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

**VOGTLE ELECTRIC GENERATING PLANT
REPORT OF FACILITY CHANGES, TESTS & EXPERIMENTS**

Gentlemen:

In accordance with 10 CFR 50.59 (b) (2), Southern Nuclear Operating Company (SNC) hereby submits the Vogtle Electric Generating Plant (VEGP) Report of Facility Changes, Tests and Experiments. This reflects changes through November 5, 1999, which is consistent with the current Revision 9 of the VEGP Updated Final Safety Analysis Report.

Sincerely,

J. B. Beasley, Jr.

JBB/JLL

Enclosure: Report of Facility Changes, Tests and Experiments.

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10 CFR 50.59(B) REPORT of
FACILITY CHANGES,
TESTS & EXPERIMENTS.
APRIL 21, 1998 THRU NOVEMBER 5, 1999

**VOGTLE ELECTRIC GENERATING PLANT
UNITS 1 & 2**



10 CFR 50.59(B) REPORT of
FACILITY CHANGES
APRIL 21, 1998 THRU NOVEMBER 5, 1999

**VOGTLE ELECTRIC GENERATING PLANT
UNITS 1 & 2**



Design Change Packages (DCPs)

SUBJECT: DCP 92-VAN0029

DESCRIPTION: This DCP made various modifications to the following lighting and communications systems: Essential, PABX telephone, the maintenance sound powered phone, shutdown sound powered phone, and the telephone-page (Gai-Tronics page system). These changes are necessary to improve and enhance intraplant communications.

SAFETY EVALUATION: These communication systems are described in section 9.5.2 of the UFSAR. The new shutdown sound powered equipment added by this DCP affected part of UFSAR table 9.5.2-1. Additionally, 120 Vac power is provided to the telephone-page tone receiver relay (TRA) and flashing beacon. This power comes from the essential lighting system. The essential lighting system is described in section 9.5.3 of the UFSAR. A review of the above mentioned sections and sections 1.7, 8.3, 18.1 and 15 of the UFSAR, determined that the changes made by the DCP affect drawings 1/2X3DG032, 1/2X3DG033, and 1/2X3dDG033, and 1/2X3DG0445. These drawings appear in section 9.5.2.2.6 and in Table 1.7.1-2 of the UFSAR as reference only. The plant, as described in the bases of the Technical Specifications and the Technical Requirements Manual (TRM) is not changed by this DCP. These changes have no impact on the Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 92-V1N0144

DESCRIPTION: This DCP replaced all safety class 1E Sola ferroresonant regulating transformers, except 1ABF13X and 1BBC23X, with those provided by Solidstate Controls and were purchased to specification X3AA04A to separate the documentation between the two types of transformers. Both specifications contain the same technical requirements.

SAFETY EVALUATION: UFSAR section 8.3.1.4.3.E.10 was revised to reflect the replacement of Sola regulating transformers with Solidstate Controls regulating transformers. UFSAR table 8.3.1-4 was revised to reflect the change in isolation devices from Sola regulating transformers to Solidstate Controls regulating transformers. UFSAR figure 8.3.1-1 was revised to add a new sheet showing the revised electrical penetration assembly protection for a load fed from distribution panel 1AYE1 which is supplied from new regulating transformer 1ABE51RX. UFSAR table 8.3.2-5 was revised to reflect the revised location numbers for the replacement transformers. UFSAR tables 9.4.2-2 and 9.4.3-5 were revised to reflect the relocation of loads on panel 1AYE1 and 1BYC1. UFSAR table 9.5.1-1 was revised to reflect the revised tag and location numbers for the replacement transformers. UFSAR table 9.5.3-1 was revised to reflect the revised tag and location numbers for the replacement transformers. UFSAR sections 9A.1.27, 9A.1.28, 9A.1.43, 9A.1.45, 9A.1.49, 9A.1.55, 9A.1.60A, and 9A.1.82, were revised to reflect the revised location and tag numbers for the replacement transformers and to reflect revised locations for some of the new transformers. Table 16.3.5 was revised to reflect the revised location and tag numbers for the replacement isolation transformers. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 93-VAN0081

DESCRIPTION: This modification installed a high efficiency purge system, rupture disk/relief valve assemblies, and a Prevac leak prevention system on each of the normal chillers. The existing purge system was replaced with a high efficiency purge. Since the new purge unit requires no cooling water, the chilled water turbine plant cooling water supplied to the existing purge unit was capped.

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SAFETY EVALUATION: The normal chilled water system is described in UFSAR Section 9.2.9.2 and shown on figure 9.2.9-2. The turbine plant cooling water (TPCW) system serves the normal chilled water system and is described in UFSAR section 9.2.11. Although the changes are not described in the UFSAR text, the associated P&IDs required updating. The change involved the normal chiller water system 1591 and TPCW system 1405. These systems are not addressed in the Technical Specifications and the change will have no affect on the control room emergency filter system or area temperature monitoring described in Technical Specification sections 3/4.7.6 & 3/4.7.10 respectively. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 94-V1N0002

DESCRIPTION: This design change replaced the existing valve and blind flange assemblies at various local leak rate test (LLRT) connection points with either a single isolation valve and pipe cap assembly or double isolation valves and pipe cap assembly, as required by the applicable code and/or standard. The purpose of the change was to eliminate the blind flange at the test connection.

SAFETY EVALUATION: Various P&IDs modified by this design change are referenced in the UFSAR. Also, UFSAR figure No. 6.2.4-1 required revision to reflect the modified valve arrangement for the drain, vent and test connection valves associated with the modified penetrations. This design modification does not require any changes to the Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 94-V2N0003

DESCRIPTION: This design change replaced the existing valve and blind flange assemblies at various local leak rate test (LLRT) connection points with either a single isolation valve and pipe cap assembly or double isolation valves and pipe cap assembly, as required by the applicable code and/or standard. The purpose of the change was to eliminate the blind flange at the test connection.

SAFETY EVALUATION: Various P&IDs modified by this design change are referenced in the UFSAR. Also, UFSAR Figure No. 6.2.4-1 required revision to reflect the modified valve arrangement for the drain, vent and test connection valves associated with the modified penetrations. This design modification does not require any changes to the Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 94-VAN0026

DESCRIPTION: This DCP installed a turbine driven auxiliary feedwater pump (TDAFWP) monitoring system. This monitoring system will record the following parameters: turbine speed, turbine stop valve position, ramp generator output, EGM output, governor valve position, oil pressures for the governor to remote servo control lines (2), steam ring pressure.

This DCP also replaced the existing 4" swing-type check valves located on the TDAFWP steam admission lines (tag nos. 2-1301-U4-008, 404) with normally open nozzle-type check valves. The new check valves are spring-loaded open during normal operation. The check valves and associated piping are ASME Section III, Class 3, project class 313.

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SAFETY EVALUATION: This design change revised drawing 2X4DB161-3 by showing the addition of the non safety-related DAS. This design change also revised 2X4DB159-2 by showing the addition of flanges to valves 2-1301-U4-404 and 008. The symbol for the check valves will not change since it is a generic symbol for all check valve types. No change to the text of the UFSAR is required as a result of these design changes. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 94-V1N0036

DESCRIPTION: Line 1-1305-654-1", a 1-inch vent, was installed on the condensate miscellaneous drain tank, (Tag # 1-1305T4-501). This vent was routed to the nearest floor drain system standpipe. New supports for the vent line were provided as appropriate. To address the high dissolved oxygen content, a combination of physical modifications to the CMDT drain piping was performed.

SAFETY EVALUATION: This DCP necessitated a change to P&IDs 1X4DB168-2 and 1X4DB180-4, which are referenced in the UFSAR. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 94-VAN0054

DESCRIPTION: This DCP added drain piping to the north end of the Unit 1 and Unit 2 station service cable trenches. The piping is routed underground to drain rainwater to nearby low voltage transformer drainage basins. This DCP also added sump pumps to Unit 1 pullbox # 631 and Unit 2 pullbox # 651 to prevent rainwater from reaching levels that will cause water to enter the respective turbine buildings thru conduit trays.

SAFETY EVALUATION: A final layer of backfill not meeting the full requirements of this section was placed over the new drainpipe. As a result, UFSAR section 2.5.4.5.2 was revised. There are no sections of the Technical Specifications that describe drainage of water from the affected structures. The existing French drainage system is not described in the Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 94-VAN0056

DESCRIPTION: The 480V/480V Inductrol regulating transformer ANB1104X feeding TSC motor control center ANBU was disconnected and abandoned in place. The transformer primary and secondary terminal box was used to splice the feeder and secondary cables from the disconnected transformer together. A fused disconnect switch was added to the transformer control panel area and spliced to the feeder cable. This disconnect switch was used to provide 480V power from the security diesel backed switchgear ANB11 for emergency uses only. This DCP also removed 120V/120V isolation transformers ANDTI801X and ANDTI901X feeding distribution panels ANYT3 and ANYT2 respectively. These transformers were required for the Foxboro loads associated with the ERF computer system, which have been removed.

SAFETY EVALUATION: Drawing AX3D-AA-G02B as referenced in UFSAR section 8.3 was revised to reflect the replacement of transformers ANBU04X and ANBU08X with regulated transformers ANBU04RX and ANBU08RX. Isolation transformers ANDTI801X and ANDTI901X were deleted.

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Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 94-VAN0057

DESCRIPTION: Two sample sinks (one per unit) were installed for the accumulator sample points (four sample points per unit- a total of eight sample points) in order to eliminate splashing of water on the floor when the high-pressure accumulator fluid stream is sampled. For 45 other grab sample locations, in the Unit 1 and Unit 2 auxiliary buildings, for the Units 1 and 2 refueling water storage tanks and the Unit 2 turbine building, stainless steel 3/8" diameter tubing was installed along with 3/8" sample valves. A 3/8" diameter drain and flush valve which will discharge to a nearby floor drain was also installed when required.

SAFETY EVALUATION: A number of the affected P&IDs are referenced in the UFSAR. The affected sample locations are located in various rooms throughout the Unit 1 and 2 auxiliary building, at the Unit 1 and 2 refueling water storage tanks and in the Unit 2 turbine building. This change did not require a revision to the Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 94-VAN0065

DESCRIPTION: This design change grounded the neutral conductors feeding panel INY3N and the Gai-tronics test and distribution cabinet. This modification changed these systems from ungrounded to grounded.

SAFETY EVALUTION: UFSAR figure 8.3.1-7, sheet 17, was changed to show the addition of a fuse to the hot conductor circuit of the telephone/page (Gai-tronics) system and the deletion of a fuse in the grounded neutral conductor circuit. This was shown as case C.1. The fuse sizes will remain the same and thus the curves will not change, nor will the protection coordination. This change was necessary because the neutral conductor was grounded. The original sheet 17, taken from calculation X3CM01, showed six cases on the same graph. This has been revised to show each case on a separate graph to make it more readable. These graphs were replaced. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 95-VAN0002

DESCRIPTION: This DCP replaced two outdated turbine plant water sampling (TPWS) analyzers with new on-line silica analyzer.

SAFETY EVALUATION: As a result of the implementation of this DCP, drawings 1X4DB171-2, 1X4DB171-3, 1X4DB171-4, 1X4DB171-7, 2X4DB171-2, 2X4DB171-3, 2X4DB171-4 and 2X4DB171-7 referenced in UFSAR section 9.3.2 were revised. The monitoring requirements for effluent, as described in UFSAR section 10.4.6.2.4.4 during power operation, are shown in UFSAR table 10.3.5-1. In this table, silica is only shown as being monitored on a daily basis for SGBD. This requirement is improved by this DCP since five new samples for SGBD effluent will be continuously monitored by the new silica analyzers. The addition of silica analysis for turbine building line numbers 084, 019, 020, 021 and 022 corresponding to steam generator blowdown system discharge, steam generator (SG) 001 blowdown, SG002 blowdown, SG003 blowdown and SG004 blowdown sample points, required a

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revision to UFSAR table 9.3.2-3 sheets 3 and 4. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 95-VAN0015

DESCRIPTION: This change to the service air dryer skids DCP replaced the inlet, purge exhaust and repressurization valves KV-19383 A, B, C, D, and E and their associated solenoid valves KY-19383 A, B, C, D and E for both the Unit 1 and 2 service air dryer skids, 1-2401-K4-501 and 2-2401-K4-501.

SAFETY EVALUATION: P&ID 1X4DB175-2 was changed as a result of the changes made by this DCP. P&ID 1X4DB175-2 is referenced in the UFSAR. The replacement of valves, orifices and controllers associated with the instrument and service air dryer skids did not change the plant as it is described in UFSAR, including section 9.3. The valves replaced by this DCP are not safety related and are not addressed in the Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 95-VAN0026

DESCRIPTION: This DCP retired in place the waste evaporators (1/2-1901-D6-002), the boron recycle evaporator (A-1210-D6-004) and the waste evaporator steam supply system including the electric steam boilers (system 1314). This DCP also retired in place the steam supply to the boric acid batching tank (A-1208-T6-004). The high-energy line break detectors for the electric steam boiler (TE-19722 A/B/C/D/E and TE-19723 A/B/C/D/E) were retired in place. Drawings 1X3D-AA-A01A, 1X4DB118, 1X4DB124, 1X4DB125, 1X4DB139, 1X4DB148, 1X4DB184, 1X4DE321, 1X4DE323, 1X4DE324, 1X4DE325, AX4DB123-1, AX4DB123-2, AX4DB190-2, AX5DN155-1, and AX5DN155-2 are included in the UFSAR by reference and listed in UFSAR table 1.7.1-2.

SAFETY EVALUATION: The Technical Specifications Bases and the TRM were not impacted by this design change. Technical Specifications 3.3.3.11 required the high-energy line break instrumentation listed in Tech. Specs. table 3.3-11 to be operable. However, a foot note in table 3.3-11 states that the instrumentation associated with the electric steam boiler (ESB) is required to be operable only during modes when the ESB is in operation. Since the ESB has never been utilized, and this DCP retired-in-place the ESB, associated equipment and piping, there is no revision required to the TS by this design change. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 95-VAN0034

DESCRIPTION: This DCP deleted several differential pressure indicators from the nuclear service cooling water (NSCW) system. These instruments were originally intended to be used for inservice testing of the pumps. However, the indicators are not used since they do not have the required accuracy and other instrumentation is available for inservice testing of the pumps. These instruments are not listed in the inservice test program for the NSCW pumps.

SAFETY EVALUATION: This design change did not affect any UFSAR text or figures. However, P&IDs 1/2X4DB133-1 & 1/2X4DB133-2, were modified by this design change and are referenced in FSAR section 9.2.1. This design change did not affect any Technical Specifications based on a review of

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Technical Specification sections 3/4.7.4 and 3/4.7.5. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 95-VAN0038

DESCRIPTION: This design change provided one ground detector for each dc system with the set point based on the most sensitive relay or coil in the system. A dc ground detector alarm set-point of $33 \text{ Vdc} \pm 1 \text{ Vdc}$ will alert operations of dc grounds.

SAFETY EVALUATION: NRC Information Notice 94-80, "Inadequate dc Ground Detection in Direct Current Distribution Systems", noted the potential for operating with undetectable grounds in vital direct current (dc) distribution systems due to inadequate ground-detection equipment, inadequate ground-alarm set-points, or both. In Information Notice 88-86, Supplement 1, the NRC described the potential for ASCO solenoid valves to inadvertently actuate or fail to drop out due to grounds of approximately 4000 ohms or less at the Summer station. The Summer licensee has also removed the on-line ground detector because its inherent 1500-Ohm resistance-to-ground value was below the plant threshold value.

