-1, 1X4DB116-2, 1X4DB114, 1X4DB119, 1X4DB120, 1X4DB121, and 1X4DB122 are included in the UFSAR by reference and listed in UFSAR table 1.7.1-2. The engineering procedure will realign valves to a configuration that is not in accordance with their normal positions as identified on the referenced drawings. However, the valves will be returned to their normal position upon completion of the procedure and therefore will not require a revision to UFSAR sections 5.2.4.7, 6.6.7, 6.3.4.2 and 6.2.4.1. The UFSAR does not contain or specifically describe the procedures for performing pressure tests, however, UFSAR 5.2.4.7 and 6.6.7 discuss pressure testing per ASME Section XI. The procedure requires alignment of the SIS test header with HHSI and selected hot and cold leg injection piping and components so that pressures can be measured by 1PI-0933. UFSAR section 5.2.5 and 6.3.4.2 discuss the ability to detect leakage from the RCS past the pressure isolation valves using the SIS test header. Since the procedure is for the ten year pressure test and may be performed with the reactor not in a shutdown condition, the procedure represents a change to procedures as described in the bases to Technical Specifications SR 3.4.14.1. Based upon the results of the safety evaluation it was determined that performance of the procedure did not represent an unreviewed safety question.

SUBJECT: T-ENG 97-27

DESCRIPTION: Procedure T-ENG-97-27, "TEN (10) YEAR CLASS 1 PRESSURE TEST" demonstrates the pressure retaining integrity of Class 1 and Class 2 piping and components by performing a system pressure test as required by ASME B&PV Code, Section XI, Articles IWA-5000, IWB-5000, IWC-5000 and as modified by ASME Code Case N-498 (approved for use by the NRC in revision 11 of Regulatory Guide 1.147 dated October 1994). This procedure was for additional portions of Class 1 and Class 2 piping and components which were not performed in 1R6 by T-ENG-96-08. Section 5.1 measures the existing pressure of selected Class 1 boundary extremities and selected Class 2 piping and components for evaluation purposes. The test will measure the pressures in the test boundaries associated with high head safety injection (HHSI) and hot and cold leg injection piping and components for RHR and SI respectively. The pressures are measured by aligning the test boundaries to either the SIS test header or utilizing a hydro test pump. Section 5.1 through 5.6 provides the instructions required to test Class 1 and Class 2 piping and components associated with RHR hot leg injection, safety injection cold leg loop injections and HHSI. Section 5.7 performs VT-2 examinations on the same boundaries for which the pressures were measured in section 5.1 through 5.6. Section 5.8 performs examination of Class

1 boundaries which are isolated by manual valves. During this portion, the first (inboard) manual isolation valve (CVCS Seal Injection to RCP 3 vent valve) will be opened and VT-2 examinations performed. This section will be performed in Mode 3 with containment accessible and RCS pressure greater than 2225 psig.

SAFETY EVALUATION: UFSAR sections 5.2.4.7 and 6.6.7 discuss pressure testing per ASME Section XI. Section 5.1 requires alignment of the SIS test header with HHSI and selected hot and cold leg injection piping and components so that pressures can be measured via test instrumentation. This utilizes the SIS test header in a similar function as does performance of 14450-1, RCS pressure Isolation Valve Inservice Leak Test. The SIS test header is described in UFSAR Section 6.3.4.2. This procedure, in sections 5.1 through 5.7, will measure the existing pressure of Class 1 and Class 2 piping to determine if the existing pressures from valve seat leakage are adequate to meet the pressure requirements. If the pressures are adequate the VT-2 examinations will be performed. If not, test equipment will be used to pressurize piping with a hydrostatic test pump. Section 5.8 performs examination of Class 1 boundaries which are isolated by manual valves. During this portion, the first (inboard) manual isolation valve (CVCS Seal Injection to RCP 3 vent valve) will be opened and VT-2 examinations performed. This section will be performed in Mode 3 with containment accessible and RCS pressure greater than 2225 psig. P&IDs 1X4DB111, 1X4DB116-1, 1X4DB116-2, 1X4DB114, 1X4DB119, 1X4DB120, 1X4DB121, and 1X4DB122 are included in the UFSAR by reference and listed in UFSAR table 1.7.1-2. The engineering procedure will realign valves to a configuration that is not in accordance with their normal positions as identified on the referenced drawings. However, the valves will be returned to their normal position upon completion of the procedure and therefore will not require a revision to UFSAR sections 5.2.4.7, 6.6.7, 6.3.4.2 and 6.2.4.1. The UFSAR does not contain or specifically describe the procedures for performing pressure tests, however, UFSAR 5.2.4.7 and 6.6.7 discuss pressure testing per ASME Section XI. The procedure requires alignment of the SIS test header with HHSI and selected hot and cold leg injection piping and components so that pressures can be measured. UFSAR section 5.2.5 and 6.3.4.2 discuss the ability to detect leakage from the RCS past the pressure isolation valves using the SIS test header. Since the procedure is for the ten year pressure test and may be performed with the reactor not in a shutdown condition, the procedure represents a change to procedures as described in the bases to Technical Specifications SR 3.4.14.1. Based upon the results of the safety evaluation it was determined that performance of the procedure did not represent an unreviewed safety question.