After Information Notice 88-86 Supplement 1 was issued, the NRC met with Commonwealth Edison on March 1, 1989, to discuss corrective action for the ground problem at Quad Cities (discussed in Information Notice 88-86). The Commonwealth Edison review revealed the potential for inadvertent relay operation at a much higher ground-resistance value for General Electric HFA, HMA, and HGA 125-volt dc relays. All Commonwealth Edison nuclear plants now have ground-clearing action with priorities based on two ground-threshold values, 125,000 and 20,000 Ohms. The 125,000-Ohm value is based on the minimum ground current required to keep an HGA relay from dropping out when its normal power is removed and an additional ground exists between the relay and its actuating switch contact. The 20,000-ohm threshold is based on the minimum current needed to pick up the most sensitive relay (General Electric HMA) under the same conditions.

The Vogtle Electric Generating Plant's dc distribution systems are two-wire ungrounded battery/charger systems equipped with ground-detection/alarm circuitry including annunciation in the control room and local indication. Ground detectors are incorporated in the dc systems so that if a single ground does occur, personnel are aware of the ground and can take immediate steps to clear the ground fault from the system.

UFSAR section 8.3.2 states that a qualified ground detector system provides indication of any grounds, which may occur in the system, however, it did not discuss the details of the ground detection system design. UFSAR table 8.3.2-5, which pertains to the failure modes and effects analysis of the dc system, was changed to reflect the removal of the ground detection relay from the class 1E distribution panels and use of the associated switchgear ground detection relays for ground fault detection. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 95-V2N0051

DESCRIPTION: This DCP replaced the Unit 2 class 1E Sola regulating transformers with regulating transformers manufactured by Solidstate Controls, Inc. The replacement transformers are the proper KVA rating for the connected load and do not require paralleling banks to achieve the KVA rating as the

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Sola transformers do. This DCP also increased the rating of the Unit 2 class 1E transformers feeding emergency lighting loads from 7.5 KVA to 15 KVA.

SAFETY EVALUATION: UFSAR section 8.3.1 was revised to reflect the replacement of Sola regulating transformers with Solidstate Controls regulating transformers. UFSAR table 8.3.1-4 was revised to reflect the change in isolation devices from Sola regulating transformers to Solidstate Controls regulating transformers. UFSAR figure 8.3.1-1 was revised to add a new sheet showing the revised electrical penetration assembly protection for a load fed from distribution panel 2AYE1 which is supplied from new regulating transformer 2ABE51RX. UFSAR table 8.3.2-5 was revised to reflect the revised location numbers for the replacement transformers. UFSAR table 9.5.1-1 was revised to reflect the revised tag and location numbers for the replacement transformers. UFSAR table 9.5.3-1 was revised to reflect the revised tag and location numbers for the replacement transformers. UFSAR sections 9A.1.82, 9A.2.23, 9A.2.24, 9A.2.29, 9A.2.33, 9A.2.37, 9A.2.43, 9A.2.47, 9A.2.78, and 9A.2.79 were revised to reflect the revised location and tag numbers for the replacement transformers and to reflect revised locations for some of the new transformers. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 95-VAN0069

DESCRIPTION: This DCP provided automatic flow control of the demineralized water transfer pumps by replacing the existing pressure control logic with a new flow control logic. Also, drawing correction was made on logic diagram, AX5DN137-1, to reflect as-built conditions based on a review of elementary diagram AX3D-BC-B38A.

SAFETY EVALUATION: This design change did not affect any UFSAR text or figures. However, P&ID AX4DB190-1, which was modified by this design change, is referenced in UFSAR section 9.2.3. This has no impact on the Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 95-V1N0070

DESCRIPTION: This DCP replaced the Unit 1 diesel air start system refrigerant-type air dryers (1-2403-G4-001-K01, K02 and 1-2403-G4-002-K01, K02) with a membrane type dryer and associated filters. The membrane type dryers utilize a gas separation technology that passes the compressed air through a bundle of hollow membrane fibers.

The diesel air start system air compressors (1-2403-G4-001-C01, C02 & 1-2403-G4-002-C01, C02) control system were modified by replacing the auxiliary valve and the booster delay valve with a dual point pressure switch and a time delay relay. Additionally, cross-connect piping and valves were installed between the air receivers so that by manually aligning the valves, either receiver could be recharged by either air start system compressor.

SAFETY EVALUATION: The air-cooled refrigerant air dryers were replaced with membrane-type dryers. In addition, the air receiver recharge time of 30 minutes was deleted. UFSAR section 9.5.6 and table 9.5.6-1 required revision to depict this new configuration. Diesel generator starting and sequencing did not change as a result of this DCP. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

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SUBJECT: DCP 95-V2N0071

DESCRIPTION: This DCP replaced the Unit 2 diesel air start system refrigerant-type air dryers (2-2403-G4-001-K01, K02 and 2-2403-G4-002-K01, K02) with a membrane type dryer and associated filters. The membrane type dryers utilize a gas separation technology that passes the compressed air through a bundle of hollow membrane fibers.

The diesel air start system air compressors (2-2403-G4-001-C01, C02 & 2-2403-G4-002-C01, C02) control system were modified by replacing the auxiliary valve and the booster delay valve with a dual point pressure switch and a time delay relay. Additionally, cross-connect piping and valves were installed between the air receivers so that by manually aligning the valves, either receiver could be recharged by either air start system compressor.

SAFETY EVALUATION: The air-cooled refrigerant air dryers were replaced with membrane-type dryers. In addition, the air receiver recharge time of 30 minutes was deleted. UFSAR section 9.5.6 and table 9.5.6-1 required revision to depict this new configuration. Diesel Generator starting and sequencing did not change as a result of this DCP. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-VAN0015

DESCRIPTION: Presently a vendor-supplied trailer monitors the chemistry of the circulating water systems. This information is provided so operators can manually turn on and off pumps. The vendor supplied analyzers can provide power to start and stop pumps automatically. This design change maintains the manual controls that exist. An automatic mode was provided with start/stop relays. These relay coils were wired to a location close to the vendor supplied trailer. The vendor will provide 120 Vac to pickup/drop out the relay coils as required. The operation of the coils along with the handswitches placed in the "auto" position will start/stop the injection pumps as required. Permanent piping from both circulating water systems was provided from an existing sample point on the circulating water tower bypass line sample valve to a location adjacent to the vendor supplied chemical monitoring trailer. Discharge (unused) flow from the sample streams was permanently piped to the unit one circulating water canal.

SAFETY EVALUATION: P&IDs 1X4DB150-1 and 2X4DB150-1 were changed to add the new permanent piping to the vendor supplied circulating water chemical monitoring trailer and also to show the automatic controls. The Unit 1 P&ID is referenced in UFSAR table 1.7.1-2. There is no change to the Technical Specification Bases or Technical Requirements Manual. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-VAN0017

DESCRIPTION: There were three cases where the existing heavy loads lifting devices in the auxiliary building can only lift floor hatches with the hook not being centered over the floor hatches. This created a safety hazard when the hatches are lifted with a side pull on the hoist. This DCP provided a method of eliminating side pull lifts when removing floor plugs with all of the above referenced cranes.

SAFETY EVALUATION: The new jib cranes installed in auxiliary building level B are used for removing the auxiliary building level B floor access hatch covers which are "heavy loads" as defined by NUREG-0612. UFSAR table 9.1.5-2 (sheet 2 of 11) was revised to show this added OHLHS but indicate

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no safe shutdown equipment is located in the load path nor on a lower elevation. UFSAR figure 9.1.5-5 sheet 5 & 6 of 42) was also revised to show the load path area of the jib cranes. Neither of the above described changes affected the requirements of the Technical Specifications Bases and Technical requirements Manual. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-VAN0022

DESCRIPTION: The resistance temperature detectors (RTDs) and thermocouples that monitor the main generator have been noisy. With the installation of the integrated plant computer (IPC) to replace Proteus, the main generator temperature monitor has been affected by electrical noise. Software filtering of the input signal has not been effective. This design change added temperature transmitters, which include filtering, to remove the noise from these RTD and thermocouple loops. A new panel to house the temperature transmitters was located in the control building level A computer rooms.

SAFETY EVALUATION: Combustible loading for the computer rooms are tracked in UFSAR section 9A.2.k. This design change added cables and therefore changed the combustible loading for fire zone 96 in both units. 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. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-V2N0027

DESCRIPTION: This DCP provided for the addition of a stairway from the containment operating floor at elevation 220'-0" down to elevation 194'-1-3/4" of the reactor cavity. The stairs, landings and support steel are made of stainless steel material. In order to facilitate refueling bridge operations and core barrel inspections, the stairway and handrails were made removable. This DCP also removed the reactor cavity ladder and reworked the refueling canal handrail in order to install the stairway. Additionally, the ladder providing access from the lower canal area at elevation 182'-4" was relocated from the North side of the canal to the South side of the canal. The stairway addition was made to promote ALARA, improve personnel safety, and to decrease critical path time required for reactor head work and decontamination of the canal and cavity.

SAFETY EVALUATION: UFSAR Table 15.6.5-2 details the peak clad temperature changes for large break LOCA analysis due to plant design changes in the containment. The stairway addition resulted in the addition of approximately 1600 lbm to the inside of the containment. Westinghouse evaluation of LOCA related UFSAR accident analyses for this mass addition determined that the effect of adding 1600 lbm of metal to the inside of the containment will have no adverse affect on any design or regulatory limit. A note was added to UFSAR table 6.2.1-72 to indicate an evaluation was done to address the mass addition.

This change replaced the existing reactor cavity ladder with a stairway. The access into the reactor cavity is not addressed by the Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question

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SUBJECT: DCP 96-V1N0028

DESCRIPTION: This modification replaced the existing steam admission valve (HV-5106) for the turbine driven auxiliary feedwater (TDAFW) pump turbine driver, a motor operated gate valve, with a new globe valve and operator. The steam admission valve for the TDAFW pump is a part of the main steam system, system 1301. The new valve and motor operator was designed to slowly admit steam to the driver during the startup acceleration transient. An air-test connection with an isolation valve, 1-1301-X4-265, and a blind flange at the end, was added for testing the TDAFW pump turbine driver and associated instrumentation during periods when it is not practical to test using steam. The hydrostatic test vent (containing valves 1-1301-X4-110 and X-411) in line 1301-012 and temperature indicator, TI-15110, were deleted. The project class of TI-15110 is 62J. The connection point for pressure transmitter, PT-5105, was relocated to accommodate the installation of the new valve. Also, the start signal to the ramp generator was moved from the steam admission valve "not closed" limit switch to a steam admission valve "open" limit switch.

SAFETY EVALUATION: Valve HV-5106 is depicted on P&ID 1X4DB161-3, which is referenced in the UFSAR text. Additionally, tables 8.3.2-3 and 8.3.2-8 required revision to reflect the change to battery 1CD1B load profiles for LOCA/LOSP and SBO conditions as a result of the new actuator being used by the new globe valve. The Technical Requirements manual and Technical Specifications Bases are unaffected by this change. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-VAN0033

DESCRIPTION: Several process lines in the fuel handling and auxiliary buildings, that are part of the boron recycle system and liquid waste processing system, required draining to perform certain maintenance activities. These low point drains are currently capped just down stream of the drain valves and temporary tygon tubing must be connected to the drain stub and routed to the nearest floor drain to facilitate draining. This activity caused ALARA concerns due to the resident time involved with disconnecting the pipe cap, connecting the tygon tubing, temporarily routing the tubing to a floor drain, removing the tubing and then re-installing the cap. This change added stainless steel tubing to the existing drain line stubs, down stream of the drain valves, for eight lines associated with the boron recycle system and liquid waste processing systems (lines outside containment from the reactor coolant drain tank).

SAFETY EVALUATION: This modification required a P&ID change to reflect the new piping configuration. The P&ID is referenced in the UFSAR. This change did not impact the Technical Specifications their Bases or the Technical Requirements Manual as incorporated in the operating license. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-V1N0037

DESCRIPTION: This design change removed the fuel upender hydraulic power unit automatic float valves from the inside of the hydraulic reservoirs. A manually operated system for reservoir level maintenance is now utilized. The manual operation of the system will be performed using the existing demineralized water isolation valve.

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SAFETY EVALUATION: P&ID AX4DB190-2 for the plant demineralized water system was revised to add the sight glass and drain valve to both upender HPUs (1-2203-P6-001 and 1-2203-P6-002). This P&ID is referenced in UFSAR table 1.7.1-2. Additionally, drawing corrections were incorporated into P&ID AX4DB190-2. In several places, demineralized water lines show a break at the Unit 1 operation/Unit 2 construction boundary. The distinction between operation and construction is no longer required since both units are now operational. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-V2N0038

DESCRIPTION: This design change removed the fuel upender hydraulic power unit automatic float valves from the inside of the hydraulic reservoirs. A manually operated system for reservoir level maintenance is now utilized. The manual operation of the system will be performed using the existing demineralized water isolation valve.

SAFETY EVALUATION: P&ID AX4DB190-2 for the plant demineralized water system was revised to add the sight glass and drain valve to both upender HPUs (2-2203-P6-001 and 2-2203-P6-002). This P&ID is referenced in UFSAR Table 1.7.1-2. Additionally, drawing corrections were incorporated into P&ID AX4DB190-2. In several places, demineralized water lines show a break at the Unit 1 operation / Unit 2 construction boundary. The distinction between operation and construction is no longer required 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. The note reads "Isolation valves to be located near the U1/U2 boundary. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-V1N0042

DESCRIPTION: This design change replaced the existing ITT Barton differential pressure sump level transmitters for 1LT-7777 (containment sump south), 1LT-7778 (reactor cavity sump), 1LT-7789 (containment sump north), 1LT-764 (containment wide range water level) and 1LT-765 (containment wide range water level) with GEMS float type level transmitters.

SAFETY EVALUATION: This design change did not change any text, tables or figures in the UFSAR. However, table 7.5.2-1 sheet 13, note "z" and P&IDs 1X4DB122 & 1X4DB143, which are referenced in the UFSAR, were modified. This design change did not change the Technical Specifications based on a review of sections 3.4.15 (RCS leakage detection instrumentation), 3.3.3 (PAMS) and table 3.3.3-1 (PAMS) of the Technical Specifications and sections B3.4.15 (RCS leakage detection instrumentation) & B3.3.3 (PAMS) of the Technical Specifications Bases. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-V1N0044

DESCRIPTION: This design change replaced the Class 1E Westinghouse ex-core source range (SR), intermediate range (IR), and neutron flux monitoring systems (NFMS) with an equivalent neutron monitoring system using the Gamma-Metrics series 300 design. This was a total replacement including the detectors and the associated processing electronics. The new system meets or exceeds the requirements of the existing systems and meets Regulatory Guide 1.97, Revision 2, requirements (post

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accident), and Branch Technical Position CMEB 9.5-1 requirements for main control room fire protection.

SAFETY EVALUATION: UFSAR section 7.2 discusses the operation of the SR and IR detectors. Tech Spec Bases sections 3.3.1, 3.3.8, and 3.9.3 discuss the reactor trip system instrumentation, HFASA instrumentation, and instrumentation used in refueling operations respectively. These sections were changed to reflect the operation of the new Gamma-Metrics neutron flux monitoring equipment. Also, section 8.1.3.4 was revised to show the additional fuses used as isolation devices between the Class 1E Gamma-Metrics drawer and the non-1E output circuits.

Based upon the results of the safety evaluation and the issuance of Amendment 104 to the Technical Specifications, it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-V2N0045

DESCRIPTION: This design change replaced the Class 1E Westinghouse ex-core source range (SR), intermediate range (IR), and neutron flux monitoring systems (NFMS) with an equivalent neutron monitoring system using the Gamma-Metrics series 300 design. This was a total replacement including the detectors and the associated processing electronics. The new system meets or exceeds the requirements of the existing systems and meets Regulatory Guide 1.97, Revision 2 Requirements (post accident), and Branch Technical Position CMEB 9.5-1 requirements for main control room fire protection.

SAFETY EVALUATION: UFSAR section 7.2 discusses the operation of the SR and IR detectors. Tech Spec Bases sections 3.3.1, 3.3.8, and 3.9.3 discuss the reactor trip system instrumentation, HFASA instrumentation, and instrumentation used in refueling operations respectively. These sections were changed to reflect the operation of the new Gamma-Metrics neutron flux monitoring equipment. Also, section 8.1.3.4 was revised to show the additional fuses used as isolation devices between the Class 1E Gamma-Metrics drawer and the non-1E output circuits.

Amendment 82 issued to the Unit 2 Technical Specifications provided approval for the replacement of the Westinghouse NIS and extended range instrumentation with the Gamma-Metrics instrumentation. These changes were made to the Tech Specs in order to reflect the operation of the new Gamma-Metrics equipment:

Based upon the results of the safety evaluation and the issuance of Amendment 82 to the Technical Specifications, it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 96-VAN0049

DESCRIPTION: This design change replaced a portion of the portable equipment in the alternate radwaste building (ARB). This included a replacement of the portable building sump pump which utilized a rubber hose discharge and an extension cord into a local receptacle with a submersible sump pump having a dedicated power source with a disconnect switch. This new pump has a hardpipe discharge to the floor drain tank connection at the ARB / auxiliary building penetration and is automatically activated to discharge fluid at a preset sump level. Numerous hose connections are hardpiped to establish the same standard that presently exists in the plant to optimize system performance and ALARA considerations. Grating is designed to accommodate the hardpipe routing and limit tripping hazards.

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This design also relocates the ARB demineralizer filter A-1901-F4-001 next to the ARB demineralizer filter A-1901-F4-021 to limit ALARA concerns. Filter skids A-1901-S4-001 and A-1901-S4-021 have been eliminated, as the equipment is not used. Instrumentation on these two skids were reused on the hardpipe portion of this design and the "H" manifolds were combined into a new configuration on the North wall of the West demineralizer vault. The East vault sample sink (A-1901-S4-021-R01) has been eliminated and all samples will be taken from the remaining sample sink (S-1901-S4-001-R01). Treatment of exposed concrete due to movement and removal of equipment was identified. A drain line was also designed to automatically empty the contents of the drip pan located near the ARB/aux. bldg. penetrations.

SAFETY EVALUATION: The UFSAR discusses the ARB systems in chapters 9 and 11. Reference to components and operational mode is made. The P&IDs for the systems and general arrangement for the ARB are referenced in Table 1.7.1-2. The general arrangement is also referenced in figure 9.1.5-5. Table 9.3.3-1 was revised to include the description of the permanent sump pump in the ARB and table 9.3.3-2 was also revised to indicate the correct dimensions for ARB floor drain sump. Since the components and configuration of the ARB system are shown on the P & IDs, the addition of a permanent sump pump, consolidation of certain equipment, and the replacement to hard pipe of a portion of the existing hoses as well as revisions to tables in section 9.3.3 are changes to the plant as described in the UFSAR. These changes do not affect the requirements of the Technical Requirements Manual or the Technical Specification Bases. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 97-V1N0001

DESCRIPTION: This design modification package involved removing the two existing Westinghouse Unit 1 boraflex spent fuel racks and installing the racks purchased from Maine Yankee Atomic Power Company. This modification package did not allow plant use of the racks after they are installed until the Technical Specification was NRC approved. The recommended guidelines of NUREG-0612 were implemented for conditions involving loads exceeding 2000 pounds (i.e., "Heavy Loads"). Temporary safe load paths and maximum lift heights were provided as applicable. Physical stops were installed to prohibit the gantry crane from traveling over the Unit 2 spent fuel pool.

SAFETY EVALUATION: This DCP removed the existing spent fuel racks and installed new spent fuel racks in the Unit 1 spent fuel pool (SFP). Seismic and structural analysis indicated the racks can be stored safely in the Unit 1 SFP prior to approved use. An amendment to the Technical Specifications was submitted to the NRC to allow plant operation with the new racks and the UFSAR and Technical Specifications were changed appropriately after its approval. The UFSAR changes were not be implemented until the Technical Specification change was approved. The part of this design change, relocating the spent fuel handling tools support required a change to drawing 1X4DE317 in section 1.2.2, "Facility Arrangement", of the UFSAR.

Administrative controls applicable to OHLHS are specified in the load handling procedures. Implementation of this DCP required specific procedures 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. Based upon the results of the safety evaluation it was determined that the scope of this design change did not involve an unreviewed safety question. NRC approval was required for plant operation with the new racks.

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SUBJECT: DCP 97-V1N0015

DESCRIPTION: This DCP modified the piping and supports associated with safety-related nuclear service cooling water (NSCW) supply and return piping to and from the containment coolers, containment auxiliary coolers and reactor cavity coolers. All of the affected piping and supports are located inside containment. The affected piping is ASME Section III, class 2, project class 212. The nature of the changes to the piping and supports is summarized as follows:

- Addition of new tie-back type pipe supports at various root, vent, drain, test and relief valve locations.
- Modification to replace various existing snubbers with rigid struts.
- Deletion of various existing snubbers and/or other pipe supports.
- Modification to various existing supports to improve their dynamic capability or to accommodate the new tie back supports.
- Deletion of the outboard valve in a double valve arrangement at various locations of vent, drain and test valves. A nipple and threaded pipe cap are installed outboard of the remaining valve. The 212/424 project class boundary is relocated to the outboard end of the remaining valve, but the nipple and cap are seismically analyzed.

SAFETY EVALUATION: Two of the NSCW P&IDs required revision to show deletion of various vent, drain and test valves. These P&IDs are referenced in UFSAR section 9.2 and, therefore, the changes are considered to be a change to the UFSAR. The NSCW system is principally described in UFSAR subsections 9.2.1 and 9.2.5. The containment coolers are principally described in subsections 6.2.2.1 and 9.4.6. The physical changes of this DCP only involve piping supports or deletion of various vent, drain and test valves and are below the level of detail provided in the UFSAR system descriptions. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 97-VAN0024

DESCRIPTION: This DCP increased the rating of the Unit 1 class 1E transformers feeding emergency lighting loads from 7.5 kVA to 15 kVA, by replacing class 1E Sola regulating transformers with regulating transformers manufactured by Solidstate Controls, Inc. The replacement transformers are the proper kVA rating for the connected load and do not require paralleling banks to achieve the kVA rating as the existing Sola transformers do.

SAFETY EVALUATION: UFSAR section 8.3.1 was revised to reflect the replacement of Sola regulating transformers with Solidstate Controls regulating transformers. UFSAR table 8.3.1-4 was revised to reflect the change in isolation devices from Sola regulating transformers to Solidstate Controls regulating transformers. UFSAR table 9.5.3-1 was revised to reflect the revised tag and location numbers for replacement transformers 1ABC23RX and 1BBC23RX. UFSAR sections 9A.1.81, 9A.1.82, 9A.1.114, and 9A.1.115 were revised to reflect the revised location and tag numbers for the replacement transformers and add locations for the transformers in the diesel generator building. This change did not require any Technical Specification or Technical Specification Bases changes. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 97-VAN0025

DESCRIPTION: This DCP added an essential lighting system for the Unit 2 personnel airlock, as well as add a battery-backed emergency lighting system in the Unit 1 and Unit 2 personnel and escape airlocks.

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SAFETY EVALUATION: The addition the emergency lights in the airlocks requires the use of the electrical penetration boxes above the airlock doors. Each circuit leg to the electrical penetration boxes utilizes two 10-ampere fuses for dual overcurrent protection for the airlock penetration assemblies. The addition of these fuses required a change to UFSAR table 16.3-5 (sheet 36 of 36) and the addition of a sheet to figure 8.3.1-1. The Technical Specifications Bases and the TRM are not affected by this change. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 97-V1N0026

DESCRIPTION: This design change relocated the diesel generator lube oil orifices and sight glasses away from the TC exhaust housing heat, and makes the sight glasses more accessible and easier to view.

SAFETY EVALUATION: This changed the line sizes shown on P&IDs 1X4DB170-1 and 1X4DB170-2. These P& ID numbers are listed in the UFSAR table 1.7.1-2. No change to the UFSAR text was needed. There is no impact to the Technical Specifications Bases or the Technical Requirements Manual (TRM). Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 97-V1N0035

DESCRIPTION: In April 1997, the NRC reviewed the implementation of the GL 89-10 program. This DCP provided changes to address several issues identified in the review.

SAFETY EVALUATION: The changes provided in Transmittal 1 redefined the methodology used by design engineering to calculate motor-operated valve (MOV) motor torque, operator thrust and margins, however, the plant was not be modified nor changed as it is described in the UFSAR. The gear modifications in Transmittal 2 changed the plant as described in the UFSAR by changing the stroke times outlined for ECCS isolation valves. The design changes increased MOV stroke times listed in table 6.3.2-3 for valves 1HV-8105 and 1HV-8106. The stroke times along with note "f" at the end of table 6.3.2-3 required revision. The IST stroke time changes in transmittal 3 required revision to 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 reflected 17 seconds rather than 15 seconds as the stroke time for said valves. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 97-V2N0049

DESCRIPTION: The rotating element (impeller) for centrifugal charging pump (CCP) 2-1208-P6-002 is scheduled for replacement during the upcoming refueling outage. There may be differences in the performance characteristics from the original impeller. If this occurs, a flow limiting/pressure reducing orifice may be required to be installed in the pump's discharge piping. This design change prepared the CCP discharge piping to accept such an orifice. It also installed the necessary pump test instrumentation.

SAFETY EVALUATION: This design change added an orifice plate to the discharge lines of the CVCS Train A & B charging pumps and modifying pipe supports. It also added a pressure indicator downstream of each orifice. P&ID 2X4DB116-2 was revised to indicate these changes. This P&ID is referenced in UFSAR sections 6.3.2 and 9.3.4. There are no changes to the UFSAR text or figure as a

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result of this modification based on a review of the referenced UFSAR sections. This DCP allows for future installation of flow restricting orifices if required due to replacement of a CCO rotating element on Unit 2. Engineering drawing (2X6AH02-3000) includes the orifice sizes for rotating elements (serial number 6455-01 and 52233) which may be installed in the Unit 2 CCP A and B. Drawing 2X6AH02-3000 was added to UFSAR table 6.3.2-1. Also, UFSAR table 1.7.1-1, "Cross Reference of Engineering Drawings to UFSAR Discussion Section", was revised to include the engineering drawing and the applicable UFSAR section. The Technical Specifications Bases and the Technical Requirements Manual (TRM) are not affected by this change, and there is no change to the Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 97-V1N0057

DESCRIPTION: In order to reduce the amount of radiation received by workers during every outage, it is necessary to reduce the time it takes to perform the removal and installation of the fuel transfer tube blind flange. This DCP reduced by one half the overall number of bolts required to attach the fuel transfer tube blind flange to the fuel transfer tube. The resulting configuration has 10 evenly spaced bolts vice 20. In addition, the refueling machine hoist operated at approximately 20 fpm. To improve the efficiency of refueling operations a new gear-box was installed on the refueling machine hoist that has a 1.2:1 gear ratio, vice the 2:1, allowing the refueling machine hoist to operate at 40 fpm.

SAFETY EVALUTION: UFSAR sections 3.2, 6.2 and 9.1, UFSAR section 9.1.4.2.4 were modified to state 40 fpm as the maximum hoist speed vice 20 fpm and P&ID 1X4DB130, rev. 37 was modified to reflect the new bolting configuration. The modification to the P&ID constitutes a change to the plant as described in the UFSAR. The modification to the fuel transfer tube blind flange and the refueling machine hoist did not require a change to the Technical Specifications or their Bases based on a review of sections 3.6.1, 3.6.4, and 3.9 nor did it require a revision to the Technical Requirements Manual based on a review of section 13.9. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 97-V2N0058

DESCRIPTION: In order to reduce the amount of radiation received by workers during every outage, it is necessary to reduce the time it takes to perform the removal and installation of the fuel transfer tube blind flange. This DCP reduced by one half the overall number of bolts required to attach the fuel transfer tube blind flange to the fuel transfer tube. The resulting configuration has 10 evenly spaced bolts vice 20. In addition, the refueling machine hoist operated at approximately 20 fpm. To improve the efficiency of refueling operations a new gearbox was installed on the refueling machine hoist which has a 1.2:1 gear ratio vice 2:1, ratio, allowing the refueling machine hoist to operate at 40 fpm.

SAFETY EVALUTION: UFSAR sections 3.2, 6.2 and 9.1, UFSAR section 9.1.4.2.4 were modified to state 40 fpm as the maximum hoist speed vice 20 fpm. The modification to the fuel transfer tube blind flange and the refueling machine hoist did not require a change to the Technical Specifications or their Bases based on a review of sections 3.6.1, 3.6.4, and 3.9 nor did it require a revision to the Technical Requirements Manual based on a review of section 13.9. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

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SUBJECT: DCP 97-VAN0069

DESCRIPTION: This DCP implemented heat tracing modifications for piping associated with the boric acid storage tank (BAST), the boric acid transfer pumps piping, and all associated pumps and valves located on levels A, B, C, and D of the auxiliary building. The heat trace control panels modified are 1-1817-U3-001A, 1-1817-U3-001B, 1-1817-U3-002A, 1-1817-U3-002B, 1-1817-U3-003A, 1-1817-U3-003B, 2-1817-U3-001A, 2-1817-U3-001B, 2-1817-U3-002A, 2-1817-U3-002B, 2-1817-U3-003A, 2-1817-U3. This change to the heat trace system on these borate lines will modify the function of the heat trace control panel from one of automatically alarming and heating to one of automatically alarming only.

SAFETY EVALUATION: The heat tracing system is described in section 8.3.1.1.9 of the UFSAR. The heat tracing system design included redundant heating and alarming capabilities for piping associated with the chemical and volume control system, safety injection system and the waste processing system. This change retired-in-place the heating portion of the heat tracing system and left the alarming portion functional. The change reduced the number of trouble alarms currently experienced by the system while ensuring operators will be alerted when the critical monitored condition, boric acid low solution temperature exists. This modification did not involve a change to Technical Specifications as incorporated into the operating license. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 97-V2N0072

DESCRIPTION: This DCP increased the available thrust and torque margin of valves 2HV-8801A and 2HV-8801B. These are the high head safety injection pump (charging pump) injection isolation valves to the RCS cold legs. Also, the stroke time was increased to more closely match that of 2HV-8105 and 2HV-8106. The physical modifications are limited to replacing the valve yoke, motor, motor thermal overload relay heater coil, circuit breaker, and operator.

SAFETY EVALUATION: The operator replacement changed the plant as described in the UFSAR by changing the stroke times specified for the ECCS injection valves. The design change increased MOV stroke times listed in table 6.3.2-3 for valves 2HV-8801A/B. The stroke time along with note "i" at the end of table 6.3.2-3 required revision. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 98-V1N0011

DESCRIPTION: Each emergency diesel engine exhausted through two 26 inch diameter exhaust manifolds which combined into a single 42 inch exhaust pipe. The 42 inch exhaust pipe was routed through an exhaust silencer and then exhausted through the roof of the diesel generator building. Where the exhaust pipe penetrates the diesel generator building roof, tornado generated missile protection was provided by a concrete structure. Due to the high exhaust temperature of the diesel generator, the structure was constructed of heat-resistant concrete. However, inspections revealed significant degradation of concrete, apparently caused by exhaust heat. This DCP provided a replacement design capable of withstanding the severe operating conditions while still providing the required missile protection.

SAFETY EVALUATION: The design of diesel generator combustion air exhaust protection from missiles is described in UFSAR Table 3.5.1-7. Table 3.5.1.7 detailed the missile protection as 24 inch thick concrete walls with a 21 inch thick concrete roof. This modification changed the missile barrier

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structure from a concrete structure to a structure with 24 inch thick concrete sidewalls and a steel exhaust assembly fabricated from one inch thick steel plate. UFSAR section 9.5.8.3 described the enclosure as a concrete structure, and was affected by this design change. Based on a review Technical Specifications Section 3.8, Technical Specification Bases section B3.8 and Technical Requirements Manual section 13.8 this change did not constitute a change to Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 98-V2N0012

DESCRIPTION: Each emergency diesel engine exhausted through two 26 inch diameter exhaust manifolds which combined into a single 42 inch exhaust pipe. The 42 inch exhaust pipe was routed through an exhaust silencer and then exhausted through the roof of the diesel generator building. Where the exhaust pipe penetrated the diesel generator building roof, tornado generated missile protection was provided by a concrete structure. Due to the high exhaust temperature of the diesel generator, the structure was constructed of heat-resistant concrete. However, inspections revealed significant degradation of concrete, apparently caused by exhaust heat. This DCP provided a replacement design capable of withstanding the severe operating conditions while still providing the required missile protection.

SAFETY EVALUATION: The design of diesel generator combustion air exhaust protection from missiles is described in UFSAR Table 3.5.1-7. Table 3.5.1.7 detailed the missile protection as 24 inch thick concrete walls with a 21 inch thick concrete roof. This modification changed the missile barrier structure from a concrete structure to a structure with 24 inch thick concrete sidewalls and a steel exhaust assembly fabricated from one inch thick steel plate. UFSAR section 9.5.8.3 described the enclosure as a concrete structure, and was affected by this design change. Based on a review Technical Specifications Section 3.8, Technical Specification Bases section B3.8 and Technical Requirements Manual section 13.8 this change did not constitute a change to Technical Specifications. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 98-V1N0019

DESCRIPTION: When the rotating element (impeller) for centrifugal charging pump (CCP) 1-1208-P6-002 or 003 is replaced there may be differences in the performance characteristics from the original impeller. If this occurs, a flow limiting / pressure reducing orifice may be required to be installed in the pump's discharge piping. This design change provided the design to add a pressure indicator and associated components on the discharge line of each centrifugal charging pump (1-1208-P6-002 and 1-1208-P6-003). The project class for the system is 212. The project class for the piping changes is 212 and for the instruments, it is 61J.

SAFETY EVALUATION: This design change added pressure indicators downstream of the orifices in the discharge lines of the chemical and volume control system (CVCS) train A & B charging pumps. P&ID 1X4DB116-2 was revised to indicate these changes. This P&ID is referenced in UFSAR Sections 6.3.2 and 9.3.4. There are no changes to the UFSAR text, tables, or figures, based on a review of the referenced UFSAR sections. Flow rates as discussed in the Technical Specifications will not be altered. The Technical Specifications Bases and the Technical Requirements Manual (TRM), are not affected by this change. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question

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SUBJECT: DCP 98-V2N0050

DESCRIPTION: In order to evaluate for leaking fuel assemblies with current plant equipment, each assembly must be transported to a test canister, inserted, unlatched, tested, latched and removed. The average time to sip using this method is approximately 34 hours. The time to perform the necessary sipping evolutions has the potential to negatively impact the length of shorter outages. To save time and reduce cost Westinghouse installed an in-mast sipping system on both the Unit 1 and Unit 2 refueling machines.

SAFETY EVALUATION: Section 9.1.4.2.4 provides a general description of the refueling machine and section 9.1.4.2.2.3 describes the general operating sequence of the machine. Although this modification does not alter the function or operation of the refueling machine or any other system or component, in order to maintain an accurate description in the UFSAR, the in-mast sipping capability has been referenced in the above mentioned sections. This modification does not change the plant as described in the Technical Specification Bases or the Technical Requirements Manual. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 98-V2N0052

DESCRIPTION: This DCP replaced the existing radial arm hoists with new hoists that include improved operation, maintenance, and reliability features. These hoists are part of the integrated head package on the reactor vessel. They are used for handling the reactor vessel studs and tensioners during removal and installation of the head.

SAFETY EVALUATION: UFSAR table 3.2.2-1, sheet 90, was revised to indicate that the radial arm stud tensioner hoist is not located in containment since it is removable. Item number 12, radial arm hoist assembly, will remain unchanged since it will still be permanent plant equipment. UFSAR paragraph 9.1.5.2.3.4.4 was revised to indicate that only the hoist assemblies are provided as part of the integrated head package and that the actual hoists are not considered part of the assembly. UFSAR table 9.1.5-3, sheet 1 and 2, "Containment Building Overhead Load Handling Systems", was revised to indicate the design standard for the new radial arm hoists. Additionally, this DCP does not represent any changes to the plant as described in, nor does it require a revision to the TS Bases or the TRM. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 99-V1N0022

DESCRIPTION: This provided the design change necessary to install a stator leak monitoring system in the stator cooling water system. The stator leak monitoring system (SLMS) calculates and records the rate and volume of hydrogen leaking from the generator into the stator water cooling system (SWCS) from the water cooled stator windings. The SLMS introduces filtered air into the stator cooling water tank from the SLMS panel to the tank drain in order to force a constant outflow through the existing vent. A sample line located at the tank vent pressure indicator was routed to the SLMS panel (1-1326-P5-SLM). The return sample line was then routed to the stator cooling water tank vent downstream of the pressure indicator. Instrument air is provided to the SLMS panel for use as injection air supply and for dry air supply to internal cooler.

Design Change Packages (DCPs)

SAFETY EVALUATION: The addition of the stator leak monitoring system (SLMS) to the stator water cooling system required a revision to drawings that are referenced in the UFSAR (section 1.7.1 and 10.2.2). There are no revisions necessary to the text of the UFSAR. Neither the TS Bases or the Technical Requirements Manual will require revisions due to this change. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 99-V2N0029

DESCRIPTION: This provided the design change necessary to install a duplex strainer arrangement in the Unit 2 turbine generator stator cooling water system (1326). It also includes installation of a monorail beam/hoist assembly, above the duplex strainer.

SAFETY EVALUATION: The addition of a duplex strainer to the stator cooling water system required a revision to a drawing (P&ID drawing 2X4DB193) whose opposite Unit (1) drawings is referenced in the UFSAR. The addition of a monorail beam/hoist assembly for maintenance did not affect any documents contained in the UFSAR. There were no revisions necessary to the text of the UFSAR. Neither the TS Bases nor the Technical Requirements Manual required revisions due to this change. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: DCP 99-VAN0061

DESCRIPTION: The Westinghouse "Margin Recovery Program" was implemented at Plant Vogtle per DCPs 98-V1N0035 and 98-V2N0036. During the development of the program, Westinghouse identified an issue concerning the results for the current licensing basis analysis for steamline break with coincident RCCA withdrawal at power event (SLB/RWAP). The results were unacceptable at low power conditions. The solution was the removal of the automatic withdrawal feature of the rod control system. Defeating the auto-rod withdrawal feature of the rod control system eliminated the SLB/RWAP for Vogtle Units 1 & 2. This design change removed the automatic control rod withdrawal capability from the rod control system.

SAFETY EVALUATION: The design change altered the capability of the 7300 process control system (7300 PCS) to automatically adjust control rod position. This change removed the capability of automatic control rod withdrawal. However, the 7300 PCS will be capable of automatically moving the control rods into the core as currently designed. The SLB/RWAP event will no longer be considered for Vogtle Units 1 & 2. Therefore, numerous sections of the UFSAR required revision. Particularly, UFSAR sections 3.9.N.1.1.1.6, 7.2.2.3.2, 7.2.2.3.1, 7.2.2.4, 7.7.1, 7.7.1.1, 7.7.1.2, 7.7.1.3.3, 7.7.2.3, 7.7.2.4, 15.0.3.2, 15.1.2.2.1, 15.1.2.2.2, 15.1.3, 15.1.5.1, 15.1.5.2.1, 15.1.5.2.2, 15.4.9, 15.4.3.2.1.2; and UFSAR tables 7.7.1-1, 15.0.3-2, and 15.1.2-1. The TS Bases required revision to B 3.2.3. The change did not require a change to the Technical Requirements Manual. The change did not effect any Technical Specification in the Vogtle Units 1 or 2 operating license. Therefore, no change to the Technical Specifications is required. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

Minor Design Changes (MDCs)

SUBJECT: MDC 93-VAM058

DESCRIPTION: This minor design change addressed a number of miscellaneous telecommunications issues. Telephones were installed in new locations, additional plant page capabilities were added to some new areas and damaged telecommunications cables and junctions boxes were replaced. Additionally, to facilitate temporary telecommunications needs during refueling outages, new junctions boxes and interconnection capabilities were added.

SAFETY EVALUATION: UFSAR section 9.5.2 describes the private automatic branch exchange (PABX) system. The changes made by this MDC enhanced the PABX system. The changes made do not affect the system as described in the UFSAR but do affect drawing 1X3DG004 which is listed in the UFSAR. This drawing was originally included as figure 9.5.2-2, sheet 3, but has since been deleted and only referenced by drawing number. The drawing has been updated to reflect the "as-built" condition. The changes made did not affect the Technical Specifications. There were no unreviewed safety questions.

SUBJECT: MDC 95-V1M050

DESCRIPTION: MDC 95-V1M050 replaced small bore piping downstream of level control valves and traps in drain lines associated with drains on the main steam and extraction steam lines with material resistant to flow accelerated corrosion. The existing carbon steel piping has proven to be susceptible to failure due to flow accelerated corrosion. The referenced material changes were reviewed and accepted by Southern Company Services design engineering, under REA 95-V1A057, to minimize erosion rates of the subject lines.

SAFETY EVALUATION: Although the subject material is not described in the text of the UFSAR, the material change resulted in the revision of drawings referenced in UFSAR sections 10.2.2 and 10.3.2-1. The subject equipment is not discussed in the Technical Requirements Manual, the Technical Specifications, or the Technical Specification Bases. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: MDC 96-V1M025

DESCRIPTION: The Unit 1 circuit boards and internal wiring in the emergency response facility (ERF) multiplier cabinets associated with digital computer inputs have been abandoned in place. Prefabricated field cables from the ERF multiplier cabinet to the ERF termination cabinet and field cables of abandoned computer digital inputs were deleted. Field cables were routed from the IPC I/O cabinets directly to the ERF termination cabinet.

SAFETY EVALUATION: This modification did not represent a change to the plant as described in the UFSAR, nor did it require a revision to the UFSAR. However, this modification did represent a change to the plant as described in the Emergency Plan. Section H.4.2.e of the Emergency Plan describes the system input room hardware. Abandonment of the circuit boards and internal wiring in the ERF multiplier cabinets associated with digital computer inputs impacts this section and requires a revision to the Emergency Plan. The original emergency facilities and equipment section in the Emergency Plan listed the multiplier cabinets as part of the hardware. The function of the multiplier cabinet was to serve as an isolation device and split field inputs, with one leg going to the abandoned emergency response facilities computer system and the other going to the IPC. The input signals are isolated prior to the system input room hardware. Therefore, this modification did not create the possibility of a malfunction

Minor Design Changes (MDCs)

of safety related or important to safety equipment previously described in the UFSAR. There were no unreviewed safety questions.

SUBJECT: MDC 97-V2M002

DESCRIPTION: The stator cooling water system (SCW) has Opto-mechanical relays. These relays have had a number of failures and calibration problems. The relays reset and generate invalid trip signal when the power is lost. These relays were replaced with electronic controllers. The electronic controllers do not change state when the power is lost; they directly interface with RTDs and do not require transmitters.

SAFETY EVALUATION: The stator cooling water system is discussed in UFSAR Section 10.2, but not to the extent of control devices. The change to electronic controllers does not change the operation or the function of the system. The transmitters removed are shown on P&ID 1X4DB193 which is referenced in the UFSAR. The transmitters are not needed but they are shown on the P&ID. Therefore, a revision to the drawing was required. The SCW system is not safety related, and not a part of the Technical Specifications or the Environmental Protection Plan. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: MDC 97-VAM003

DESCRIPTION: To provide a more reliable means of controlling water level in the first and second stage contaminant air filters, Drain All traps were added in place of existing drain traps on the first and second stage contaminant air filters 1/2-2401-F4-501 & 502. Additionally, the existing differential pressure switches and local indicators were deleted on both contaminant filters. The level switch and light indication associated with the second stage filter were deleted. The isolation valve located downstream of the drain traps was relocated to a position upstream of the traps.

SAFETY EVALUATION: The instrument and service air systems are described in UFSAR section 9.3.1. The section contains a description of system components and basic system operations. The contaminant air filters are mentioned in this section under the general flow path description for the rotary air compressors. The section does not contain specific discussion concerning the contaminant filters. The change implemented does not impact overall operation of the instrument and service air system as described in this section and therefore does not require a revision to this section. The instrument and service air system is depicted on P&ID 1X4DB175-1 which is incorporated in the UFSAR under section 9.3.1 and table 1.7.1-2 (sheet 9 of 32) contained in UFSAR 1.7. Implementation of this change resulted in revision of 1X4DB175-1 and therefore represents a change as described in the UFSAR. The instrument and service air system is not addressed in the Technical Specifications, Technical Bases or TRM. Based upon the results of the safety evaluation it was determined that this design change did not constitute an unreviewed safety question.

SUBJECT: MDC 97-V1M006

DESCRIPTION: Before flooding of the refueling cavity for defueling/refueling, drain lines 1-1213-012-12" and 1-1213-013-12" are isolated with blind flanges. It was desirable to modify one or both of these lines such that they may be used in addition to normal refueling cavity drain line 1-1213-024-4". This change addressed installation of a reducer/valve assembly on the discharge end of drain lines line 1-1213-012-12" and 1-1213-013-12", and forgoing installation of the blind flanges used for sealing these

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lines at the refueling cavity liner. A flange was welded to the downstream end of the valve where a hose is attached to route the final radioactive slurry from the cavity to the containment floor sump system.

SAFETY EVALUATION: UFSAR section 6.2.2.2.3.6, "Containment Spray System", discusses the reactor cavity blind flanges being closed or sealed during refueling which is changed to partially open with spacers. A valve assembly to close downstream of the flange addresses the function of having flanges closed. UFSAR 6.2.2.2.3.6 now states "The drain layout is such that each 12-in. drain line is capable of passing approximately 2000 gal/min; therefore, there is no danger of starving the sump via the refueling canal. The drain piping is isolated during refueling and left open during normal reactor operation. Plant refueling procedures ensure that these drain pipes are opened after refueling prior to plant startup." The requirement for installation of the valve assembly and partially opening the flanges was addressed with notes on P&ID 1X4DB130. The change does not initiate any accident or increase the consequences of any accident previously evaluated in the UFSAR. There were no unreviewed safety questions.

SUBJECT: MDC 97-V2M007

DESCRIPTION: Before flooding of the refueling cavity for defueling/refueling, drain lines 2-1213-012-12" and 2-1213-013-12" are isolated with blind flanges. It was desirable to modify one or both of these lines such that they may be used in addition to normal refueling cavity drain line 2-1213-024-4". This change addressed installation a reducer/valve assembly on the discharge end of drain lines line 2-1213-012-12" and 2-1213-013-12", and forgoing installation of the blind flanges used for sealing these lines at the refueling cavity liner. A flange was welded to the downstream end of the valve where a hose is attached to route the final radioactive slurry from the cavity to the containment floor sump system.

SAFETY EVALUATION: UFSAR section 6.2.2.2.3.6, "Containment Spray System", discusses the reactor cavity blind flanges being closed or sealed during refueling which is changed to partially open with spacers. A valve assembly to close downstream of the flange addresses the function of having flanges closed. UFSAR 6.2.2.2.3.6 now states "The drain layout is such that each 12-in. drain line is capable of passing approximately 2000 gal/min; therefore, there is no danger of starving the sump via the refueling canal. The drain piping is isolated during refueling and left open during normal reactor operation. Plant refueling procedures ensure that these drain pipes are opened after refueling prior to plant startup." The requirement for installation of the valve assembly and partially opening the flanges was addressed with notes on P&ID 2X4DB130. The change does not initiate any accident or increase the consequences of any accident previously evaluated in the UFSAR. There were no unreviewed safety questions.

SUBJECT: MDC 97-V1M022

DESCRIPTION: MDC 97-V1M022 eliminated the automatic controls associated with the main turbine moisture separator / reheater (MSR) steam supply valves. The control system, which was provided by General Electric, was intended to automatically place the reheaters in service gradually as the turbine load is increased from 15 to 65 percent. Since this evolution is performed infrequently and the automatic pneumatic controls had some weaknesses, the operators had routinely elected to operate the system in the manual control mode. This design change reduced the required maintenance by removing the unused automatic controls, and will improve the manual operation by eliminating potential failure of the automatic devices and providing more accurate and reliable indication of the manual control output pressure.

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SAFETY EVALUATION: The main turbine and MSR are generally described in UFSAR sections 10.1 and 10.2. Although the controls which regulate the heating steam flow to the MSRs are not described in the UFSAR text, P&I D 1X4DB160-2, which is referenced in UFSAR section 10.2.2, and P&I D 1X4DB175-4, which is referenced in UFSAR section 9.3.1.2.1, were revised as a result of this change. The subject equipment is not discussed in the Technical Requirements Manual, the Technical Specifications, or the Technical Specification Bases. Based upon the results of the safety evaluation, it was determined that this change did not involve an unreviewed safety question.

SUBJECT: MDC 97-V2M023

DESCRIPTION: MDC 97-V2M023 eliminated the automatic controls associated with the main turbine moisture separator / reheater (MSR) steam supply valves. The control system, which was provided by General Electric, was intended to automatically place the reheaters in service gradually as the turbine load is increased from 15 to 65 percent. Since this evolution is performed infrequently and the automatic pneumatic controls have some weaknesses, the operators had routinely elected to operate the system in the manual control mode. The design change reduced the required maintenance by removing the unused automatic controls, and will improve the manual operation by eliminating potential failure of the automatic devices and providing more accurate and reliable indication of the manual control output pressure.

SAFETY EVALUATION: The main turbine and MSRs are generally described in UFSAR sections 10.1 and 10.2. Although the controls which regulate the heating steam flow to the MSRs are not described in the UFSAR text, P&I D 2X4DB160-2 (which is similar to the Unit 1 drawing referenced in UFSAR section 10.2.2) and P&I D 2X4DB175-4 (which is similar to the Unit 1 drawing referenced in UFSAR section 9.3.1.2.1) was revised as a result of this change. The subject equipment is not discussed in the Technical Requirements Manual, the Technical Specifications, or the Technical Specification Bases. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: MDC 97-V2M048

DESCRIPTION: To improve the reliability of the indication and control functions associated with condenser and electro-hydraulic control (EHC) fluid pressure, modifications were made to the instrumentation used to sense these parameters. Inaccuracy in these instruments has contributed to two reactor trips at Vogtle. The new instrumentation is more accurate than the switches previously used, and the ability to continuously monitor the operation of the instruments will reduce the potential for the occurrence of an unnecessary turbine trip.

The changes are as follows:

Condenser Pressure - The existing separate vacuum switches which are used for low condenser vacuum alarm, turbine trip, and steam dump block functions were removed. Two new electronic absolute pressure transmitters were installed on each low-pressure exhaust hood to monitor condenser pressure. The signals from these transmitters are used to provide control room alarm and indication, steam dump interlock, and turbine trip signals. A three-second-time delay is provided prior to the turbine trip to prevent spurious trips due to mechanical agitation of the remote instrumentation or power supply transients. This time delay is brief in comparison to the highest possible rate of change of condenser pressure and its use does not degrade the level of protection provided by the trip.

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EHC Pressure - The existing separate low hydraulic pressure alarm and turbine trip switches were replaced with two electronic pressure transmitters. The signals from these transmitters are used to provide control room alarm and indication, standby pump automatic start, and turbine trip signals. The three second time delay previously provided by MDC 94-V2M080 is retained to minimize the risk of trips due to spurious transient signals.

The new instrumentation are powered by a reliable 120 Vac source in the EHC cabinet, which is automatically supplied by a shaft driven generator if available or one of two plant sources selected through a static transfer switch. This will minimize the potential for failure of the instruments during loss of ac power events, which may lead to circumstances requiring the trip functions. Loss of the ac power supply will result in several control room alarms, will start the standby hydraulic pump, and will prevent the steam dump valve operation from being blocked on high condenser pressure, but will not result in a turbine trip.

The change involved only non safety-related equipment and instruments.

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 UFSAR 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 UFSAR section 10.2.5 remain valid following the modification. The alarm and trip setpoints provided in 10.4.1.5 are in agreement with the values used in the design change.

The steam dump system is described in detail in UFSAR sections 7.7.1.8 and 10.4.4. The operation of the steam dump system remains as described in the UFSAR text. The pressure at which steam dump operation is blocked was changed from 4.9" HgA to 5.0" HgA, which is agreement with the value given in UFSAR section 10.4.4.2.3 per approved LDCR FS97-021. As a result of the change, several plant drawings were revised. Included among these are: 2X4DB160-2 (which is similar to the Unit 1 drawing referenced in 10.2.2 and 10.3.2), 2X4DB168-1, (which is similar to the Unit 1 drawing referenced in 10.4.1.2 and 10.4.7.2.1), 2X4DB194 (which is similar to the Unit 1 drawing referenced in 10.2.2.3.1), and 2X5DN203-1 (which is similar to the Unit 1 drawing referenced in 10.2.2.4). Changes to these references are considered changes to the facility's UFSAR description. The subject equipment is not discussed in the Technical Requirements Manual, the Technical Specifications, or the Technical Specification Bases. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: MDC 97-VAM056

DESCRIPTION: MDC 93-VAM057 abandoned in place the originally designed and installed hydrogen storage/cryogenic system. This system was replaced with a portable tube trailer. MDC 97-VAM056 permanently removed the hydrogen storage tank and its associated instrumentation.

SAFETY EVALUATION: UFSAR sections 2.2.3, 3.2.2 and 9.3.5 discuss the auxiliary gas systems, which includes the portion of the hydrogen system that was removed by this change. UFSAR section 2.2.3 provides evaluations for potential accidents due to explosions, toxic vapor releases and liquid spills for materials stored and utilized at Plant Vogtle. As part of this change, table 2.2.3.20 (Toxic Gas Release Information) was revised to show that the liquid hydrogen vessel has been removed. UFSAR section 3.2 discusses the classification of structures, components, equipment and systems at Plant Vogtle. As part of this change UFSAR table 3.2.2.1 (sheet 39 of 99 and sheet 97 of 99) was revised to reflect the removal of the liquid hydrogen storage vessel. Also, UFSAR section 9.3.5 provides a system description of the

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auxiliary gas system. The deletion of the liquid hydrogen storage vessel does not change the described operation of this portion of the auxiliary gas system. However, P&ID AX4DB176-2, which is referenced in section 9.3.5.2 and description of components in section 9.3.5.2.2.9 and 9.3.5.2.2.10 was revised to reflect the permanent removal. Based on review of technical specification bases (section 3.7, Plant Systems) and the Technical Requirements Manual, there was no other revisions required as a result of this change. The auxiliary gas system has no safety function and is not addressed in the Technical Specifications or Environmental Protection Plan. Based upon the results of the safety evaluation it was determined that this design change did not constitute an unreviewed safety question.

SUBJECT: MDC 97-VAM062

DESCRIPTION: Raceway separation in nuclear safety-related areas of VEGP complies with Reg. Guide 1.75-1978 Rev 2 and IEEE Standard 384-1981. Where the separation requirements deviate from these standards, the basis is a Wyle Laboratory testing program. In those cases where the minimum separation requirement distances could not be maintained, resolution was achieved by (1) installing metallic barriers, (2) enclosing the cable or conduits with Siltemp cloth, or (3) for cable trays, by installing metallic tray covers and bottoms. An additional approach to achieve the required 1.75 separation was to install Thermo-Lag 330 material as a qualified barrier.

REA 96-VAA063 was issued to identify which of the Reg. Guide 1.75 wrapped cables need to be re-wrapped by an alternate material and to identify any additional Thermo-lag material which was installed for purposes other than Appendix R or Reg. Guide 1.75 separation. DCP 94-V1N0061 and 94-V2N0062 dispositioned a portion of the raceways identified. MDC 97-VAM062 eliminated the plant's reliance on Thermo-Lag as a rated barrier for the remainder of the circuits identified. The Thermo-Lag was replaced by metal barriers or an approved fire barrier wrap.

SAFETY EVALUATION: The material used to provide raceway separation to comply with Reg. Guide 1.75 is not discussed or described in the UFSAR to the level of detail as to manufacturers being used. However, UFSAR section 9A.2.48, which described cable trays that were encapsulated with Thermo-Lag fireproofing material for life safety considerations, was changed per LDCR FS 98-032. Thermo-Lag material is not discussed in the Technical Requirements Manual or the Technical Specification Bases. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: MDC 97-VAM064

DESCRIPTION: A demineralized water user station located on level 1 of the Auxiliary Building leaks-by due to a faulty isolation valve (1-1418-U4-072). Repeated attempts to repair the existing ¾" gate valve has resulted in only temporary relief from leakage. Review of valve design principles reveals that a globe valve provides superior isolation capabilities for valves that are frequently operated. Thus, the user station isolation valve was replaced with a globe valve of equivalent size.

SAFETY EVALUATION: UFSAR chapter 9.2 deals with plant water systems and does not include within that description the level of detail that would warrant a text change to it as a result of the replacement of the gate valve with an globe valve as an isolation valve for this demineralized water user station. However, implicit configuration is included in that the P&ID associated with the change is listed in the UFSAR. This change required revising the P&ID associated with the steam generator blowdown system; i.e., 1X4DB179-2. UFSAR chapter 9.2 describes plant water systems and their mode of operation. Replacement of the gate valve with a globe valve for manual operation of the user station does

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not impact any operational methodologies associated with the system. There are no changes to procedures described or implied in the UFSAR. This change involved no test or experiment. There were no unreviewed safety questions.

SUBJECT: MDC 97-VAM070

DESCRIPTION: The change installed a bypass line and manual throttle valve around the Unit 1 and Unit 2 boron concentration meters in the chemical and volume control system. The purpose was to lower sample delay times in order to make indication more representative of boron concentration in the reactor coolant system.

SAFETY EVALUATION: The change installed piping not described in the USFAR. No credit is taken for the boron concentration meter in any accident analysis. The new flow path is a small portion of let down flow and is enveloped by existing analyses. There were no unreviewed safety questions.

SUBJECT: MDC 98-VAM003

DESCRIPTION: The change installed a mechanical float valve in the stuffing box head tank of the Unit 1 and Unit 2 positive displacement charging pumps in the chemical and volume control system. The purpose was to eliminate the need for manual make-up to the head tank by automating the function.

SAFETY EVALUATION: The change caused the normal position of the manual make-up valve to open instead of shut as described in the USFAR. The change did not affect the pressure boundary of the pump nor raise the likelihood of pump failure. There were no unreviewed safety questions.

SUBJECT: MDC 98-VAM006

DESCRIPTION: This changes the maintained open position of 1/2-1218-U4-082, equipment drain isolation valve from the positive displacement pump room, from locked 2 turns open to locked 3 turns open.

SAFETY EVALUATION: Based on SCS evaluation referenced in RER 98-0010, it is possible to maintain the valves at three turns open without degradation of plant status. Since, the unit 1 PDP leakage is greater than the drain-off flow allowed through the valve at two turns open, the valve may be opened the additional turn open. Although the area of valve opening is increased by approximately 78%, the actual flow area change from approximately 0.64 sq. in. to approximately 1.14 sq. in., is small in relation to the HVAC system capacity to produce a negative pressure in the PDP rooms R-C111 and R-C12. The valve position changes are reflected in UFSAR table 3.2.2-1 and 9.3.3.3-note "b". There were no unreviewed safety questions.

SUBJECT: MDC 98-V2M023

DESCRIPTION: This modification provided an instrument signal from pressurizer level channel 2L-462 in the 7300 process control racks to the integrated plant computer system for monitoring capabilities. The hardware changes included replacing the quad-loop power supply board NQP, with a single loop power supply board NLP, utilizing the test point on the NLP board in place of the existing test point

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board NTP, and wiring the cabinet that supported these changes. The signal also had to be wired through an existing computer interface board NCI, and out an existing computer I/O cable.

SAFETY EVALUATION: This modification did not represent a functional change to the plant as described in the UFSAR, nor did it require a revision to the UFSAR. However, this modification did represent a change to P&ID 2X4DB112 for instrument loop 2L-462. P&ID 2X4DB112 is referenced in UFSAR sections 5.1, 5.1.2, 5.2.2.3, 5.4.7.2.3.7, 5.4.10.2.1, 5.4.11.2, and table 5.4.11-2. The change to P&ID 2X4DB112 reflects the addition of a computer point that provides channel-monitoring capability. The addition of this computer point did not impact the discussions in the above sections of the UFSAR. This modification did not affect the TRM nor change any Technical Specifications safety settings, conditions or surveillance requirements associated with Pressurizer level channels. There were no unreviewed safety questions.

SUBJECT: MDC 98-VAM043

DESCRIPTION: Depiction of potable water sodium hypochlorite system was changed to show it as a vendor skid, injecting into the top of the potable water storage tank. Abandoned and removed chlorine injection equipment was deleted from the P&ID as well. Additionally, the skid power supply was equipped with dedicated receptacles rather than hard wired.

SAFETY EVALUATION: The potable water system is described in section 9.2.4 and the sodium hypochlorite chemical addition system is depicted on P&ID CX4DB153 and was changed to be depicted on P&ID AX4DB198-3. There were no text changes required. The addition of new valves on the P&ID to support these changes does not affect the references of UFSAR section 9.2.4. The procedures describing the potable water system were not compromised by this change. There were no unreviewed safety questions.

SUBJECT: MDC 98-V1M047

DESCRIPTION: This modification provided an instrument signal from pressurizer level channel 1L-462 in the 7300 process control racks to the integrated plant computer system for monitoring capabilities. The hardware changes included replacing the quad-loop power supply board NQP, with a single loop power supply board NLP, utilizing the test point on the NLP board in place of the existing test point board NTP, and wiring the cabinet that supported these changes. The signal also had to be wired through an existing computer interface board NCI, and out an existing computer I/O cable.

SAFETY EVALUATION: This modification did not represent a functional change to the plant as described in the UFSAR, nor did it require a revision to the UFSAR. However, this modification did represent a change to P&ID 1X4DB112 for instrument loop 1L-462. P&ID 1X4DB112 is referenced in UFSAR sections 5.1, 5.1.2, 5.2.2.3, 5.4.7.2.3.7, 5.4.10.2.1, 5.4.11.2, and table 5.4.11-2. The change to P&ID 1X4DB112 reflects the addition of a computer point that provides channel-monitoring capability. The addition of this computer point did not impact the discussions in the above sections of the UFSAR. This modification did not affect the TRM nor change any Technical Specifications safety settings, conditions or surveillance requirements associated with pressurizer level channels. There were no unreviewed safety questions.

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SUBJECT: MDC 98-VAM057

DESCRIPTION: The 2B diesel generator jacket water standpipe level indicator developed a leak and the replacement parts had a long lead-time. This level indicator is located near the top of the standpipe and has graduations of empty and full. It is not effective as a level gauge and is not used by operations personnel. There is another 0-100% level indicator that is used for standpipe level indication. Since the float type indicator had a tendency to develop leaks over time and parts were not readily available, the indicators on all four diesels were removed and a blind flange installed in its place.

SAFETY EVALUATION: UFSAR section 9.5.5.2.1.6 describes the jacket water standpipe as being fitted with a glass gauge. In UFSAR table 9.5.5-2, Sheet 3 of 4, the sight glass is described as a method of leak detection. Applicable sections of the UFSAR have been revised. Level indication remains available from the 0-100% gauge. The standpipe mounted level gauge is not discussed in the Technical Specifications. There were no unreviewed safety questions.

SUBJECT: MDC 99-V1M010

DESCRIPTION: The original General Electric 4160-480V dry type transformer requires replacement in switchgear 1NB12X. This switchgear serves non-essential loads in the turbine building. An ABB dry type transformer core and coil assembly was installed as a replacement utilizing the existing GE transformer case. The new core and coil assembly is of a different design; utilizing copper instead of aluminum windings and has a higher BIL rating than the original. Additionally, the replacement ABB temperature monitoring system measures the temperature of all three phases.

SAFETY EVALUATION: The UFSAR discussion of the 4160V system or the electrical distribution system was not affected by this modification. However, the change did require a revision to drawing 1X3D-AA-A01A to reflect the ABB transformer installation. Drawing 1X3D-AA-A01A is referenced in a number of locations in the UFSAR. The drawing was updated to reflect the "as-built" condition. The transformer replacement did not affect or change the plant electrical distribution system or its operation as described in the Technical Specifications. There were no unreviewed safety questions.

SUBJECT: MDC 99-V2M045

DESCRIPTION: Due to developments regarding the reliability of the accumulator level transmitters, SIS accumulator level computer points were added to allow for monitoring capabilities. This modification changes the 7300 process control system for accumulator level channels 2L-951, 2L-952, 2L-955, and 2L-956, and the IPC. Hardware changes included internal wiring in the 7300 control cabinets that utilized the existing computer interface boards, existing pre-fabricated cables routed to the computer I/O cabinet, and existing computer I/O hardware.

SAFETY EVALUATION: This modification did not represent a functional change to the plant as described in the UFSAR, nor did it require a revision to the UFSAR. However, this modification did represent a change to P&ID 2X4DB120, which is referenced in UFSAR section 6.3.2.7. The change to P&ID 2X4DB120 reflects the addition of the computer points that provide monitoring capability for the instrument loops. Section 6.3.2.7 of the UFSAR discusses the provisions for performance testing. The addition of computer points to the instrument loops did not impact this discussion. This change increased monitoring/trending capability and improves the maintainability of the instrument channels, which reduces the probability of occurrence of an accident previously evaluated in the UFSAR. This modification did not affect the TRM nor change any Technical Specification limiting conditions or

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surveillance requirements associated with accumulator level channels. There were no unreviewed safety questions.

SUBJECT: MDC 99-V2M052

DESCRIPTION: The change removed the guide pin and stop lug from the head of the Unit 2 spent fuel-handling tool. The purpose was to permit handling fuel assemblies that had broken hold-down spring screws.

SAFETY EVALUATION: The change altered the tool from the description in the USFAR. The change did not raise the likelihood of a dropped or mispositioned fuel assembly. There were no unreviewed safety questions.

SUBJECT: MDC 99-V2M058

DESCRIPTION: The change moved temperature detectors from abandoned packing leak-off lines to the bonnets of loop suction isolation valves in the residual heat removal system on Unit 2. The purpose was to obtain data to evaluate potential pressure locking of the valves.

SAFETY EVALUATION: The change altered location of temperature detectors from the description in the USFAR. The temperature detectors do not effect operation of any system, structure or component. They do not provide control or indication. There were no unreviewed safety questions.

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SUBJECT: RER 97-0171

DESCRIPTION: The unlined "start-up" pond remains depicted on plant drawings; including control valves which are also included in operations lineup procedures. In actuality, the unlined start-up pond is filled in and overgrown with natural vegetation rendering it useless and essentially abandoned in place. Plant drawings were revised, and piping to and from the pond was cut and capped to establish the pond abandoned in place in accordance with our engineering standards for abandoning equipment.

SAFETY EVALUATION: The waste water effluent system is described in sections 2.4.13.2, 9.2.3, 9.3.2, 9.3.3, 10.4.8 and 11.2.3 of the UFSAR. However, the changes included in this evaluation do not impact the existing description of the system or method of operation of the system as it is described. Thus, there was no change to the UFSAR text. However, section 1.7 of the UFSAR lists the P&ID associated with this change. This represented a change to the UFSAR description of the plant. There is no impact to the TS Bases or the TRM. The procedures describing the waste water effluent system are in sections 2.4.13.2, 9.2.3, 9.3.2, 9.3.3, 10.4.8 and 11.2.3 of the UFSAR. The changes described by this evaluation did not compromise the existing UFSAR descriptions. There were no unreviewed safety questions.

SUBJECT: RER 97-0316

DESCRIPTION: Unit 1 containment post LOCA purge lines were extended by 6" and threaded on the ends to accommodate pipe caps. These lines were extended to support VOTES/MOV testing on post LOCA purge valve 1HV9380A & B. During this test, the service air system supply to the containment building were removed from service due to the possibility of the valves venting into containment resulting in possible air borne contamination.

SAFETY EVALUATION: Service air supply lines, 1-2401-095-4" and 1-2401-098-4" are referenced on service air P&ID 1X4DB186-1. This P&ID was revised to note the addition of the threaded pipe extensions. P&ID 1X4DB186-1 is referenced in the compressed air system general description, UFSAR section 9.3.1, therefore a change to the plant as described in the UFSAR was made. This air line modification did not impact the function or operation of the service air system. The service air system is not referenced in the Technical Specifications Bases or the Technical Requirements Manual. Technical Specifications Bases 3.6 and 3.7 and the Technical Requirements Manual were reviewed. No changes to the Technical Specifications or Environmental Protection Plan were be required. Based upon the results of the safety evaluation it was determined that this work did not constitute an unreviewed safety question.

SUBJECT: RER 97-0366

DESCRIPTION: RER 97-0366 approved the installation of manual isolation valves in the vendor air supply tubing to the air relay dump valves in the front standard of the main turbine. This air supply is used to overcome the spring force in the actuators on the extraction steam non-return valves when the turbine is reset. The new valves were installed because the existing installed instrument air isolation valves are in an inaccessible location. The valves will be open when the turbine is in operation and will therefore not alter the operation of the system. The components modified are not safety related.

SAFETY EVALUATION: The main turbine and extraction steam systems are discussed in UFSAR chapter 10. The addition of these normally open valves did not require a revision to the UFSAR text. The valves are shown on drawing 1X4DB194, which is referenced in UFSAR section 10.2.2.3.1. The subject equipment is not discussed in the Technical Requirements Manual, the Technical Specifications,

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or the Technical Specification Bases. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: RER 97-0372

DESCRIPTION: The discharge lines for the North firewater pumphouse oily waste separator pumps are hard piped to the mounting flange of the pumps and would therefore have to be cut to allow pump removal. The supports for the pump bearing water lines are also welded to the mounting flange of connections to this discharge piping so that a pump can be removed from service without cutting and re-welding the piping. The project class of these lines is 626 with a material classification of NKO. The box beam supports were cut approximately 16" above where they are welded to the pump-mounting flange. Square plates with boltholes in each corner were welded to each end of the cut beam. This creates a four-bolt flange in each support to allow for easy removal.

SAFETY EVALUATION: The North firewater pumphouse oily waste separator pumps are discussed in UFSAR section 9.3.3.2.3.9. However, neither the addition of the flanged connections to the discharge piping nor the support modifications required a revision to this section of the UFSAR. In UFSAR section 2.4.12, P&ID 2X4DB152-3 is referenced. Therefore, the change revised this P&ID and this section of the UFSAR, implicitly. There were no unreviewed safety questions.

SUBJECT: RER 98-0036

DESCRIPTION: P&ID 2X4DB161-1 erroneously changed the position of TPCW seal cooling to CST degasifier vacuum pump isolation valve 2-1405-U4-705 to open position in Rev. 25 of 2X4DB161-1 when the position should have remained closed. This was an erroneous change made due to implementation of DCP 96-V2N0032. 2X4DB161-1 was revised to change the position of the turbine plant cooling water to condensate degasifier vacuum pump 04 seal water isolation valve, 2-1405-U4-705, back to the closed position since only one vacuum degasifier pump is operated at a time.

SAFETY EVALUATION: UFSAR section 9.2.6 was reviewed for the description of operation and design of the condensate storage facility shown in drawing 1X4DB161-1 and procedures and the method of operation of the vacuum degasifier pump seal cooling as described in UFSAR section 9.2.11 for the turbine plant cooling water system. UFSAR section 9.2.6 states that two vacuum pumps are provided to maintain the required vacuum in the degasifier but does not address if they are both required to be operated to maintain the required vacuum. There is no technical basis to maintain the turbine plant cooling water to condensate degasifier vacuum pump 04 seal water isolation valve, 2-1405-U4-705, open when the vacuum pump is not operating. Operations procedure addresses verifying that the associated vacuum pump the turbine plant cooling water to condensate degasifier vacuum pump 04 seal water isolation valve is open prior to starting a degasifier vacuum pump. There were no unreviewed safety questions.

SUBJECT: RER 98-0085

DESCRIPTION: This connected a separate nitrogen bottle manifold system at the outlet of the current hydrogen manifolds just upstream of the system relief valve for each existing hydrogen supply manifold to the reactor coolant drain tank (RCDT).

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SAFETY EVALUATION: This RER made a change to drawings described in the UFSAR section 9.3.5 for the auxiliary gas systems. Drawings 1X4DB176-3 and 1X4DB176-3, describing auxiliary gas system - nitrogen, were changed due to this RER, by adding a nitrogen supply manifold which may be connected to the existing hydrogen manifold. Procedure 13708-C already addresses temporarily connecting a temporary nitrogen bottle to the hydrogen supply header for supplying the RCDT. This change made a permanent change in piping to accommodate this capability. UFSAR section 2.2.3 did not require a change due to the addition of the compressed nitrogen bottle due to this change. UFSAR sections 9.3.4 for the chemical and volume control system and 5.4.11 for the pressurizer relief discharge system already describe the use of using both hydrogen and nitrogen purge for these systems and no change was required to these sections of the UFSAR. UFSAR sections listing the codes and standards applicable to auxiliary gas system- nitrogen are indicated in table 3.2.2-1. Table 9.3.5-1 provides a listing of design parameters for the major system components. Neither of these sections require a change to the UFSAR. There were no unreviewed safety questions.

SUBJECT: RER 98-0192

DESCRIPTION: This changed the position of auxiliary building and miscellaneous drains system condensate storage tank (CST) trench drain to auxiliary feedwater (AFW) sump isolation valves, 1/2-1215-U4-269 to account for continuous drainage from the degasifier vacuum pumps and rain water and to prevent possible AFWS room flooding per REA 98VAA647 and SG-16390.

SAFETY EVALUATION: This RER changed drawing 1/2X4DB146-3, described in UFSAR section 9.3.3, for a description to the equipment and floor drainage systems which includes the 1215 system. It changed the position of auxiliary building and miscellaneous drains system condensate storage tank (CST) trench drain to auxiliary feedwater (AFW) sump isolation valves, 1/2-1215-U4-269, from normally closed to normally throttled open. Changing the position of auxiliary building and miscellaneous drains system condensate storage tank (CST) trench drain to auxiliary feedwater (AFW) sump isolation valves, 1/2-1215-U4-269 from normally closed to normally throttled open (except if contamination is indicated) does not increase the probability of occurrence of an accidental release of radioactive material since the contents of the CST trench is subject to only rainwater, CST degasifier vacuum pump seal leakoffs and CST spillage from tank overflow following a CST diaphragm rupture or local piping breakage or leakage. Rainwater and seal leakoffs are solely non-radioactive. In the unlikely event of CST leakage or overflow as described above, the only time when the CST would be expected to have radioactive contamination is during a steam generator tube rupture (SGTR) or steam generator tube leakage (SGTL). During a SGTR and possibly during a SGTL, the contents of the CST are likely to be used up to feed the steam generators to maintain a heat sink and are not likely to be in an overfilled condition. During either a SG tube leak or tube rupture, the contents of the CSTs are isolated from the hotwell and other contamination sources by automatic features such as steam generator blowdown (SGBD) isolation and procedure controls in the abnormal operating procedures (AOP) and emergency operating procedures (EOP). There were no unreviewed safety questions.

SUBJECT: RER 98-0196

DESCRIPTION: A chemical injection point was added to the existing Unit 2, 3C condenser heater. This chemical injection point was provided to allow injection of methoxypropylamine (MPA) for pH control consistent with Southern Nuclear and Westinghouse evaluations (attached with RER 98-0196 and RER 99-0034). Westinghouse has evaluated use of MPA in accordance with 10 CFR50.59.

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Separate from the Westinghouse evaluation, this evaluation was limited to the addition of a chemical injection point at the Unit 2, 3C heater and does not include evaluation of the use of MPA. The chemical injection point addition was a permanent plant change.

SAFETY EVALUATION: While not explicitly described in the UFSAR, the sample point for the 3C heater is implicit in that it is included in a plant P&ID. The condensate feedwater system is described in UFSAR section 10.4.7. UFSAR section 10.3.4.4 "Chemical Additions" does not include a description of the use of MPA as a chemical additive nor does it include a description of the chemical injection point being added. Addition of MPA is controlled by a chemistry procedure wherein a 10CFR 50.59 evaluation will include appropriate license document changes as required. This evaluation involved no test or experiment but is providing a permanent chemical injection point at the Unit 2, 3C condenser heater. There were no unreviewed safety questions.

SUBJECT: RER 98-0245

DESCRIPTION: This changes P&ID 1X4DB129 and 2X4DB129 references to the more specific vendor drawings since vendor drawing X6AK09-171 & X6AK09-172 have been replaced by more specific vendor drawings 1X6AK09-176, 1X6AK09-177, 2X6AK09-178, 2X6AK09-179, AX6AK09-180 & AX6AK09-181.

SAFETY EVALUATION: This RER required a change to critical drawings, P&IDs 1/2X4DB129, due to an administrative change only. It changed references to vendor drawings on the P&ID. Vendor drawings X6AK09-171 and X6AK09-172 are replaced by more specific vendor drawings 1X6AK09-176, 1X6AK09-177, 2X6AK09-178, 2X6AK09-179, AX6AK09-180 & AX6AK09-181. This change did not change the plant design or a description of the method of operation in the UFSAR due to these administrative changes to drawing references. This RER required no changes to UFSAR section 15.7 which describes radioactive waste gas decay tank failure and required no changes to UFSAR section 11.3 which describes the design, operating features, and performance of the gaseous waste processing system (GWPS) and other plant gaseous waste management systems with respect to the collection and control of radioactive gases. There were no unreviewed safety questions.

SUBJECT: RER 98-0264

DESCRIPTION: Equivalency determination 98-VAD055 approved a new mechanical seal design for demineralized water degasifier transfer pumps A-1409-D4-001-P08, P09, & P10. The new seal design required modifying seal water tubing and the installation of a flow controller / indicator for each pump.

The new flow controllers / indicators installed were assigned tag numbers AFCV-7563, -7564, & 7565. These components were mounted to the discharge flanges of the transfer pumps with all seal water tubing being field routed. The existing seal water supply from the discharge of the transfer pumps was utilized to supply the flow controllers.

SAFETY EVALUATION: This modification to the seal water arrangement of pumps A-1409-D4-001-P08, P09, & P10 did not impact any system or component description as described in UFSAR, TS Bases or TRM. However, the modified tubing and installation of flow controller / indicators required revision to P&ID AX4DB177, which is referenced in UFSAR Section 9.2.3, "Demineralized Water Make-up System". This change did not impact procedures described or referenced in UFSAR. There were no unreviewed safety questions.

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SUBJECT: RER 98-0294

DESCRIPTION: The boron recycle system (BRS) processes reactor coolant effluent that can be readily reused as makeup. RER 98-0294 requested an evaluation to determine if valve A-1211-U4-041 can be changed from a normally closed valve (as referenced on P&ID AX4DB123-1) to a normally open valve. A-1211-U4-041 is a Rockwell diaphragm valve that isolates the Unit 2 portion of the BRS from the nuclear sampling system – gaseous (NSS-G). This valve was difficult to access and must be opened each time operations needs to extract gas from the Unit 2 recycle holdup tank (RHT). Per drawing AX4DB123-1, both A-1211-U4-041 and A-1210-U4-078 provide isolation from the recycle uphold tank, A-1210-T4-002. With A-1211-U4-041 changing from normally closed to normally open, RHT isolation was still provided by A-1210-U4-078. Additionally, per the same drawing, A-1211-U4-041 did not provide any type of boundary separation or function for any hardware components in the NSS-G system. Therefore, changing this valve to normally open eliminated operating this difficult-to-access valve each time the RHTs are educted.

SAFETY EVALUATION: Review of the UFSAR determined that valve A-1211-U4-041 was not referenced by that document. The only reference to the isolation valve was drawing AX4DB123-1, which shows the position of the valve within the BRS. Per plant procedures, any time a component referenced on a P&ID that is listed in the UFSAR is changed, this change is a modification to the plant as described in the UFSAR. AX4DB123-1 is referenced twice in the UFSAR, Sections 1.7.1 and 9.3.4.2. Both of these references list the drawing number only as information so the reader may review them for detailed information. There were no unreviewed safety questions.

SUBJECT: RER 98-0296

DESCRIPTION: This added a cap to the reactor makeup control water storage tank (RMWST) vent valve 2-1228-U4-105, to P&ID 2X4DB184 and to isometric drawings 1K5-1228-177-01 and 2K5-1228-177-02 to make the operation of both units consistent.

SAFETY EVALUATION: This RER required a change to critical drawing or associated P&ID 2X4DB184 which is referenced in UFSAR section 9.2.7, Reactor Makeup Water Facility, due to the addition of a pipe cap to the RMWST vent line. This change did not affect the accident discussed in UFSAR section 15.7 for the occurrence of an accidental radioactive release from a subsystem or component. Adding an RMWST vent valve cap did not increase the probability of occurrence of an accident previously evaluated in the UFSAR 2.4.13.2 entitled, “Dispersion, Dilution, and Travel Times of Accidental Releases of Liquid Effluents in Surface Waters”. The likelihood of a potential overflow condition was not increased by this change. The reactor makeup water system capability as discussed in section 9.2.7 to provide a category 1 backup source of water for spent fuel pool was not decreased due to this change by adding a cap to the RMWST vent valve. The cap may stay in place and the vent valve may remain closed during a gravity flow to the spent fuel pool (SFP) in case of a loss of SFP inventory. This RER did not lessen reactor makeup control system capability for iodine removal from the released fission product gas through the body of liquid in the spent fuel pool during fuel handling accidents as discussed in UFSAR section 15.7.4. There were no unreviewed safety questions.

SUBJECT: RER 98-0299

DESCRIPTION: The change required the editing of drawings 2X4DB170-1, 2X4DB170-2, 1X4DB170-2, and AX4DB190-2. The specific changes are editorial in nature and are detailed below.

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- 2X4DB170-1 coordinate F-8 LINE 2-1418 is referenced to 190-2 (H-8).
These coordinates were changed to A-8.
- 2X4DB170-2 coordinate F-8 LINE 1-1418 is referenced to 190-2 (H-7).
This line was labeled 2-1418 and referenced to 190-2 (A-8)
- 1X4DB170-2 coordinate F-8 LINE 1-1418 is referenced to 190-2 (H-7).
These coordinates were changed to H-8.
- AX4DB190-2 coordinate H-8 LINE 1-1418 is referenced to 170-1 (G-8) AND 170-2 (G-8).
In both cases these coordinates were changed to F-8.
- AX4DB190-2 coordinate A-8 LINE 2-1418 is referenced to 170-1 (G-8) and 170-2 (G-8).
In both cases these coordinates were changed to F-8.

SAFETY EVALUATION: This modification addresses the editing of drawings, and does not require any field changes of the involved systems. The drawings that were involved are listed in the following sections of the UFSAR: 1.7-1, 3.9, 9.2, and 9.5. These drawings are also implicitly indicated in section 8.3 of the UFSAR, which addresses onsite power systems. These sections of the UFSAR were reviewed and it was determined that a change to the UFSAR was not be required. Section 3.8 of the TS-Bases, which addresses electrical power systems, and section 13.8 of the TRM, which also addressed electrical power systems, were reviewed and it was determined that no revision of these documents was required. There were no unreviewed safety questions.

SUBJECT: RER 98-0335

DESCRIPTION: The existing flow indicators for condensate pump seal water inlet flow were experiencing failures due to excessive flow. This change allowed the flow indicators to be valved out except for daily readings or prior to pump startup. Seal flow was opened via the bypass line.

SAFETY EVALUATION: The condensate and feedwater system is described in UFSAR section 10.4.7. The flow indicators are not described in this section, however, P&ID 1/2X4DB168-1 is referenced in the UFSAR. This drawing required revision. The seal flow indicators were not required to mitigate any accidents. Changing the valve arrangement during normal operation did not affect the functions of the seal water system. This change did not require a revision to the UFSAR, TS, TRM, TS Bases or the Environmental Protection Plan. Based upon the results of the safety evaluation, it was determined that this operating philosophy change did not constitute an unreviewed safety question.

SUBJECT: RER 98-0348

DESCRIPTION: This changed the position of gaseous waste processing system (GWPS) common hydrogen recombiner out to compressor suction Unit 1 A-1902-U4-148 from normally closed to normally open on P&ID 1X4DB129 to allow alignment of the common recombiner to be operated with the Unit 1 waste gas compressors and to allow a continuous purge to the common analyzer when it is out of service.

SAFETY EVALUATION: This RER was a change to UFSAR section 11.3.2 since it made a change to P&ID 1X4DB129 by changing the position of gaseous waste processing system (GWPS) common hydrogen recombiner out to compressor suction Unit 1, A-1902-U4-148, from normally closed to normally open on P&ID 1X4DB129. There were no other changes to the system description of the waste processing system – gas in UFSAR section 11.3.2 or UFSAR table 1.7.1-2. There was no explicit description in the UFSAR that only allows the Unit 1 recombiner to be valved into service. UFSAR section 11.3.2.1.2, “Catalytic Hydrogen Recombiner Packages”, states: “Three catalytic hydrogen

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recombiners are provided for the two units. One recombiner per unit is used in each main process loop to remove hydrogen from the hydrogen-nitrogen fission gas mixtures by oxidation to water vapor, which is removed by condensation. The third recombiner is available on a standby basis. The units are self-contained and are designed for continuous operation.” UFSAR section 11.3.2.3.2, “Normal Operations”, states that after the water vapor is condensed and removed, the gas flow is directed to a shutdown GDT and from there to the waste gas compressor and back to the hydrogen recombiner. UFSAR section 11.3.2.3.2 also states that the contaminated hydrogen gas is continuously vented from the VCT into the circulating nitrogen stream to transport the fission gases into the GWPS. UFSAR section 11.3.2.3.1, “Startup Operation”, addresses the hydrogen-nitrogen mixture vented from the volume control tank (VCT) into the GWPS circulating nitrogen stream at the waste gas compressor suction. Neither UFSAR section addresses the issue of leaving the Nitrogen purge gas aligned to the analyzers while the associated recombiner is shut down. Orbisphere recommends that if a recombiner is out of service for more than a couple of weeks, the nitrogen purge gas to the analyzers in a waste gas system should remain in service to keep moisture buildup and thus degradation of the analyzer cell membranes. Such a change does not increase the probability of occurrence of any accident previously evaluated in the UFSAR 15.7.1 for a radioactive waste gas decay tank failure since changing the valve position of A-1902-U4-148 has no affect on increasing the probability of a gaseous decay tank (GDT) failure. There were no unreviewed safety questions.

SUBJECT: RER 99-001

DESCRIPTION: Potable water manual isolation valve C2417U4556 isolates the potable water supply to the construction batching plant, which has been abandoned. The manual valve is inaccessible and has failed in the closed position. As such, it has been abandoned in-place.

SAFETY EVALUATION: Although not explicitly described, the operating position of this valve is implicit in the description of the plant in that it is represented by a piping and instrument diagram; representing a change to the UFSAR description. Review of UFSAR sections 2.3, 3.2, 9.2, 9.3 and 11.2 and the accident analyses of chapter 15 revealed that there are no direct descriptive text changes to the UFSAR. There was no TRM or TS bases impact. While the methodologies for operating potable water system and the UFSAR description of its operation remained unaffected by this change, a change to the normal valve position infers a change to procedures (i.e., controls over plant configuration) as described in the UFSAR sections 2.3, 3.2, 9.2, 9.3 and 11.2. While there is no direct description of the position of the valve involved in this change, an implicit change in plant configuration was indicated. There was no TRM or TS bases impact. This change did not include a test or experiment not described in the UFSAR. The optimum operating configuration of the potable water system was revised indicating that, during normal plant operation, the valve is normally closed and abandoned in place. There were no unreviewed safety questions.

SUBJECT: RER 99-0007

DESCRIPTION: P&IDs 1X4DB182 and 2X4DB182 were revised to show valves 1/2-1309-X4-964 and 965 normally open and 1/2-1309-U4-532 and 539 normally closed. This was done to ensure the P&ID, SOP and system line-up procedures depict the correct normal configuration for these valves.

SAFETY EVALUATION: Drawings 1X4DB182 and 2X4DB182 are referenced in UFSAR section 10.4.2.2.1 in the general description paragraph. Changing these drawings was a change to the plant as described in the UFSAR. UFSAR section 10.4.2. Technical Specification Bases and the TRM were reviewed. No changes to the TRM or TS Bases were required. Making drawing changes to 1X4DB182

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and 2X4DB182 did not require a change to the Technical Specifications or Environmental Protection Plan. System 1309 is not referenced in the Technical Specifications. Based upon the results of the safety evaluation it was determined that this drawing change did not constitute an unreviewed safety question.

SUBJECT: RER 99-0018

DESCRIPTION: A relief valve immediately downstream of the degasifier transfer pumps associated with the water treatment plant continuously relieves when the system is placed on low flow recirculation. This is a common mode of operation when the system is not making up from the well water storage tank to the demineralized water storage tank. To prevent the continual relieving of the relief valve, a miniflow line "teeing" off just downstream of the pumps discharge, but upstream of the relief valve, was added to the system configuration, along with a globe valve to allow throttling of the miniflow as needed.

SAFETY EVALUATION: UFSAR chapter 9.2 deals with plant water systems and does not include within that description the level of detail that would warrant a text change to it as a result of the addition of a return line from the degasifier transfer pumps to the vacuum column. However, implicit configuration is included in that the P&ID associated with the change is listed in the UFSAR. This change required revising the P&ID associated with the water treatment plant. UFSAR chapter 9.2 describes plant water systems and their mode of operation. Addition of a return line from the degasifier transfer pumps to the vacuum column did not impact any operational methodologies associated with the system. There were no changes to procedures described or implied in the UFSAR. This change involved no test or experiment. There were no unreviewed safety questions.

SUBJECT: RER 99-0027

DESCRIPTION: The RCDT is required to have a nitrogen cover gas during chemical degassing and maintenance activities. The existing manifold did not accommodate a nitrogen bottle. This RER was generated to expand the scope of RER 98-0085 to also relocate the existing auxiliary gas manifold assembly away from the south main steam valve room access door. This RER relocated the existing gas manifold assembly at 2-2406-S4-001 auxiliary gas station to approximately 15 feet north of the existing 2-2406-S4-001 auxiliary gas station. It connected a separate nitrogen bottle manifold system at the outlet of the current hydrogen manifolds just upstream of the system relief valve

SAFETY EVALUATION: This RER changed drawings described in the UFSAR section 9.3.5 for the auxiliary gas systems. This RER did not change procedures or the method of operation of equipment as described in UFSAR section 9.3.5 for the auxiliary gas systems since connecting a nitrogen bottle to supply nitrogen to the RCDT is not described in the UFSAR. Drawing 2X4DB176-3 describing auxiliary gas system- nitrogen is changed due to this RER by adding a nitrogen supply manifold, which may be connected to the existing hydrogen manifold. Plant procedures already addressed temporarily connecting a nitrogen bottle to the hydrogen supply header for supplying the RCDT. This RER made a permanent change in piping to accommodate this capability. UFSAR section 2.2.3 did not require a change due to addition of the compressed nitrogen bottle due to this RER. UFSAR sections 9.3.4 for the chemical and volume control system and 5.4.11 for the pressurizer relief discharge system already describe the use of using both hydrogen and nitrogen purge for these systems and no change was required to these sections of the UFSAR. UFSAR sections listing the codes and standards applicable to auxiliary gas system- nitrogen are indicated in table 3.2.2-1. Table 9.3.5-1 provides a listing of design parameters for the major system components. Neither of these sections required a change to the UFSAR. There was no change to the design as described in the UFSAR required due to relocating 2-2406-S4-001 auxiliary gas station to approximately 15 feet north of existing the existing 2-2406-S4-001 auxiliary gas station.

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There is a less likely probability of having an accidental hydrogen release by disconnecting hydrogen from the permanent hydrogen manifold to connect to a temporary nitrogen bottle. There is a less likely probability of having an accidental spark that will cause a hydrogen explosion, which could cause personnel injury and damage to surrounding plant equipment. Therefore, adding the nitrogen supply manifold and associated interconnecting piping to the hydrogen supply line to the RCDT did not increase the probability of an occurrence of an accident previously evaluated in the UFSAR.

There is better control of flow of hydrogen and nitrogen by having both the hydrogen and nitrogen bottles permanently installed should a failure of a valve or component result in an accidental release. This equipment is located outside the main steam valve rooms not in close proximity of safety related equipment. Having permanently installed piping made the consequences of an accidental release less likely to result in a hydrogen burn or explosion since there would be no use of tools to make the swap over. Therefore, adding the nitrogen supply manifold and associated interconnecting piping to the hydrogen supply line to the RCDT did not increase the consequences of a malfunction of safety-related/important to safety equipment previously evaluated in the UFSAR. There were no unreviewed safety questions.

SUBJECT: RER 99-0034

DESCRIPTION: Design detail was provided for a chemical injection point added to the existing Unit 1, 3C condenser heater. This chemical injection point was provided to allow injection of methoxypropylamine (MPA) for pH control consistent with Southern Nuclear and Westinghouse evaluations (attached with RER 98-0196 and RER 99-0034). Westinghouse has evaluated use of MPA in accordance with 10 CFR50.59.

Separate from the Westinghouse evaluation, this evaluation is limited to the addition of a chemical injection point at the Unit 1, 3C heater and does not include evaluation of the use of MPA. The chemical injection point is a permanent plant change.

SAFETY EVALUATION: While not explicitly described in the UFSAR, the sample point for the 3C heater is implicit in that it is included in a plant P&ID. The condensate feedwater system is described in UFSAR section 10.4.7. UFSAR section 10.3.4.4 "Chemical Additions" does not include a description of the use of MPA as a chemical additive nor does it include a description of the chemical injection point being added. Addition of MPA is controlled by a chemistry procedure wherein a 10CFR 50.59 evaluation included appropriate license document changes as required. This evaluation involved no test or experiment but provides a permanent chemical injection point at the Unit 1, 3C condenser heater. There were no unreviewed safety questions.

SUBJECT: RER 99-0066

DESCRIPTION: The normal alignment of utility water manual isolation valves to the auxiliary steam mixing chamber for Unit 1 and Unit 2 are shown normally closed with a note annotating that the valves are throttled open when the auxiliary steam system is placed in service. The mixing chamber allows utility water to aid in condensing steam that is drained into a nearby floor drain when the aux. steam system is in service. To prevent continuous flow of utility water into the drain when the aux. steam mixing chamber is out of service (and cooling water is not needed), the isolation valves (1-2429-U4-701 for Unit 1 and 2-2419-U4-658 for Unit 2) are closed.

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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 diagram; representing a change to the UFSAR description. review of ufsar sections 2.4.12, table 3-2-2, 9.5.9 and 10.4.7 and the accident analyses of chapter 15 reveals that there are no direct descriptive text changes to the UFSAR. While the methodologies for operating the utility water and auxiliary steam system's and the UFSAR description of their operation remain unaffected by this change, a change to the normal valve position infers a change to procedures (i.e., controls over plant configuration) as described in the UFSAR (section 9.5.9). While there is no direct description of the position of each of the valves involved in this change, an implicit change in plant configuration is indicated. This change does not include a test or experiment not described in the UFSAR. The optimum operating configuration of the utility water system valves (as indicated by their normal position) was revised, indicating that during normal plant operation, the valves are normally closed; isolating utility water from the auxiliary steam mixing chamber. There were no unreviewed safety questions.

SUBJECT: RER 99-0076

DESCRIPTION: RER 99-0076 replaced existing globe valves 1-1307-U4-578 and 581 that drain the water side of the main turbine lube oil coolers 1-1307-T4-501-E01 and E02, respectively, with gate valves. The referenced valves were changed from a globe to a gate design to allow in removal of silt during the draining process. The gate valves used in this application are a 3/4" diameter, Mark 145. The referenced valves have a piping material classification of LL0 and the Mark 145 is the gate valve requirement for this piping material classification. These valves have a project class of 424. The referenced valve replacements meet all the requirements for this system design and does not change the operation of the system or component.

SAFETY EVALUATION: The water side drain valves and lines for the main turbine lube oil coolers are shown on P&ID 1X4DB167-2. This P&ID is referenced in UFSAR section 10.2.2, "Turbine Generator Description". Replacement of the existing globe valves required a change to this P&ID and therefore changed the facility as referenced in the UFSAR. The new valves are in accordance with the specifications for the turbine lube oil coolers and meet the requirements of the turbine plant cooling water system as given in UFSAR section 9.2.11.2.2.D, "Component Description", which states piping and valves are designed for a minimum of 150 psig pressure applications. Flow through the coolers is unaffected by this modification, and the values given in UFSAR table 9.2.11-1 are not effected. The replacement of the existing globe valves with gate valves does not change the Technical Specifications, the Technical Specification Bases or the Technical Requirements Manual based upon a review of section 3/4.7-Plant Systems. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: RER 99-0160

DESCRIPTION: Valves 1(2)-1411-U4-657 and -658 isolate interconnecting chemical wet lay-up lines associated with shutdown steam generator (S/G) water chemistry maintenance. Although part of original design for S/G wet lay-up, chemistry prefers an alternate method for maintaining S/G water chemistry during shutdown that requires these valves to be closed. In fact, after discussing with the chemistry department, it was determined that this original makeup method has never been used and normal makeup for wet lay-up chemistry is via an alternate path utilizing piping associated with Auxiliary Feed Water.

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Prints, 1(2) X4DB159-3, were revised to indicate that valves 1(2)-1411-U4-657 and 1(2)-1411-U4-658 are normally closed. This helps to eliminate potential chemical contamination of those performing local leak rate testing (LLRT) preparations or other maintenance activities that may require breaching lines associated with steam generator wet lay-up.

SAFETY EVALUATION: Section 10.4.10 of the UFSAR describes the chemical injection system in general and while there is no direct impact to that description an implicit description change is involved as a result of a change to the P&ID associated with the system. Changing the valve position associated with the system does not impact or compromise the existing specification for the chemical injection system as provided in the UFSAR. But, change to the P&ID implicitly impacts the UFSAR description of it. There are implicit procedural changes provided by section 10.4.10. The UFSAR indicates chemical addition methods without detail description for doing so. However, since procedural description is indicated, changes to UFSAR procedural methods are implied. This activity does not involve either an experiment or test. There were no unreviewed safety questions.

SUBJECT: RER 99-0178

DESCRIPTION: The drain valve 2-1328-X4-507 from Pyrolysate collector leaks small amount of hydrogen past the seat. The piping was modified by socket welding a LLO grade nipple and installing a threaded cap.

SAFETY EVALUATION: The turbine generator gas purge system P&ID 2X4DB196 is referenced in the UFSAR section 10.1. The modification required revision of the drawing. the gas purge system or the main generator are not the topic of Technical Specification or the Environmental Protection plan. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

SUBJECT: RER 99-252

DESCRIPTION: The operations dept. requested a change to the normal valve alignment as shown on P&ID for the SGBD spent resin tank to plant vent valve 1/2HV-7757. The change in position prevents water from being forced into the piping during standby operations. When the valves were opened, water ran into the steam generator blowdown spent resin storage tank and changed the level. This change in level was a nuisance to plant operations.

SAFETY EVALUATION: UFSAR table 12.2.1.1-9 and 12.2.1-10 show the specific activity and source strengths present in the steam generator blowdown spent resin storage tank. Industry operating experience with leaking steam generator tubes has shown that the liquid is degassed in the steam generator. The gasses are then filtered at the condenser air ejector. Therefore this change does not affect the offsite dose analysis or affect the description in the UFSAR. UFSAR section 10.4.8.2 discusses drawing 1X4DB179-2. This drawing and a similar Unit 2 drawing required a revision due to this modification. The change does not affect the operation of the steam generator spent resin storage tank when it is not transferring resin. The UFSAR's only discussion for the Spent resin storage tank operation is during the transfer of spent resin. This change did not require a revision to the UFSAR, TS, TRM, TS Bases or the Environmental Protection Plan. Based upon the results of the safety evaluation it was determined that this change did not involve an unreviewed safety question.

Request for Engineering Review (RERs)

SUBJECT: RER 99-0262

DESCRIPTION: The change was temporary addition of lead shielding to letdown piping and valves in the chemical and volume control system on Unit 2. Lead shielding in this location is not described in the UFSAR. The purpose was to lower radiation dose rates during maintenance.

SAFETY EVALUATION: The additional weight was within analysis limits for operation in modes 5, 6 and defueled. The lead shielding was removed prior to entry into mode 4. There were no unreviewed safety questions.

10 CFR 50.59(B) REPORT of
TESTS & EXPERIMENTS.
APRIL 21, 1998 THRU NOVEMBER 5, 1999

**VOGTLE ELECTRIC GENERATING PLANT
UNITS 1 & 2**



Tests and Experiments

SUBJECT: T-ENG-98-13

DESCRIPTION: The test gathered vibration data on the suction and discharge piping of the Unit 1 and Unit 2 positive displacement charging pumps in the chemical and volume control system. The purpose was to determine if operational conditions existed that would damage piping and other components.

SAFETY EVALUATION: During the test, hydrogen concentration in the reactor coolant system was lowered below the target value of the UFSAR. Hydrogen concentration remained well above the lower limit for critical operation. There were no unreviewed safety questions.

SUBJECT: T-ENG 99-01

Description: The carbon adsorber bed in the containment preaccess filter Unit 1-1504-N7-001-000 was replaced during the 1R8 refueling outage per the guidance of temporary procedure T-ENG-99-01. All work in containment was performed during modes 5 and 6. The scope of work covered by this temporary procedure included equipment setup and inspection, evacuation of used carbon from the filter unit, loading of new carbon into the filter unit, and post adsorber replacement filter unit run.

SAFETY EVALUATION; The preaccess filter system is designed and maintained in accordance with Regulatory Guide 1.140 as described in UFSAR sections 9.4.6 and 1.9.140. The replacement of carbon in the preaccess filter unit is a routine maintenance activity that had no affect on the system description or function as described in the UFSAR. However, transient combustible limits were exceeded during the filter change process.

Replacing the carbon in the preaccess filter unit is a routine maintenance activity that is required to maintain filtration efficiency within design requirements. UFSAR section 9.4.6.4 states that "the carbon adsorber is filled with carbon in a manner to ensure a uniform packing density and to minimize dusting." The temporary procedure covered by this evaluation provided guidance to replace the carbon adsorber to meet these requirements and its activities had no affect on the system description or function as described in the UFSAR.

During the carbon filter loading and unloading process, there was approximately 15,000 pounds of additional charcoal in containment. This additional charcoal was a transient combustible and exceeded the heat release value for transient combustibles as shown in UFSAR section 9A.1.111.K. Transient combustibles were controlled and tracked during the outage per procedure 92015-C. The increased transient combustible loading was a temporary occurrence that did not require a permanent change to the UFSAR. The preaccess filter system is non-safety related and is not discussed in the TS Bases or the TRM. There were no unreviewed safety questions.

SUBJECT: T-ENG-99-03

DESCRIPTION: The test gathered speed, pressure, differential pressure, flow, motor current, motor voltage and vibration data on Unit 1 B train centrifugal charging pump in the chemical and volume control system. The purpose was to verify proper operation of the pump following replacement of the rotating element.

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SAFETY EVALUATION: During the test, instruments were temporarily added that are not described in the UFSAR. The pump was operated in the range of expected flows through analyzed flow paths. The test was performed in a condition where the pump was not required to perform any safety function. There were no unreviewed safety questions.

SUBJECT: T-ENG 99-04

DESCRIPTION: The procedure provides instructions for installing containment penetration outage fixtures to containment penetrations 5, 55, and 90. The use of outage penetration fixtures during modes 5 and 6 was evaluated in DCP 89-V1N0059 and DCP 90-V2N0111. The outage fixtures provide the capability to prevent direct communication of the containment environment to the outside environment. The modified containment penetrations were installed to accommodate the large number of cables and hoses required to accomplish steam generator cleaning, inspecting and testing services.

SAFETY EVALUATION: DCPs 89-V1N0059 and 90-V2N0111 evaluated the modifications of the containment penetrations to replace the welded end caps with bolted blind flanges. The DCPs also evaluated the utilization of containment penetration fixtures to be installed during modes 5 and 6 when fuel is not being moved. In addition, a seismic evaluation concluded that the penetration fixtures were seismically qualified. The containment penetration fixtures provide containment integrity to prevent direct communication of the containment environment to the outside environment during a postulated refueling accident. These containment fixtures are to be removed and replaced with blind flanges prior to entering into mode 4. The typical configuration for the containment penetration fixtures is described in plant drawing 1X2D01J019 and 2X2D01J019. The procedure addresses the use of modified containment penetrations for steam generator cleaning, inspection and testing activities performed during refueling operations. The uses of the modified penetrations does not adversely impact containment integrity. The cables passing through the fixture are sealed. Manually operated valves are provided on the process hoses to isolate containment from both inside and outside containment when the sludge lance process is interrupted due to a system malfunction or completion of the service. The procedure changes the typical configuration of the penetration as shown on plant drawings. This procedure allows the containment penetration to be installed on the outside of the penetrations. There were no unreviewed safety questions.

SUBJECT: T-ENG 99-017

DESCRIPTION: Temporary engineering procedure T-ENG 99-017 provided guidance for operating test well No. 1 (TW-1) for the implementation of the functional test associated with MDC 99-VAM026, "Backup Well Water Pump – Reactivation of Test Well No. 1". The design change approved the test well as a backup source of plant makeup water in the event that a failure to the well water system renders the existing makeup to the well water storage tank inoperable. The intent is to use the test well for makeup water supply only as necessary until the primary makeup capability is restored. The procedure requires starting TW-1 pump and verifying proper rotation from flow data as well as giving instruction for operations to monitor flow from TW-1, once established, throughout the duration of the test run.

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 "Test Well No. 1 Initial Test Run" represents such a test. The

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UFSAR section 2.4.12.1.3.3 states that: "...test well (TW-1) was drilled and tested to provide design data for the makeup well field. This well will not be used for plant makeup due to its location near category 1 structures." The category 1 structures referred to are the Unit 1 NSCW cooling towers. Based on the results of a technical evaluation of the effect of pumping from this test well at a rate not to exceed 1000 gpm, the total subsidence at the edge of the NSCW tower 1A will not exceed the maximum differential settlement for the NSCW valve house train A category 1 buried piping. Therefore, operation of a pump at this well at a flowrate that does not exceed 1000 gpm is acceptable. This change does involve a change of plant procedures to administratively control the flow rate/usage of this well. This is a change to the process of plant operation as described in the UFSAR. Changes (LDCR FS99-024) to UFSAR sections 2.4.12.1.3.3, Table 2.4.12.7B and table 2.4.12-7D to allow use of the test well for plant well water makeup were performed and evaluated as part of and MDC 99-VAM026. The makeup well water system is not discussed in the Technical Specifications. Use of the test well, TW-1, is not discussed in the Technical Specifications. There were no unreviewed safety questions.

SUBJECT: T-OPER-99-01

DESCRIPTION: This provided instructions for operation of the auxiliary feedwater system (AFW) during implementation of temporary modification 99-V2T004. It established flow to steam generator #4 to cool valve 2-1302-U4-043 while measures are taken to reduce leakage through this valve.

SAFETY EVALUATION: Although the UFSAR does not specifically exclude operation of the AFW system while the plant is at or near full power, the operation of AFW system is generally described as being during startup and shutdown or during emergencies. Limitations are also included to ensure the plant remains at or below licensed thermal power and within the limitations of Technical Specifications. There were no unreviewed safety questions.

SUBJECT: T-OPER-99-06,

DESCRIPTION: This provided instructions for operation of the 125Vdc switchgear while 1ND3A and 1ND3B are cross-tied to support replacement of batteries 1ND3AB and 1ND3BB. Should a battery charger fail while the cross-tie is in service, any of the other three available chargers may have been placed into service.

SAFETY EVALUATION: Although cross-tying this non-1E switchgear deviates from permanent plant design and represents a configuration which would not normally exist, it does not represent a physical change as described by the UFSAR or the Technical Specifications. However, operation of switchgear as described in the UFSAR, does not address this abnormal configuration. There were no unreviewed safety questions.

SUBJECT: T-OPER-99-10

DESCRIPTION: This provides instructions for performing a leakage check of manual diaphragm valve 1-1208-U6-068, which is associated with a chemical and volume control system mixed bed demineralizer. For this evolution, normal letdown bypassed the demineralizers and was diverted to the volume control tank during this test. Following the leakage check, the lines

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were flushed with borated water to preclude any reactivity excursions once the demineralizers were returned to service.

SAFETY EVALUATION: A jumper is installed to maintain a boron thermal regenerative system (BTRS) valve open to allow leakage from 1-1208-U6-068 to be collected. The installation of this jumper represents a change to a drawing referenced in the UFSAR. Because the demineralizers were bypassed and the lines were later flushed before being returned to service, this evolution had no effect on normal system operation. Technical Specification compliance was also not affected. There were no unreviewed safety questions.